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Soviet tractors vs. oxen

Agroecology, agricultural policies and political discourse in Cuba

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ABSTRACT

After the collapse of the socialist bloc in the late 1980s and early 1990s, the Cuban government was forced to forsake its plans to develop a modern agricultural sector, highly dependent on the intensive use of imported machinery, fertilizers and pesticides. A set of circumstances led to the practice of low-input agriculture taking on the name Agroecology that had been used in Latin American contexts. This particular context motivated two narratives, the narrative of opportunity, namely that Cuba became an ideal natural setting for large-scale conversion to agroecological agriculture, and the narrative of the victory of alternative agriculture in Cuba (mainly recreated from abroad). However, the study of the institutionalization processes of the agroecological movement, agricultural policies and the results of agroecological practices show a more complex story than what these narratives reproduce.

The specific trajectory of scaling up the agroecological movement in Cuba provides a valuable case for the analysis of the influences of the political environment on the adoption of alternative agricultural practices. Some pro-agroecological experts place the barriers to the scaling up of the agroecological movement in Cuba in the permanence of mentalities akin to the conventional model, situating the debate in the technological sphere. This thesis broadens this debate by considering the scaling up of the movement as a political-economic phenomenon as well, and brings the discussion to the field of political economy and the Cuban socialist model.

How do agricultural policy-making and policy beliefs of the Cuban government relate to agroecological principles and practices, and how do they shape the processes (and limits) of scaling (up and out) of the Cuban agroecological movement? This thesis assesses the points of coherence and conflict between 1) the history of the agricultural policy of the revolution (i.e., post-1959) and the practice of agroecology in Cuba, and 2) the political beliefs of the government (identified in political discourse) and the principles and practices of agroecology in Cuba. Through the analysis of point 1), the thesis questions the validity of the assumptions surrounding the triumph of Cuban agroecology and provides a more nuanced view on the limits of the results of agroecology on the island. From the analysis of point 2), the thesis makes visible the long-standing contradictions between the political beliefs of the Cuban government and the essential principles of agroecology related to scale, markets, ownership, as well as autonomy and the expected attitudes and motivations of producers.

The study is based on the analysis of 247 official policy and normative documents, 322 speeches (by the Castros between 1984 and 2015), the testimonies of 105 interviewees, secondary literature on Cuba's political and economic history, and the analysis of secondary data related to agricultural performance. The thesis argues that the processes of scaling up and out of agroecological practices in Cuba have been an expression of the (contradictory, ambivalent) accommodation between the principles and practices of agroecology and the government's different policy choices in agriculture (on issues such as land use, markets, producer autonomy) and the behaviors that the government expected from agricultural actors. The latter two had been influenced by the policy beliefs of the government (state-party) in line with the official socialist ideology.

ZUSAMMENFASSUNG

Nach dem Zusammenbruch des sozialistischen Blocks in den späten 1980er und frühen 1990er Jahren war die kubanische Regierung gezwungen, ihre Pläne zur Entwicklung eines modernen Agrarsektors aufzugeben, der in hohem Maße vom intensiven Einsatz importierter Maschinen, Düngemittel und Pestizide abhängig war. Eine Reihe von unterschiedlichen Faktoren führte dazu, dass die daraufhin entwickelte Praxis der Low-Input-Landwirtschaft den Namen Agroökologie annahm, welcher seither in der lateinamerikanischen Öffentlichkeit verwendet wurde. Der besondere Kontext in Kuba motivierte im Folgenden zwei Erzählungen: die Erzählung von der Chance, dass Kuba ein ideales Umfeld für eine groß angelegte Umstellung auf agrarökologische Landwirtschaft sei, und die Erzählung vom angeblichen Sieg der alternativen Landwirtschaft in Kuba über das konventionelle Agrarmodell (die hauptsächlich aus dem Ausland übernommen wurde). Die hier vorliegende Untersuchung der Institutionalisierungsprozesse der agrarökologischen Bewegung, der Agrarpolitik und der Ergebnisse der agrarökologischen Praktiken zeigt jedoch eine komplexere Geschichte als die, die diese Erzählungen wiedergeben.

Die Entwicklung der agrarökologischen Bewegung in Kuba ist ein gutes Beispiel zur Analyse des Einflusses der Politik auf die Einführung alternativer landwirtschaftlicher Praktiken. Einige Autoren und Befürworter der Agrarökologie sehen die Hindernisse für die weitere Ausbreitung der agrarökologischen Bewegung in Kuba im Fortbestehen von alten Einstellungen und Überzeugungen, die das konventionelle Landwirtschaftsmodell bevorzugen. Diese Autoren verorten demnach die Debatte über das Landwirtschaftsmodell vorwiegend auf einer technologischen Ebene. Die vorliegende Arbeit erweitert jedoch den Blickwinkel dieser Studien, indem sie Ausbreitung der Agrarökologie-Bewegung als politisch-ökonomisches Phänomen betrachtet, und somit die Diskussion in den Bereich der politischen Ökonomie des sozialistischen Modells in Kuba bringt.

Wie verhalten sich die konkrete Agrarpolitik und die politischen Überzeugungen der kubanischen Regierung zu den agrarökologischen Grundsätzen und Praktiken, und wie beeinflussen sie die Prozesse (und Grenzen) der vertikalen und horizontalen Ausbreitung der agrarökologischen Bewegung Kubas? In dieser Arbeit werden Kohärenzen und Konflikte zwischen 1) der Geschichte der Agrarpolitik der Revolution (d.h. nach 1959) und der Praxis der Agrarökologie in Kuba und 2) den politischen Überzeugungen der Regierung (die im politischen Diskurs zum Ausdruck kommen) und den Prinzipien und Praktiken der Agrarökologie in Kuba untersucht. Durch die Analyse von Punkt 1) stellt die Arbeit die Gültigkeit der Annahmen über den Siegeszug der kubanischen Agrarökologie in Frage und bietet eine nuanciertere Sicht auf die Möglichkeiten der Agrarökologie auf der Insel. Anhand der Analyse von Punkt 2) macht die Arbeit die seit Langem bestehenden Widersprüche zwischen den politischen Überzeugungen der kubanischen Regierung und den wesentlichen Prinzipien der Agrarökologie sichtbar. Diese Widersprüche beziehen sich insbesondere auf die Frage nach der Produktionsskala einzelner Betriebe, die Etablierung freier Agrar-Märkte, die Zulassung von Privat-Eigentum, sowie die unternehmerische Autonomie und das zugrunde gelegte Verhaltensmodells und Anreizsystem für Erzeuger.

Die vorliegende Arbeit basiert auf der Analyse von 247 offiziellen politischen und normativen Dokumenten, 322 politischen Diskursen der Castro-Brüder zwischen 1984 und 2015, den Aussagen von 105 Interviewpartnern, der Auswertung von Sekundärliteratur zur politischen und wirtschaftlichen Geschichte Kubas und der Analyse von Sekundärdaten zur landwirtschaftlichen Sektorperformance. Die Schlussfolgerung lautet, dass die vertikale und horizontale Ausbreitung agrarökologischer Praktiken in Kuba Ausdruck teils

widersprüchlicher Anpassungsprozesse war. Diese Anpassungsprozesse entstanden im Konfliktfeld von Prinzipien und Praktiken der Agrarökologie, verschiedenen agrarpolitischen Überzeugungen und Entscheidungen der Regierung zu Themen wie Landnutzung, Märkte und Erzeugerautonomie, sowie den konkreten Verhaltensweisen, die die Regierung von den landwirtschaftlichen Akteuren erwartete. Die beiden letzteren wurden zudem von den politischen Überzeugungen der Regierung (Staatspartei) im Einklang mit der offiziellen sozialistischen Ideologie beeinflusst.

RESUMEN

Tras el colapso del campo socialista a finales de los 80s y comienzo de los 90s, el gobierno cubano fue obligado a abandonar sus planes de desarrollar un sector agrícola moderno, altamente dependiente en el uso intensivo de maquinarias, fertilizantes y pesticidas importados. Un conjunto de circunstancias llevó a que la práctica de agricultura de bajos insumos tomara el nombre de Agroecología que venía utilizándose en contextos latinoamericanos. Este particular contexto motivó dos narrativas, la de la oportunidad, a saber, que Cuba se convirtió en un escenario natural ideal para la conversión a gran escala hacia la agricultura agroecológica, y la narrativa de la victoria de la agricultura alternativa en Cuba (principalmente recreada desde afuera). Sin embargo, el estudio de los procesos de institucionalización del movimiento agroecológico, las políticas agrícolas y los resultados de las prácticas agroecológicas muestran una historia más compleja que lo que estas narrativas reproducen.

La trayectoria específica de desarrollo del movimiento agroecológico en Cuba constituye un caso valioso para el análisis de las influencias del ambiente político en la adopción de prácticas de agricultura alternativa. Algunos expertos pro-agroecológicos sitúan las barreras para la ampliación del movimiento agroecológico en Cuba en la permanencia de mentalidades afines al modelo convencional, situando el debate en la esfera tecnológica. Esta tesis amplía este debate considerando la ampliación del movimiento como un fenómeno también político-económico y trayendo la discusión al campo de la economía política y específicamente al modelo socialista cubano.

¿Cómo se relacionan la formulación de políticas agrícolas y las creencias de políticas del gobierno cubano con los principios y las prácticas agroecológicas? ¿Cómo configuran los procesos (y los límites) de la ampliación (vertical y horizontal) del movimiento agroecológico cubano? Esta tesis evalúa los puntos de coherencia y conflicto entre 1) la historia de la política agrícola de la revolución (es decir, después de 1959) y la práctica de la agroecología en Cuba, y 2) las creencias políticas del gobierno (identificadas en el discurso político) y los principios y prácticas de la agroecología en Cuba. A través del análisis del punto 1), la tesis cuestiona la validez de los supuestos que rodean el triunfo de la agroecología cubana y aporta una visión más matizada sobre los límites de los resultados de la agroecología en la isla. A partir del análisis del punto 2), la tesis hace visibles las antiguas contradicciones entre las creencias políticas del gobierno cubano y los principios esenciales de la agroecología relacionados con la escala, los mercados, la propiedad, así como la autonomía y las actitudes y motivaciones esperadas de los productores.

El estudio se basa en el análisis de 247 documentos oficiales de carácter normativo y político, 322 discursos (de los Castros entre 1984 y 2015), los testimonios de 105 entrevistados, la literatura secundaria sobre la historia política y económica de Cuba y el análisis de datos secundarios relativos al desempeño de la agricultura. La tesis argumenta que los procesos de escalamiento de las prácticas agroecológicas en Cuba han sido una expresión del acomodo (contradictorio, ambivalente) entre los principios y prácticas de la agroecología y las diferentes decisiones políticas del gobierno en materia de agricultura (en asuntos como el uso de la tierra, los mercados, la autonomía de los productores) y los comportamientos que el gobierno espera de los actores agrícolas. Estos dos últimos están influenciados por las convicciones políticas del gobierno (estado-partido) en consonancia con la ideología socialista oficial.

DEDICATION

to the memory of my parents who instilled in me endurance and perseverance
to my father, Victor Figueroa, who taught me to question every story and whose memory and
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List of Abbreviations and Acronyms

Spanish abbreviations and Acronyms¹

	Spanish name	English translation
ACAO	Asociación Cubana de Agricultura Orgánica	Cuban Association of Organic Agriculture
ACDI	Agencia Canadiense para el Desarrollo Internacional	Canadian International Development Agency
ACTAF	Asociación Cubana de Técnicos Agrícolas y Forestales	Cuban Association of Agricultural and Forestry Technicians
ANAP	Asociación Nacional de Agricultores Pequeños	National Association for Small Farmers
ANPP	Asamblea Nacional del Poder Popular	National Assembly of People's Power
ASU	Agricultura Sub-Urbana	Sub-Urban Agriculture
AU	Agricultura Urbana	Urban Agriculture
CCS	Cooperativas de Créditos y Servicios	Credit and Service Cooperatives
CCSF	Cooperativas de Créditos y Servicios Fortalecidas	Credit and Service Strengthened Cooperatives
CEE	Comité Estatal de Estadísticas	State Committee of Statistics
CEAS	Centro de Estudios de Agricultura Sostenible	Center for Sustainable Agriculture Studies
COSUDE	Agencia de Cooperación Suiza para el Desarrollo	Swiss Development Cooperation Agency
CPA	Cooperativas de Producción Agropecuaria	Agriculture and Livestock Production Cooperatives
CREE	Centros de Reproducción de Entomófagos y Entomopatógenos	Entomophogus and Entomopathogen Reproduction Center
CTC	Central de Trabajadores de Cuba	Cuban Workers Union
EPFIH	Estación de Pastos y Forrajes “Indio Hatuey”	Pasture and Forage Station “Indio Hatuey”
GAO	Grupo de Agricultura Orgánica	Organic Agriculture Group
INCA	Instituto Nacional de Ciencias Agropecuarias	National Institute for Agricultural Sciences
INIFAT	Instituto Nacional de Investigaciones Fundamentales de Agricultura Tropical	National Research Institute for Tropical Agriculture
MINAG	Ministerio de la Agricultura	Ministry of Agriculture
ONEI	Oficina Nacional de Estadística e Información	National Statistics and Information Office

¹ Cuban and Spanish-speaking countries' abbreviations have been kept in their Spanish form in order to be more identifiable in the general literature.

PCC	Partido Comunista de Cuba	Cuban Communist Party
PDVSA	Petróleos de Venezuela, S.A.	Petroleum of Venezuela company
PPM	Pan para el Mundo (Spanish acronym for Bröt für die Welt)	Bread for the World
UBPC	Unidad Básica de Producción Cooperativa	Basic Unit of Cooperative Production
UNACH	Universidad Agraria de La Habana	Agrarian University of Havana

Other abbreviations and acronyms

CMEA	Council of Mutual Economic Assistance
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
Hivos	Humanist Institute for Cooperation with Developing Countries
IFOAM	International Foundation for Organic Agriculture
OXFAM	Oxford Committee for Famine Relief
UNDP	United Nations Development Program
USSR	Union of Soviet Socialist Republics or Soviet Union

Stylistic Notes

As Fidel Castro and Raúl Castro are continually referred in the text, only their first names, Fidel and Raúl are mostly used.

When referring to both, Fidel and Raúl, their last name is used in plural: Castros.

Cuban institutions are given in their Spanish form and initials in order to be more recognizable.

Revolution is only written with capital letter when in a quote.

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OPENING THE BOX: INTRODUCTORY REMARKS²

“In Cuba, in the little bodegas where the people go for groceries, beer and gossip, they tell the story of Fidel Castro and the impulsive young lady in New York. Charmed by Mr. Castro’s magnetic presence, his beard, his large and limpid eyes and his ceaseless flow of hoarsely eloquent Spanish, she had, they say, by some means made her way to his room by night. ‘Fidel’, she whispered, gently rousing the sleeping hero, ‘I am eager to serve the revolution. What is it you wish of me?’ Mr. Castro, the story goes, sat up in bed, his whiskers bristling fiercely. ‘Tractors,’ he bellowed. ‘Tractors, seeds and fertilizers.’”

Harold H. Martin 1959 Can Castro Save Cuba? *The Saturday Evening Post*, August 1, 1959, p. 13.

In the 1990s, many Cubans, especially those of us who did not have family abroad (in popular slang, FE for its Spanish acronym *Familia en el Extranjero*, which also means faith) farmed empty pieces of land in our neighborhoods. My father, an academic economist, dusted off knowledge from his family farming background and started growing pumpkins, which grow very easily, along with beans, sweet potatoes, and pigeon peas on improvised temporary fences, dividing neighbors’ farming plots. It is difficult to estimate the yields from his efforts. Certainly, no fertilizers or pesticides were applied. The seeds or sprouts were obtained here and there on the basis of neighborhood solidarity or through saving the seeds of what we ate. Were we practicing agroecology? Depending on the definition (and positionality of the respondent), some will answer affirmatively to this question, even though there was no environmental awareness in the production, nor a holistic understanding of the agroecosystem.

Cuba’s modern agricultural sector, dependent on the intensive use of machinery, fertilizers and pesticides, was hit hard by the drastic end of imports of inputs, spare parts and oil from the socialist bloc, especially the USSR, at the beginning of the 90s. After depleting input reserves, Cuba experienced a peak oil situation and was forced to practice (very) low-input agricultural techniques. The combination of pro-organic academics, an agricultural system in crisis, the spontaneous food production of the population in cities, and the influence of well-known figures of international agroecology (e.g., Miguel Altieri, Peter Rosset, Clara Nicholls) gave rise to what is known as the Cuban agroecological movement.

² In order to reflect the author’s positionality, the first person is used in the introductory and methodology section of the thesis. In the rest of the chapters the third person is used.

Agroecology, understood as a set of agricultural practices³ opposed to high input and chemical-intensive agriculture, started in Cuba out of necessity after the demise of the Soviet bloc and its economic guarantees. In that context, Cuba became an excellent natural experiment for the conversion of an entire nation to agroecological⁴ agriculture and soon after was heralded internationally as a victory of alternative agriculture (Altieri, 2016; Funes-Monzote, 2008; Rosset, 2016; Wright, 2012), and an example to other Latin-American countries (Altieri, 1993; Mier y Terán et al., 2018; Rosset, 2016).

Shortages influenced the initial perspective of the movement and the government's position of allowing more unmonitored practice of subsistence agriculture in the cities and the countryside. The overall perspective was addressed by Altieri in the early years of the movement: "At this point, Cubans are overly emphasizing the input-substitution approach in their conversion process, thereby disregarding the ultimate goal of designing diversified agroecosystems capable of sponsoring their own pest control, soil fertility, and productivity through the complex interactions and synergisms that emerge from mixing crops and incorporating trees and animals in time and space" (Altieri, 1993, p. 91).

Nonetheless, with the relative economic recovery beginning in the second half of the 1990s, the government approach changed and the movement underwent government-led processes of institutionalization. In the following years, between reforms, "openings" and "updated models", the practice of low-input agriculture was, in addition to being an economic option given the remaining limitations of centralized allocation of inputs, a policy choice. Was agroecology ever conceived as a long-term agricultural model or was it only intended to face the shortages of the crisis in the short-term? Did agroecology have a steady place in national agricultural policy? Is long-term agroecology politically viable in Cuba or was it merely contextually viable?

The political and policy environment has proven to play a critical role in the implementation of organic/sustainable agriculture approaches in a variety of contexts (Lee, 2005; Michelsen, 2001b, 2002; Moschitz & Stolze, 2010; Stolze & Lampkin, 2009). Under leftist governments, agroecological movements in Latin America succeeded in promoting pro-agroecological policies in countries such as Brazil and Nicaragua (Giraldo & McCune, 2019; Mier y Terán et al., 2018). Literature on the "agroecology movement" in Cuba predominantly describes a supportive government (Altieri, 2016; Cruz & Sánchez Medina, 2003; Funes, 2002; Nelson, Scott, Cukier, & Galán, 2009; Vázquez, Marzin, & González, 2017). Such narratives are, nonetheless, in my opinion, tinged by a conscious or unconscious process of "selective retelling" (Premat, 2012) that serves personal, academic, or professional objectives⁵ or expressions of self-censorship, specially of Cuban academics.

However, some researchers contrast the supportive government stance by considering resource allocation to conventional agriculture, the lack of an agroecological consciousness among officials in power (Altieri & Funes-Monzote, 2012; Caballero & Valdés Paz, 2010; Vázquez et al., 2017; Wright, 2009, 2012) and farmers (Enríquez, 2003; Funes, 2002; Nelson et al., 2009; Vázquez et al., 2017), and the domestic production and cultivation of GMOs on

³ The literature on agroecology distinguishes three uses of the term: agroecology as a science, as a movement and as a practice (Wesel et al, 2009; Le Coq et al., 2017). Here we refer to the emergence of agroecology as a practice.

⁴ Sometimes organic or green in the literature, meaning the adoption of ecological agricultural practices.

⁵ For example, during interviews, some specialists asked me to handle the opinions expressed with care so as not to affect their future relations with organizations in Cuba.

the island (Altieri & Funes-Monzote, 2012; Rosset, 2016). Although pro-agroecology scientists often complain about the underrepresentation of agroecology in the country's political agenda (expressed in the absence of the word *agroecología* in official policy documents⁶), the discussion on the limitations and obstacles for scaling agroecology in Cuba have occurred mostly as a technological debate.

This thesis aims to broaden this discussion by exploring the government's relationship with the agroecology movement by assessing the points of consistency and conflict between: 1) the history of the agricultural policy of the revolution (i.e., after 1959) and the practice of agroecology in Cuba, and 2) the policy beliefs (typical of the socialist ideology and perceptions of the efficacy of policy instruments) identified in the political discourse and the principles and practices of agroecology in Cuba. Through the analysis of point 1), the thesis questions the validity of the assumptions surrounding the Cuban agroecological triumph and provides a more nuanced view on the limits of the results of agroecology on the island. From the analysis of point 2), the thesis makes visible the long-standing contradictions between the Cuban government's policy beliefs and essential principles of agroecology related to scale, markets, ownership, as well as the autonomy and the expected attitudes and motivations of producers.

The study argues that although the technological debate is important, the processes of scaling agroecology in Cuba cannot be understood without analyzing its political dimension. In this sense, the central objective of this research is to explore the political viability of agroecology in Cuba that emerges from the analysis of points 1) and 2) above. The study was conducted from a historical perspective combining political economy and political science perspectives. The thesis draws from different categorical systems and analytical frameworks, although privileging János Kornai's (1992) understanding of the political economy of the socialist system, Judith Goldstein and Robert O. Keohane's (1993) classification of policy beliefs and their influence on decision-making processes, and Andrew B. Kennedy's (2012) approach on the role of leaders in policy making and using leaders' public communication as a valuable source to identify policy beliefs.

The methodological approach is predominantly qualitative, although some quantitative analysis can be found in the thesis, limited to descriptive statistics, particularly using agricultural data, and quantitative discourse analysis. The first part of the research (point 1) was carried out through the analysis of 247 regulatory and policy-relevant official documents, the testimonies of 105 interviewees (Cuban and foreign experts, pro-agroecology leaders and intellectuals, and Cuban farmers), secondary literature on the political and economic history of Cuba, and the analysis of secondary data concerning agriculture performance.

In order to shed light on the government's policy-beliefs and its levels of coherence with principles and practices of agroecology in Cuba (point 2), I analyze the political discourse in the period 1984-2015, i.e., prior, during, and after the spread of agroecological practices in Cuba. The research combined the use of Political Discourse Analysis (I. Fairclough & Fairclough, 2012) and the Discourse-historical approach (Reisigl & Wodak, 2009). Presidential discourse (589 presidential transcript speeches between 1984 and 2015) is used as a proxy for agricultural policy analysis and also as a public manifestation of government ideology. The discourse analysis focused on how the "desired agriculture" is defined and the argumentative scheme behind it. It also considered how actors, phenomena, events, and processes relevant to agricultural policy and agroecology are represented and qualified in the discourse. From the

⁶ First addressed by agroecologists in interviews conducted by the author in Havana between July and October 2015 and then corroborated in the analysis of policy documents.

discourse analysis, policy beliefs were identified and evaluated in relation to the principles and practices of agroecology in Cuba.

This research's primary purpose is to contribute to a better understanding of the relationship between government (containing the state and the communist party) and agroecology in Cuba by highlighting the different argumentative schemes behind the promotion of desired agricultural systems over time and the long-lasting policy beliefs manifested in the discourse. The resulting work argues that although the government promoted low-input agricultural practices in the context of the crisis, mediated by Fidel's optimism regarding certain projects that were consistent with the classic socialist system, low-input agricultural practices were encouraged from an anti-crisis, short-term approach with a strong productivist emphasis.

The study concludes that the Cuban agroecological movement enjoyed only relative government support. This is evidenced by underlining not merely the absence of market and incentives policies but also demonstrating a declining interest in low input agricultural practices in the political discourse, a focus on short-term yield performance, and the perception of agroecology as a circumstantial necessity in the face of input scarcity. Furthermore, the study shows how some principles and practices of the Cuban agroecological movement clash with long-standing policy beliefs typical of the classical socialist system and reform system (Kornai, 1992), undermining its long-term development in the country and its political viability.

The study does not underestimate the agroecology movement's accomplishments in Cuba (e.g., urban agriculture, the *Movimiento Campesino a Campesino*, or individual pioneers). Nonetheless, it argues that analysis that only focuses on those accomplishments misses the vital dimension of policy-making in a highly centralized political system where initiatives can hardly develop without state support or consent.

Analytical studies on the experiences of Cuba that focus on the non-technological dimension of agroecology are still scarce. This study's contribution should also be considered in a context where the role of the political environment in agricultural policies is hardly, if at all, systematically studied. Methodologically, the study will enrich the growing literature on discourse analysis and policy analysis, and global scientific debates about the relation between political environment, policy beliefs, and the development of non-conventional agriculture.

Structure of the thesis

The thesis is divided into seven chapters plus a final section with conclusions. After this introduction, Chapter 1 addresses the conceptual issues related to the topic of study. First, it briefly describes the development of the term agroecology, as well as its principles, the phases of conversion to agroecological agriculture and the factors that facilitate its dissemination. Second, the role of governments and policies in the implementation of sustainable agricultural perspectives is discussed, with special emphasis on the role of the political environment and policy beliefs in policy choice. This is followed by a discussion of the political economy of socialism and the policy beliefs that characterize it. Special attention is given to János Kornai (1992)'s understanding of the classical socialist system and the reform system, and the ideologies inherent to them. Finally, the scientific questions and theoretical framework of the thesis is defined.

Chapter 2 describes the methodological strategy used to answer the scientific questions, as well as the details of data collection and analysis. The chapter also contains a discussion of the main limitations for scientific research in Cuba faced in the course of the study, the way in

which the main challenges were dealt with, and a reflection on the possible impacts of the positionality of the author on the study.

Chapters 3 and 4 deal with the practices of the agroecology movement and its relationship with the policies and regulations promoted by the Cuban government. Chapter 3 discusses the history of the Cuban agroecological movement, emphasizing its connection with broader domestic political and economic processes. In addition, the regulatory framework in the period 1990-2015 and its potential impact on the movement is analyzed. At the end of the chapter, I reflect on the different perceptions regarding the government's involvement in the agroecological movement and the romanticization of a "green" Cuba. Chapter 4, on the other hand, tests the main assumptions and arguments surrounding the Cuban agroecological triumph. It analyzes the historical development of land use policies, agricultural scale, ownership and autonomy. It also focuses on the policies of agrochemical input allocation and crop prioritization, and makes a comparison, based on official data, of the results of state and non-state agriculture in intentionally selected crops.

Chapters 5, 6 and 7 address and discuss the results of the analysis of the presidential discourse on agriculture in the periods 1984-1988, 1989-1997 and 1998-2015. In each period, the discursive strategies, the resulting policy beliefs and the implications for an agroecological perspective are discussed. This discourse analysis was enriched with historical evidence obtained through literature review, expert interviews and secondary data analysis. Quotations exemplifying the Castros' (Fidel and Raúl) discursive strategies are used to present the results. The quotations were translated by the author and can be found in the original language (Spanish) in Annex 2. In addition to the selected quotations, a set of references in the form of "FC, speech date" or "RC, speech date", indicate the presence of the topic of analysis in other speeches. Further details of the speeches analyzed can be found in Annex 1.

Lastly, Conclusions and Final Remarks summarizes the main findings of the thesis. This section includes a reflection on the pertinence of the theoretical and methodological perspective used in the study and its limitations, as well as recommendations for further research on the subject.

CHAPTER 1. RESEARCH AND THEORIES ON THE STUDY TOPIC

1.1. Introductory remarks

This chapter deals with three essential topics to the theoretical discussion and practical research of the thesis. First, the definition(s) of agroecology and the emergence of the term are addressed. Special emphasis is placed on the principles of agroecology and the drivers of scaling agroecological practices out and up. Preferential attention was given to authors working in the Latin American context because of their proximity and influence on the adoption of agroecological practices in Cuba.

Later in the chapter, the role of public policy and the political environment in the implementation of alternative approaches to agriculture is discussed, as well as the influence of policy beliefs on policy choice and policy outcomes in different contexts, including socialist contexts. The framework for the definition and classification of policy beliefs used in the thesis is derived from this section.

Finally, essential features of the political economy of socialism are addressed in relation to issues such as property, autonomy, and the centralization of power. Special attention is given to the establishment of the hegemonic official ideology, from which a set of policy beliefs characteristic of the official socialist ideology are derived. The presence of these typical socialist policy beliefs serves as a basis for the identification of policy beliefs in the presidential speeches analyzed in the thesis. Resulting from the discussion of these three topics, the research questions and analytical framework can be found at the end of the chapter.

1.2. Understanding Agroecology

Agroecology is a term with multiple uses and meanings constructed from the 1920s onwards (Bellwood-Howard & Ripoll, 2020; Gliessman, 2015; Sanderson-Bellamy & Ioris, 2017; Wezel et al., 2009; Wezel & Soldat, 2009). The most common distinction is to understand agroecology either as a scientific discipline, a set of agricultural practices, or a pro-peasant social movement (Rosset & Altieri, 2017; Wezel et al., 2009; Wezel & Soldat, 2009). Sanderson-Bellamy and Ioris (2017) distinguish between technology-oriented agroecology (generally associated with science) and political agroecology (considered a practice and movement). Sevilla-Guzmán and Woodgate (2013) argue, nevertheless, that agroecology as a science is inseparable from its political and practical content, highlighting its connections with agrarian social thought and movements in opposition to agricultural industrialization.

Uses of the term, however, have evolved in different ways in different geographical and epistemological contexts, also in regard to the evolution of political and scientific agendas-

both global and local. In some countries, such as in Germany, agroecology developed primarily as an area of scientific research. In other countries, for example, in Brazil and Nicaragua, it has been driven by social movements with a greater emancipatory content and struggle for peasant land rights (Nicholls & Altieri, 2018; Wezel et al., 2009). In Cuba, agroecology has been used more as a practice and as a scientific discipline, although it is nominally called the agroecological movement (See Chapter 3).

1.2.1. A brief historical review of the evolution of the term agroecology

First as a scientific discipline, agroecology evolved from the interactions between ecology and agronomy in studies conducted primarily in the USA and Germany between 1920-50, roughly understood as the application of ecology to agriculture (Gliessman, 2015; Wezel et al., 2009; Wezel & Soldat, 2009). With the advancement of the Green Revolution and the development of industrial (conventional) agriculture, two contrary processes occurred in relation to agroecology. On the one hand, agronomy focused increasingly on the technological solutions of the Green Revolution, while, on the other hand, the concern of ecologists about the effects of pollution from the high use of agrochemicals grew (Gliessman, 2015). Epistemologically, agroecology drew from the development of the ecosystem concept in the 50s and especially from the agroecosystem concept in the 70s (Francis et al., 2003; Gliessman, 2015; Wezel et al., 2009).

The use of agroecology as a science grew in the 1970s-80s (Rosset & Altieri, 2017; Wezel et al., 2009). Research conducted in those years on traditional farming systems in tropical and subtropical regions, especially in Central America and Mexico⁷, refined a conceptual framework and the development of holistic methods for the study of agroecosystems, as well as tools for the design and management of agroecosystems to protect natural resources and presenting an alternative to industrial agriculture (Gliessman, 2015; Nicholls & Altieri, 2018; Wezel et al., 2009; Wezel & Soldat, 2009). Those studies highlighted that locally adapted indigenous and peasant farming systems, without depending on modern industrial agricultural inputs, managed to subsist and deal with very different (changing) environments (Rosset & Altieri, 2017). The values of those systems, e.g., resilience, adaptability, resource-saving, self-reliance, and preserving biodiversity, became the inspiration and starting point for agroecologists designing new agroecosystems (Rosset & Altieri, 2017).

Studies on peasant and indigenous communities, in combination with environmental movements, the work of NGOs, and the growing awareness of sustainability issues, favored the spread of agroecology as an agricultural practice and as a social movement (Wezel et al., 2009; Wezel & Soldat, 2009). This process also contributed to the development of agroecology as normative science or science for sustainability (with socio-economic and political concerns) in parallel to the descriptive agroecological science, focused on the issues that gave rise to agroecology as a science in the 1920-50s (Bellwood-Howard & Ripoll, 2020).

⁷ For example, Gliessman, S. R., E. Garcia, and A. Amador. 1981. The ecological basis for the application of traditional agricultural technology in the management of tropical agroecosystems. *Agro- Ecosystems* 7:173–85.; Hart, R. D. 1985. *Conceptos básicos sobre agroecosistemas*. Turrialba, Costa Rica: Centro Agronómico Tropical de investigación y Enseñanza.; Montaldo, P. 1982. *Agroecología del trópico americano*. Turrialba, Costa Rica: Centro Agronómico Tropical de investigación y Enseñanza.; Altieri, M.A. and Trujillo, J. (1987) The agroecology of corn production in Tlaxcala, Mexico. *Human Ecology* 15 (2), 189–220.

In the 1990s, the increase of publications on agroecology⁸, the proliferation of research and academic programs focused on issues of soil sustainability, crop and livestock production, and pest management led to the consolidation of agroecology as a science (Nicholls & Altieri, 2018; Wezel & Soldat, 2009). The contributions of the Spanish Marxist agronomist and sociologist Eduardo Sevilla Guzmán, who in the same period developed a sociological framework to understand agroecology within the process of rural development and sponsored the first doctoral program on agroecology, contributed significantly to the involvement of social scientists in agroecology (Sevilla-Guzmán & Woodgate, 2013; Sevilla Guzmán, 2006).

The rise of environmental movements, rural development projects, the defense of indigenous cultures, the struggles for land rights in the 1990s and 2000s, the economic impacts of corporate monopolies on food production, and especially the global food price crisis in 2008 contributed to broadening the focus of some foundational authors of agroecology towards the food system and its structural problems, and a growing inclination towards a political agroecology (Gliessman, 2015; Sanderson-Bellamy & Ioris, 2017; Wezel et al., 2009; Wezel & Soldat, 2009). The ultimate expression of the politicization of agroecology has come from concepts such as food sovereignty and food justice and from organizations such as La Via Campesina⁹.

The uses of agroecology as a practice, and especially as a social movement, implied a stance against industrial agriculture not only in technological terms, but also in socio-economic and political terms. Agroecology as a practice focused on providing an alternative to industrial agriculture for small and medium food producers, based first on traditional indigenous and peasant practices, and on low-external-input use, environmentally friendly practices, not necessarily based on science (Bellwood-Howard & Ripoll, 2020; Wezel & Soldat, 2009). As a social movement, agroecology focused on issues such as agrarian empowerment, the right to land, the democratization of access to food, and the struggle against the exclusion of peasants from the processes of agricultural modernization (Nicholls & Altieri, 2018; Sanderson-Bellamy & Ioris, 2017). This position comes to reaffirm the linkage of agroecology with peasant agriculture and the assertion that small and medium-scale peasant agriculture can feed the world's population (Altieri, 2000, 2018; Gliessman, 2015; Holt-Giménez, 2001; Rosset & Altieri, 2017).

In recent formulations, associated with political agroecology and with the food system as the unit of analysis, agroecology is defined as “the integrative study of the ecology of the entire food system, encompassing ecological, economic and social dimensions” (Francis et al., 2003, p. 100). This approach stresses that socio-economic factors, and not ecological factors, are the primary factors in determining modern agricultural systems (Francis et al., 2003). Agroecology

⁸ For example, Altieri, M. A. 1987. *Agroecology: The scientific basis of alternative agriculture*. Boulder, CO: Westview Press.; Altieri, M.A., (1995) *Agroecology: The Science of Sustainable Agriculture*. Boulder, CO: Westview Press.; Altieri, M.A. (1999) The ecological role of biodiversity in agroecosystems. *Agriculture, Ecosystems and Environment* 74 (1–3), 19–31.; Carroll, C.R., Vandermeer, J.H. and Rosset, P.M. (1990) *Agroecology*. New York: McGraw-Hill.; Gliessman, S.R. (ed.) (1990) *Agroecology: Researching the Ecological Basis for Sustainable Agriculture*. Ecological Studies Series No. 78. New York: Springer.; Gliessman, S.R. (1997) *Agroecology: Ecological Processes in Sustainable Agriculture*. Boca Raton, Florida: CRC Press.

⁹ La Vía Campesina, founded in 1993, made the promotion of agroecology one of its three main foci: “La Vía Campesina promotes Agroecology as a key form of resistance to an economic system that puts profit before life. It recognizes that small farmers, including peasants, fisher folk, pastoralists, and indigenous people, who make up almost half the world’s people, are capable of producing food for their communities and feeding the world in a sustainable and healthy way” (La Via Campesina, 2016).

applied to food systems pays attention to the efficiency of the food production process from the extraction of natural resources to the consumers' table, thus involving all actors in the system, as well as the total flows of energy and materials and the return of nutrients to the field. This means incorporating analysis tools such as life cycle analysis, energy analysis, environmental footprint calculations, and alternative economic and other valuation schemes (Francis et al., 2003).

1.2.2. Agroecology versus industrial agriculture

Agroecologists consider the technological and economic approach of industrial agriculture (associated with the Green Revolution and also called intensive or conventional, with respect to the agroecosystem and the food system) has negative environmental and socio-economic consequences that make it unsustainable (Altieri, 2000, 2018; Gliessman, 2015; Rosset & Altieri, 2017). They stress that practices associated with industrial agriculture, i.e., intensive tillage, monoculture, irrigation, high use of inorganic fertilizers and chemical pest control, genetic manipulation, factory-farming of animals and top-down research and extension systems produce soil degradation, the overuse of water and resulting damage to hydrological systems, pollution of water reserves, destruction of natural habitats, loss of genetic diversity, production of greenhouse gases, loss of carbon links, and loss of autonomy of producers (Chappel & LaValle, 2009; Funes-Monzote, 2008; Gliessman, 2015). Moreover, as industrial agriculture is based on a high dependence of external inputs and non-renewable resources (e.g., oil), it produces a loss of local control over agricultural production, increasing the vulnerability and risk of food systems (Gliessman, 2015).

Agroecologists claim that the inadequate externalization of the costs of the effects of industrial agriculture, e.g., greenhouse gases, water pollution, biodiversity loss, and wetland disappearance, among others, recently emphasized by ecological economics, has provided a distorted view of the economic viability of this agriculture (Altieri, 2018; Francis et al., 2003; Funes-Monzote, 2008). In contrast, the internalization of the benefits of agroecological agriculture, e.g., energy efficiency, soil conservation, water, biodiversity, waste reuse, rural employment, and peasant empowerment (Chappel & LaValle, 2009; Francis et al., 2003; Funes-Monzote, 2008) allows for economical feasible and sustainable agriculture. Moreover, if the costs of long and inefficient supply chains, i.e., transportation, processing, refrigeration and storage of food (Francis et al., 2003), subsidies and investments in research and development of industrial agriculture products (Altieri, 2018; Sanderson-Bellamy & Ioris, 2017) are considered. In addition, agroecologists stress that agroecological ecosystems are more resilient to the effects of climate change (Altieri, 2018; Gliessman, 2015; Holt-Giménez, 2001; Rosset & Altieri, 2017).

The purpose of maximizing production (translated into yields = tons per hectare) with minimal use of labor due the intensive use of industrial agriculture technologies is considered inadequate from the agroecological perspective. Instead, agroecologists argue that agriculture should optimize yields through high levels of functional biodiversity and human inputs intensive in information (Altieri, 2018; Francis et al., 2003; Gliessman, 2015; Wright, 2005), becoming "process rather than input agriculture", and bringing an increase in total output per hectare (Altieri, 2018).

The positive impacts of agroecologically designed agroecosystems claimed by agroecologists are increased yields (total output per hectare), resource conservation, household and community food security, reduced risks (including farmers' costs and debts), and increased producer autonomy (Altieri, Funes-Monzote, & Petersen, 2011; Nicholls & Altieri, 2018; Rosset & Altieri, 2017). Scientifically demonstrating the superiority of agroecological

agriculture is, nonetheless, challenging. Studies are insufficient and face some limitations, such as a) studies are often based on the results of organic agriculture (and not agroecological) or in a combination of both and, b) agroecological experiences are difficult to compare as they involve very different agroecosystems, and thus, very different combinations of practices and strategies (Sanderson-Bellamy & Ioris, 2017). Altieri (2018) also stresses that since the impacts of agroecological conversion are mostly visible in the long term, longitudinal studies are needed for periods longer than 5 years, extending beyond what science funding systems typically grant.

1.2.3. Definition and principles of agroecology

Agroecology, as seen above, is not a homogeneous field and is therefore difficult to conceptualize. Depending on the author and his or her epistemological stance, agroecology can be defined as the focused technical application of the concepts of ecology to agriculture on the plot, as a transdisciplinary approach to the analysis of the ecology of local/regional agroecosystems and food systems, or as a banner of political struggle of peasant movements around the world for the transformation of the global food system. Depending on the predominant agroecology approach, its unit of analysis varies between the plot (field scale), the agroecosystem as the farm, the agroecosystem as community or locality, or the local or global food system (Wezel et al., 2009; Wezel & Soldat, 2009). Considering the frameworks in which agroecology was developed in Cuba (Chapter 3), this research focusses on the formulations associated with the plot and the agroecosystem and the uses of the term as a science and practice.

Miguel A. Altieri (2000, 2015, 2016, 2018) and Gliessman (Gliessman, 1998, 2001, 2015) defined agroecology as the science of applying ecological concepts and principles to the design and management of sustainable agroecosystems (Altieri, 2000; Gliessman, 1998). Sustainable agroecosystems are understood as those with minimal dependence on agrochemicals and external energy inputs, where ecological interactions and synergies between system components provide the mechanisms that support soil fertility and system productivity (Altieri, 2000).

Epistemologically, agroecology is characterized by the holistic, inter-, multi-, and transdisciplinary study of agroecosystems (jointly natural and social sciences and traditional farmers' knowledge), considering both ecological and human (socio-economic, political and cultural) components through participatory research in farmers' fields (Rosset & Altieri, 2017). The holistic understanding of agroecosystems (complex systems) allows the systems to be designed and managed in a way that a) increases system sustainability, b) improves production, c) reduces the use of external inputs, and d) minimizes negative environmental and social impacts (Altieri, 2000).

Agroecology is based on the application of a set of principles that materializes in specific practices tailored to the characteristics of the agroecosystems, and the socio-economic needs and knowledge of farmers (Altieri & Nicholls, 2017). As a result, agroecosystems should be productive while conserving natural resources, culturally sensitive, socially just and economically viable (Altieri, 2000). The 5 principles are listed below (Altieri, 2000, 2016):

1. Enhance biomass recycling, optimize nutrient availability and balance nutrient flow.
2. To ensure favorable soil conditions for plant growth, in particular by managing organic matter and enhancing soil biotic activity.

3. Minimize losses due to solar radiation, air and water flows through microclimate management, water harvesting and soil management through increased soil cover.
4. Diversification of species and agroecosystem genetics over time (e.g., crop rotation) and space (e.g., polycultures, agroforestry systems, animal husbandry).
5. Enhance beneficial biological interactions and synergies among agro-biodiversity components, resulting in the promotion of key ecological processes and services.

These principles have been translated into practices that centrally focus on restoring agroecosystem diversity because of its ecological role (Rosset and Altieri, 2017). Simultaneously, the practices aim at conserving soil and water resources, decreasing risks and increasing producer resilience. Common practices and their benefits to the system, based on the work of Altieri (2000, 2018) Gliessman (2015), and Rosset and Altieri (2017), are summarized in Table 1.1.

Table 1.1: Agroecological practices and benefits to the agroecosystem

Practices	Benefits
Crop rotation	Provides nutrients to crops and breaks the life cycles of various insect pests, diseases and weed life cycles Enhances crop yield stability
Polycultures/intercropping (complex cropping systems where two or more species are planted with spatial proximity)	Gives rise to competition or complementation, thus improving yields Associated with resistance to herbivory, since in diverse systems there is a greater abundance and diversity of natural enemies of pest insects that keep populations of individual herbivorous species in check Reduces the risk to farmers, especially in marginal areas with more unpredictable environmental conditions - if one crop does not do well, income from other crops can compensate Provides a broad variety of products and therefore food sovereignty and livelihood security
Agroforestry systems (agricultural system in which trees are grown alongside crops and animals)	Enhances complementary relationships between components, increasing number of uses of the agroecosystem Trees minimize nutrient leaching and soil erosion and add organic matter Increases biomass, nutrients, and shade for the livestock
Cover crops and mulching (use of pure or mixed stands of leguminous or other annual plant species under fruit trees/ flattening cover crop mixtures on the soil surface)	Improves soil fertility, increases biological control of pests and modifies orchard microclimate Soil and water conservation
Integration of crops and livestock	High biomass production, manure for fertilizing the soil and optimal nutrient recycling (crop residues are feed for livestock)

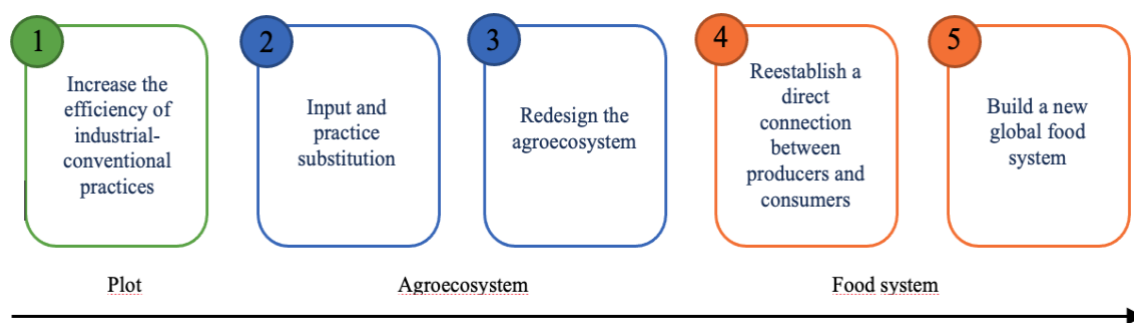
	Can provide draft power
Use of biological pest control agents (introduction and conservation of natural enemies and antagonists)	Regulates pests without the use of chemical inputs, through the beneficial interactions allowed by the coexistence of biological agents in the system
Selection and breeding of local seed varieties	Protects genetic diversity Promotes the grow of populations of variable and adapted species Heightens resistance to diseases and other biotic stresses
Minimal or zero tillage (maintaining plant cover)	Soil and water conservation
Addition of organic matter (manure, compost, promotion of soil biotic activity)	Soil conservation Soil diversity provides a number of ecological services, such as nutrient recycling, detoxification of harmful chemicals, and regulation of plant growth.

Elaborated by the author. Sources: Altieri, 2000, Gliessman, 2015, Rosset and Altieri, 2017.

1.2.4. Agroecological conversion

Conversion to agroecology from industrial agriculture has been described as taking between three to five years (Altieri, 2000, 2018; Gliessman, 2015). Figure 1.1 shows the phases for agroecological conversion. The first three phases are common in the work of Altieri (2000, 2018) and Gliessman (Gliessman, 2015). The last two, however, show the radicalization of the agroecological approach in recent years in the work of Gliessman (2015) and others in political agroecology, e.g., Francis et al. (2003), Rosset and Altieri (2017), and Giraldo and McCune (2019).

Figure 1.1: Phases of conversion to agroecology



Elaborated by the author. Sources: Altieri, 2000, Gliessman, 2015.

In the first phase, the use of conventional inputs is optimized with the aim of reducing their negative impacts (Gliessman, 2015). Although in this stage producers do not eliminate their dependence on external inputs, producer awareness of the possibility of reducing costs and negative environmental impacts grows through the incorporation of practices such as optimal

crop spacing and density, improved machinery, pest monitoring for improved pesticide application, improved timing of operations, and precision farming for optimal fertilizer and water placement (Gliessman, 2015).

In the second phase, conventional practices are replaced by alternative agroecological practices such as those outlined in Table 1.1. Although visible changes occur at the farm level in this stage, agroecologists insist that the structure of the agroecosystem is not radically altered and therefore many of the problems associated with industrial agriculture persist (Altieri, 2018; Gliessman, 2015). Organic agriculture is often used to explain this point. In organic agriculture, synthetic chemical inputs are replaced by organic, non-toxic inputs. However, this change does not necessarily imply an alteration of the monoculture structure, nor the elimination of external dependence on inputs, as organic farmers depend on off-farm industrial production of inputs, usually approved by certification schemes.

It is in the third phase that agroecologists consider that, through the redesign of the agroecosystem, changes occur that indicate the emergence of a new set of ecological processes that provide sustainability to the system. In this stage, the structural and functional problems of the system are analyzed, and the agroecological principles (outlined above) are put into practice. As a result, the agroecosystem becomes less dependent on external inputs and relies instead on agroecological design and management, generating increases in production output (Rosset & Altieri, 2017).

The fourth and fifth phases aim at transformation of food systems. The fourth stage focuses on local food systems and the creation of alternative food networks. During this phase, more direct relations between producers and consumers should be developed, where consumer awareness plays a role in the promotion of local food production and the creation of alternative food networks (Gliessman, 2015). The fifth stage addresses the global food system and broader political and social issues such as equity, participation, justice, sustainability, and conservation of the earth's natural resources (Gliessman, 2015).

The progression through the stages also implies a broadening of the unit of analysis (from plot to food system) and action focus (shown at the bottom of Figure 1.1). This evolution in the unit of analysis and action reflects the epistemological evolution of the term agroecology, described in previous sections.

1.2.5. Driving forces for scaling agroecology out and up

Agroecologists have used different horizontal social methodologies based on peasant and farmer protagonism to scale agroecology out (i.e., to increase the number of practitioners and the geographical extension of practices). Due to its connection with indigenous, family, and peasant agriculture suffering from exclusion from dominant agricultural modernization processes, agroecology, like other rural social movements, drew from the critical pedagogy of Paulo Freire ("Pedagogy of the Oppressed", first published in the late 1960s). Freire's pedagogy is based on horizontal dialogue, without imposition of the educator, where the educated play an active role in the learning process and in the transformation of their reality, so that an emancipatory, liberating action take place - the pedagogy of liberation (Freire, 2012).

One of the methods that has been extensively used for transferring sustainable technologies and innovations through horizontal learning networks is the *campesino-a-campesino* (farmer-to-farmer) method. This is a decentralized, farmer-led and participatory method for exchanging experiences and knowledge among farmers that developed in Central America and then spread throughout Latin America (Holt-Giménez, 2001; Mier y Terán et al., 2018). Another method used has been the establishment of demonstration farms called *faros agroecológicos*

(agroecological lighthouses), where traditional knowledge and scientific knowledge are combined to create innovatively designed farms, adapted to local circumstances and which can serve as demonstration modules for other farmers (Nicholls & Altieri, 2018). They have also made use of peasant agroecology schools where experiences are exchanged among farmers and their empowerment is promoted (Rosset & Altieri, 2017).

Nicholls and Altieri (2018) consider that it is the translation of agroecological principles into practices that improves production and system resilience through soil, water and biodiversity management strategies, the key element for scaling out agroecology. If the scaling out of the use of agroecological principles, through training methods such as those mentioned above, is accompanied by facilitating policies, agroecology can reach territorial levels (Nicholls & Altieri, 2018).

Among the policies that favor the development of agroecology, two fundamental groups are found in the literature: 1) policies that favor family, indigenous, and peasant agriculture and 2) policies that focus on agroecology specifically. In the first group are policies with respect to land, such as agrarian reforms, policies to confront land grabbing, or others that have a positive impact on the stability of land tenure by peasants (Giraldo & McCune, 2019; Rosset & Altieri, 2017; Wright, 2005). There are also policies referring to the protection of peasant (traditional, indigenous) agriculture against agribusiness monopolies and cheap food imports, providing a stable market space for their products (Parmentier, 2014). Likewise, there is a set of microeconomic policies that plays an important role in the stability and improvement of peasant economies, e.g., policies that secure appropriate credit and infrastructure and policies that promote fair pricing both for consumers and producers (Rosset & Altieri, 2017; Wright, 2005).

Specific policies that facilitate the spreading out of agroecology include those that favor research and education in agroecology, agroecological extension systems and agroecological consumer education (Giraldo & McCune, 2019; Holt-Giménez, 2001; Nicholls & Altieri, 2018; Sanderson-Bellamy & Ioris, 2017; Wright, 2005). There are also those focused on eliminating or minimizing the use of conventional inputs, e.g., the prohibition of the use of certain chemical inputs, the cultivation of GMOs, or the elimination of subsidies for these inputs. Also, there are other policies such as the promotion of urban and organic agriculture, support for local seed systems, and the promotion of local to regional markets and procurement systems for agroecological products (Giraldo & McCune, 2019; Nicholls & Altieri, 2018; Rosset & Altieri, 2017; Wright, 2005). Additionally, environmental policies, such as promoting soil protection, and ecological payments, tend to positively affect agroecology implementation (Sabourin, Patrouilleau, Le Coq, Vázquez, & Niederle, 2017).

While there is a resounding consensus that the use of horizontal social process methodologies and pedagogy, peasant protagonism, and agroecological farming practices with proven results play an essential role in the process of scaling out (or horizontal scaling) agroecology (Gliessman, 2015; Nicholls & Altieri, 2018; Rosset & Altieri, 2017), the appropriate means for the scaling up of agroecology, such as the aforementioned policies, are more contested (Giraldo & McCune, 2019; Rosset & Altieri, 2017; Sevilla-Guzmán & Woodgate, 2013). Processes to scale up agroecology are understood as institutionalization processes in which public policies and organizations support the scaling out of agroecology (political scaling up) and local organizations or grassroots organization increase their organizational strength and improve the effectiveness, efficiency and sustainability of the process (organizational scaling up) (Rosset & Altieri, 2017).

Although agroecologists, with different degrees of emphasis, state that amplifying agroecology needs an enabling environment characterized by favorable and complementary public policies, an adequate economic environment, political will (e.g., right to adequate food), and backed by enabling public policy environment (Nicholls & Altieri, 2018; Parmentier, 2014; Rosset & Altieri, 2017; Sanderson-Bellamy & Ioris, 2017), some authors highlight that certain policies can be counterproductive. Such is the case, for example, when improved access to credit translates into increasing purchase of conventional inputs, when income obtained through subsidies or projects creates dependencies and other undesired effects such as the emergence of inequalities, as well as the demobilizing impact of being absorbed by the state institutional agendas (Giraldo & McCune, 2019; Mier y Terán et al., 2018; Nicholls & Altieri, 2018; Sanderson-Bellamy & Ioris, 2017).

These arguments have also been raised by (non-conventional) organic agriculture advocates (Michelsen, 2002; Moschitz & Stolze, 2009; Nelson et al., 2009; Offermann, Nieberg, & Zander, 2009). Doubts about the possible impacts of government regulation of a movement with social roots (Stolze & Lampkin, 2009) and the possible dependence on state financial support (Offermann et al., 2009) are two of the most debated issues. In contexts where organic agriculture is regulated and controlled by state standards and certifications, the defining power of organic agriculture is increasingly a task for the state and not for farmer groups or non-governmental organizations who apply and may have a sense of ownership over this form of agriculture (Stolze & Lampkin, 2009). Some authors consider this a process contrary to the origin of the organic movement with high risk of leading to a conventionalization of it (Stolze & Lampkin, 2009) and its dependence on state policies (Offermann et al., 2009).

Specifically, the dependence on financial support has been widely analyzed in terms of a) negative impacts on the market and prices, b) distortions in the cost structure of farms, c) impacts on the efficiency of resource use and d) speed of reaction to changes (Offermann et al., 2009). Although it is widely accepted that financial support has played a fundamental role in the expansion of organic agriculture (Offermann et al., 2009), these problems raise doubts about the security of its long-term economical sustainability. Offermann et al. (2009) find different levels of vulnerability of organic farms in relation to financial support in the European context. Interestingly, their study also shows that large differences in financial support do not greatly change the interest in organic agriculture since there are other financial support policies (e.g., general environmental policies and environmental services payments) from which organic farms can benefit in the absence of specific support for organic agriculture.

Agroecologists have gone further, highlighting the recent setbacks experienced in agroecology-friendly policies in Latin America due to the rise of right-wing governments (Brazil as an emblematic case) as evidence that agroecological movements should more critically consider their links with the state (Giraldo & McCune, 2019). Agroecologists argue that Latin American leftist governments (late 1990s - early 2010s), which are credited with the greatest advances in establishing agroecology-friendly policies (see Chapter 3, section 3.2), failed to definitively break with extractivist structures and the power of transnational agribusiness, allowing only a limited, marginal space for agroecological alternatives (Giraldo & McCune, 2019; Mier y Terán et al., 2018; Rosset & Altieri, 2017). These analyses either exempt Cuba or situate it as the paradigmatic example where the leftist government sustains an agroecological policy and is freed from the influences of transnational agribusiness. They also claim that the combination of agroecology with organic agriculture in many Latin American regulations has favored the assimilation of an input substitution approach, typical of stage 2 agroecological conversion, not leading to the redesigning of the agroecosystem (Giraldo & McCune, 2019; Rosset & Altieri, 2017).

This practical experience has revealed, on the one hand, that the rhythms of political governments, because of their short-term nature, are not consistent with the rhythms of the transition to agroecological systems of agriculture and that agroecological achievements are vulnerable to political regimes (Giraldo & McCune, 2019; Rosset & Altieri, 2017). On the other hand, it has emphasized the structural character of the barriers facing agroecological implementation (i.e., economic and political control of food systems, seeds, technologies, research agendas, land) and the necessity of the (food) systems approach (Giraldo & McCune, 2019; Gliessman, 2015; Nicholls & Altieri, 2018; Rosset & Altieri, 2017; Sanderson-Bellamy & Ioris, 2017).

This general positioning has focused attention on the value of organizational scaling up and conducting politics with a bottom-up approach, without a state-centric emphasis. Agroecologists assert that it is the organization of the social movement (i.e., the degree of organization), and the collective construction of self-determination and autonomy of peasant organizations that are the key factors for scaling up agroecology (Giraldo & McCune, 2019; Mier y Terán et al., 2018; Rosset & Altieri, 2017). The material, symbolic and discursive action of these organizations has the capacity, being interconnected with different scales of the food system (regional, national, transnational), to impact and transform the system (Giraldo & McCune, 2019; Sanderson-Bellamy & Ioris, 2017). Associated with this perspective are objectives such as the reorientation of food value chains through the implementation of alternative food networks and building new rural-urban links (Giraldo & McCune, 2019; Sanderson-Bellamy & Ioris, 2017). For the action of these organizations to be effective, Rosset and Altieri (2017, pp. 111–114) and Mier y Terán et al. (2018) point out the need to develop and use a motivating and mobilizing discourse that makes people actually want to transform their farms and take advantage of political opportunities, external allies, charismatic leaders and local champions (government officials, public figures, artists or religious figures).

Finally, agroecologists argue that agroecology does not constitute one more method or a complementary strategy for agriculture, but the answer to the problems of the global food system (Rosset & Altieri, 2017; Sevilla-Guzmán & Woodgate, 2013). This approach implies that not only food producers, but all actors in the food system (economic actors, politicians, civil society) must participate in the implementation of a transition towards agroecological designs, ultimately implying a change of philosophy and way of life at the global level (Rosset & Altieri, 2017). It also states that agroecology is incompatible with the application of other agricultural approaches and perspectives such as the application of GMOs and other forms of conventional or ecological agriculture and should not be confused or co-opted by new labels such as “climate smart agriculture”, “sustainable intensification”, “ecological intensification” or “organic agriculture” (Altieri, 2015; Giraldo & McCune, 2019; Rosset & Altieri, 2017).

1.3. The role of governments in implementing sustainable agriculture approaches

Despite the radical position of some Latin American agroecologists with respect to the role of the state and public policies in the implementation of agroecological strategies, government support, translated into policy, is recognized as playing a fundamental role in the adoption of sustainable agricultural practices¹⁰ and in translating the benefits of such agriculture into rural development (Lee, 2005). Scientific literature provides evidence for conditions for the spread

¹⁰ Sustainable agriculture is understood here as resource conserving, environmentally non-degrading, technically appropriate, and economically and socially acceptable, thus encompassing related concepts such as alternative, ecological, agroecological, low-input, biological, organic, and conservation agriculture.

of sustainable agriculture, including an enabling policy environment, supportive government agencies of local sustainable agriculture projects and initiatives, investment in infrastructure for markets, transport and communications, the development of markets for sustainable agricultural produce, and increasing social capital within rural communities (Lee, 2005; Nelson et al., 2009; Pretty & Hine, 2001). Other categories such as policy beliefs, ideologies, and governmental orientation (i.e., right, left) have been identified as important variables influencing the implementation and development of alternative agriculture (Birner & Resnick, 2010; Daugbjerg & Swinbank, 2012; Moschitz & Stolze, 2009; Nelson et al., 2009; Pretty & Hine, 2001).

1.3.1. The role of policies and the political environment in promoting alternative agriculture

Food policy, including agricultural policies, are plans or actions consisting in the setting of goals for the food system or its parts (natural resources, production, technology, processing, marketing, food consumption and safety, nutrition) and the determining of plans to achieve these goals (Pinstrup-Andersen & Watson II, 2011). Public food policies emerge from a complex interaction of stakeholder groups and different government agents (Pinstrup-Andersen & Watson II, 2011) and provide a framework (legal framework and institutional environment) that constrains or supports the role played by institutions and organizations (Lovendal & Knowles, 2006). The institutional and organizational environment influences, for example, access to assets (e.g., technologies, inputs, services), their use and the expected returns (Binswanger & Deininger, 1997; Daugbjerg & Swinbank, 2012; Lovendal & Knowles, 2006). It also affects the actions that can be legitimately undertaken, i.e., the interactions between organizations and institutions that can be performed, which translates into their real power to exert influence in decision-making processes.

Governments also have a leading responsibility for promoting rural development, securing rights to land and water resources, and promoting and diffusing appropriate agricultural technologies. Some of the most important policy concerns are funding and conducting agricultural research, investing in rural public education, improving access to information and knowledge (research results, best management practices, experiences of other farmers), improving the integration of applied research, extension and outreach programs, improving access to technological options through diffusion of new technologies, credit programs, institutional arrangements, extension work and monitoring technical change impacts (Lee, 2005; Timmer, Falcon, & Pearson, 1983). An opportune public agricultural science and technology policy can stimulate national agricultural productivity. Such policies comprise structures and processes for specific purposes: a) setting priorities, b) specifying agendas, c) financing, organizing and distributing technologies, and d) monitoring, evaluating and assessing impacts of agriculture research, extension, education and technology transfer (Mugunieri, Omamo, & Obare, 2011).

Relevant European-based literature recognizes three types of policy instruments for the support of organic agriculture, namely legal, financial, and communication¹¹ (Michelsen, 2002; Moschitz & Stolze, 2010; Stolze & Lampkin, 2009). Legal (or regulatory) instruments are based on the authority of the state to regulate the production, labelling and certification of organic products. Financial instruments, on the other hand, constitute economic incentives or

¹¹ Since the first half of the 1990s, the European Union has financially supported the conversion and maintenance of organic agriculture and more recently (2003) introduced “direct payments” to organic farms relative to farm area. Payments vary in depending on specific land use and state.

disincentives (subsidies or taxes) e.g., payments for conversion support or payments for the maintenance of organic production. Finally, communication policies are aimed at promoting information, research, training and advice (Michelsen, 2002; Stolze and Lampkin, 2009; Moschitz and Stolze, 2010). Michelsen (2001b) found that both the introduction of certification and production standards, and public financial support to farmers, positively impacted the growth of the organic sector in Europe, although only the former had an impact on accelerating the rate of farmers' conversion to organic agriculture.

As previously indicated, some policies can have an ambivalent impact or disincentivize alternative agriculture practice (Lee, 2005; Rosset & Altieri, 2017). As agricultural policies that subsidize output prices can increase adoption incentives, input subsidies for, e.g., the use of mineral fertilizers, create significant disincentives for sustainable agriculture and natural resource management adoption (Lee, 2005). Labor market policies and improved nonfarm employment opportunities can both generate liquidity for on-farm investments or draw labor away from agricultural use (Lee, 2005).

However, pro-alternative agriculture policy-making has been a field of contested negotiation among different power groups. Major actors and stakeholder groups play a crucial role in agricultural policy negotiations: government policy-makers (not only agriculture ministries, but health, commerce, trade, environment, and foreign affairs ministries); civil society (consumers, social movements); farmers and farm laborers (producers); and international organizations and donors. These agents have specific objectives based on, inter alia, self-interests, political power, ideology, perceptions of risks and their impacts, and resources (Daugbjerg & Swinbank, 2012; Lovendal & Knowles, 2006).

Alternative agriculture, in any of its expressions (organic agriculture, agroecology, sustainable agriculture, etc.) has generally been promoted by social movements, NGOs, or civil society demands opposed to the Green Revolution or industrial agriculture (Le Coq, Sachet, Vázquez, Schmitt, & Sabourin, 2017; Lee, 2005; Michelsen, 2001a; Moschitz & Stolze, 2009; Offermann et al., 2009). Studies on the scaling up of different expressions of alternative agriculture have stressed this confrontational aspect, namely alternative agriculture vs. mainstream (conventional, industrial) agriculture. Studies on the scaling up of organic agriculture in Europe clearly show this, where pro-organic agriculture institutions and policy networks are in conflict (at different levels) with state mainstream agriculture policy networks and institutions.

Michelsen (2002) distinguished three main types¹² of institutional interrelationships between organic farming and general agricultural institutions in Europe: 1) pure-cooperation, 2) creative-conflict, and 3) pure-competition. Following Michelsen (2002), pure-cooperation occurs when organizations representing organic agriculture and general agricultural institutions collaborate in a comprehensive and all-encompassing manner, making the demarcation between these entities and therefore organic agriculture organizations themselves virtually unnecessary. Under pure-cooperation, criticism of mainstream agriculture is avoided or moderated since representatives of organic agriculture are part of mainstream agricultural institutions. Pure-cooperation does not lead to the scaling out of organic agriculture unless mainstream agricultural institutions perceive it as the appropriate agricultural policy for all domestic agriculture (Michelsen, 2002).

In the creative-conflict interrelationship, pro-organic agriculture and general agriculture organizations collaborate in some areas (shared interests, e.g., promoting sustainable and

¹² In practice, elements of the three types can be mixed depending on specific national contexts.

environmentally friendly agriculture) and compete in others (Michelsen, 2002). In this context, organic agriculture organizations play a role in promoting organic agriculture and keeping relevant issues on political agendas. Finally, pure-competition is characterized by the absence or scarcity of exchange between organic farming organizations and those of mainstream agriculture (Michelsen, 2002). The organizations are perceived as opponents in agricultural policy, food market space and public opinion. This type of relation occurs if organic farming organizations are strong enough to confront those of conventional agriculture. If this is not the case, they are bypassed by the mainstream agriculture organizations, hindering the scaling of organic agriculture. In the opinion of Michelsen (2002), only the creative-conflict type promotes the expansion of organic agriculture and does not damage its identity.

Several factors have been identified that affect the ability of pro-organic farming groups to act on policy. Elements of the national context that have been identified as factors affecting the impact of pro-organic farming groups (or policy networks) on agricultural policy-making include the level of socio-economic development and the political environment, characterized by different levels of strength and dominance of the state (expressed in, e.g., degree of centralization), state actors' interests and preferences for particular policies, the degree of stability of state institutions, the state's levels of sympathy with debate and political-learning processes (e.g., existence of forums), and the type or interplay between pro-organic groups and state institutions (Lynggaard, 2001; Michelsen, 2002; Moschitz & Stolze, 2009, 2010). Political environments can be affected by externally created perturbances such as international economic crises or world policy debates. Additionally, the resources available and the cultures and ideologies regarding political action shape the way organic groups participate in policy networks (Moschitz & Stolze, 2009, 2010).

Stolze and Lampkin (2009) found that the distribution of power between pro-organic agriculture organizations and agricultural ministries is influenced by state involvement and by the resources available to organic farming policy actors. They concluded that in European countries, the political environment is the main factor affecting size and density of organic farming policy networks (Stolze & Lampkin, 2009). Moschitz and Stolze (2010)'s comparison of two different experiences of organic policy implementation (both ex-socialist countries- Czech Republic and Poland)¹³ shows how in political environments where the state acts independently from social organizations (i.e., having the power to decide whether and whom to consult) and policy choice reflects the state preference, organic interest groups have not succeeded in establishing a clear position vis-à-vis the state bodies. Contrarily, organic interests groups have more success in environments with organic farming policy networks in which farming policy is discussed between the government and major organic farming organizations (Moschitz and Stolze, 2010). In brief, when organic farming policy is state driven, organic farming policies depend on whether organic farming is a priority (or not) in the political agenda. Birner and Resnick (2010) describe how authoritarian regimes enjoy a considerable degree of autonomy from societal pressures, which becomes an enabling feature for countries like China and Indonesia to launch Green Revolutions.

¹³ Moschitz and Stolze (2009, 2010) include ex-socialist European countries, such as Poland, Czech Republic, Estonia, Hungary, Slovenia, where previous regimes did not allow independent interest groups (as organic farming groups) to participate in policy-making. Mostly the cases of these ex-socialist countries contrast with other European countries such as Austria, Germany, Denmark, and Switzerland.

1.3.2. Policy beliefs and policy choice

The role of ideas (ideologies, paradigms, beliefs) had received limited attention in the analysis of agricultural policy changes, especially in the case of quantitative political economy models (Binswanger & Deininger, 1997; Birner & Resnick, 2010; Mockshell & Birner, 2015). The longer history of qualitative studies, however, indicates the fundamental role of ideas in the explanation of policy outcomes, both for foreign policy (Blum, 1993; Goldstein & Keohane, 1993b; Kennedy, 2012) and for agricultural policy (Birner, Gupta, & Sharma, 2011; Birner & Resnick, 2010; Halpern, 1993; Krueger, 1996).

Some of the most relevant studies connecting ideas to policy outcomes in the field of agricultural policy-making are those of Anne O. Krueger (1996) and Regina Birner (Birner et al., 2011; Birner & Resnick, 2010; Mockshell & Birner, 2015). Krueger (1996) shows how “the ideology of industrialization” (i.e., development and economic growth is only achievable through industrialization) was one of the most critical drivers of the agricultural pricing policies until the 80s that negatively affected the development of agriculture in developing countries. The same idea can be found in Halpern (1993) when addressing the influence of Stalinist political economy (including rapid industrialization by seeking to eliminate peasant agriculture) in China and Yugoslavia’s policy-making (countries not especially dependent on the USSR and therefore less susceptible to coercion). Another study on the influence of all-encompassing sets of ideas on agricultural policy-outcomes is Birner et al. (2011). They describe how the confrontation between the free-market paradigm and the welfare state paradigm, along with interest groups and electoral politics, shaped reforms in fertilizer and electricity supply policies in India.

In a later study, Mockshell and Birner (2015) indicate that different policy beliefs regarding policy instruments and their effects influenced agricultural policy choices in Africa. Considering policy belief systems as including value priorities, perceptions of important relationships, perception of world states, and the efficacy of policy instruments, Mockshell and Birner (2015) found that noticeable divergent perceptions regarding the right way to develop small-scale agriculture between domestic policy makers and donors in Ghana and Uganda were impacting agricultural policy making. Similarly, state actors’ preferences for particular policies has been identified as an influential factor on the impact of pro-organic farming groups and networks on agricultural policy-making in Europe (Moschitz & Stolze, 2009, 2010).

Birner (Birner et al., 2011; Mockshell & Birner, 2015)’s studies draw from Sabatier (1993)’s advocacy coalition framework. Sabatier (1993)’s framework states that individuals belonging to different groups (organizations, social classes) share different beliefs. These beliefs can be classified into core-beliefs or secondary-beliefs. Core-beliefs are resistant to change while secondary-beliefs can change in processes of ‘policy-oriented learning’ that are visible only in periods longer than a decade. However, Sabatier (1993) pointed out that when the interrelations between advocacy-coalitions (in this case, between pro-alternative agriculture groups and pro-conventional agriculture groups, e.g., governments, state institutions, ministries) is characterized by domination and not by the exchange of arguments and beliefs, external shocks (such as economic or ecological crises) have a greater chance of provoking policy changes.

Blum (1993)’s research on the Soviet foreign policy belief system also highlights the stability of core beliefs and addresses the factors driving changes or continuity in policy beliefs. For Blum (1993), beliefs are a key intervening variable shaping policy since beliefs define situations and the range of politically legitimate positions and priorities. Blum’s (1993) belief system is composed of three hierarchical levels of beliefs that serve as a guide for perceiving

and acting in political environments. The first is the core-level, which consists of philosophical beliefs and basic values and assumptions that serve as an umbrella for the other levels in the belief system. Intermediate beliefs constitute conceptual generalizations that provide normative direction as well as additional analytical concepts. Finally, peripheral beliefs detail tactical information relevant to the policy world and both these and intermediate beliefs are derived from core beliefs (Blum, 1993). Crucially, the stability of the belief system places limits on the options available to policy-makers and explains why policies that bring long-lasting negative outcomes remain in place for long periods (Blum, 1993). Blum (1993) specifically shows how the prevailing set of Stalinist beliefs (after Stalin's death in 1953) constrained the policy agenda and scope of debate in the USSR and placed restrictions on the range of dissent within the elite so that discrepancies could not challenge the political and ideological coherence of the prevailing worldview. The stability of the belief system managed to insulate policy from pressure to change, remaining stable from Nikita Khrushchev's government (Party leader after Stalin's death) to Mikhail Gorbachev (Party leader between 1985-1991).

Blum (1993) argues that the continuity and change of Soviet foreign policy, using the belief system model, can be explained through the interaction of three factors: 1) policy outcomes, 2) the structure of the belief system (core, intermediate and peripheral) and 3) political opportunities. Policy outcomes either reaffirm policy beliefs or negate them. However, belief systems are stable and changes in peripheral (more frequent) beliefs do not necessarily lead to changes at the intermediate and core levels, which imply higher political costs. Even so, political opportunities such as the emergence of new leaders or generational turnover, which imply a reassessment of the policy, can facilitate changes in the belief system with political implications.

The studies edited by Goldstein and Keohane (1993b) in *Ideas and Foreign Policy. Beliefs, Institutions, and Political Change*, show how ideas influence (foreign) policy outcomes in Western Europe, the US, and socialist economies. Like Blum (1993), Goldstein and Keohane (1993a), argue that beliefs influence the shaping of policy agendas and limit the number of alternatives for policy implementation. They outline three types of beliefs, i.e., worldviews, principled, and causal beliefs, as being important determinants of government policy. Goldstein and Keohane (1993a)'s belief system can be summarized as following:

- 1) Worldviews include ideas regarding cosmology, ontology and ethics. They are embedded in the symbolism of a culture and entwined with people's conception of their identities. They affect modes of thought and discourse and evoke deep emotions and loyalties. Specific studies on the role of worldviews in European policy making are those of Ferejohn (1993) and Krasner (1993).
- 2) Principled beliefs are normative ideas distinguishing right from wrong, fair from unfair. They are justified by larger worldviews, and mediate between these worldviews and particular policy constructions, translating doctrines and paradigms into guidance to action. Principled ideas can shift the focus of attention to moral issues and away from purely instrumental ones by providing compelling ethical or moral motivations for action. The impact of principle beliefs is addressed in Jackson (1993), Sikkink (1993), Garret and Weingast (1993) and Katzenstein (1993).
- 3) Causal beliefs express cause-effect relationships. They provide guidance on how to achieve goals and imply strategies for the attainment of objectives and goals that are valued because of shared principled beliefs and worldviews. The role of causal beliefs

in policy making is analyzed in Ikenberry (1993), Halpern (1993), Garret and Weingast (1993) and Katzenstein (1993).

As Blum (1993) also makes clear, Goldstein and Keohane (1993a) consider that these three general types of beliefs behave hierarchically, with changes in causal beliefs being more frequent and rapid compared to changes in worldviews and principled beliefs. Likewise, changes in worldviews and principled beliefs have a greater and more lasting impact on political actions than changes in causal beliefs. Nevertheless, these types of beliefs, separated for reasons of operationalization, are linked in real life as a seamless web (Goldstein & Keohane, 1993a).

Following Goldstein and Keohane (1993a), these beliefs can affect government policy through three causal-pathways. The first pathway is when beliefs offer a roadmap to follow with respect to general goals and means-ends relationships, a process by which other interpretations of reality are excluded or other interpretations are suggested as not valuable (Goldstein & Keohane, 1993a; Halpern, 1993; Ikenberry, 1993; Jackson, 1993; Sikkink, 1993). The second pathway occurs when, in the absence of equilibrium (situations of multiple choices), political beliefs affect strategic interactions that determine certain options over others, creating focal points and helping establish coalitions (Ferejohn, 1993; Garrett & Weingast, 1993; Goldstein & Keohane, 1993a; Krasner, 1993). Finally, the third causal-pathway refers to when ideas are embedded in rules and norms (institutionalized), acquiring higher levels of stability, reinforcing organizations and normative structures and affecting the incentives of political entrepreneurs (Ferejohn, 1993; Goldstein & Keohane, 1993a; Katzenstein, 1993; Krasner, 1993).

A more recent study emphasizes the role of leaders' beliefs in foreign policy making. The research of Andrew B. Kennedy (2012) explains the foreign policy choices of Mao Zedong (China Communist party leader, 1943-1976) and Jawaharlal Nehru (India Prime Minister, 1947-1964) based on their national efficacy beliefs. Both leaders, who were nationalist icons with intentions to modernize their countries but in contexts that constrained their actions, adopted unexpected and ambitious policies in relation to the military and to international cooperation (Kennedy, 2012).

Kennedy (2012)'s study is based on the assumption that political elites possess some freedom of policy choice and are not prisoners of their circumstances. Kennedy (2012) asserts that leaders have a varying willingness to challenge international structures based on different perceptions of national proficiency in different areas of foreign policy. These perceptions are in turn based on leaders' perceptions of the challenges they face and the types of challenges they believe their state can overcome (Kennedy, 2012).

National efficacy beliefs of individual leaders are understood as convictions about the ability of one's state to accomplish specific military and diplomatic tasks, as opposed to estimates of the material power it possesses (Kennedy, 2012). These beliefs, according to Kennedy (2012) shaped the two leaders' policy preferences in crises that occurred with stronger states or coalitions and shaped how the leaders approached costly commitments when international norms and institutions that could support cooperation were weak or nonexistent. Kennedy (2012)'s research shows how strong efficacy beliefs are very durable even when they have brought negative consequences.

In summary, the policy beliefs approaches, such as of Blum (1993), Goldstein and Keohane (1993a), Mockshell and Birner (2015), and Kennedy (2012) provide useful tools to explain patterns of policy continuity and change (and resistance to change) from the analysis of policy beliefs of relevant actors (leaders, groups, coalitions, governments). Blum (1993) and

Goldstein and Keohane (1993a) offer a framework for the identification and classification of policy beliefs that is used to outline a methodological strategy instrumental for this study. Kennedy (2012)'s study, on the other hand, highlights the role of the beliefs of individual leaders and the way to identify their beliefs from discourse analysis.

It is worth emphasizing that none of the above studies claim that policy-beliefs are the sole explanatory variables of policy choice. On the contrary, policy-beliefs are important drivers along with material and political interests (Mockshell & Birner, 2015), interest groups and electoral politics (Birner et al., 2011), the development of international politics, international contextual factors, and domestic institutions and coalition building (Blum, 1993).

1.4. Political economy of socialism and policy beliefs

The political economy of socialism is a subject that has long been addressed by the international academic literature and has fallen into disrepute after the collapse of the socialist bloc in Eastern Europe, despite some new formulations labelled "XXI Century Socialism". The intention here is not to discuss the feasibility or theoretical flaws of socialism. Rather, the emphasis in this research is on understanding how the actual experiences of implementing socialist economies developed and what elements characterized their policies and economies. For this reason, the following draws heavily on the work of János Kornai (1992) on the lasting regularities of the socialist system, although it covers other approaches, especially those addressing the Cuban case, such as those of Carmelo Mesa-Lago and Pérez-López (2013, 2005), Susan Eckstein (2003), Antoni Kapcia (2008b, 2014), Claes Brundenius (Brundenius, 1984, 2009), and Víctor Figueroa-Albelo (2003, 2009).

1.4.1. Kornai's political economy of socialism

In "The Socialist System. The Political Economy of Socialism", János Kornai (1992) carried out a positive analysis of the socialist system based on real experiences of its implementation in different countries. Kornai (1992) based his analysis on what he called the "lasting regularities" manifested in the countries where the classic socialist system developed (Cuba among them). He identified four system prototypes: 1) the revolutionary transitional system, 2) the classical system (or classical socialism, 3) the reform system, and 4) the post-socialist system. Kornai's understanding of socialism development is not only clarifying in terms of the relationships between socialism's features and associated policy choices that are analyzed in this study, but it is also instrumental in the understanding of Cuban socialism. Next, the first three prototypes proposed by Kornai (1992) are described, emphasizing those elements that illustrate the Cuban case. Special attention is given to Kornai's definitions of the classical system and the reform system given their relevance to the study period (1984-2015) in Cuba.

1.4.1.1. The revolutionary transitional system

Following Kornai (1992), it is necessary to distinguish between the countries in which the socialist revolution was brought about by internal forces (generally countries with outdated and poor economies), and those in which the socialist system was introduced by external forces. Cuba is among the countries in which the revolution was brought about by internal forces in response to a tense political, economic and social situation, i.e., high levels of inequality, dictatorship and repression of the opposition, political and economic dependence on the United

States, as well as a history of long struggle for national independence¹⁴ (Figueroa-Albelo, 2009; Kapcia, 2008b).

Kornai (1992) described the revolutionary transition (in countries like Cuba) as a period full of enthusiasm, fervor and heroism, in which its protagonists are imbued with a sense of triumph and of having made heroic sacrifices for the materialization of their ideals. Among the practices typical of this period exposed by Kornai (1992) that apply to Cuba are 1) the expropriation of factories, banks, institutions and the centralization of production and distribution, 2) the nationalization and socialization of the expropriated among peasants and landless workers (e.g., land reforms explained in Chapter 4), 3) the confiscation of upper-class assets and distribution among the poor (e.g., houses of the rich divided and converted into multi-family buildings, schools, state institutions or recreational facilities for workers), 4) implementation of social impact measures such as education campaigns, health services becoming universal and free, and food distribution through rationing¹⁵, 5) persecution and punishment of the black market, 6) persecution and condemnation of politicians and representatives of the former system, sometimes involving spontaneous acts not sanctioned by the law, and 7) the division of the population between those who support the revolution and those who do not (indifferent or active resisters)¹⁶.

As Kornai (1992) asserted, this period can only be transitional because the factors that sustain it are temporary, e.g., the fervor and sacrifice of the followers and the confiscated wealth to be distributed. In addition, revolutionary leaders must fulfill their promises to eliminate the backwardness of the economy by promoting dramatic productive leaps. Alleged threats from abroad need the development of national military power. Society, after turbulent times, demands law and order. The new structure of the (collective) economy requires organization and control. From the processes of institutionalization and bureaucratization that follow, the classic system emerges.

Historical studies on the Cuban economy place the end of this period around 1970, after the failure of the *Zafra de los 10 millones*¹⁷ (10 million sugarcane harvest) (Eckstein, 2003;

¹⁴ For a short summary on pre-revolutionary Cuba, see: Section Introduction: The Emergence of a Revolution in Kapcia, A. 2008 *Cuba in Revolution. A History since the Fifties*, pp. 7-24.

¹⁵ For a short recount of points 2), 3) and 4), see Chapter 2 Benefiting from the Revolution: The 1960s in Kapcia, A. 2008 *Cuba in Revolution. A History since the Fifties*, pp. 46-63.

¹⁶ For a lengthy anthropologic description recounting the impact of the Cuban revolution in common peoples' lives and their different approaches to the changes taking place, see the three volumes of Oscar Lewis, Ruth M Lewis, and Susan M Rigdon, *Four Men* (1977), *Four Women* (1977), and *Neighbors* (1978): *Living the Revolution: An Oral History of Contemporary Cuba*. University of Illinois Press, and Butterworth, Douglas S. Champaign, *The People of Buena Ventura: Relocation of Slum Dwellers in Postrevolutionary Cuba*, University of Illinois Press, 1980.

¹⁷ In 1969, Fidel launched the 10 million (tons of sugar) harvest, ignoring the estimates of specialists who set the maximum production capacity at around 8 million. Achieving and maintaining a production of around 10 million would mean, in the rhetoric of the period, a demonstration of the power of socialism, and Cuba could increase its position in the sugar market. The harvest faced multiple problems: insufficient level of mechanization, insufficient milling capacity of the mills (dependence on modernization plans of the mills that took place simultaneously with the harvest), and dependence on mobilized labor. The idealistic euphoria of the moment paralyzed the country in terms of this single objective, diverting all resources and human capital towards the harvest, which had disastrous economic consequences in 1971-1975. The harvest failed, and production reached a little more than 8 million tons.

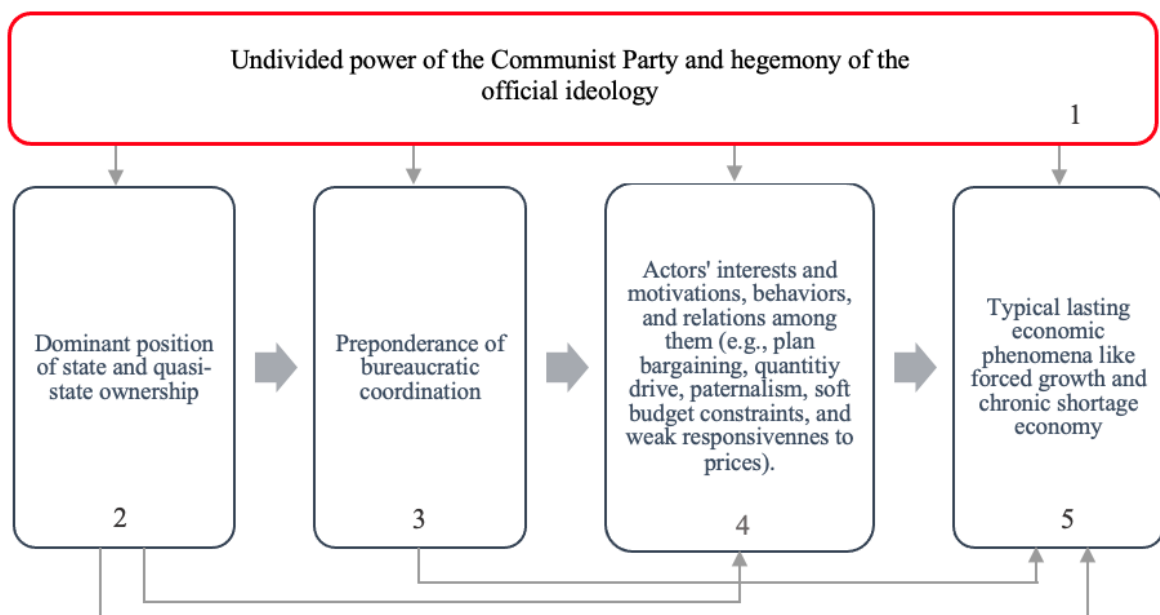
Figueroa-Albelo, 2009; Kapcia, 2008b; Mesa-Lago & Pérez-López, 2013). Some of the events that signaled the transition to the classical system were the beginning of institutionalization processes of the political and economic system (e.g., the founding of the communist party and its first congress, a new constitution), and the strengthening of relations with the socialist bloc, including Cuba's entry into the Council for Mutual Economic Assistance (CMEA) and the adoption of a planning system closer to the Soviet one.

1.4.1.2. The classical system

Kornai (1992)'s understanding of the classical socialist system is far from the relationship between structure and superstructure that the Marxist manuals foresaw as a means to overcoming of the capitalist system. In Kornai (1992)'s vision, it is not the base that promoted the emergence of a socialist superstructure, but rather the opposite. According to this view, classical socialism has historically emerged during periods of revolutionary transition in which the old superstructure is replaced (artificially) by a new superstructure that then clashes with the old base. This conflict eventually leads to the old base accommodating and becoming coherent with the newly erected superstructure (Kornai, 1992). For this process of re-adjustment to take place, political power promotes changes at the base (e.g., in property relations and modes of production) that react dialectically with the superstructure, bringing about the transformation and consolidation of the socialist ideology and system.

For Kornai (1992), the structure of power is essential to explain the classical system (Figure 1.2). The elements of the system are causally interrelated and mutually reinforcing, providing the system with high levels of coherence. However, it is the power structure, characterized by the undivided political power of the ruling party imbued with the official ideology of the socialist system, the interpenetration of the party and the state, and the suppression of all forces that deviate from or oppose the party's policy, that is the element from which the remaining enduring regularities of the system develop (Kornai, 1992).

Figure 1.2: Kornai's classical socialist system's main lines of causality



Adapted by the author from Kornai (1992).

*Box number 1 is in red in order to highlight its predominant and defining role in the line of causality defined by János Kornai (1992). The arrows reflect the different possibilities of influence between the boxes representing the long-lasting regularities of the classical socialist system identified by Kornai (1992).

The communist party is the fundamental organization in the power structure and its power extends beyond its political functions, intervening and controlling the administrative and economic functions of the state (e.g., it decides the appointments of top state posts and state enterprises, duplicates the functions of the state by having structures in charge of supervising the different branches of the economy and society, and makes decisions on important state matters) (Kornai, 1992). The Cuban Communist Party was founded in 1965 after concentrating different pro-revolution organizations. In the Cuban constitution (1976)¹⁸, as in other countries of the socialist system, it is established that the party is “the superior leading force of the society and the State, organizing and guiding the common efforts aimed at the highest goals of the construction of socialism and advancement toward the communist society” (Article 5, Cuban Constitution, 1976).

The party also supervises the activities of civil society through the control of mass organizations and the exercise of paternalism. The mass organizations, led by party cadres, have a monopoly on the different sectors, i.e., there is a single and party-controlled workers’ union, women’s organization, neighborhood organization, peasants’ organization, artists’ organization, etc. These organizations receive orientations and have limited autonomy with respect to the party-state. The distinction between the private and the state sphere is blurred in classical socialism (Kornai, 1992). In addition to the party apparatus keeping track of the actions of individuals, the party is considered the vanguard of the people, and as the vanguard, it represents the interests and demands of the people. Ultimately, it is also its duty to consolidate and protect the revolution.

The dominant ideology, being an indissoluble part of the party, is based on the conviction of the superiority of the socialist system over the capitalist system and on the promise that the country, under the socialist system, will soon catch up with and surpass the developed capitalist countries. The growth is enabled by concentrating resources on stimulating production and making sacrifices for the sake of accelerated growth rates. The dominant ideology, shaped by Marxism and the ideas, aspirations and values of the revolutionary movements that gave rise to the classical socialist system as well as local leaders, enjoys an ideological monopoly in the absence of (tolerated) alternative ideologies.

Following Kornai (1992), the indivisible power of the party and the dominant ideology is incompatible with the levels of autonomy of private enterprise, which makes the authorities of the socialist system, as fast as their particular national contexts allow, attempt the total suppression of private property. In most national socialist systems, the process began with nationalization of some or many economic assets during the revolutionary transitional period (Section 1.4.1.1). At the end of the 1960s in Cuba, the government proposed the parallel construction of socialism and communism (Figueroa-Albelo, 2009), accelerating the changes leading to the dominance of state (and quasi state) property and the bureaucratic coordination

¹⁸ After the triumph of the revolution (in 1959), two constitutions were approved. The first one in 1976, as part of the process of institutionalization of the political and economic system of the revolution. In it, Cuba was defined as a socialist state of workers. This constitution underwent some modifications, highlighting that of 2002 where the irreversibility of the socialist character of the revolution was proclaimed. In 2019, a new constitution was approved as part of the reform process promoted by Raul Castro's government.

of the system (boxes 2 and 3, Fig. 7.1). In addition to the processes of expropriation, nationalization, and agrarian reform taking place predominantly between 1959-1964, which transferred to the State the fundamental means of production, the suppression of private capital reached its climax in 1968 when the government launched the Revolutionary Offensive. With this campaign, the government nationalized the remaining small private businesses in cities. In total, 58 012 small businesses consisting of retail food and service shops, bars, stores, restaurants, cafeterias, and craft services were transferred to the state sector (Figueroa-Albelo, 2009).

In state enterprise, the state is the nominal owner and is represented by the government (state, party), which in turn (at least in its ideological expression) is owned by all the people. The income of the state sector goes to the state budget and constitutes the net income of the state. This predominance of state ownership, estimated at 95.9% in 1988 in Cuba, creates the incentives, following Kornai (1992), for the development of bureaucratic control (bureaucratic coordination, in Figure 1.2). This control means the same bureaucracy (i.e., party members, as representative of the state-party-government) decides the selling prices, wages, the price of the means of production, and products' contribution to the state budget. It also decides how much money is reinvested in state enterprises (and in what sectors), which does not depend on the amount paid into the state budget in the first place. The state system is based on artificial incentives, which ultimately constitute the means of state control. The distortions produced by bureaucratic coordination are reflected in the long-lasting regularities shown in Boxes 4 and 5 of Figure 1.2.

Another well-known way of eliminating private property in classical socialist systems took place through collectivization, especially in the agricultural sector. Cooperative ownership (quasi state property in Figure 1.2) is nominally based on the voluntary sacrifice of the means of production (land, machinery, etc.) by interested individuals, whereby the members of the cooperative elect their leaders. In practice, collectivization processes were of a very different nature in the different socialist experiences. These ranged from massive forced agricultural collectivization during Stalin's rule in the USSR, with aggressive persuasion, threats, and brutal sanctions, to more voluntary and less brutal forms of persuasion elsewhere.

Collectivization was promoted by the propaganda of the classical system countries based on circumstantial practical arguments (e.g., the need for specific food production) and long-lasting economic and political arguments (Kornai, 1992). From the economic point of view, the propaganda highlighted the supposed advantages in productivity of the large scale over the small scale. From the political point of view, propaganda explicitly stressed that small private agriculture would reproduce petty bourgeois styles, such as selfishness, greed and backwardness, and private farmers could become *kulaks*¹⁹. Implicitly, propaganda made it clear that private peasants were incompatible with the system, and could represent an independent social, political and economic threat. Regardless of the way in which the collectivization processes were promoted, the resulting cooperatives enjoyed limited autonomy, often being directed by the party. In Cuba, the cooperatives (discussed in more detail in Chapters 4 and 5)

¹⁹ Kulaks is a derogatory term used in Soviet political language, which referred in principle to former landowners of the Russian Empire that had large extensions of land. It was used to classify rural landowners as enemies of the people in the early years of the Soviet government. The term was also used for all the deportees, condemned and opposed to the collectivization. This term was also used by Fidel in 1986 when promoting collectivization (See Chapter 5).

were controlled and oriented by the single peasant organization in the country and, for the most part, contained party cells and party members²⁰.

The consolidation of the classical socialist system left a marginal place for private enterprise. Depending on the particularities of the specific contexts, it manifested itself in a) small scale private industry or commerce, b) private agriculture, c) informal economies (comprised of prohibited activities with different levels of enforcement that were legal or tolerated through loopholes in legislation). After the Revolutionary Offensive, the Cuban private sector consisted of small farmers, some pre-revolutionary truck and car owners who could offer cab and transportation services, and some hundred doctors. The doctors, provided they had graduated before the revolution, had not left the country, and did not wish to be part of the new public sector, were able to maintain their practices (Ghai, Kay and Peek, 1988).

As previously mentioned, bureaucratic control derives from the political structure, official ideology, and the predominance of state ownership and not vice versa (Kornai, 1992). The elimination of free enterprise, autonomous market actors and competition among them, the centralization of decision-making and information, and the dominance of hierarchical dependence and vertical over horizontal relations are conducive to the dominance of the bureaucratic control mechanism (Kornai, 1992).

Given the focus of this research, other characteristics of the classical socialist system (Boxes 4 and 5, Fig. 1.2) cannot be dealt with in detail. Suffice it to say that bureaucratic control and the continued action of the party's monopoly of power and official ideology, as well as the predominance of state and quasi-state ownership exerts influence on the interests, motivations and behavior of the actors and their relationships (Box 4). Common occurrences include plan bargaining, quantity drives, paternalistic behavior of superiors, soft budget constraints, and a weak responsiveness to prices, among others, along with typical long-lasting economic phenomena (Box 5) such as forced growth, labor shortages, unemployment on the job, chronic shortage economies, and the system specific role of foreign trade (Kornai, 1992).

As the elements of the system (Fig. 1.2) develop coherence and reinforce each other, the classical system is consolidated. Institutions, regulations, customs and moral and legal norms that are akin to the nature of the classical system survive and take root; those that are alien to it (e.g., private property, market coordination, independent organizations, ideas contrary to official ideology) are discarded or rejected (Kornai, 1992). From this coherence derive constant constraints on choice in decision making of system actors.

However, as Kornai (1992) points out, the general inclinations of the system manifest in country-specific ways. Some relevant determining factors are geographical and natural conditions, the cultural and economic legacy of previous regimes, the political orientation adopted by the new government, the personal characteristics of the leader, the behavior of other countries with respect to the socialist country, global or international political events, and the closeness or distance of ties with the Soviet Union (Kornai, 1992).

1.4.1.3. The reform system

In the process of revolutionary transition and in the early years of the classical system, the government (party-state) makes promises to the population which it fulfills through high subsidies, e.g., full employment, free education and health, and other basic needs such as food, shelter, vacations, and cultural services and goods. Underlying this is a more important

²⁰ Between 1981-1988, for example, 919 party cells were formed in 65.7% of the existing cooperatives, with more than ten thousand members (Valdés Paz, 2010).

promise, i.e., to reach and surpass the welfare levels of the developed capitalist countries, sometimes stated as making “the great leap”.

As Kornai (1992) explains, the realization of the promise never occurs, nor can it occur because of the dysfunctionality of the system and its serious internal problems. The weight of the unfulfilled promise begins to create tensions that force change. In the transitional and beginning stages of the classical system, the population sees the backwardness as part of the sacrifices necessary to make “the great leap” (e.g., accelerated growth, forced industrialization), but growth rates are unsustainable and problems accumulate in non-prioritized sectors, e.g., housing, transportation, and communications.

Kornai (1992) describes four types of factors that induce change: 1) accumulation of economic difficulties (technological inferiority, shortages, and low levels of consumption compared to capitalist societies), 2) public discontent (complaints about low standards of living and discomforts caused by material shortages of various kinds, an outdated service sector, frustration, limitations to personal freedoms, arbitrariness of the bureaucracy, propaganda and repression), 3) loss of confidence in the bureaucracy, and 4) external examples of reforms and transition (this factor proved its effectiveness in the case of European socialism, but not in Cuba).

Change can be rapid or slow and can take many forms, e.g., reform, restructuring, transformation, transition, revolution. Between 1984 -2015 (period of study) the Cuban government launched three processes of change: the “Process of Rectification of Errors and Negative Trends”, from 1986-1991 (discussed in Chapter 5), the economic reform of the 1990s (discussed in Chapter 6) and the “Process of Updating the Cuban socio-economic model” from 2008 onwards (discussed in Chapter 7). Kornai (1992) classifies the changes in the classical system according to their depth and radicality. The depth of the changes refers to how close the changes are to altering the undivided power of the communist party and the hegemony of the official ideology (Box 1 in Figure 1.2) and the radicality refers to how radical the changes are in the particular spheres (regarding all boxes in Figure 1.2). The closer the changes are to Boxes 1, 2 or 3 (respectively, undivided power of the communist party and the hegemony of the official ideology, the predominance of state and quasi-state ownership, and bureaucratic coordination), and the more radical the changes produced in them, the closer the changes are to *reform*.

However, *reform* does not imply a change of system as does *transition* and *revolution* because it does not abandon the basic distinguishing mark of the socialist system: the undivided power of the Communist party (Kornai, 1992). Following Kornai (1992), only when profound transformations occur in Box 1, i.e., the end of the Communist party’s monopoly of power, do the changes in the remaining boxes of the causal line (Fig. 7.1) that characterize a post-socialist transition begin to take place. Since this transition did not occur in Cuba in the period under study, we will focus only on the discussion of reform and pseudo-reform in the country.

Pseudo-reforms create the illusion of change based on moderate alterations in some of the elements of the causal chain (Fig. 1.2) in the form of improvement programs that lead to greater control (Kornai, 1992). Following Kornai (1992), in the classical system there are accumulated contradictions inherent to the system that are perceived as the result of incorrectly applying the socialist principles, which remain valid and superior to the principles of capitalism. The system must, therefore, be perfected by replacing secondary principles, regulations, and institutions with more effective ones. Pseudo-reforms have taken shape in socialism’s experiences of improving the planning and work system, reorganizing the bureaucracy, splitting or merging ministries, merging state enterprises and cooperatives, and improving the planning method.

None of these campaigns alter bureaucratic control as the basic coordinator of the system's social and economic production (Box 3, Fig. 1.2) nor the hegemony of the party and state ownership (Boxes 1 and 2, Fig. 1.2).

The reforms, on the other hand, starting from the experiences produced in European socialism, tended towards political liberalization, the increase of the private sector and market coordination, the introduction of self-management in state enterprises and reform in prices (caused by the joint effect of the above-mentioned changes), as well as the simultaneous appearance of macro tensions from the accumulated changes (Kornai, 1992). Political liberation materialized, roughly speaking, in the weakening of the party monopoly, less repression, alterations in the official ideology, a push for political pluralism of alternative groups and movements, an openness to the capitalist world, and public expression of discontent in the media. As part of this trend, some taboos on subjects disappear, although censorship and self-censorship remain. Also, the discourse changes from the spirit of heroic sacrifices (and a belief that the welfare of the masses will improve in the long run) to hedonistic motivations, incentives, and increased levels of consumption in times of economic improvement. There is also a change in the paternalistic style of state-government, with some promises regarding state provision of basic subsidized services eliminated. Similarly, subsidies are slowly but progressively reduced and responsibilities are transferred to the individual, along with the promotion of more practical and less romantic ideas.

The trend toward increasing the private sector and market coordination in reform, however, is matched by the opposite trend of obstructing and restricting its development by bureaucracy. Although the role of small private enterprise is acknowledged, its existence is so contrary to the mentality of classical socialism that it engenders contradictions. These generate the alternation of favorable and unfavorable periods for the private sector and an ambivalent environment that limits its development that, in the words of Kornai (1992), breeds a bitter coexistence. However, from these trends and the changes in the role of private property and the market, the sense of superiority of socialism is shaken, disintegrating the structure of the official ideology, which undermines the system's foundations (Kornai 1992).

The processes of change promoted by the Cuban government (party-state) have combined features of pseudo-reform and reform. These processes of change did not question the monopoly power of the communist party, the predominance and ideological superiority of state and quasi-state ownership, or the suitability of bureaucratic coordination and planning as a method of organizing the economy (Boxes 1, 2 and 3, Fig. 1.2). The reform initiated by Raúl's government during one of the periods under study reaffirmed the "immovability of the single-party system" (Raúl, 29.01.2012), the socialist ownership of fundamental means of production, and centralized planning rather the market approach (PCC, 2011).

1.4.2. Socialist ideology and policy beliefs

Kornai's (1992) analysis of socialist ideology reveals a set of policy beliefs characteristic of classical socialist systems. The most important belief is the conviction of the superiority of the socialist system over the capitalist system. This conviction is based, in turn, on several beliefs of socio-economic and moral content. The beliefs are described below. Because they are not considered in a hierarchical manner, but rather as a seamless web, they are listed using letters and not numbers.

Belief A: Socialist relations of production are more conducive to the development of the forces of production than capitalist relations of production. This is because socialism, through planning and the elimination of competition and the consumerism of the exploiting classes,

eliminates factors affecting the economic efficiency of capitalism and frees the working class from exploitation.

Belief B: Capitalism has passed the stage where it contributed to the progress of society and exhibits numerous signs of decay.

Belief C: Socialist ownership is superior because it has higher productivity, does not exploit its workers, and eliminates the capitalist class. Therefore, the elimination of private property and the establishment of a state public sector is necessary.

Belief D: The superiority of socialism comes from the intrinsic qualities of the system itself (Kornai, 1992). After overcoming initial disadvantages and sacrifices, superiority will manifest itself in the near future. Therefore, the consolidation, maintenance and protection of socialism is a primary good, because, although failures in the system may be perceived, these are temporary and socialism will demonstrate its superiority.

Belief E: The socialist system is morally superior to the capitalist one. Socialism is a purer and nobler system, which ensures social justice and equality.

Belief F: Under the influence of socialism, people are positively transformed by voluntarily and increasingly placing themselves at the service of the common good, overcoming the selfishness and individualism of the capitalist system. Socialist (morally superior) people behave according to a set of norms (imperatives) that are celebrated by the authorities (and potentially lead to a position in the bureaucracy). These characteristics are considered of greater importance than the professional expertise or productivity levels of individuals. Conversely, attitudes contrary to socialist homogeneity are considered immoral and incompatible with the system. Listed below are the moral imperatives that make up what is believed to be a good socialist.

- Political reliability. Socialists are loyal and faithful to the party and its ideals.
- Unconditional discipline²¹. Socialists follow the political line and orders of superiors (party). Critical attitudes are seen as disrespectful to superiors and a potential sign of counter-revolution or alliance with the enemy. Originality may be considered as eccentricity and independence as being characteristic of intractable or unmanageable individuals.
- Willingness to make sacrifices. Socialists must subordinate their individual interests to the higher collective interests. This subordination usually involves sacrifices such as voluntary work (during non-working hours) in tasks determined by the state, renunciation of improvements in the material standard of living, mass mobilizations, and sacrifices for the state over family life. Those unwilling to make sacrifices are described as cowards, deserters, traitors, and individualists.
- Vigilance. Socialists have a vigilant attitude toward internal and external enemies. The influences of capitalism must be rejected by socialists. This vigilance produces an atmosphere of distrust and secrecy, especially with internal suspicion and a distrust of the external world, particularly the capitalist world. “All this breeds a self-imposed isolation from the outside world” (Kornai, 1992), or a “siege mentality” (Kapcia, 2008).

²¹ Kornai (1992) states that the focus on discipline is more frequent in socialist systems that were developed from internal forces and where the achievement of the revolution involved armed struggle and secrecy.

Belief G: The Party is the vanguard of the working class and society as a whole. The party knows better than the people themselves, including what their interests and demands are; and is capable of leading, educating, and caring for the people (paternalism), along with being in charge of consolidating and protecting the revolution.

Beliefs specific to agricultural policy:

Belief A: Only state and cooperative ownership are socialist.

Belief B: Cooperative ownership is a lesser form of socialist ownership than state ownership, therefore, it should be transitory.

Belief C: The elimination of private ownership is in favor of the people and it is in the interest of private peasants to give up their independence and enter the cooperative sector. Their backwardness and shortsightedness do not let them see their interests, so they must be forced or coerced by the government (party-state).

Belief D: Agricultural productivity is much higher in large-scale agriculture than in small-scale.

Belief E: Independent farmers (private peasants) suffer from petty bourgeois selfishness, putting individual private interests above the common interests of the people (thus failing the moral expectations previously stated in Belief F). Small independent agriculture is backward and reproduces capitalist relations of production.

During the reform processes, the basic elements that make up the ideology of the classical system are reaffirmed. However, some elements become nuanced and others are adapted. Some of the most relevant ones are listed below:

Belief A. The communist party is reaffirmed as the leading force and its monopoly of power is legitimate.

Belief B. The precepts of the classical exponents of Marxism-Leninism (Marx, Engels, Lenin) are reaffirmed, but the erroneous decisions of specific leaders who departed from the classical sources are questioned. The explanations of the problems of classical socialism come from these deviations.

Belief C. It is reaffirmed that state property is superior to private property and that its predominance is indispensable in socialism, but small private property is now considered compatible with socialism.

Belief E. Basic moral imperatives such as loyalty and vigilance are reaffirmed, but the spirit of heroic sacrifice is diminished and hedonistic motives and material incentives are emphasized.

Belief F. The party is reaffirmed as the vanguard responsible for satisfying the needs and demands of the population, but the promises of the state are diminished (gradual elimination of basic subsidized services), transferring responsibilities to the individual.

1.5. Conceptual framework

1.5.1. Research questions

The research was guided by the following central question:

How do agricultural policy making and policy beliefs of the Cuban government relate to agroecological principles and practices and shape Cuban agroecological processes (and limits) of scaling (up and out)?

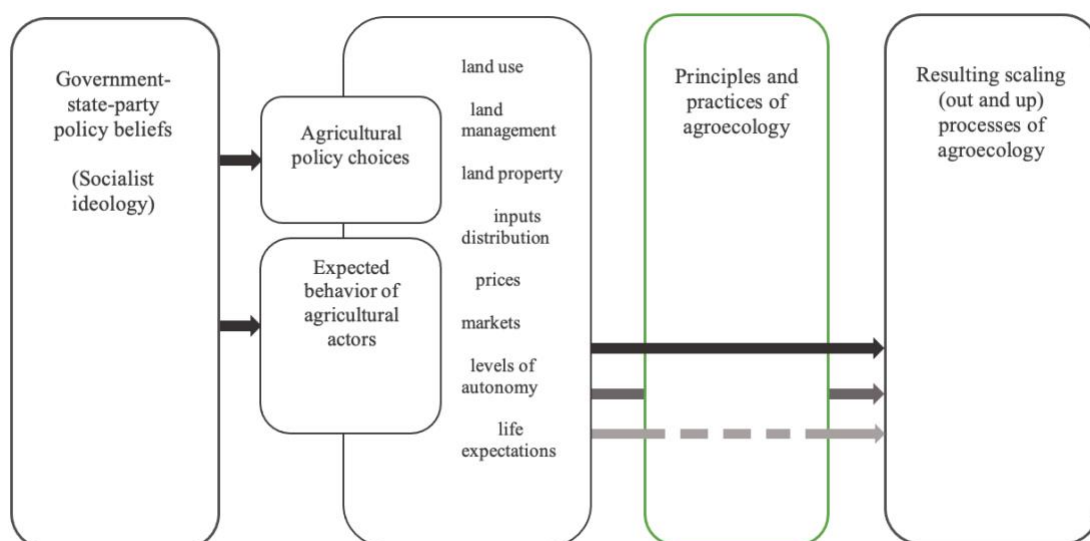
The research questions that contributed to answering the central question are the following:

1. What is the Cuban agroecology movement?
2. How have recent and historical policies on scale, property, and land use shaped the development of the Cuban agroecology movement and the narrative of agroecology success in Cuba?
3. How do policy beliefs concerning land use, land property and markets relate to principles and practices of agroecology?
4. How have Cuban socialistic political economy and policy beliefs affected the Cuban agroecological movement? What are the potential consequences for the scaling out of agroecological farming in the near future?

1.5.2. Policy beliefs, agricultural policies and path for agroecology in Cuba

This section presents a graphic overview of how the concepts and approach to be utilized in this thesis (as described in the previous sections) relate to each other in the analysis (Fig. 1.3). The diagram attempts to visualize the main argument of the thesis, namely, that the processes of scaling out and up of agroecological practices in Cuba have been an expression of the (contradictory, ambivalent) accommodation between the principles and practices of agroecology and the different policy choices of the government in relation to agriculture (in matters such as land use, markets, autonomy of producers) and the behaviors expected by the government from agricultural actors. The latter two are influenced by the policy beliefs of the government (state-party) in line with the official socialist ideology.

Figure 1.3: Analytical framework



Elaborated by the author.

*The arrows through the principles and practices of agroecology, in the green box, aim to represent the varying degrees of coherence/correspondence between policy beliefs and policies for agriculture and the principles and

practices of agriculture, some overlap, some are contrary, some imply benefits, but ambivalently. These varying degrees of correspondence impact on the resulting agroecology scaling processes.

The first block of the diagram, the government policy beliefs, are analyzed in Chapters 5, 6 and 7, based on the analysis of the presidential discourse between 1984 and 2015. Agricultural policies and their relationship with agroecological practices is addressed in Chapter 4, showing some points of congruence between the agricultural policy of the revolution (i.e., from 1959 onwards) and characteristics of agroecological practices in Cuba. The principles and practices of agroecology, partially addressed in this chapter in the first sections, will be addressed again for the Cuban case in Chapter 3. In Chapters 5, 6 and 7, finally, the points of encounter and disagreement between agroecological principles and practices with the political beliefs of the government are analyzed.

CHAPTER 2. JUMPING OVER WALLS: THE METHODOLOGICAL APPROACH

2.1. Introductory remarks

Conducting research in Cuba on economic and social issues is challenging, especially if the research design does not explicitly or implicitly praise the achievements of Cuban socialism or explore topics considered “sensitive” or “taboo” for unsupervised external exploration. In addition to the general resistance to external questioning (explained in more detail in this chapter), addressing the narrative about the triumph of agroecology encounters two types of resistance. Pro-agroecology leaders show resistance to questioning the triumphs of agroecology and government officials to questioning agricultural policy in general. The methodological strategy of the thesis expresses the challenges of dealing with these two sets of resistance.

The research was conducted from 2015 until the second part of 2021 when its writing was completed. The research process was interrupted by two maternity leaves and the demands of motherhood, which limited the possibility of staying in Cuba for long periods, which also influenced the methodological strategy. Nevertheless, the research included two short periods of fieldwork in Cuba in 2015 and 2017 (from 17.07.2015 to 27.10.2017 and from 09.02.2017 to 30.03.2017), followed by periods in which research assistants, previously trained by the author, conducted interviews with farmers. The analysis of the interviews and the rest of the collected data was conducted by the author in Germany.

This chapter describes the methodological strategy applied in this research, the methods and techniques used, and how the data were collected and analyzed. The account of the methodological strategy favored a chronological approach to reflect the challenges, setbacks and how obstacles were overcome in the research process. In addition, the description of the strategy is complemented by reflections on the author’s positionality. With this, the thesis aims to visualize the processes, usually overlooked in scientific texts, of accommodation and renegotiation of methodologies, objectives and purposes that occur in scientific research due to the influence of specific research contexts and the positionality (past and present) of the researcher.

2.1.1. Overview of research objectives and main questions

The main objective of this study is to explore the political viability of the scaling (out and out) of agroecology in Cuba in the period 1990-2015 by assessing the points of consistency and conflict between: 1) the history of the agricultural policy of the revolution (i.e., after 1959) and the practice of agroecology in Cuba, and 2) the policy beliefs (typical of the socialist ideology and perceptions of the efficacy of policy instruments) identified in the political discourse and the principles and practices of agroecology in Cuba.

Main question: How do the Cuban government's agricultural policy-making and policy beliefs relate to agroecological principles and practices and shape Cuban agroecological processes (and limits) of scaling (up and out)?

The research questions that contributed to answering the main question are the following:

1. What is the Cuban agroecology movement?
 - Description of the history of the agroecological movement in Cuba and its connection with political, economic and social events in the country (Chapter 3).
 - Description of the main representatives of the agroecological movement and their practices, as well as their relationship with government institutions (Chapter 3).
2. How have recent and historical policies on scale, property, and land-use shaped the development of the Cuban agroecology movement and the narrative of agroecology success in Cuba?
 - Identification of the assumptions of the narrative of agroecology's success in Cuba (Chapter 4).
 - Analysis of post-1959 Cuban government's policies of land reform, collectivization and input and crop prioritization and how these policies fit into the victory narrative (Chapter 4).
 - Analysis of the level of correspondence between policies between 1990-2015 and the agroecological movement (Chapter 3 and 4).
3. How do policy beliefs concerning land use, land property and markets relate to principles and practices of agroecology?
 - Identification of policy beliefs regarding the politics of agriculture and the expected behaviors of agricultural actors, especially private farmers, through analysis of policy discourse between 1984-2015 (Chapter 5, 6, and 7)
 - The contrasting of policy beliefs with the principles and practices of agroecology (Chapter 5, 6 and 7).
4. How have the Cuban socialist political economy and policy beliefs affected the Cuban agroecological movement? What are the potential consequences for the scaling out of agroecological farming in the near future?
 - Analysis of policy beliefs as they relate to socialist ideology and socialist political economy (Chapter 5, 6 and 7).
 - Analysis of socialist policy beliefs and their relationship to the principles of agroecology (Chapter 5, 6 and 7).

2.2. Why using the Castros' discourse as an entry point for agricultural policy analysis?

This study is not exclusively about or entirely based on the Castros' speeches. The research also relied on a considerable amount of information on the regulatory framework of agricultural policy, the testimonies of 105 interviewees, and secondary data on agricultural performance. Nevertheless, Castros' speeches transcripts constituted the most reliable and available data that served as an entry point for agricultural policy analysis. The preliminary analyses of the Castros' discourse (between 1984-2015) played a relevant role in providing an overview of changes in agriculture policy over time and raising relevant issues in the area of political economy and socialist ideology. Epistemological and methodological elements that justify the Castros' discourse's validity as data in this research are discussed below.

2.1.1. Castros' speeches as a source for Cuban policy analysis

Cuba is a socialist country with a highly centralized economic system (De Miranda-Parrondo, 2014; Fernández-Estrada, 2014) and a single-party political system. The excessive centralization and governmental control shape all the economic sectors as well as domestic and foreign trade (Deere & Meurs, 1992; Deere, Meurs, & Pérez, 1992; Fernández-Estrada, 2014; García-Álvarez & Nova-González, 2014; Hershberg, 2014; Torres-Pérez, 2014).

The crucial role of Fidel Castro in the policy-making in Cuba is highlighted and discussed abundantly in the scientific literature²² (Domínguez, 1993, 1994; Eckstein, 2003; Hoffmann & Whitehead, 2007; Kapcia, 2008c, 2008b, 2014; Mesa-Lago, 1989; Mesa-Lago & Pérez-López, 2005; Mujal-León & Busby, 2001; Pérez-Stable, 1999; Ritter, 1994; Roca, 1994; Rosenberg, 1992). Some specialists place Castro's opinions and decision-making as the main internal factor shaping economic policy changes and key decisions affecting Cuba (Mesa-Lago, 1989; Mesa-Lago & Pérez-López, 2005), especially from the mid-80s onwards (Domínguez, 1994). According to Domínguez (1994), in the mid-1980s, a process of "regime personalization" took place. Only a couple of officials were able to question or interfere with Fidel's ideas due to a) the loss of prestige and authority of mass and political organizations²³, b) the dismissal or loss of power of top political officials and c) cases of scandals, corruption and defections²⁴ (Domínguez, 1994).

However, the idea that Fidel was responsible for most policy decisions is a strong opinion contested by other perspectives opposed to this "Fidel-centrism" (Eckstein, 2003; Kapcia, 2008b, 2008c, 2014). Nonetheless, those opposed acknowledge that it would be foolish to deny

²² It is important to stress that, although there is a high consensus on the crucial role played by Fidel Castro in Cuban politics, the visions on the impact of his influence are different. Scientific literature written abroad is far more critical regarding the effects of his influence on the economy. Texts published in Cuba usually speak only positively of his triumphs or successes. In the opinion of the author, the criticism of Castro's policies in Cuba is subsumed under the theme "centralization".

²³ In Cuban-socialist political jargon, organizations are divided into mass organizations and political organizations. Mass organizations bring together sections of civil society, e.g., women, neighbors, students and peasants. In classical socialism, mass organizations are characterized by grouping these sections of society into single organizations in the country and possessing a high ideological and political hue. Political organizations are those of a strictly political character, such as the Communist Party and the Young Communist League.

²⁴ For a deeper understanding of these cases, see Domínguez, 1994: 2-7; Kapcia, 2008, Chapter 6 "Defending the Revolution: Dealing with Dissent":133-156; Eckstein, 2003, Chapter Three "The Late Campaign to Rectify Errors and Negative Tendencies: Socialist Renegade or Retrograde in the Era of Perestroika?": 60-87.

Fidel's fundamental role in decision-making and determining domestic and foreign policy (Eckstein, 2003; Kapcia, 2008b, 2014).

Until 2006, Fidel held the most important political positions in the country: chief of state, president of the council of state, president of the council of ministries and its executive committee, first secretary of the communist party and head of its political bureau, and commander-in-chief of the armed forces. When Raúl Castro (his younger brother) succeeded him in 2008, he inherited the same positions.

One of the ways Fidel expressed his charismatic leadership and legitimized his decisions was through long speeches. They constitute crafted stories in which Fidel framed issues of policy importance using colorful language. Through them, Fidel persuaded Cubans about the veracity and scope of defined policy problems, seemingly of broad public interest, and aimed to convince, morally stimulate and mobilize the people towards different policy directions²⁵ (Eckstein, 2003; Kapcia, 2008b). In Hermman et al. (2001)'s study on leadership, Fidel Castro is classified as a crusader, considered his attempts to export socialistic revolution, his disposition to challenge constraints, his expansionistic focus, and his interest in persuading others to accept his message and join his cause.

Raúl, although less inclined to give speeches, both in frequency and length (see Table 2.2), also uses them as a medium to report on policy changes. In addition, the Cuban people are used to learning about these changes through these speeches. These discourses are one of the main ways the populace expects to be informed about the government's new decisions and the results of the economy and social state programs. The speeches function in the social sphere as policies, that is to say, "they are the policy"²⁶.

Additionally, the lack or the intermittency in the release and access to socio-economic data has made such speeches an important source of relevant information. In 1989, the economist Carmelo Mesa-Lago analyzed the causes, the policies, and effects of the Economic Counter-Reform (*Proceso de Rectificación*) in Cuba using Fidel's speeches in combination with available statistics (Mesa-Lago, 1989).

Using Fidel's speeches is not uncommon even for those more inclined to use economic, social and even cultural factors for explaining the evolution of Cuban policies. No matter how far from "Fidel-centrism" (or Raúl-centrism) the general approach is, experts on Cuban policy make extensive use of the Castros' speeches to build their arguments²⁷. Interestingly, the most explicit linguistic expression of Fidel's centrality in decision-making is the presence in most of the literature of the figure of Fidel (or Castro) as the subject of sentences expressing political actions, e.g., "Castro also initiated institutional reforms..." (Eckstein, 2003, p. 114) or "... Castro remained committed to providing social services" (Eckstein, 2003, p. 99). In most cases, Fidel is used analogously with "government" (state and party), such as in Brundenius (2009, p. 36), "When the government (read Fidel Castro) became aware of..."

However, as Mesa-Lago (1989) points out, having only the anecdotes recounted by Castro, coupled with the absence of reliable aggregate statistics, inevitably leaves doubt as to whether his decisions were based on economic and social realities, on ideological positions, or on the

²⁵ For a lengthy discussion on "mobilizational authoritarianism" in Cuba, see Pérez-Stable, M. 1999 "Caught in a Contradiction: Cuban Socialism between Mobilization and Normalization." in *Comparative Politics* (October): 63–82.

²⁶ Interview with a Cuban political science expert.

²⁷ See for example: Eckstein (2003), Kapcia (2008, 2014), Brundenius, 2009.

desire to maintain power. Even so, economic policy-making in Cuba is highly ideologized (De Miranda-Parrondo, 2014), and the analysis of presidential speeches in Cuba is vital to understanding Cuban policies and their evolution.

2.1.2. Cuban agriculture and political discourse

Agriculture has been a critical sector of the Cuban economy since colonial times. The production of sugar, especially after the Haitian revolution²⁸, became the primary commodity for the country throughout the nineteenth and twentieth centuries (Figueroa-Albelo, 2003; Monreal-González, 2014; Schultz, 2012). Sugar production and trade was at the center of economic exchanges of distinct political character: first with Spain, then with the United States, and most recently with the Soviet Union until the end of the 20th century, before tourism, remittances and medical services exports reframed the Cuban economy.

Land reform was one of the first measures of the revolution (First and Second Agrarian Reform Acts, 1959 and 1963). These reforms not only gave land to the farmers who cultivated it and limited the land of large-holders up to a maximum of 67.1 hectares but also secured two-thirds of the national agricultural area for the state sector (see in more detail in Chapter 4). Cuba's statist approach to economic development (Deere et al., 1992) meant, in the case of agriculture, centralized control over land and agricultural inputs and centralized state planning of the use of agricultural resources.

This centralized approach, combined with the importance of food policies as a source of legitimacy of the socialist model, has made control over the agricultural sector one of the priorities of Cuban leaders (Deere et al., 1992). Policies related to agriculture, therefore, have been an essential part of all economic reforms in the country. Being not only at the center of the economy but also of politics, the issue of agriculture has been a key theme of presidential speeches (see Table 2.2). Agricultural policy analysis through discourse analysis becomes critical considering the prevalence of a "top-down" over a "bottom-up" approach for technology transfer and science and technology policy design (Núñez-Jover & Montalvo Arriete, 2014).

Fidel's role in the agricultural policy arena is also emphasized by several Cuban economy experts (Mesa-Lago, 1989; Mesa-Lago & Pérez-López, 2005; Roca, 1994). Roca (1994) and Mesa-Lago (1993a) highlight how Castro's meddling in agricultural decision-making involved strategic design, operational details, scientific and technical decisions and even peripheral matters. Agricultural "special plans" and cattle-breeding techniques, the ten-million-ton sugar plan of the 70s, and the Food Program in the second half of the 80s and beginning of the 90s (to be discussed in following chapters) are illustrative examples of Fidel's micromanagement of the sector.

2.1.3. Methodological imperative

Not only political and contextual reasons justify the use of presidential speeches as a source for policy analysis. The lack of agriculture officials willing to be interviewed about agricultural science and technology policies and the limited access to policy documents and data for the period in question (1984-2015) limit other possibilities for research.

The scarcity of adequate, reliable data and limited access to data are widely acknowledged constraints for research on Cuba (Deere et al., 1992; Eckstein, 2003; Mesa-Lago & Pérez-

²⁸ After the Haitian revolution (1791-1804), which destroyed sugar production in Haiti, Cuba became the world's leading exporter of sugar.

López, 2005; Rosenberg, 1992; Wright, 2005, 2009, 2016; Zimbalist, 1988). Problems associated with the sporadic publication of socio-economic data, contradictions and changes in data, coverage of selected topics, changes in the definitions of indicators, and political bias are the most frequently mentioned.

However, the use of transcripts of presidential speeches also has methodological advantages to highlight. Castros' speeches constitute a non-biased source of information in the sense that they do not depend on the memories or interpretations of the past of interviewees. They constitute non-manipulated snapshots of historical moments. Also, the speeches allow for reliable and inexpensive longitudinal analysis of Cuban politics.

Furthermore, using Castros' speeches as a data source avoids at least two limitations of fieldwork in Cuba indicated by Antoni Kapcia (2008c). First, what Kapcia calls the "Cuban resistance to external research, an attitude rooted in a penchant for defensiveness" (Kapcia, 2008c, p. 648). This resistance, according to Kapcia (2008b, 2008c), has roots in the resulting "siege mentality" of the history of the revolution. Resistance is particularly strong when lines of inquiry refer to the past and are critical of policy decisions, especially those taken by or involving Fidel Castro.

Researching food availability and farming (by e.g., visiting farms, interviewing farmers) were also considered "sensitive" topics by Cuban authorities. Obtaining authorization to interview farmers or agriculture officials was an excessively bureaucratic and lengthy process. The author, who kept her status as a lecturer at the University of Havana during the fieldwork to avoid further questioning by Cuban authorities, had to, in collaboration with senior professors at the University, inform and request authorization to conduct interviews from the following organizations: the municipal government, the municipal delegation of agriculture (local representation of the Ministry of Agriculture), the municipal agricultural enterprise (representation of state agriculture in the municipality), and the local farmers' association (representation of the national association). The request for authorization required face-to-face meetings that had to be coordinated in the agendas of the officials involved. For these meetings, the author had to prepare a summary of the research in progress and a list of topics to be addressed during the interviews, a document that would be kept on file by the organizations involved. After the meetings were held, the organizations consulted with higher authorities for approval of the interviews. This process took at least three months.

Secondly, Cuban researchers have occasionally been punished for publishing, working or sharing information about "sensitive topics" with foreign researchers²⁹, especially from the United States. The stories of these scientists influence the larger scientific community and creates mistrust prior to any agreements for cooperating with work that will be published abroad. The author of this study also experienced this suspicion, despite having Cuban nationality and ten years of work experience in Cuban academic institutions. An unrelated incident to this research, but which occurred shortly before the beginning of the author's fieldwork, aggravated suspicions. The director of a research center on the Cuban economy was removed from his position and separated from the country's higher education system (i.e., not ever being able to teach or work in Cuban academic institutions) for alleged relations with foreign press and American researchers.

This overall mistrust lengthens the research process as it is necessary to find key institutional contacts (those who are well-connected or with decision-making power), show

²⁹ For a lengthy discussion of specific cases, see Kapcia, 2008 "Does Cuba Fit Yet or Is It Still 'Exceptional'?" p. 648; Kapcia, 2008 *Cuba in Revolution. A History since the Fifties*, pp. 133-156 and p. 164, and Wright, 2016.

proof of the study subject, intentions, and methods, along with the time needed to build trust. Most probably, every study, especially those aimed at non-domestic dissemination, has to compromise from the methodological and theoretical point of view to be able to conduct field research in the country³⁰.

2.3. Using discourse analysis approach

In addition to scientific work on the role of ideas on policy choices (agricultural or others) discussed in Chapter 1, there are a growing number of studies using discourse analysis as an analytical method and (or) using discourses (whether expressed in the form of speeches, interviews, official documents or reports) as the primary data for agriculture-related policy analysis. Some prominent examples are Mockshell and Birner (2015); Erjavec and Erjavec (2009, 2015); Kelemen et al. (2013); Saarikoski, Mustajoki and Marttunen (2013) ; Arts, Fischer and van der Val (2012); Kuchler and Linnér (2012); Durand and Vázquez (2011); Lestrelin (2010); Jay (2007); Lynggaard (2001); Potter (2006); Potter and Tilzey (2005); and Campbell and Liepins (2001).

The studies of Erjavec and Erjavec (2009, 2015) use critical discourse analysis to examine the European Common Agricultural Policy (CAP). Through the analysis of a sample of speeches given by representatives of relevant institutions, Erjavec and Erjavec (2009) identified competing discourses in the context of the CAP. Later, they applied the same methodology to the CAP reform documents and showed how key discourses transformed, resulting in a combination of productivist and environmentalist discourses (Erjavec & Erjavec, 2015). Both studies emphasized how the analysis of discourses can help predict policy changes by unveiling how the use of particular topics, terms and arguments helps justify and legitimize specific policy changes and interventions (Erjavec & Erjavec, 2009, 2015).

Kuchler and Linnér (2012) studied 20 years of evolution of the biofuel debate through the analysis of documents issued by international organizations dedicated to food and agriculture. Jay (2007) applied discourse analysis to dairy industry reports in New Zealand in order to explore the country's productivist construction of environmental management. Mockshell and Birner (2015) applied discourse analysis to in-depth interviews with stakeholders to identify policy beliefs and discourse coalitions regarding different agricultural policy matters. Kennedy's (2012) study uses, in addition to the public speeches of the Mao and Nehru, their letters and personal communications for the analysis of the leaders' policy efficacy beliefs and foreign policy.

None of these studies disregards the importance of other indicators and sources for agricultural policy analysis. However, they underline that: 1) stakeholders' discourses and beliefs play a role in agricultural policy-making, 2) discourses constitute valuable data for agricultural policy analysis, and, 3) discourse analysis is a practical approach that can contribute to the understanding of the evolution of agricultural policy decision-making processes.

2.3.1. Qualitative discourse analysis

This study combines the use of political discourse analysis (I. Fairclough & Fairclough, 2012) and the discourse-historical approach (Reisigl & Wodak, 2001, 2009) of critical discourse analysis (N. Fairclough, 2013; Wodak & Meyer, 2009). Political discourse analysis understands political discourse (and policy discourse) as fundamentally argumentative,

³⁰ See for example Wright (2016)

deliberative and oriented towards decision-making, and attached to political actors in political contexts. The political context is understood as the institutional context that allows political actors to exercise their power and agency in such a way that it has an impact on ways of understanding matters of public interest and where political actors can provide reasons for action (I. Fairclough & Fairclough, 2012).

Argumentation is the central analytical concept of political discourse analysis. It is a social and verbal activity through which, in political contexts, political actors try to convince the public to accept their position and that a particular strategy is appropriate through the criticism or justification of certain points of view (I. Fairclough & Fairclough, 2012). In the process of argumentation, policy-makers not only weigh options and examine reasons for action in conditions of uncertainty and incomplete knowledge (practical argumentation), but simultaneously attempt to find the arguments that will persuade specific groups (I. Fairclough & Fairclough, 2012).

Practical arguments are sets of explicit or implicit statements, composed of premises and a conclusion (claim) that reflect the practical reasoning of the agent. Practical reasoning is considered a process in which practical problems that require a course of action are addressed (I. Fairclough & Fairclough, 2012). Fairclough and Fairclough (2012), propose that the structure of practical reasoning is composed of a claim for action and a group of premises (practical arguments) which should be the focus of analysis.

The claim for action expresses what ought to be done or what is allegedly the right thing to do. Premises are composed of a) goals (possible future state of affairs), b) values (concerns regarding the goals), c) circumstances (contexts of action) and d) means (actions that make it possible, within the circumstances, to achieve the goal) (I. Fairclough & Fairclough, 2012). In this sense, political discourse analysis reveals the argumentative schemes (ways of connecting premises and conclusions) that are explicitly declared in the discourse or subsumed in ways of narrating, describing and explaining situations (and its causes), and related sequences of events (I. Fairclough & Fairclough, 2012).

The discourse-historical approach, on the other hand, explores in an interdisciplinary way how political discourse evolves in relation to different socio-political contexts, is problem-oriented and incorporates fieldwork (Reisigl & Wodak, 2001, 2009). Methodologically, it is based on the principle of triangulation that takes into account:

- a) the immediate language (speeches in this case) to analyze,
- b) intertextual and interdiscursive relationships between affirmations, texts, and other discourses (in this study, speeches, regulations, experts' interpretations and interviewees' testimonies),
- c) sociological variables and the broader socio-political and historical context in which the discourse is framed (Reisigl & Wodak, 2001, 2009).

The discourse-historical approach pays attention to different discursive strategies located in the contents of specific discourses. Discursive strategies constitute plans, carried out with different levels of intentionality, that pursue diverse objectives, e.g., justifying or legitimizing decisions, modifying public opinion, creating consent, or excluding groups (Reisigl & Wodak, 2001, 2009).

In this study, the analysis of two discursive strategies, nomination and predication strategies (Reisigl & Wodak, 2001, 2009)³¹, complements the reconstruction of the practical argument of Fairclough and Fairclough (2012). Nomination (or referential) strategies involve the discursive construction of social actors, objects, phenomena, processes and actions. Predication (or predicational) strategies involve the discursive qualification of the nominations, i.e., what characteristics, qualities and features are attributed to them (Reisigl & Wodak, 2001, 2009). Through nomination and predication strategies, actors, objects, phenomena, processes and actions are depicted, stereotyped or labelled positively or negatively (Reisigl & Wodak, 2001). The analysis of these strategies helps identify, according to Stone (2002), who are the heroes and allies who are scripted to fulfill the role of the fixers, the protagonists and antagonists, the villains, the opponents, the responsible parties for the policy problem, and the victims harmed by the villain.

2.3.2. Quantitative thematic text analysis

Parallel to the first phase of the qualitative analysis, a descriptive keyword-based statistical text analysis was performed. This was a useful exploratory analysis of the discourse with the purpose of testing the general preliminary hypotheses. In this approach, words are considered the relevant unit of observation and word choices are the primary indicator of latent content (Lowe, 2003). This methodology has proven to be valuable in the analysis of political discourses (Danielson & Lasorsa, 1997; Lowe, 2003; P. J. Stone, 1997). In public speeches, politicians strive to use a language accessible to all and largely based on keywords and iconic and straightforward imagery (Lowe, 2003). It is also valuable in longitudinal studies covering long periods of time (Danielson & Lasorsa, 1997).

For the thematic text analysis (Danielson & Lasorsa, 1997; P. J. Stone, 1997), the themes were pre-specified according to the research questions, the presence or absence of themes in the discourse corpuses was assessed, and the frequency with which the theme occurs was measured. First, using the keywords contained in Table 2.2, and the speeches in Table 2.3, it was possible to observe general trends of the presence of agriculture in presidential discourse during the periods assessed, with marked changes over time. Secondly, a basic category system was constructed that associates sets of keywords with relevant concepts. For this, keywords that identify agroecological agriculture were grouped and keywords identifying conventional/industrial agriculture were grouped. The distinction of keywords into categories was based on the literature review and exploratory reading of the 322 Castros' speeches addressing agricultural topics.

The analysis of word frequencies contained in the categorical system over the time periods allows for the distribution of themes to be visualized longitudinally. The analysis was carried out using the statistical analysis program R with the help of a research assistant. The results of this analysis were integrated in the following chapters, and in Annex 5, the graphics and a summary of the analysis can be found.

Unfortunately, time constraints did not allow the research to exploit the wide range of possible tools within quantitative discourse analysis. Future studies on political discourse in Cuba would benefit from going beyond the thematic analysis and taking full advantage of more complex quantitative discourse approaches. The research described here relies on a comprehensive qualitative assessment supplemented with quantitative data. The results provide an evidence-based starting point for more detailed quantitative studies.

³¹ Reisigl and Wodak (2001, 2009) also use argumentation, perspectivation, intensifying and mitigation strategies.

2.4. Data collection

2.4.1. Speeches

Several steps were followed to prepare the speeches for analysis. First, 589 transcript speeches were collected: 524 Fidel Castro’s speeches covering the period 1984-2007, and 65 Raúl Castro’s speeches from 2008, when he officially became president, to 2015 (Table 2.3). Most of the speeches was available from a free online data source maintained by the Cuban government; available at: www.Cuba.cu/gobierno/discursos for Fidel’s, and www.cuba.cu/gobierno/rauldiscursos/index2.html for Raúl’s. This source proved to be the most comprehensive source, after considering other online and in print collections³². Nonetheless, four speeches included in the compilation of Fidel’s speeches on science and technology published in Saénz et al. (1991; 1990) were added because of their relevance to the topic. Although the study covers all speeches registered by the official Cuban media, it should not, however, be interpreted that the study analyzes all public statements, speeches, and interviews made by Fidel and Raúl Castro.

From the 589 speeches, a first selection was made to identify speeches in which agricultural topics were addressed. The presence of agriculture-related topics was determined by a first round of intentionally selected keywords (Table 2.2). The first round of keywords was as inclusive as possible with the goal of encompassing all speeches relevant to the understanding of agricultural policy. After the first round of keywords, 322 speeches were identified with mention of agricultural issues (Table 2.3). An initial reading of these discourses made it possible to identify relevant agricultural policy topics addressed by the Castros, allowing the author to reflect on the theoretical and methodological approach.

Table 2.2: List of keywords used to create the text corpuses

Round 1	Round 2
<i>agricultura</i> [agricultura, farming]	<i>cooperativa, cooperativo</i> [cooperative]
<i>agropecuario, agropecuaria</i> [agricultura and livestock, farming]	<i>cooperativista</i> [cooperative member]
<i>agrícola</i> [agricultural]	<i>maquinaria</i> [machinery]
<i>cultivo</i> [crop, cultivation]	<i>combinada</i> [harvester]
<i>agricultor</i> [farmer]	<i>irrigación, riego</i> [irrigation]
<i>campesino, campesina</i> [peasant]	<i>tractor</i> [tractor]
<i>alimento</i> [food]	<i>mercado</i> [market]
	<i>cosecha</i> [harvest]
	<i>granja</i> [farm]
	<i>empresa</i> [enterprise]
	<i>acopio</i> [collection]
	<i>insumo</i> [input]
	<i>fertilizante</i> [fertilizer]
	<i>pesticida</i> [pesticide]
	<i>herbicida</i> [herbicide]
	<i>tierra</i> [land]
	<i>suelo</i> [soil]
	<i>buey</i> [ox]

³² For example, for Fidel <http://www.fidelcastro.cu/es/discurso/>, <http://lanic.utexas.edu/la/cb/cuba/castro.html> and for Raúl <http://www.granma.cu/discursos-raul> , <https://www.radiorebelde.cu/discursos-raul-castro/>

tecnología, tecnológico, tecnológica [technology, technological]
campo [field, country-side]
producción, producciones [production, productions]

Elaborated by the author

* Words are written in Spanish as in the speeches' transcripts and in English within brackets

Next, the speeches were separated according to a historical perspective (Table 2.3). The study initially used the classification of periods proposed by Febles-González et al. (2011), adding a fourth period corresponding to more recent times. Although there are multiple periodization schemes for the analysis of Cuban history (see, for example, Eckstein, 2003; Mesa-Lago and Pérez-López, 2005; Kapcia, 2008; Figueroa-Albelo, 2009; among others), the study uses the framework proposed by Febles et al. (2011) due to its focus on agricultural change in Cuba.

The speeches were then divided into four key chronological periods: 1) 1984-1991, considered a period of implementation of the Green Revolution approach in the country, 2) 1992-1997, a period of economic and food crisis after the demise of the socialist bloc that prompted the implementation of agricultural low input alternatives, 3) 1998-2007 the reanimation of the economy and last period of Fidel's government leadership, and 4) 2008-2015, the Raúl Castro's government agricultural policies.

However, during the coding the first period (1984-1991), changes in the discourse in argumentation schemes and nomination and predication strategies connected with new socio-economic priorities and circumstances became apparent and the period was later divided into two separate periods (1984-1987 and 1988-1991) (Table 2.3).

Table 2.3: Distribution of the speeches in the sample by period

Period	Speeches	Speeches with keywords	% of speeches with keywords	Words (total)	Corpus words	% of words within the corpus
1984-1987	48	39	81.25	493 794	41 308	8.37
1988-1991	62	51	82.26	545 901	95 087	17.42
1992-1997	102	75	73.53	644 337	33 046	5.13
1998-2007	312	137	43.91	1 361 236	11 664	0.86
2008-2015	65	20	30.77	149 830	5 925	3.95
Total	589	322	54.67	3 195 098	187 030	5.85

Elaborated by the author.

In order to create the text corpus to analyze (i.e., removing the text that is not relevant for the specific analysis), a broader number of keywords (Table 2.2) were then located and selected within their contexts (e.g., paragraph, sentence, ideas). The appropriate extent of the context was determined for each case by the author, ensuring that the ideas were captured fully. This created five full text corpuses of speeches to analyze corresponding to each period. Each text corpus was analyzed as an independent discourse that expresses the discursive strategies and the argumentative scheme of a period. The coding process was conducted manually by the

author. A codebook was developed based on the research questions outlined above (Section 2.5.2).

2.4.2. Agricultural policy documents

Relevant official documents were located in order to 1) identify policies promoting and/or benefiting the scaling (out and up) of agroecological agriculture, and 2) reveal the interdiscursive relations between the agricultural strategies promoted in the speeches and the policies being implemented (Table 2.4).

Table 2.4: Overview of consulted official documents

Type of documents	Source	Period	Number of documents
Regulations, laws, decree laws related to agriculture	<i>Gaceta Oficial de la República*</i>	1990-2012	247
Programs, plans and strategies, policy guidelines, reports of official institutions	MINAG**, ANPP***, CITMA****, ANAP***** and PCC*****	1987-2015	37
Total			284

* Official Gazette of the Republic of Cuba, government publication containing the laws, decrees and regulations in the country.

** MINAG *Ministerio de Agricultura* (Ministry of Agriculture)

*** ANPP *Asamblea Nacional del Poder Popular* (National Assembly of People's Power)

**** CITMA *Ministerio de Ciencia, Tecnología y Medio Ambiente* (Ministry of Science, Technology and Environment)

***** ANAP *Asociación Nacional del Agricultores Pequeños* (National Association of Small Farmers)

***** PCC *Partido Comunista de Cuba* (Cuban Communist Party)

The compilation of regulations was carried out by accessing the digital publications of the *Gaceta Oficial de la República de Cuba* (Official Gazette of the Republic of Cuba, in the following Official Gazette) available in www.gacetaoficial.gob.cu/es. The Official Gazettes are government publications containing the laws, decrees and regulations in the country. At the time of the field research (first half of 2017), only the Official Gazettes between 1990-2012 were digitalized. The poor state of the digitalization of the Official Gazettes of the period 1990-2008 (scans of their original paper form), sometimes practically illegible, did not allow for an analysis based on keywords. The analysis therefore required the manual revision of all publications. For the rest of the Gazettes (2009-2012), keywords helped identify regulations relevant to the analysis.

The author tried to incorporate to the analysis the Gazettes of the period 1984-1989, but it was extremely laborious and time consuming. Publications from 1984-1989 period could only be found in public libraries or state institutions with limited opening hours. The collections were incomplete and the gazettes, published on newsprint paper, were in very poor condition (mold, holes for moths), often making them unreadable.

After reviewing the 1990-2012 Official Gazettes, 247 regulations were identified related to agriculture (Table 2.5).

Table 2.5: Agricultural regulations per period, Cuba 1990-2015

Period	Number of regulations related to agriculture
1990-1991	50
1992-1997	63
1998-2007	94
2008-2012	40
Total	247

Elaborated by the author.

In addition to the Gazettes, 37 documents relevant to agricultural policy published between 1987 and 2015 were analyzed. The documents, produced by governmental institutions, were identified from the literature review and accessed digitally or in situ at the institutions in Havana during field research (July- October 2015 and February-April 2017). Finally, a group of older policy-relevant regulations and documents were consulted covering the period from 1959 onwards.

2.4.3. Interviews

During two fieldwork periods, the author and three assistants conducted a total of 105 interviews. In the first period, 30 formal in-depth interviews were conducted with 20 agroecological farmers, three pro-agroecology NGO members and seven researchers on agriculture in Cuba (economists, agronomists, and sociologists). The author and a research assistant carried out the interviews between July 2015 and July 2016.

Both farmers and experts' interviews were conducted using an unstructured, topic-based guide (Annex 6). The interviewees were chosen intentionally based on the snowball sampling method. The main objective was to reconstruct the history of the agroecological movement in the vision of the experts and the history of agroecological practices on specific farms. The interviews also explored the motivations for the adoption of agroecological practices, the perception of costs and benefits, and visions of the future of agroecology in the country and on farms specifically.

During the second fieldwork, 75 structured interviews were conducted with farmers in the outskirts of Havana between March 2017 and September 2018. Farmers were not purposively selected for their farming perspective, which allowed interviewing farmers with a wide range of farming practices (non-agroecological and agroecological). Interviews were conducted on the farms by the author and two research assistants.

The assistants were professors from the agronomy program of the Agrarian University of Havana, selected for their expertise in the subject and their knowledge of the farmers and agricultural characteristics of the region. The assistants were, additionally, considered respectable and trustworthy people by the political system (meaning the party and official organizations in the university and the local government), which could facilitate the obtaining of authorizations to conduct the interviews and avoid the suspicions that a researcher based abroad, such as the author, could raise.

The interview design was discussed with the assistants and tested in three farms before its application. The structured interviews (Annex 8) were designed to record in more detail the operation of specific randomly selected farms and to explore the role of environmental concerns (in line with agroecology) in farm decision making. Numerous notes based on observations made during farm visits are attached to the interviews.

The first intention was to cover a sample of 120 farms, making more elaborate statistical analyses possible. Unfortunately, obstacles of different nature prevented the completion of the desired sample, e.g., delays in the authorization process to conduct the interviews, two hurricanes, and illness of one of the assistants. Nevertheless, the interviews conducted provide valuable information that was incorporated into the analysis throughout the study.

Additionally, in analyzing the data and writing the results, the author carried out multiple consultations and interviews (formal and informal) with Cuban political scientists and economists and non-Cuban experts on the topic, such as Miguel A. Altieri, Peter Rosset, and Julia Wright. Communications were established through email, phone calls and video calls. These consultations helped clarify specific issues, such as providing details of historical processes and discussing interpretations of the results.

2.4.4. Secondary data

Secondary quantitative statistical information on agricultural yields, land use, input use, import-export totals and other indicators relevant to the analysis were also incorporated into the study. To provide as consistent a picture as possible, priority was given to the use of official national statistics from the *Oficina Nacional de Estadísticas e Información* (National Office of Statistics and Information, ONEI) and FAOSTAT estimates (based on ONEI information)³³.

ONEI is a state institution belonging to the Cuban Council of State. As in other experiences of socialism, the publication of statistical information is politically supervised and non-existent in topics considered taboo, e.g., poverty, income, remittances. During the course of the research, the author found some inconsistencies in the information provided regarding land tenure. For clarification, she referred to the formal consultation channels available on the official ONEI website (www.onei.gob.cu). Shortly thereafter, she was informally informed that ONEI representatives called the department at the University of Havana where the author previously worked, to inquire about the origin of the questions and the veracity of the information provided about the doctoral research.

The problems of reliability of the statistical information provided by official Cuban sources, the intermittency in its publication and the inconsistencies in the information over time have been addressed by several authors (Benjamin, Collins, & Scott, 1984; Mesa-Lago, 1989; Mesa-Lago & Pérez-López, 2005; Wright, 2016). Particularly exhaustive are Mesa-Lago & Pérez-López's (2013, 2005) descriptions of the changes in GDP measurement methodologies and inconsistencies since the crisis of the 1990s. Nevertheless, even with the limitations listed above, the information provided by ONEI is the only accessible national information that offers comparability over time. Since there are no alternative sources, the use of the information published by ONEI is essential for any analysis of Cuba's economic and social reality.

In addition to information from ONEI and FAOSTAT estimates, data collected by various scholars of Cuban agriculture and economy were also used. In most cases, the author was able to corroborate the data and estimates in at least two published sources. This information proved to be vital in periods where ONEI did not publish statistical information, e.g., between 1990-

³³ World Bank dataset also uses ONEI among other sources.

1993 and in unpublished information on private agriculture. Finally, the analysis was complemented with notes (mostly footnotes) based on the author’s personal experiences.

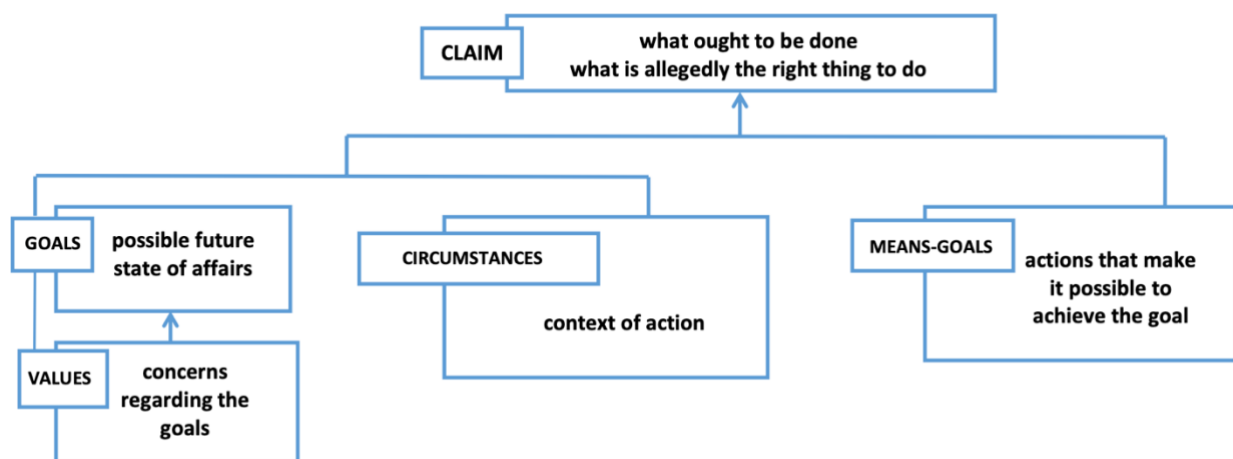
2.5. Data analysis

2.5.1. Discourse analysis of Castros’ speeches

This study analyzes the political discourse on agricultural policy in Cuba in the period of 1984-2015. Not without understanding that political discourse is a broader category, the study is based on the concept developed by Fairclough and Fairclough (2012). It utilizes the speeches of Fidel and Raúl Castro (political actors), delivered in a variety of events, congresses and activities of political nature (political contexts) between 1984 and 2015 as one of its main data sources.

The analysis of argumentative scheme (I. Fairclough & Fairclough, 2012) is used as a tool to depict agricultural strategies over time (Figure 2.1) and their supporting arguments (premises). By doing so, it was possible to identify changing approaches in different agricultural policy issues, e.g., technologies, land tenure, input use, and markets. Those changing approaches brought evidence on the evolution of agricultural policies in relation to sustainable agriculture and agroecology specifically.

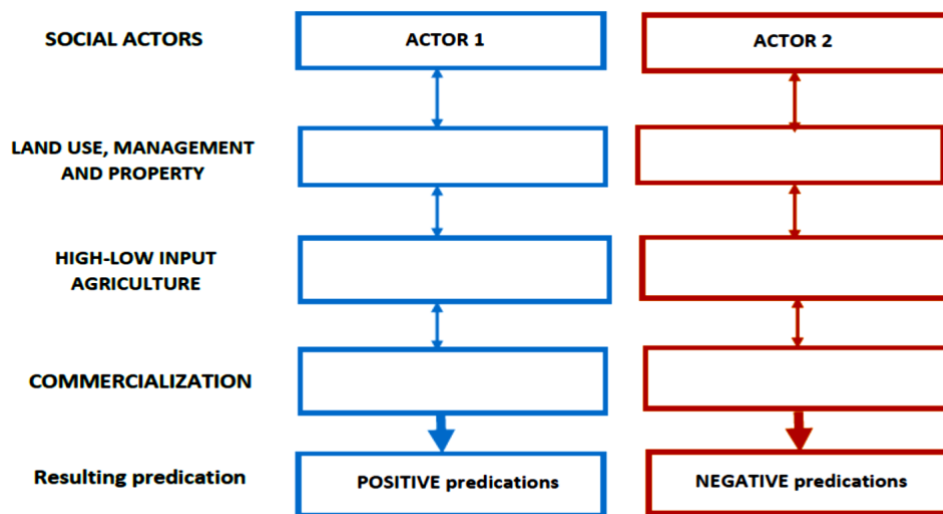
Figure 2.1: Basic argumentative scheme



Elaborated by the author based on Fairclough and Fairclough, 2012

The study of nomination and predication strategies (Reisigl & Wodak, 2001, 2009) complemented the analysis by showing the way in which actors and events are represented in political discourse. The analysis looked specially at social actors involved in agriculture and how they relate to 1) land use, management and property, 2) input usage and, 3) different commercialization and distribution systems (See example in Figure 2.2). Nominations and predications are closely related to practical argumentation, i.e., they influence and reinforce the arguments for decision-making. In this study, the different ways Fidel and later Raúl portray actors and events (positively or negatively) were considered to be part of the arguments strengthening the promotion of specific agricultural policies.

Figure 2.2: Basic nomination strategy scheme



Elaborated by the author based on Reisigl and Wodak, 2001, 2009

In addition, the study shares the methodological position of the discourse-historical approach (Reisigl & Wodak, 2001, 2009) in terms of triangulation and historical perspective. Different data sources were combined in order to give the most accurate vision of the relations between the agricultural strategies and the changing contexts (regulatory, social, economic and political) in which they were promoted.

2.5.2. Discourse analysis guiding questions

The following groups of questions served as a codebook for the discourse analysis. The first group focused on the identification of the argumentative scheme. The second group deals with the strategies of nomination and predication, and the third provides the historical approach.

1. Which strategies for agriculture development are promoted in the presidential speeches in the period 1984-2015? What are the desired characteristics of Cuban agriculture? What arguments are used to support the relevant strategies? What is the argumentative scheme (claim solution, circumstantial premises, goal premises, value premises, means-goal premise)?
2. What social actors, objects, phenomena and events, processes and actions are enunciated in the political discourse in reference to the development of agriculture based on presidential speeches in the period between 1984 and 2015? How are these social actors, objects, phenomena and events, processes and actions reflected/represented (nomination strategies) and characterized (predication strategies) in the discourse?
3. How are elements of the country's socio-economic and historical situation connected to these strategies? How do these strategies change over time? How are elements of the country's socio-economic and historical situation connected to the changes in the strategies in the different periods?

2.5.3. Identification of 'policy beliefs' resulting from discourse analysis

Policy beliefs refer to ideas held by individuals concerning policy matters. They contain value priorities, perceptions regarding causal relationships and world states, and perceptions of

the efficacy of policy instruments (Mockshell & Birner, 2015). Goldstein and Keohane (1993a) classify policy beliefs as worldviews (ideology), principled or normative, and causal. Principled beliefs are normative ideas that distinguish right from wrong, fair from unfair, and causal beliefs are ideas that express cause and effect relationships (Goldstein & Keohane, 1993a).

Agricultural ‘policy beliefs’ refer, then, to the ideas held by individuals (for this research, key policy actors) concerning agricultural policy matters that affect agricultural policy decisions. Because of their presence in the discourse in the period of 1984-2015, and their relevance to the specific way in which agroecological practices were carried out in Cuba, this research focused on the identification of policy beliefs related to the following agricultural core issues: a) scale, b) input usage, c) technologies and agricultural practices, d) land property and management, e) autonomy, and f) commercialization and appropriation of the benefits. It also focused on policy beliefs expressing the behaviors of agricultural actors considered correct and in line with the government ideology (See example in Table 2.6). The policy beliefs were derived from the political discourse analysis (argumentation scheme and nomination and predication strategies) and refer to perceptions of the issues mentioned above.

Table 2.6: Identification of policy beliefs

		RIGHT	WRONG
Agricultural policies	Scale		
	Technology		
	Inputs		
	Land		
	Input allocation		
	Food distribution		
Behaviors and attitudes	Living expectations		
	Moral stance		
	Adherence to government leadership		
Conducive to		Looked-for agriculture	Unsought agriculture

Elaborated by the author.

Goldstein and Kehane (1993a)’s definitions of principled and causal beliefs help describe Castros’ beliefs about the pros and cons and directions of Cuban agriculture, and the ideas of cause and effect behind the policies. More specifically, the identified principled beliefs respond to questions such as: What kind of agriculture is right for the Cuban system and what is wrong? Which behaviors, attitudes, and desires are correct and which are inappropriate in the Cuban agricultural system, i.e., which are in accordance with the revolutionary ideal and which are not? Which are the right policy instruments for promoting the desired agriculture? Are these policy instruments in line with the moral of the revolution? Causal beliefs, on the other hand, respond to questions such as: What scale, what technologies, and what type of land management provides better levels of production? Which is more efficient? What type of land ownership, tenure, and management are better or worse for agricultural production?

2.5.4. Definition of agroecology principles and practices in Cuba

Agroecology or agroecological agriculture refers to the application of ecological concepts and principles to the design and management of sustainable agroecosystems. It emphasizes complex agricultural systems in which ecological interactions and synergies between biological components provide the mechanisms for the systems to sponsor their soil fertility, productivity and crop protection, with fewer negatives environmental or social impacts and fewer external inputs (Altieri, 2000).

Since agroecology is a term with multiple uses (science, practice and political movement) depending on different historical, economic, and epistemological contexts (Sanderson-Bellamy & Ioris, 2017), it is necessary to use the term precisely. For the purpose of this research, a list of principles and practices attributed to the dissemination of agroecological agriculture in Cuba was compiled (Table 2.1). The resulting list is based on the literature review of the agroecology movement in Cuba (see Annex 4) and interviews in the field, and do not always reflect trends elsewhere in the world. A more detailed list of practices is found in Chapter 3 on the history of the agroecological movement in Cuba.

Table 2.1: List of principles and practices related to agroecology in Cuba

Type of Principle	Principle	Practices
Ecological	Agroecosystems' diversification in space and time	Polycultures, crop rotation Agroforestry Crop-livestock integration
	Soil and water conservation	Soil ecological management Manure, organic fertilizers, biofertilizers Minimum tillage and animal traction Water energy solutions
	Optimization of biological interactions and synergies among components of the agroecosystem	Biological control of pests Appropriate varieties, traditional varieties
	Integration of farm components to increase biological efficiencies	Recycling of nutrients and biomass
Social-Economic	Horizontal approach	Knowledge sharing, traditional peasant knowledge and farmer innovation together with the science of agroecology, farmer-to-farmer knowledge exchanges Collaborative social practices
	Farmers' empowerment	Farmer-to-farmer knowledge exchanges Peasants' family farms as production units
	Yield optimization	Focus on yield sustainability in the long term while not exhausting and contaminating natural resources
	Input substitution	Minimum use of external inputs (organic or conventional), use of in-farm resources Alternative animal feeders, pastures and fodders Local seed varieties
	Access to nutritious foodstuffs	Consumption of a diversity of fresh produce Food conservation through traditional methods

Elaborated by the author. Based on Machín et al. (2010), Fernández et al. (2018), Funes (2002), and Funes-Monzote, 2008.

Based on the peculiar history of the Cuban agroecological movement, experts (see Annex 4) claim that agroecology is mostly present in 1) small-scale farms, 2) with non-state

management, especially in privately managed farms and 3) cultivating non-prioritized crops (i.e., not among state-considered priority crops). These assumptions do not mean that all private small-scale agriculture of non-prioritized crops is agroecological. Instead, this study asserts that historical and contextual reasons (explained in more detail in Chapter 4) made the development of agroecological agriculture more feasible in farms with a combination of these characteristics. Nonetheless, the analysis of how private small-scale agriculture of non-prioritized crops is represented in the discourse and what policy beliefs are related to small-scale, non-state and non-prioritized crops helps understand what has been the space of agroecology in the country's agricultural policy and its possible futures if the framework of beliefs is maintained.

2.5.5. Contrasting government policy beliefs with the principles and practices of agroecology in Cuba

Finally, the resulting argumentative schemes, together with the analysis of nominations and predictions, provide a map expressing the government's mindset on agricultural policy for each period. These maps allow for identifying the underlying agricultural policy beliefs (principled and causal beliefs) in discourse analysis. Altogether, argumentative, nomination and predication strategies, and policy beliefs are compared with the principles and practices of agroecology and with Cuban agroecological agriculture assumed characteristics, i.e., small-scale, non-state, non-prioritized (Figure 2.3).

By doing so, the contradictions and areas of agreement between the government and agroecology become evident. Such is the case with issues such as the expected extension and size of agroecological agriculture in Cuba, the time frame (short or long term) and shared or conflicting interests (environmental, economic, or social interests). Significantly, the comparison of the policy beliefs with the principles and agroecological agriculture practices in Cuba allows for a deeper understanding on the limits of the scaling process of agroecology in the country, as well as drawing different possible futures in relation to the policy coherence of agroecological agriculture with the government's principled and causal beliefs.

The research is not focused on explaining the sources/origins of Castros' policy beliefs. The speeches are taken as the given primary data. Therefore, the research focuses on the relationship of the discourse (as an expression of the agricultural policy and ideology of the government/state/party), with the possibility of the dissemination of agroecological agriculture as the Cuban agroecological movement desires. It is not the objective of the research to explain how the ideas expressed in the Castros' discourse affect the policy; they are considered an expression of the policy and the official ideology (Mesa-Lago, 1989; Mesa-Lago & Pérez-López, 2005; Roca, 1994). The analysis of the discourse allows for an understanding of the ideas behind the policies and then a description of how they relate to the principles and practices of agroecology in Cuba.

2.5.6. Presentation of results

Chapter 5, 6 and 7 contain the results of the discourse analysis of the five historical periods studied. In each of the results sub-sections, elements of the historical and socio-economic context considered relevant for understanding the discourse of the period are described. The selection of these elements was determined by the combination of two sources: 1) the identified circumstantial premises in the speeches by Fidel and Raúl and 2) secondary material, i.e., analyses by historians and economists about the periods in question along with statistical information from various domestic and foreign sources.

The agricultural strategy of each period is first summarized and then explained in detail using the categories proposed by I. Fairclough and Fairclough (2012). The analysis of the nomination and predication strategies (Reisigl & Wodak, 2001, 2009) is subsumed in the presentation of the argumentative scheme. The decision to include the analysis of these discursive strategies in the analysis of the structure of practical reasoning was based on two aims: 1) to emphasize the role played by the nominations and predications in the construction of the arguments and 2) to avoid the repetition of content in the exposition of the results. During the presentation of the results, textual quotations from the speeches of the Castros, translated into English by the author, support the description of the argumentative scheme and of the nomination and predication strategies (in Annex 2 a list of the quotations in the original language [Spanish] can be found). At the end of each of these sections, the policy beliefs are summarized according to key variables for the analysis regarding their relationship to agroecology and alternative views of agriculture.

CHAPTER 3. AGROECOLOGY IN CUBA: PRACTICE AND POLICY

3.1. Introductory remarks

The actual uptake of agroecological practices in Cuba is a controversial issue. Views on it range from the assertion that agroecology is a widespread practice in Cuban agriculture (“*la agricultura cubana es agroecológica*”) to the debatable article by Dennis T. Avery, “Cubans starve on diet of lies”³⁴ which denies any success of the movement (Avery, 2009).

However, the truth is that in the absence of a certification system and under the principle of “minimal use of chemical inputs”, usually attributed to agroecological practices in Cuba, it is difficult to distinguish the real scope of the movement. In an interview with the author, a representative of the permaculture movement stated that, in her opinion, there were only about 200 truly agroecological farms in the country³⁵. On the other hand, “minimal use of chemical inputs” can be associated, in principle, to many crops with limited access to conventional inputs due to the economic crisis and the country’s limited purchasing power.

The issue of limited resources is not, however, the whole story. Wright (2016) relates an interview in Cuba in which one expert stated that organic banana cultivation was not feasible for the time being. Immediately after, the expert received a message from another specialist in the room, which resulted in the interviewee deflecting the conversation to emphasize that Cuba was already almost entirely organic³⁶. This kind of situation seems to reflect what Premat (2012) calls “selective retelling”, intended to serve personal and institutional projects, especially for foreign observers. Personal and political interests as well as the ‘siege mentality’ described by Kapcia (2008b) also play a role in the resulting perception of the scope of agroecology. The combination of these factors would be less of a problem if reliable data were available on food production, input allocation and use by crop and form of tenure, and if doing large-scale studies on-farms faced less obstacles.

³⁴ In the article, Dennis Avery states: “The organic success was all a lie -a great, gaudy, Communist-style Big Lie”. This article generated controversy. Fernando Funes, Miguel Altieri and Peter Rosset responded to Avery’s article in another article called “The Avery Diet: The Hudson Institute’s Misinformation Campaign Against Cuban Agriculture”, available at https://www.academia.edu/2891561/The_Avery_diet_the_Hudson_Institute_s_misinformation_campaign_aga_inst_Cuban_agriculture Accessed 11 December 2020.

³⁵ The interview took place in Havana in September 2015.

³⁶ The same optimistic view was given to the supervisor of this thesis in a visit to the field with the author in 2018.

The following is an analysis based on a bibliographic review, interviews with experts (Cuban and foreign) and farmers, and available secondary data. Introductory, it describes the Latin-American approach to agroecology and some examples of pro-agroecology policies implemented in the region. Then it discusses the history of the agroecological movement in Cuba and addresses three areas with an institutionalized ecological approach: certified organic agriculture, the urban and suburban agriculture movement, and ANAP³⁷'s agroecological movement. Following this, it depicts the regulatory framework affecting the agroecology movement and, finally, summarizes the take-home messages of the discussion.

3.2. Latin American agroecology and public policies favoring agroecology implementation

The history of Latin American agroecology is indivisible from the history of agroecology itself as a science since the 1970s, and from its development as a political movement and practice. However, this section looks in more detail at its institutional development and the experiences of scaling up agroecology in Latin American countries. The review of the influence of leftist governments on the institutionalization of agroecology provides relevant elements for the evaluation of the Cuban case.

3.2.1 Latin American political agroecology. Brief history

Pro-agroecology movements gained momentum in Latin America around the 1990s motivated by a variety of factors related to the impacts of the industrial agriculture and shaped by specific national contexts (Le Coq et al., 2017; Sabourin, Vázquez, Le Coq, Patrouilleau, & Niederle, 2017). The movements were supported by pro-peasant NGOs, universities, religious organizations (mostly influenced by the Liberation Theology), left-wing political groups and social movements focused on rural development (Altieri & Nicholls, 2017; Mier y Terán et al., 2018).

The movement's progress led to different levels of regional and national legitimization, expressed in organizations, institutionalized initiatives and public policies. At the regional level, the movement prompted the creation of several organizations, for example, the Latin American Consortium for Agroecology and Development (CLADES)³⁸ founded in 1989 by a group of NGOs working in Latin America, the Latin American Agroecology Movement (MAELA)³⁹ founded in 1992, and the Latin American Scientific Society for Agroecology (SOCLA)⁴⁰ founded in 2007. Some examples of national organizations are summarized in Table 3.1.

³⁷ Asociación Nacional de Agricultores Pequeños (National Association of Small Farmers) is the only association of private and cooperative farmers in Cuba.

³⁸ CLADES is a regional organization dedicated to agroecological advice, research and training for rural social movements and NGOs, which also publishes the journal *Agroecología y Desarrollo* dedicated to promoting agroecological experience and knowledge and providing a forum for debate on the institutional challenges of sustainability.

³⁹ MAELA is a movement that brings together peasant organizations, small and medium family farmers, indigenous communities, landless communities, rural women and youth, consumers and social organizations that defend agroecological peasant and family agriculture (<http://maela-agroecologia.org/quienes-somos/>).

⁴⁰ SOCLA is a regional organization dedicated to promoting agroecology as an indispensable strategy for achieving sustainable rural development and food systems in Latin America (<https://soclaglobal.com/>).

Table 3.1: Examples of national pro-agroecological organizations in Latin America

<i>Country</i>	<i>Organization</i>	<i>Foundation year</i>	<i>Web link</i>
<i>Argentina</i>	RENAMA - Red Nacional de Municipios y Comunidades que fomentan la Agroecología - Argentina	2016	http://www.renama.org/
<i>Argentina</i>	Red Nacional en Agroecología (REDAE)	2013	https://inta.gob.ar/proyectos/red-de-agroecologia-0
<i>Bolivia</i>	Asociación de Productores Ecológicos de Bolivia (AOPEB)	1991	https://www.aopeb.org/
<i>Brazil</i>	Articulación Nacional de Agroecología (ANA)	2002	https://agroecologia.org.br/
<i>Brazil</i>	ABA Asociación Brasileña de Agroecología	2004	https://aba-agroecologia.org.br/
<i>Ecuador</i>	Colectivo Agroecológico del Ecuador	2007	https://colectivoagroecologicoec.wordpress.com/
<i>Nicaragua</i>	Red de Promoción de Agroecología GPAE	1994	https://www.gpaenicaragua.com/
<i>Nicaragua</i>	Movimiento de Productoras y Productores Agroecológico y Orgánicos de Nicaragua	2009	http://maonic.org/
<i>Nicaragua</i>	Promoción de la Sustentabilidad y los Conocimientos Compartidos		https://prosuco.org/
<i>Peru</i>	Asociación Nacional de Productores Ecológicos del Perú ANPE-PERU	1998	https://www.anpeperu.org/
<i>Peru</i>	Consortio Agroecológico del Perú	2005	http://consorcioagroecologico.pe/
<i>Uruguay</i>	Red de Agroecología del Uruguay	2019	https://eccosur.org/pfo/red-de-agroecologia-pfo/
<i>Venezuela</i>	Asociación Venezolana de Agroecología (AVA)	2014	https://avaagroecologia.wixsite.com/misitio

Elaborated by the author

The path towards the institutionalization of the Latin American agroecological movement as a political movement came from different directions. One of them was to distinguish itself from organic agriculture. In most countries of the region, the initial trajectory of agroecological movements is jointly organic⁴¹ and agroecological (Sabourin, Patrouilleau, et al., 2017). However, agroecologists claim that the development of organic agriculture eventually focused on its commercial opportunities, mainly linked to the export of certified organic products to Europe and the United States. In both Chile (Martínez Torres, Namdar-Iraní, & Saa Isamit, 2017) and Costa Rica (Sáenz-Segura, Le Coq, & Bonin, 2017), for example, the institutionalization of organic agriculture was concerned with improving the competitive positioning of national products in the international market and therefore responding more to international influences and private interests than to the work of social movements or rural development.

Interest in the opportunities offered by organic agriculture prompted a process of standardization that was reflected in the proliferation of organic agriculture laws and regulations and the use of certification systems focused mainly on international markets. In this context, countries such as Argentina and Costa Rica stand out with regulations for the

⁴¹ The organic agriculture movement in Latin America began by the 1980s, with significant involvement of IFOAM Latin America, and other European and US organic agriculture organizations.

promotion of organic agriculture since the 1990s⁴², achieving the status of third country with the European Union for the export of organic products. Other countries in the region, such as Mexico, Peru, Chile, Colombia, Brazil and Peru, also have regulations promoting organic agriculture⁴³.

Agroecologists perceived this process as the conventionalization of organic agriculture and the reductionism of the ecological approach to the substitution of inputs (chemicals by organics) (Le Coq et al., 2017; Nelson et al., 2009; Sabourin, Patrouilleau, et al., 2017). In the agroecological movement's perspective organic agriculture, if not based on agroecological principles⁴⁴, reproduces negative patterns of conventional agriculture: external dependence (technology, inputs), monoculture, large-scale production and use of fossil energy sources. In addition, it leads to processes of elitization of healthy products, making them only accessible to high-income consumers (Intriago & Gortaire Amézcuca, 2016).

Epistemologically, conventional organic agriculture is based on the control and dominance of natural processes through disciplinary approaches, aiming at maximizing yields (Rosset & Altieri, 2017; Sabourin, Patrouilleau, et al., 2017). In contrast to this approach, in Latin America, agroecological agriculture stands as a science of complexity, with a holistic approach based on the dialogue of different knowledge (traditional and scientific) and the understanding of the reciprocity of natural processes. At the production system level, agroecology promotes technological and input self-sufficiency, and the diversified use of soil and natural energy sources (solar, wind, water, animal and human) (Le Coq et al., 2017).

In addition to their epistemological differences, the separation between agroecological and organic agriculture was influenced by apparent differences in the socio-economic and political perspectives of the movements. Agroecology was, in all cases, more linked to the defense of peasants, indigenous people, the landless (small-scale agriculture) excluded from agricultural modernization processes, and the fight against hunger, poverty and situations of food vulnerability (Le Coq et al., 2017; Sanderson-Bellamy & Ioris, 2017; Wright, 2005). The social and political processes of defense of land rights, and of family, peasant and indigenous agriculture influenced the development of agroecology in contexts such as, for example, Brazil (Schmitt et al., 2017), El Salvador (Moran, 2017), Nicaragua (Fréguin-Gresh, 2017), Chile (Martínez Torres et al., 2017), Ecuador (Intriago & Gortaire Amézcuca, 2016), Bolivia (Catacora-Vargas et al., 2017) and México (Pulido Secundino & Chapela y Mendoza, 2017). In other countries, the implementation of agroecological practices was driven by situations of food crisis, such as the Argentine Pro-Huerta project (Patrouilleau, Martínez, Cittadini, &

⁴² In Argentina, Ley Nacional de Producción Orgánica, 1999 and in Costa Rica, Reglamento sobre Agricultura Orgánica, 1997; Programa Nacional de Agricultura Orgánica, 1994; Ley para el Desarrollo, Promoción y Facilitación de la Agricultura Orgánica en Costa Rica (2007).

⁴³ In Mexico, the Law for Organic Production was passed in 2006 (Pulido Secundino & Chapela y Mendoza, 2017). In Chile, between 2008 and 2019, laws, decrees and resolutions were issued to promote organic agriculture (https://www.bcn.cl/leychile/consulta/listado_n_sel?comp=&agr=1054&_grupo_aporte=&sub=945). In 2003, in Peru, the Technical Regulation of Organic Products was published, which establishes a regulatory framework and definitions on organic/ecological agriculture and in 2008 the Congress enacted Law 29196 for the Promotion of Organic/Organic Agriculture and its regulation in 2012 (Alvarado et al, 2015).

⁴⁴ There are experiences of organic agriculture that apply agroecological principles and that are celebrated by the agroecological movement, such as Mier y Terán et al. (2018)' study where the case of organic coffee growers in Chiapas is considered one of the five success stories for deducting key drivers for scaling agroecology.

Cittadini, 2017) and the Cuban urban agriculture and agroecological movement (Funes-Monzote, 2008; Funes, 2002; Mier y Terán et al., 2018).

The confrontation with the productive, commercial and political monopolies of agribusiness and the industrialization processes of current agriculture, such as the cultivation of transgenic crops, was reflected in the promotion of self-sufficiency in production systems, the rescue of traditional seed varieties, the promotion of participatory certification systems and local markets, or alternative market networks. Specifically, the actions of the agroecological movement against GMO crops have gained political space in several countries in the region since the 2000s. Such was the case of the governments of Venezuela during the Chavez administration (Núñez, 2013), Ecuador in 2008 (Intriago & Gortaire Amézcuca, 2016) and Peru in 2011 (Alvarado, Siura, & Manrique, 2015). Participatory certification systems and alternative markets have paradigmatic examples such as the Rede Ecovida in the southern states of Brasil, created in 1998 by NGOs, consumer cooperatives, cooperatives and organizations of peasants and agroecological farmers (participatory certification, horizontal pedagogical approach, solidarity economy) and the national organic agriculture fair BioBolivia, inaugurated in 1999 (Catacora-Vargas et al., 2017; Mier y Terán et al., 2018; Schmitt et al., 2017). In Bolivia in 2012, the National Technical Standard on Participatory Guarantee Systems for National and/or Local Trade in the Process of Ecological Non-timber Agricultural and Forestry Production was also issued with the objective of promoting ecological production according to the dimensions and criteria of agroecology, promoting self-consumption of ecological production as a contribution to food sovereignty, and facilitating the application of participatory guarantee systems (Catacora-Vargas et al., 2017).

The combination of these approaches led to a strong political profile of the agroecological movement, centered on categories such as food sovereignty, solidarity economy and “*buen vivir*” (well living), focused on working with small producers and subsistence agriculture⁴⁵. A clear expression of the political nuance of Latin American agroecology is how the Agroecological Movement of Latin America and the Caribbean (MAELA) defines itself.

“What is MAELA? It is a political expression against neoliberalism and the globalization of the economy, as these are exclusionary and discriminatory of the cultures and knowledge of the peoples of Latin America and the Caribbean. MAELA is a non-profit civil entity, made up of organizations of peasant producers, indigenous peoples, families, consumers, NGOs, agroecology movements and networks, educational institutions and universities. It is an open, plural and diverse movement in development experiences, production, marketing, research, training and promotion that brings together more than 150 institutions. Its purpose is to promote ecological agriculture to contribute to sustainable human development based on agroecology and local knowledge.” (<https://maelac.wordpress.com/maela/>)

3.2.2 Policies favoring agroecology implementation in Latin America

The processes of scaling-up agroecological agriculture describe particular trajectories in Latin America, leading to different levels of pro-agroecological regulations and policies. However, it is recognized that the agroecology movement made greater progress in some countries during leftist governments' terms (Giraldo & McCune, 2019; Mier y Terán et al., 2018). Brazil and Nicaragua are paradigmatic cases with specific policies that promote jointly

⁴⁵ Argentina is an exception because it is implementing an extensive, large-scale agroecological strategy in one region of the country based on replacing chemical inputs with biological inputs or management techniques. This proposal aims to lower costs and stabilize yields by reducing producers' dependence on conventional packages and producing for both the domestic and foreign markets (Patrouilleau et al, 2017; Sabourin et al, 2017).

agroecological and organic agriculture, namely, the Brazilian National Policy on Agroecology and Organic Production of 2012 and the Law for the Promotion of Agroecological and Organic Production in Nicaragua of 2011.

In other countries as Bolivia, Ecuador and Venezuela laws were approved with emphasis in food sovereignty and sustainable agriculture. In 2006, Bolivia passed, under the government of Evo Morales, Law 3525 on Regulation and Promotion of Ecological Agricultural and Non-Timber Forest Production, and other complementary regulations for concerning technical norms and control systems for the ecological production (Catacora-Vargas et al., 2017). The Ecuadorian Organic Law of the Food Sovereignty Regime, approved in 2010, explicitly promotes agroecology and organic agriculture (Intriago & Gortaire Amézcuca, 2016). In Venezuela, the 1999 constitution establishes the state's duty to promote sustainable agriculture (Herrera, Domené-Painenao, & Cruces, 2017; Núñez, 2013).

However, most of the countries do not have a comprehensive policy in favor of agroecology, but do have instruments that favor or regulations with a partial, non-explicit approach to agroecology (Martínez Torres et al., 2017; Patrouilleau et al., 2017). Rather, agroecological movements benefit from complementary environmental policies and those focused on peasant, indigenous and family agriculture.

Regarding environmental policies, pro-agroecological movements were nurtured and benefited from the boom in environmental policies in the region, especially after the Earth Summit in Rio de Janeiro in 1992. Chile has a sustainable agriculture policy (Martínez Torres et al., 2017); Costa Rica implements payments for environmental services (Sáenz-Segura et al., 2017) and Mexico enacted laws such as the Sustainable Rural Development Law in 2001 and the General Climate Change Law in 2012 (Pulido Secundino & Chapela y Mendoza, 2017). Also in 2012, Bolivia approved Law 300 on “Mother Earth and Integral Development for Well-Being”.

In other countries, not only growing international interest in the environment, but also domestic environmental crises have led to progress in environmental policies that have a positive impact on agroecological agriculture. That is the case of, for example, health crises due to the overuse of toxins in cotton and sugarcane cultivation in El Salvador (Moran, 2017) and in cotton cultivation in Nicaragua (Fréguin-Gresh, 2017), as well as the impact of Hurricane Mitch in Nicaragua in 1998, which elevated agroecology as the “miracle solution” due to its resilience capacities (Fréguin-Gresh, 2017).

In addition, parallel policies focused on peasant and indigenous family agriculture positively affected the pro-agroecological movements in countries such as Bolivia, Brazil, Chile, Salvador, Ecuador, and Nicaragua (Catacora-Vargas et al., 2017; Fréguin-Gresh, 2017; Intriago & Gortaire Amézcuca, 2016; Martínez Torres et al., 2017; Moran, 2017; Schmitt et al., 2017). Similarly, the struggle for land rights, political conflicts and economic crises also shaped the development of agroecological agriculture in Latin America. In countries with a high concentration of land, such as El Salvador or Brazil, movements such as the MST adopted agroecology as a political guideline (Schmitt et al., 2017). The political conflicts in El Salvador, the changes in power in Brazil, Nicaragua and Bolivia, led to approaches to peasant and family agriculture, which was affected during the political conflicts. Similarly, international and peasant movements reacted to the impacts on small producers of the North American Free Trade Agreement (NAFTA) or of big GMOs and inputs companies in the region, such as Monsanto. The economic crises in Argentina and Cuba also propelled advances in the agroecological movement.

However, none of these experiences has led to a national conversion to agroecological agriculture and agroecology still has a marginal place in agricultural national systems⁴⁶. Latin American agroecological initiatives coexist with agribusiness and Green Revolution practices. Brazil is one of the countries where this dichotomy is clearly expressed. As one of the countries where national policies for agroecology and organic agriculture have been implemented, it is paradoxical that Brazil is also one of the largest consumers of agrochemicals and with the largest areas of GMO cultivation in the world (Schmitt et al., 2017).

The failure of agroecological movements to mainstream agroecological principles, even in contexts of leftist governments, has highlighted the structural barriers they face. The agroecological movements identify fundamental obstacles to the generalization of the agroecological approach in Latin America as the following:

- the dominant perspective among governments where organic and agroecological agriculture is an item of the agricultural economy and not a model of agriculture (Fréguin-Gresh, 2017; Moran, 2017; Sabourin, Vázquez, et al., 2017)
- the dual position of governments that combine pro-agroecological policies with policies of massive fertilizer and improved seed deliveries (Catacora-Vargas et al., 2017; Fréguin-Gresh, 2017; Martínez Torres et al., 2017; Moran, 2017; Parmentier, 2014)
- the contradictions emanating from governments demanding rapid increase in productivity and the slow process of change and restoration of the agroecosystem that does not provide results in the short term (Fréguin-Gresh, 2017)
- the agro-export and import substitution approach (Martínez Torres et al., 2017)
- the effectiveness of environmental policies that regulate the use of agrochemicals, but do not eliminate them (Martínez Torres et al., 2017)
- educational system and technical assistance still dominated by conventional agriculture (Catacora-Vargas et al., 2017; Fréguin-Gresh, 2017; Intriago & Gortaire Amézcuca, 2016; Moran, 2017)
- limited local demand, local markets and local certification systems for agroecological products (Catacora-Vargas et al., 2017; Fréguin-Gresh, 2017)
- absence of data and studies valuing the regional and nationally impact of agroecological conversion (Catacora-Vargas et al., 2017; Sabourin, Vázquez, et al., 2017).

Without discussing whether a total or partial conversion would be convenient in the region, in the to a large extent, the application and dissemination of agroecological practices were based on the pre-existing situation of peasants who were alienated or displaced from the Green Revolution, or affected by political conflicts or agribusiness. International organizations worked in principle with peasants with limited access to irrigation or inputs, where most needed, and simultaneously, where assimilation of change requires less investment and less conviction.

3.3. Looking at the history of the Cuban agroecological movement

Before the collapse of the Berlin Wall, the Cuban government followed a model of agricultural modernization characterized by intensive use of machinery and irrigation, high fertilizer and pesticide use, overspecialization and monocropping (Chan & Freyre Roach, 2012; Funes-Monzote, 2008; Funes, 2002; Wright, 2009). The external assistance of the socialist bloc

⁴⁶ Social movements in Bolivia reached in 2015 an agreement with the government, from which the national ecological production would increase from the then 3.3% to 11% (Catacora-Vargas et al., 2017).

allowed Cuba to have indicator values comparable or higher to those of the leading countries of the Green Revolution (Table 3.2). The Cuban Green Revolution was, nonetheless, far more costly and highly dependent on external inputs than the global average (Blasier, 1993; Chan & Freyre Roach, 2012; Mesa-Lago, 1993c).

Cuba was, however, not food insecure (based on caloric and protein intake and nutritional levels), but rather dependent on food imports. Fifty-seven percent of its domestic protein requirements and 50 percent of its calorie requirements were imported (Cruz-Hernández, 2005; Febles-González, Tolón-Becerra, Lastra-Bravo, & Acosta-Valdés, 2011; Funes-Monzote, 2008; Wright, 2009). The trade agreements established with the socialist Council of Mutual Economic Assistance (CMEA) provided a false sense of security. Cuba focused its agricultural production on a few items for export (mainly sugar and citrus fruits), and processed foods were imported from the socialist bloc (explained in more detail in Chapter 5).

Table 3.2: Fertilizer consumption, tractor density and irrigation per agricultural hectare of selected leading and regional countries in 1986

<i>Country</i>	Fertilizer consumption per agricultural land (kg/ha)	Tractor per 1000 ha agricultural land	Area equipped for irrigation per 1000 ha agricultural land
<i>Brazil</i>	16.80	2.82	9.14
<i>China</i>	35.84	1.81	102.54
<i>Costa Rica</i>	32.54	2.39	28.33
<i>Cuba</i>	102.77	11.43	133.00
<i>India</i>	53.08	3.58	251.88
<i>Mexico</i>	17.71	1.99	51.02
<i>USSR</i>	47.47	4.97	36.65
<i>USA</i>	40.07	10.96	61.91
<i>World</i>	28.01	0.005	0.051

Elaborated by the author. Sources: FAOSTAT_data_8-11-2020 Fertilizers Archive, Land Use and Machinery Archive.

In parallel, the agricultural system was highly centralized, with state control over the ownership and management of about 80% of the agricultural land (See Table 4.4), control over production (what to produce and how) and input allocation, and centralized domestic and international commercialization of the yield (private, cooperative or state). Following a model that imitated the “sister Soviet republics”, state agriculture was characterized by the gigantism of state large-scale farm enterprises (Figueroa-Albelo, 2003), a permanent salaried labor force, and the marginal role of small-scale agriculture and peasants. Small and medium producers (private or cooperative) were also highly dependent on “technological packages” (allocated by

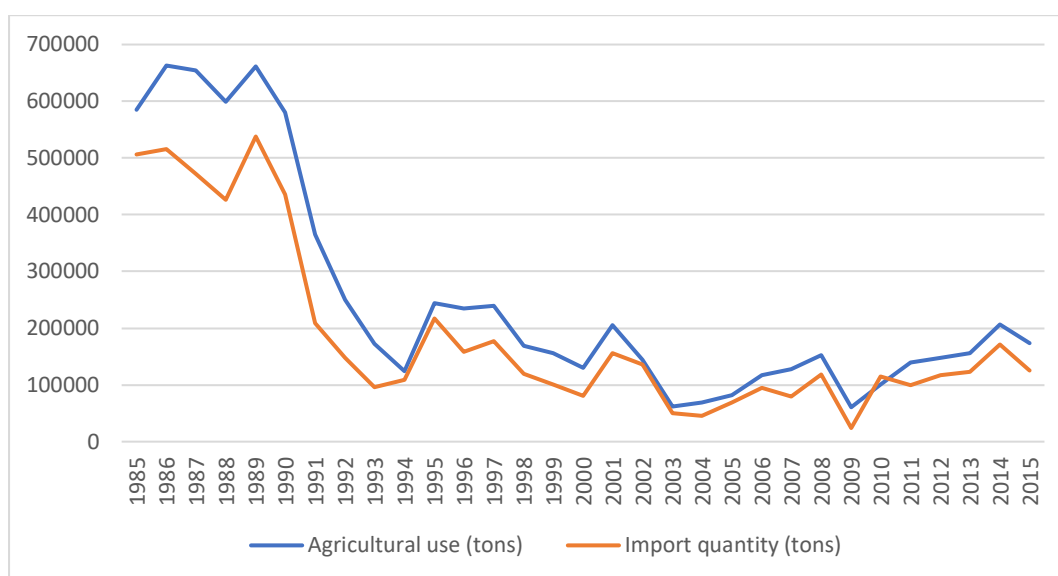
state agricultural entities), which were common for intensive agriculture and consumed expensive imported energy sources (Febles-González et al., 2011; Wright, 2005)⁴⁷.

The collapse of the Socialist Bloc of Eastern Europe, the end of the Council of Mutual Economic Assistance (CMEA) and Soviet assistance, in combination with the economic failings of the Cuban planning model, led to a severe economic and food crisis (explained in more detail in Chapter 6). In the first half of the 1990s, the agricultural sector suffered a drop of close to 50 percent of its internal production (Caballero & Valdés Paz, 2010; Valdés-Paz, 2009), and Cuba lost more than 80 percent of its external market for financing agricultural resources and inputs (See Figure 3.1) for the sector (Funes, 2002). In 1994, the average caloric intake dropped by as much as 30 percent as a consequence of the crisis. Cuba lost its Soviet safety net and was forced to enter the global market, without having developed diversified agricultural products or light industry (Funes-Monzote, 2008; Wright, 2009).

The impact was not immediate, but with the depletion of the stocks and reserves, Cuban agriculture supplemented the absence of supplies with low-input agricultural techniques (Table 3.3) and prioritization of input use on strategic crops (*cultivos priorizados*). Considering that the centralized behavior pattern did not stimulate participation or develop innovation among farmers and agricultural workers (Febles-González et al., 2011), it is not surprising that the organic-agroecological movement was not farmer-driven but rather an academic movement. Scientists conducting research on aspects of input substitution and reducing the use of fertilizers, pesticides, and concentrated feed for livestock in the late 80s (Funes-Monzote, 2008) were presented with an ideal opportunity to advance their ideas. To a large extent, what has come to be called the “agroecological movement” in Cuba is the result of the work of scientists, especially in the area of agronomy and animal science, who created working groups, trained technicians and farmers, and sought international partners and funding for projects related to the organic and agroecological approach (See Table 3.4).

⁴⁷ The way in which production and consumption was pursued had environmental consequences and made agricultural system unsustainable: degraded lands, low food self-sufficiency, low energy-efficiency of the systems, high external dependence, high agricultural costs, and other consequences like extensive deforestation and biodiversity loss, broadly described in multiple scientific works (Altieri, 2000; Cruz-Hernández, 2005; Funes-Monzote, 2011; Febles-González, 2011; Rosset et al, 2011).

Figure 3.1: Total consumption of fertilizers in Cuba, 1985-2015



Elaborated by the author. Source: FAOSTAT_data_9-16-2020. Fertilizers by Nutrient.

The Cuban Association of Organic Agriculture (ACAO) was founded in 1992 and held its first international conference in 1993 (thereafter, a conference was held every two years). Its main objectives were to raise environmental awareness on agriculture, develop agroecological projects, promote training and research within an agroecological paradigm, coordinate technical assistance, encourage exchanges with international organizations with sustainable agriculture approaches, and promote the marketing of organic products (Funes, 2002; Wright, 2005). In 1995, ACAO helped setting up three “agroecological-lighthouses” in three cooperatives near Havana that short after implemented agroecological practices as tree integration, crop rotation, polycultures, and green manures (Nicholls & Altieri, 2018).

Simultaneously, the Center for Sustainable Agriculture Studies (CEAS) was created at the Agrarian University of Havana. During the 90s, CEAS supported the movement, organizing courses and master and doctorate programs on agroecology (Funes, 2002; Machín Sosa, Roque Jaime, Ávila Lozano, & Rosset, 2010).

Table 3.3: List of agroecological practices by theme in Cuba, 1990-2000

Manure and organic fertilizers	Sugacane filter-cake mud (cachaza) Compost, bioearth, and worm humus Waste waters, Cover crops, mulch
Biofertilizers	Rhizobium, Bradyrhizobium, Azotobacter, Asozpirillum, phosphorus solubilizing microorganisms, vesicular-arbuscular mycorrhizae
Biopesticides: biological control of pests	National network of 276 Centers for the Production of Entomophages and Entomopathogens: production of biological control agents Use of predators, insect pathogens and disease antagonists

	Use of plants with insecticidal, fungicidal, bactericidal and herbicidal qualities Parasitic nematodes
Alternative animal feeders, pastures and fodders	Locally adapted breeds and crosses Free range rearing Local resource diet Legumes in protein bans Integration of livestock with other farming activities
Appropriate varieties	Cultivation of resistant varieties Traditional crops varieties rescue Less input demanding crops Traditional animal varieties
Animal traction and innovation on alternative tools	Oxen traction Modified equipment for oxen traction Labor saving by leaving residues in the field Sharing use of machinery
Food conservation through traditional methods	Artisanal food processing
Soil ecological management	Living barriers, ground cover with locally adapted pasture species, contour plowing Conservation tillage system
Farm and production systems diversification	Crop rotation and polyculture Integrated crop-livestock systems
Water energy solutions	Windmills Hydraulic battery rams

Elaborated by the author. Sources: Funes, 2002; Funes-Monzote, 2008; Machín et al., 2010; Rosset et al, 2011; Chan and Freyre Roach, 2012; Wright, 2005, 2012.

By 1995, ecological approaches started to become visible (Wright, 2005). The Cuban agroecological movement began to gain international recognition and admiration. First, fact-finding missions and study tours led by US and European organic interest groups throughout the 90s gave international visibility and painted a success story for ecological agriculture, creating the perception that Cuba had converted to organic (Wright, 2005). In 1993, Miguel A. Altieri, one of the most leading figures in agroecology stated "... aside from political preferences or considerations, it is the social responsibility of progressive scientists in the North to support in every way possible Cuba's agricultural transition process and to ensure, as well, that other Latin American countries have access to Cuban technological innovations" (Altieri, 1993, p. 92).

In 1996, ACAO received the Saar Mallinskrodt Prize by the International Federation of Organic Agriculture Movements (IFOAM). Only three years later, the same group, renamed as Organic Agriculture Group (GAO), was awarded the Right Livelihood Award (Alternative Nobel Prize). Likewise, in 2010, a Cuban promoter of sustainable agriculture received the Goldman Prize (green Nobel Prize). Meanwhile, many articles and books were written praising the Cuban experience with sustainable agriculture (Annex 4).

Table 3.4: Summary of projects and programs related to agroecology in Cuba 1990-2015

Project or Program	What is it about?	Reported impact	Institutions and Funding partners
Agroecological “Lighthouses” (1995- current)	Promoting agroecological agriculture in cooperatives in key locations of the country	Improved productivity and biodiversity in the farms after applying agroecological methods Farms showcased the methods to other farms	SANE, UNDP Hivos Bröt für die Welt Oxfam International ANAP
Urban and Peri-urban Agriculture (1991-	Food production in urban and peri-urban areas, using organic methods and local resources and direct marketing to local populations	Use of idle areas for food production More than 300 thousand jobs 4.2 million tons production in 2006.	INIFAT MINAG
Farmer-to-Farmer Agroecological Movement (1997-current)	Promoting sustainable agriculture through participatory methods (farming demonstrations and exchange of experiences) Spreading agroecological techniques	Over 110 000 families using sustainable methods 12 000 farmer-promoters 3000 facilitators 170 exchange coordinators	ANAP Bröt für die Welt Oxfam CCFD
Popular Rice Program (1990-	Small or medium-scale rice cultivation with minimum inputs, using local resources, animal traction, and low or no chemical use	Produced 40-75% of the rice on the island in the period 1997-2008	MINAG IIR ANAP
Medical Plants Program (1992-current)	Using “Green medicine” for the prevention and cure of diseases (medicine shortages during the Special Period)	700 ha, 1000 tons of medicinal plants organically produced (2002) Distribution in drugstores and hospitals	FAR MINSAP MINAG
Permaculture Program (1994-current)	Training families, communities and farms to produce food in very small spaces in the most ecological way possible and to provide social, economic and environmental benefits	Family networks, 24 community groups in 7 regions	FANJNH
National Front of Animal Traction (1990-	Increasing animal traction for substituting tractors, mainly oxen Developing new implements for ox teams (multi-plow) Training of oxen for agricultural labor Technical demonstrations and training of farmers	376 000 trained oxen delivered to cooperatives and state farms in the period 1991-2002	MINAG MINAZ IAgric IIMA

Science and Technology Forum (1981-current)	Promoting worker and peasant innovation and the generalization of results from the local to the national level	Presentation of the results of the agroecological movement and promoting its national implementation	CITMA
National Program of Biological Pest Control Production (1988-current)	Network of Entomophagous and Entomopathogenic Reproduction Centers (CREE) (220) in agricultural production areas, with the mission of producing (or reproducing) organisms (bacteria, fungi, insects) that when released behave efficiently as natural enemies or bioregulators of pests 3 Biopesticide Plants	Average annual production of 12 types of bio-products 1.3 tons of bio-pests, 15 000 million entomophagous (trichogramma) 900 000 nematodos entomopathogous Application in 1.5 million ha	MINAG
Local Agricultural Innovation Program (2000- current)	Participatory local seed systems through “agrobiodiversity fairs” and “demonstrations plots” Participatory facilitation to access seeds and promote genetic diversity Soil conservation Smallholders (non-state, private)	10 provinces, 45 municipalities 50 000 beneficiaries Increased yields in participant farms Networks for knowledge-sharing and decision-making Increased labor opportunities	COSUDE INCA
National Soil Conservation Program (2000- current)	Payments for soil conservation and improvement measures (e.g., live barriers, use of organic matter, hedgerows, contour ditches) Capacity building on soil conservation	In 2011 measures were already applied in around 600 thousand ha	MINAG CITMA
National Forestry Development Fund (2000- current)	Promoting and finance projects aimed at developing forests and protecting forests’ soil and resources	Increased forest area to near 30% in 2015.	FONADEF
National Emergency Program of Organic Fertilizers (abonos orgánicos) (2001-current)	Promoting the generalization of the use of organic fertilizers in the country	Training of producers in systems for the treatment of organic solid waste from worm farming and composting Dissemination of the optimal application of organic fertilizers 168 municipal organic fertilizer production centers Production of worm humus and compost of 6 and 15 million tons respectively	MINAG
Agroecological Articulation: design of sustainable	Demonstrating scalability and functional sustainability of agroecological model to achieve	A set of basic strategies for agroecological reconversion at the municipal level were designed in a participatory manner.	ACTAF MINAG EU Hivos

alternatives for local food security (2011- 2015)	local (municipal) nutrition and food security Facilitating the adoption of agroecological articulation alternatives in municipal agricultural development strategies		COSUDE
Project Biomass as a renewable source of energy for the rural environment (2009-2017)	Integrating local biogas/biodiesel production with food production for food and energy security	Promotion of biodiesel, biogas and biomass gasification, reforestation of highly fragile soils Use of biofertilizers produced from biodigester effluents Increase in food production and diversification of production lines in 6 municipalities	EPFIH MINAG MINED COSUDE
Project Agricultural Biodiversity in Cuban Protected Ecosystems (2013)	Addressing food security and conservation issues by integrating agroecological systems in Cuban protected areas	190 families in three of biosphere reserve zones benefited Knowledge-sharing and capacity building on seeds, pests' control, organic manures Agricultural tools Double families' income Farmer empowerment	INIFAT MINAG MINREX CITMA UNESCO FAO Biodiversity International
Project to Support Sustainable Agriculture in Cuba, PAAS (2013- current)	Training and capacity building to improve the production of and access to organically grown foods and developing a participatory certification system.	Reduction of production costs Improvement of infrastructure Installation of mini fruit processing industries Job creation in 12 municipalities	ACTAF COSUDE Hivos
Project Environmental Basis for Local Food Sustainability (2012-2017)	Facilitating knowledge exchange, promoting adaptive strategies to address threats from climate change.	Capacity building, stakeholders' knowledge-sharing experiences in 8 municipalities 89 demonstration sites with mitigation, adaptation and development practices covering 5780 hectares	CITMA MINAG UNDP COSUDE EU

Elaborated by the author. Sources: Funes, 2002; Ríos, 2002; Funes-Monzote, 2008; Machín et al, 2010; Rosset et al, 2011; Chan and Freyre Roach, 2012; Wright, 2012; Funes Aguilar and Vázquez Moreno, 2016; Vázquez et al, 2017; Fernández et al., 2018

National institutions: ACTAF Cuban Association of Agricultural and Forestry Technicians, ANAP National Association of Small Farmers, CITMA Ministry of Science Technology and Environment, IIR Rice Research Institute, EPFIH Pasture and Forage Station "Indio Hatuey", FANJNH Antonio Núñez Jiménez Foundation for Nature and Humanity, FAR Revolutionary Armed Forces (Ministry of), INIFAT Tropical Agriculture Research Institute, INCA National Institute of Agricultural Sciences, MINAG Ministry of Agriculture, MINAZ Sugar Ministry, MINEM Ministry of Energy and Mines, MINSAP Ministry of Public Health, MINREX Ministry of Foreign Relations, FONADEF National Fund for Forestry Development, IAgri Agricultural Engineering Research Institute, IIMA Agricultural Mechanization Research Institute

International Partners: SANE Sustainable Agricultural Network and Extension, UNDP United Nations Development Program, COSUDE Swiss Agency for Development and Cooperation, Hivos Humanist Institute for Cooperation with Developing Countries, EU European Union, UNESCO United Nations Educational, Scientific and Cultural Organization,

In the second half of the 90s, the agroecological movement experienced key processes of institutionalization. Two major ones occurred when the *Asociación Nacional de Agricultores Pequeños* (National Association of Small Farmers, ANAP) decided to expand the farmer-to-farmer movement to the whole country and when the *Instituto de Investigaciones Fundamentales en Agricultura Tropical* (Institute for Fundamental Research on Tropical Agriculture, INIFAT), a scientific institution belonging to the Ministry of Agriculture, concentrated and organized the activity of urban agriculture in the country. Both institutions expanded and institutionalized “*a la cubana*” (centralized organizational structures, chains of control and command, representations in each municipality of the country, ideological nuance) experiences that had originally emerged mostly spontaneously. Both experiences of institutionalization are described in more detail in the following sections.

These processes of institutionalization seem, however, to have been motivated by more far-reaching political processes in the country. In 1996, Raúl Castro presented a Political Bureau report at the Fifth Plenary Session of the Central Committee of the Communist Party in which intellectuals and NGOs were openly attacked for trying to subvert the revolution. This report had repercussions that marked the closure of a research center⁴⁸ where Cuban economic reform was discussed and had direct impacts on Cuban (independent) NGOs and associations. In the report, Raúl stated:

“... the enemy does not hide its intention to use a couple of the so-called Non-Governmental Organizations, developed in Cuba during recent times, to foster division and subversion here, and the theoretical mantle they use is to present them as members of civil society...”

“For us, civil society is not the one they refer to in the United States, but ours, the Cuban socialist civil society that is made up of our powerful mass organizations, CTC, CDR, FMC, ANAP, FEU, FEEM and even the pioneers, the social ones, which as is known, group together, among others, the combatants of the Revolution, economists, jurists, journalists, artists and writers, etc., as well as other NGOs that act within the law and do not intend to undermine the economic, political and social system freely chosen by our people, while at the same time, even when they have their own personality and even their specific language, together with the revolutionary State they pursue the common objective of building socialism”.

“In this sphere (intellectuals) and in others equally strategic, the Party cannot tolerate the existence of officials who act for freedom, even interfering in tasks that correspond to other bodies without establishing cooperation and without having the due authorization of the heads of those bodies.” (Raúl Castro, Informe del Buró Político, V Pleno del Comité Central del Partido Comunista de Cuba, Havana, March 23, 1996)

In the early 1990s, the state made it easier to create associations and foundations. Associations such as ACAO (organic agriculture) and the Antonio Núñez Jiménez del Hombre y la Naturaleza Foundation (permaculture) were created in 1992-1993. These associations, along with others created earlier or in the same period⁴⁹, were able to receive funding from

⁴⁸ For more details, see Mauricio Giuliano 1998 *The CEA Case: Intellectuals and Inquisitors*. Universal Editions.

⁴⁹ For example, the Cuban Council of Churches (CIC), Cuban Association of Animal Production (ACPA), and the Center for Exchange and Reference on Community Initiatives (CIERIC).

NGOs or foreign organizations that did not want to work with government institutions⁵⁰. In the late 1990s, the government began perceiving the development of these initiatives operating outside of the strictest state control with suspicion.

The case of ACAO illustrates this movement toward government centralization and control. In only a few years after its establishment, ACAO had achieved recognition from international organizations linked to sustainable agriculture, received awards, attracted the attention of foreign specialists, and received funding from international sources. ACAO's approach was far from the centralized planning of the Ministry of Agriculture.

These differing approaches, the general mistrust of the government, compounded by the fact that one leading member of the movement did not return from their trips abroad, led to ACAO's transformation in 1999 into the Organic Agriculture Group (GAO), which is currently still attached to the Cuban Association of Agricultural and Forestry Technicians (ACTAF). ACTAF was a non-governmental organization without a distinguishable focus on organic agriculture. Nonetheless, it had closer links to the state (as the ones described above by Raúl) and worked under the control and monitoring of the Ministry of Agriculture. ACTAF absorbed ACAO's projects as well as centralizing funds and the management of the group activities⁵¹.

Premat's (2012) study on small plots of urban agriculture describes similar stories of institutionalization. The author narrates how the private and spontaneous initiative of Havana's inhabitants in the development of gardens for the cultivation of vegetables for family and community consumption was appropriated by state institutions and NGOs (quasi-state) when the economy started to recover (Premat, 2012).

In 1999, when ACAO, renamed GAO, received the Right Livelihood Award, conspiracy theories arose. Wright (2005) explains having found people believing that the United States had maneuvered for ACAO to win this award in another effort to attack Cuba and that ACAO was unaware of any conspiracy. The financial prize associated with the award was transferred to ACTAF after the government authorized it (Wright, 2005). Other stories about ACAO becoming GAO were reported in the Wright (2005) study, and to the author by interviewees, including stories about jealousy and envy for international travel, exchange with foreigners, and the monetary rewards of the awards.

3.4. Who are then the agroecologists?

3.4.1. Officially organic

Cuba has a small sector of certified organic products for export. In 1997 there was organic citrus production in 6 regions of the country and there was interest in planting organic coconut, pineapple and mango (Funes, 2002). In the period of 2001-2007, Fairtrade certified 18 cooperatives producing organic citrus concentrate juice (interview with an ANAP official). In 2003, a small portion of coffee, cacao, honey, citrus and sugarcane production was also certified by Öko-Garantie from Germany and bio.inspecta from Switzerland (Chan & Freyre Roach, 2012).

In 2000, private-state plans aimed to produce 3000 tons of organic sugar and to have a mill in each region of the country (Funes, 2002; Wright, 2005). The production began with a joint venture with the German companies Naturkost and Naturwaren. Likewise, in the same period,

⁵⁰ Only Welthungerhilfe worked in this period with the Ministry of Agriculture.

⁵¹ For a lengthy description of this process, see Wright, 2005, p: 261-265.

there were 3000 ha of organic coffee produced in east Cuba with an expected 150 tons of production for European export. Organic cocoa was also produced in 1500 ha in East Cuba, with expectations of 200 tons (Funes, 2002). In 2008, Fairtrade certified nine farms producing organic honey and sugar⁵². Production of organic coffee, briefly certified by Fairtrade, was decertified on the basis that domestic production was not meeting domestic demand and rather only met specific export commitments (interview with an ANAP official).

Little information exists about the end results of this production. According to Chan and Freyre Roach (2012), the area of certified organic agriculture was of 8495 ha in 2001, then grew steadily to more 15 000 ha in 2006. After, FAO reports a decreasing trend, around 2100 ha in 2010, 4300 ha in 2015, and 1300 ha in 2016 (FAOSTAT, 2019 Land Use. Agriculture area under organic agriculture-Area. Lates Update: 03/12/2019).

The Cuban state pays higher prices to farmers with export-oriented certified organic crops compared to non-certified Cuban farmers⁵³ (Chan & Freyre Roach, 2012). Nonetheless, prices are still low compared with Latin-American standard prices for organic production. Farmers with Fairtrade certification did not receive direct premium payments, unlike other countries and with other certifiers. Fairtrade payments were sent to ANAP's central account and then ANAP invested the money back into projects designed to resolve socio-productive problems of the certified cooperatives (interview with an ANAP official). This situation created some friction with the Fairtrade organization, leading to periods with no certification and currently only a small sector of organic sugarcane (interview with FairTrade official in Bonn).

Premium prices for organic produce for domestic consumption have proven to be polemic. As of January, 2021, there is no certified production or differentiation between organic and non-organic produce in any Cuban domestic market. The official approach is that food should be available for all, no matter how it was produced (Chan & Freyre Roach, 2012). Nonetheless, in early publications and activities of the organic movement, the interest for domestic certification and commercialization of organic produce is present (See, for example, Funes, 2002; Wright, 2005). For example, an ACAO conference had certification as its focus and it was considered one of the challenges of the agroecological movement (Machín Sosa et al., 2010).

Contradictions between the organic organization (non-governmental) and MINAG (centralization) interests seem to have hindered the certification impetus of the 90s⁵⁴. Nonetheless, parallel to export interest, the government saw organic production's potential for its tourism sector. Using conventional supply channels but separating the produce based on non-use of agrochemicals, the ministry aimed to get premium prices for this "organic" produce without needing certification (Wright, 2005). However, in 2012, the Cuban National Standardization Office circulated a set of proposed guidelines for the production, certification, labeling and marketing of organic products for public review (Chan & Freyre Roach, 2012). Additionally, project PAAS (Table 3.3) was promoting the creation of a participatory guarantee system that would function as a certification of organic production (Vázquez et al., 2017). Both are still not in place.

⁵² Currently, there is only sugarcane certified production by Fairtrade (<https://www.flocert.net/about-flocert/customer-search/>).

⁵³ For example, the Cuban state paid coffee producers between 8 to 21 pesos a tin. Organic producers obtained 28 pesos (Chan and Freyre Roach, 2012).

⁵⁴ For a lengthy explanation, see Wright, 2005 pp. 252-253

3.4.2 Urban and sub-urban agriculture

Cuban urban agriculture enjoyed great international coverage. Usually depicted as small green plots with fresh lettuce in the city surrounded by multifamily buildings, urban agriculture is currently a nationwide program promoting the production of not only vegetables but also fruits, tubers, rice, grains, organic fertilizers, seeds, meat and eggs, among others. Inspired by the experience of the “*organopónicos*” (begun by the Cuban military in the late 1980s) and prompted by the shortages of the 1990s, the government welcomed people’s initiative of planting food in empty spaces in the cities. In 1991, the government allowed the use of small plots or idle areas in the city with the main aim of improving families’ food consumption. In 1993, the government officially leased small plots (up to half a hectare in usufruct) in some areas, while other small producers in semi-authorized and private areas (patios and *parcelas*) continue to produce food⁵⁵. Direct commercialization of the produce was first illegal (but tolerated) until agricultural markets were allowed in 1994. This way, urban agriculture moved from being subsistence agriculture (1989-1994) to becoming officially agriculture for market⁵⁶ sale (1994 onwards) (Cruz & Sánchez Medina, 2003).

In 1994, the Ministry of Agriculture created an Urban Agriculture Department, and together with local governments started providing support services and material resources to the urban gardeners. Additionally, urban gardeners spontaneously organized horticultural clubs for knowledge sharing (Premat, 2012).

In 1997, the movement was further institutionalized and changed its name to *Movimiento de Agricultura Urbana* (Urban Agriculture Movement). The National Research Institute for Tropical Agriculture (INIFAT) started coordinating the movement. Institutionalization meant the establishment of urban agriculture organizations’ structures in every town, authority hierarchies, control and evaluation system by the INIFAT, and ultimately the Ministry of Agriculture. At the end of the century, the urban agriculture movement was represented by a national urban agriculture group composed of specialists, government officials, urban farmers, and regional and local groups organizing, developing and regulating urban agriculture throughout the country (Companioni, Ojeda Hernández, Páez, & Murphy, 2002). The “movement” was running 26 sub-programs (agriculture, livestock and supporting programs), and had representation in every municipal government and in many neighborhoods.

The Cuban definition of urban agriculture is very broad. It is defined as “the production of food within the urban perimeter applying intensive methods, taking into account the interrelationship of human-culture-animal-environment and the facilities of the urban infrastructure that promote the stability of the labor force and the diversified production of crops and animals throughout the year, based on sustainable practices that allow the recycling of waste” (MINAG, 2014). In urban agriculture plots, agrochemicals are not used or only in minimal amounts (when necessary and authorized). Instead, urban farmers use bio-formulas, organic matter for soil, apply integrated pest management and organic soil management, practice crop rotation and intercropping, and also use animal traction depending on the size of the plot.

The strict regulations and evaluation system of urban agriculture program was positively appreciated by agroecologists in Cuba. One of the prominent figure of the agroecology

⁵⁵ For a more complete understanding of these small producers see the seminal work of Adriana Premat (2012).

⁵⁶ Urban agriculture farmers were selling without paying taxes until 1998-2000, when new regulations regarding commercialization specific to urban agriculture system were approved.

movement stated on urban agriculture: "... and it is here that we are possibly closer to the ideal of integrated agroecological systems due in part to the prohibition of the use of chemicals because of the proximity to dense human population" (Funes, 2002, p. 18), implicitly stressing the absence of similar regulations for agriculture in general.

In 2009, with Raúl Castro's involvement, the program was expanded to suburban areas and renamed as *Programa Integral de la Agricultura Urbana y Suburbana* (Holistic Urban and Suburban Agriculture Program)⁵⁷. Simultaneously, the National Urban and Suburban Agriculture Training Center was also created at INIFAT and the program started running 31 sub-programs. Suburban agriculture is defined as agriculture that takes place within a 10 km radius outside cities and towns, and within a 2 km radius of small villages. The resulting program is very heterogeneous regarding size, crop-livestock mixes, and land property and management (See Table 3.5).

Being a program so extensive in area, allegedly around 12 000 km², the overlapping of pro-agroecological programs and projects became common. Thus, a cooperative farm on the outskirts of any municipality could be part of the urban agriculture program, the farmer-to-farmer movement of the ANAP (to be explained in detail in the next section), the permaculture movement of the Antonio Núñez Jiménez Foundation, and at the same time benefit from international projects promoted by universities or scientific centers (Table 3.4). This overlap is very clearly evident in the interviews with agroecological farmers.

Table 3.5: Urban and suburban agriculture modalities, a summary, Cuba 1989-2015

Modality	Description
State enterprise farms for workers' consumption (1989-current)	Plots, generally more than one hectare, cultivated by workers to produce roots, tubers, fresh vegetables, grains, fruits, pork, poultry and rabbits for workers' canteens and families.
Community gardens, later converted to plots or intensive-cultivation gardens (1991-1996)	Use of available spaces (state or privately owned) for food production for self-consumption Less than 1500 m ²
Plots, <i>parcelas</i> (1996- current)	Usually, less than 1000 m ² , worked by one person or one family, food production for self-consumption Usufruct
Intensive-cultivation gardens (1996-current)	From several hundred m ² to more than one hectare (average between 1000 to 3000 m ² , one or several families or partnerships High-quality soils, drainage and water supply Self-consumption and market Mainly UBPCs*
Urban community garden, <i>Organopónicos</i> (1993- current)	Plots from 2000 to 5000 m ² , not suitable for agriculture, to be collectively farmed by groups Cultivation of fresh vegetables in containers or raised beds (between 20-30 cm) with organic matter and soil mix, with more than 3 rotations a year Mainly UBPCs
High yield urban garden, <i>Organopónicos de alto rendimiento</i> (1994-current)	Plots over one hectare, usually not suitable for agriculture Fresh vegetables and cooking herbs Cooperatives and state enterprises Payment for land use and investments

⁵⁷ From 2014 onwards, "Urban, Suburban and Family Agriculture"

	Sale to the population below market prices
Fresh vegetable greenhouses (1998-current)	High yield fresh vegetable and off-season crop production State and UBPCs Produce mainly intended to the tourism sector
Organic matter production centers (1999-current)	UBPCs, 1-2 ha Collection (dairy farms, plant residues in agricultural markets and large-scale agriculture), processing and distribution of organic matter to all kinds of urban agricultural units
Agricultural support stores (1999-current)	Technical assistance Promotion of seed and seedling exchange Facilitation of information and meetings to exchange experience Materials: seeds, seedlings, biological products, tools, veterinary medications, bio-soil, earthworm humus, brochures and specialized literature
Seedling greenhouses (1996-current)	Production of high-quality seedlings for urban agriculture Biological inputs, biofertilizers, biological pest control agents, biological fumigation services UBPCs ¼ ha
Suburban farms	Located in the periphery, larger plots (more than 2 ha) Highly integrated system of production
Hydroponics	Indoor cultivation in a nutrient-rich solution Higher costs, state-owned
Household gardens, patios	Family yards, high variation of size and type of produce

Elaborated by the author. Sources: Cruz and Sánchez Medina, 2003; Companioni et al, 2002; Altieri et al, 1999

* UBPC: Unidades Básicas de Producción Cooperativa (Basic Units of Cooperative Production)

The positive impacts of urban agriculture in Cuba have been highlighted in many publications - an increase in the availability of fresh food and green medicinal remedies, the productive use of abandoned areas in cities, saving of fuel and means of transport due to the proximity of production to consumers, an increase of green areas in cities, more than 100 000 jobs, and bringing the culture of agriculture closer to that of cities (Altieri et al., 1999; Companioni et al., 2002; Companioni, Rodríguez-Nodals, & Sardiñas, 2017; Cruz & Sánchez Medina, 2003; Vázquez et al., 2017).

The limitations of the urban agriculture movement are, however, less frequently cited in the literature. Cruz and Sánchez Medina's (2003) evaluation of urban agriculture in Havana highlights that "not using agrochemicals does not necessarily mean that the production is organic" and that "conducting organic activities does not mean that they are sustainable" (Cruz & Sánchez Medina, 2003, p. 51). Notwithstanding the many merits of the urban agriculture movement, Cruz and Sánchez Medina (2003) list a number of limitations, summarized as follows:

Environmental and health

- possible contamination of leafy-green vegetables located in high motor-vehicle concentration areas
- industrial and residential wastes containing heavy metals and contaminants can be part of the composting

Feasibility

- lack of cost-benefit analysis and holistic view to the different components of the urban environment
- problems of water availability for irrigation and the use of the public water supply network
- organic matter availability depends on a centralized system
- the management system of some cooperatives is not always suitable for small urban agriculture units

Centralized approach

- preconceived design despite the contexts of different locations
- preconceived techniques despite the contexts of different locations and actors
- single evaluation and follow up system
- improper identification of local resources, reproducing the dependency of the external input system (e.g., organic matter, seedlings, seeds)
- not engaging with seed production or native germplasm recovery

The last group of limitations relate to what was described by Stolze and Lampkin (2009) as the institutionalization of organic agriculture as opposed to grassroots movements and what is criticized by the Latin American agroecological movement in relation to a conventionalization of organic agriculture. Nonetheless, at the same time, this homogenization promoted by governmental structures highlights the benefits of government intervention and regulation, namely no agrochemicals are allowed, organic matter is produced and distributed, and seeds and technical assistance are available.

3.4.3. ANAP's Farmer-to-Farmer Agroecological Movement

In 1997, the National Association of Small Farmers (ANAP) began promoting agroecology through the *campesino-a-campesino* (farmer-to-farmer) methodology⁵⁸ (Table 3.4) in the central region of the country. In the following years, the methodology was extended to other provinces with support from international donors as one-time projects. In 2001, ANAP decided to transform the experience into a national movement. The *Movimiento Agroecológico de Campesino a Campesino* (MACAC, Farmer-to-Farmer Agroecological Movement) was to be carried out with national funds in the absence of international donors. With this, each ANAP representation office (in each municipality and province of the country) had the institutional mandate and responsibility to promote agroecology through the farmer-to-farmer methodology.

In 2008, ANAP began classifying the farms participating in the movement according to the level of agroecological progress and integration (See Table 3.6). Progress in the ranking of agroecological farms did not imply economic benefits, only moral ones: “gain the respect of the community and cooperative, and feel a sense of satisfaction and pride” (Rosset, Machín Sosa, Roque Jaime, & Ávila Lozano, 2011, p. 174). ANAP declared that one-third of farming families are involved in the movement, namely over 110 000 families using sustainable methods, 12 000 farmer-promoters, 3000 facilitators, and 170 exchange coordinators (Machín Sosa et al., 2010).

⁵⁸ The *campesino-a-campesino* movement methodology is aimed at transferring sustainable technologies and innovations through horizontal learning networks. This decentralized, farmer-led and participatory method for exchanging experiences and knowledge was developed in Central America and spread in Latin America as the ideal method for agroecological agriculture (Holt-Giménez, 2008).

There are no public data regarding the distribution by ranking of agroecological farms. In in-depth interviews with agroecological farmers, only one mentioned having ANAP's agroecological seal (Rank 3), although all mentioned the organization as part of the process of transforming their farms. In a more detailed review of the classification system (Table 3.5), it is apparent that being included in Rank 1 is relatively easy. Initiation Rank only requires the application of two agroecological techniques in terms of farm transformation, which can be, as in the case of some interviewees, worm farming and composting.

Table 3.6: ANAP ranking system for agroecological farms, Cuba 2010

	Aspects to be fulfilled
Rank 1 Initiation	<ul style="list-style-type: none"> - Identification of farm problems through Participatory Rapid Appraisal (PRA) - Implementing an agroecological technique or alternative to solve the identified problem - Implementing other (1-3 or more) agroecological practices - Family awareness and involvement with the movement - Family awareness of environmental and agricultural productive issues - Commitment to participate in the movement before the General Assembly - Practice and/or rescue of rural agricultural traditions - Planning of farm crop and livestock diversification - Practice and/or willingness to experiment on farm - Productive and commercial potentialities with a social purpose
Rank 2 Transition to agroecology	<ul style="list-style-type: none"> - Integration into the process of exchange, experimentation and promotion of the CAC Movement and methodology - Increasing biodiversity and integration of the productive components of the farm (crops, livestock and forestry). - Substantial reduction of chemical inputs use - Increasing use of resources generated on-farm and proportional decrease of the external dependence - Social commitment (produce to local markets and social institutions) - Gender equity - Strengthening of social and cultural peasant identity - Economic efficiency - Orderly and functional farm
Rank 3 Agroecological farms	<ul style="list-style-type: none"> - High agroecological awareness and conceptual knowledge of sustainability and food security with gender approach - Commitment as a promoter of the agroecological movement, with participation in workshops and exchanges of experiences - Highly diversified, integrated and efficient use of farm components (soil, crops, trees, animals, water, seeds, family culture) - High productive performance, sufficient for family consumption and local marketing (comparable or higher yields than conventional agriculture) - Absence of environmentally degrading practices (chemical inputs use, transgenic seeds, hormonal products, excessive mechanization, monoculture, etc.) - Low (almost zero) external dependence for the production and maintenance of family life - Guarantee of quality of family life (family, education, health, information) - Participation in the activities of grassroots organizations. - Social commitment (produce to local markets and social institutions) - Conservation and practice of rural cultural traditions - Permanent improvement of the resources of the farm (soil and water conservation, self-generation of fertility, etc.) - Family participation (men, women, youth) in production and decision-making of the farm

Elaborated by the author. Source: Machín et al, 2010

ANAP integrated agroecology into the organizational structure of the organization. A department was also created at ANAP's National Training Center where courses were given to MACAC facilitators and coordinators. However, Machín Sosa et al. (2010) point out limitations in the work of actors involved in MACAC as a lack of resources for training and exchange, cadres that do not prioritize agroecology, and resistance from decision-makers in agricultural organizations. These limitations reflect the non-primary space of agroecology within ANAP's missions. In informal conversations, experts commented that the movement declined significantly in recent years due to a lack of resources.

Nonetheless, ANAP's involvement with agroecology shows the government's tacit approval in promoting agroecological practices in non-state agriculture. ANAP is formally a non-governmental organization representing cooperatives and independent farmers. Created in 1961, the organization has a very high political emphasis comparable to other "mass" organizations in Cuba.

"The work of the Organization is directed to orient, unite and organize the cooperative members, peasants and their families in the realization of the Agrarian Policy of the Party and the Revolution, and in the fulfillment of the strategic missions of the ANAP, contained in 1) the defense of the principles of the Revolution above any class, collective and individual interest, placing itself justly in favor of reason, 2) the political and ideological preparation of the peasants and their families to continue being strategic allies of the working class in the present and future scenario and 3) working from the internal functioning and the differentiated political and ideological work, ensuring the production of food towards the destinations prioritized by the policy of our Socialist State" (ANAP's official web page: http://www.revista.anap.cu/?page_id=1351, 05.10.2020).

ANAP's surveillance and control over the farmers are permanent. Any activity with farmers needs the consent and approval of ANAP⁵⁹. The trade-offs of this institutionalization of the agroecological movement are not yet studied. Machín Sosa et al. (2010) suggest that the involvement of ANAP made MACAC "more systematic and less spontaneous" (Machín Sosa et al., 2010, p. 19). While extending training and exchange on agroecological practices throughout the country, a dose of bureaucratization and verticality may have been inescapable. ANAP's orientations come with a certain political authority and therefore penalization. In the voices of its protagonists, MACAC became a political movement:

"It is political, moreover, because it contains the economic, social and ethical principles required to fulfill that number one patriotic duty of the peasantry, which is to produce for the people. And this very important task, so decisive that it cannot be separated from the grassroots, municipal and national structure of ANAP, should be part of the periodic analyses that we make in our assemblies and board meetings, regardless of the fact that some cooperatives, because of their economic development and results, may have a comrade who is responsible for this task" (Vice-President of ANAP, quoted in Machín et al, 2010).

⁵⁹ The author, during her fieldwork in Cuba, had to request ANAP's authorization to conduct interviews with farmers. The process involved presenting a summary of the research topics and objectives, and the issues to be addressed in the interviews. After several weeks wait, ANAP, the local government and the local representation of the Ministry of Agriculture authorized the interviews. Still, during an interview, the president of the cooperative arrived, questioned the presence of the author and the assistants, and called ANAP's local office to verify the interviews were authorized. The president of the cooperative then stayed and heard the rest of the interview.

3.5. Official regulatory framework

Given the extent of the institutionalization process carried out since 1997, one would expect a regulatory framework that promotes agroecological practices to the same extent. That is not the case. The absence of such regulations contrasts with the existing strong and detailed framework that outlines state control over what farmers can do in their farms, even when private. Examples include regulations regarding in which conditions private farmers can sacrifice their female sheep⁶⁰ or their cows⁶¹. Considering the complexity of the underlying regulatory framework, the state's commitment to the agroecological movement must be analyzed in different layers.

As described in the prior section, enacting solutions in times of crisis in non-state spaces was practiced with some autonomy (i.e., without strict governmental control, but implicit allowance) before 1996. This was followed by stricter state monitoring. The former *laissez-faire* policy was applied with reticence (see later in Chapter 6 the manifestations of this policy in the political discourse) in periods when the state did not have the resources to encompass all aspects of the Cuban economy and society as they saw fit, allowing what Mesa-Lago and Pérez-López (2005) call “pragmatic cycles”.

When the analysis is conducted in the regulatory framework, it is easily recognized that the number and scope of pro-agroecology programs and projects (Table 3.4) allowed by the government contrasts with what is effectively legislated in the country. There is no formal conceptualization of agroecology in public policies and regulations (Vázquez et al., 2017). In fact, the word *agroecología* (agroecology) is not included in any regulation.

The absence of specific policies to promote agroecology contrasts with the experience of other Latin American countries, especially those that made progress in passing pro-agroecological laws and regulations during the terms of leftist governments, e.g., Brazil during the governments of Lula Da Silva and Dilma Russef, Bolivia during the term of Evo Morales, and Nicaragua under Daniel Ortega. However, as in other Latin-American countries, there are regulations and laws that affect (positively and negatively) the Cuban agroecological movement.

In the following section, the Cuban regulatory framework related to the development of agroecology in the country is described. The analysis was based on the review of all regulations concerning domestic agriculture between the years 1990-2012 and was complemented with the analysis of relevant policy documents such as the economic resolutions approved during the Communist Party Congresses during studied period (PCC, 1991, 1997, 2011). In addition, based on the European and Latin American experiences and interviews in the field with agroecological farmers and experts, the analysis considers the absence of policies and discusses the existing visions on the government's support to agroecology in Cuba.

3.5.1. Regulations that (indirectly) support the agroecology movement

Of all 247 regulations and laws concerning agriculture in the period 1990-2012, only fourteen regulations are related to agroecology, although only indirectly since it is not mentioned explicitly. In both the European and Latin-American context, some regulations with environmental purposes positively affect the practice of agroecology. Such is the case with

⁶⁰ Resolution 2-91, GOO No.7, 19.02.91.

⁶¹ Resolution Law No. 1279, GOO No. 29, 12.10.74.

regulations related to the conservation of soil and water sources (Table 3.7), forestry, and those related to animal traction (Table 3.8).

Table 3.7: Environmental regulations with positive effects on the agroecology movement

Organizational		
Decree-Law No. 118 (18.01.90)	Council of State	Defines the structure, organization and operation of the National System of Environmental Protection and Rational Use of Natural Resources.
Resolution No. 168/95 (09.10.95)	Ministry of Science, Technology and Environment	Regulations for the conduct and approval of environmental impact assessments and the granting of environmental licenses.
Resolution No. 50/99 (21.05.99)	Ministry of Science, Technology and Environment	To establish a template for the elaboration of technological innovation projects, containing orientations for its realization by agricultural and industrial companies, research centers, universities and other entities that execute this type of project.
Protection of natural resources		
Decree No. 179 (26.02.93)	Council of State	Regulation for the protection, use and conservation of soils, and its contraventions.
Decree No. 199 (11.05.95)	Council of Ministers	Regulations for the protection and rational use of water resources and its contraventions.
Resolution No. 111/96 (28.11.96)	Ministry of Science, Technology and Environment	Regulations on Biological Diversity
Law No. 81 (11.07.97)	National Assembly of the People's Power	Law of Environment, containing a definition of sustainable agriculture and sustainable agriculture standards.
Resolution No. 62-96 (26.04.96)	Ministry of Agriculture	Disposition of the elaboration of the projects of hydro-regulatory forest belts around the reservoirs and fluvial channels as anti-erosion measures.
Joint Resolution (16.04.07)	Ministry of Agriculture and Public Health	Regulations for the use of formulated bio-pesticides aiming at preventing water contamination and human health problems.

Elaborated by the author. Sources: GOE No. 1, 18.01.90; GOO No. 4, 26.02.93; GOO No. 14, 11.05.95; GOO No. 26, 09.10.95; GOO No. 13, 26.04.96; GOO No. 40, 28.11.96; GOE, 11.07.97; GOO No. 32, 21.05.99, GOE No. 16, 16.04.07.

The Ministry of Science, Technology and Environment was created in April 1994 (<http://www.citma.gob.cu/>). Although this gave new impetus to environmental policies in the country, agriculture has not been one of its main focus. Environmental regulations for the protection of water and soil resources, while positively affecting the agroecological movement, have had a minimal impact on the movement. In addition, the fines for infractions were insignificant, consisting of between 30-50 Cuban pesos (between 1.25 and 2 USD at the 2020 exchange rate, between 30 and 50 cents at the moment of the legislation's approval).

However, a fact not often mentioned in the literature is that the Environmental Law does define "sustainable agriculture" and outlines a set of sustainable agriculture principles. Sustainable agriculture is defined as an "agricultural production system that allows for stable

production that is economically viable and socially acceptable, in harmony with the environment” (Law No. 81 of Environment, GOE, 11.07.97). According to the document, sustainable agriculture is based on:

- a) the development of comprehensive systems for managing cultivated ecosystems: the management of soils, biological diversity, in particular productive diversity, water, nutrients and their recycling, pests and diseases and the establishment of an appropriate policy on varieties.
- b) the rational use of biological and chemical means, in accordance with local characteristics, conditions and resources, which minimize environmental pollution;
- c) the preparation of the soil according to environmentally adequate criteria, promoting the use of techniques that avoid or diminish the development of degrading processes;
- d) the preventive and integrated management of pests and diseases, with particular attention to the use of biological diversity resources for these purposes;
- e) the establishment of adequate land use and planning, executed on a real and objective basis, in which local agricultural activities correspond to the economic and ecological conditions of the area;
- f) the integration of scientific and technical achievements with the traditional local knowledge of the population and the genetic resources obtained in this way, promoting the direct participation of local communities in the design, development and improvement of production systems;
- g) the establishment of mechanisms for economic regulation that encourage the conservation of biological diversity and the use of agricultural practices that are favorable to the environment and that tend to avoid the inappropriate use of soils and other natural resources and the excessive use of agrochemicals. (Law No. 81 of Environment, GOE, 11.07.97)

Sustainable agriculture seems to be a more neutral all-encompassing term, which still allows a broader variety of technological approaches. The law⁶² contains many elements related to agroecological practices, for example, integral management of soils and pests, rational use of biological and chemical means, integration of science with local knowledge, and participation of local communities in decision-making. At the same time, the law distances itself from the movement by not mentioning agroecology or making reference to organic agriculture. This is particularly noteworthy since it coincides with the period of the movement’s rise. The same is true of agricultural legislation (Table 3.8).

Studies on the movement based on in-depth interviews show that the Ministry of Agriculture never looked favorably on the agroecological movement (Premat, 2012; Wright, 2005, 2009, 2012). Other studies describe even a counter-mentality to the agroecological movement among agricultural policymakers (Altieri & Funes-Monzote, 2012; Funes-Monzote, 2008; Machín Sosa et al., 2010; Premat, 2012; Wright, 2005, 2009, 2012).

⁶² Regulations promoting sustainable agriculture were also enacted in the cases of Chile and México. Nonetheless, these countries also have specific regulations for organic agriculture.

Table 3.8: Agricultural regulations with positive effects on the agroecology movement

Incentives		
Resolution No. 55-97 (29.12.97)	Ministry of Finance and Prices	Stimulate producers (payments from the state budget) for the use of oxen in sugarcane plantations, aiming at saving pesticides and fuel.
Resolution No. 330-99 (10.09.99)	Ministry of Agriculture	Regulations of the Forestry Law, including incentives for forestry activity (one-time payment for forestry project)
Organic or agroecological practices		
Resolution No. 1/2005 (28.03.06)	Ministry of Agriculture	Work program for mountain agriculture (Plan Turquino -Manati). Among the goals: promoting of sustainable management and development of forest ecosystems, applying technologies that contribute to sustainability, eliminate pollutants and strengthen environmental education in mountain people; and promote organic production for exports (emphasis on coffee, cacao, honey and citrus)
Resolution No. 1230/2006 (27.10.06)	Ministry of Agriculture	Create state economic organizations for mountain agriculture. Among the objectives: to produce and commercialize in a wholesale way organic material, worm humus, by-product of the crops for the animal food, animal feed, botanical and agamic seeds.
Resolution No. 1210/2011 (20.12.11)	Ministry of Agriculture	Authorize the expansion of the corporate purpose of cooperatives in a list of activities, among them, producing and marketing wholesale and retailing organic matter, biopreparations, worm humus, green and dry fodder, by-products of grain harvesting and milling.

Elaborated by the author. Sources: GOO No. 45, 29.12.97; GOO No. 32, 21.05.99; GOO No. 16, 28.03.06; GOO No. 86, 27.10.06; GOO No. 49, 20.12.11.

However, two lines of work of the agroecological movement seem to have been well received by the Ministry of Agriculture and the government: 1) animal traction and 2) large-scale production of organic matter (Table 3.8). The first was encouraged since Soviet oil supplies began to decline limiting the use of tractors or other agricultural machinery. The second, however, is more connected to the demands of the urban agriculture program and the impact of Raúl's government, with closer links to the urban agriculture program.

Although creating a positive environment for agroecological practices, the environmental and agricultural regulations referred to above seem to have had a minor impact on agroecological farms. In in-depth interviews with agroecological farmers, only one farmer reported benefiting from payments for soil protection and forest creation. All, however, mentioned land distribution policies, and to a lesser extent, policies that facilitated access to inputs and increased prices of agricultural products (all promoted by Raúl's government).

The policy of distributing idle state land began in the first half of the 1990s. From this policy, the urban agricultural movement developed in the cities and, in the countryside, the state divided most of its state farms into cooperatives and gave up land in usufruct for crops considered priorities. However, the Raúl government gave a major boost to these policies in 2008, Decree-Law 259 and 300 of 2008 and 2012, respectively. Along with land distribution policies, Raúl decentralized peasants' access to some inputs (small farming tools, basic implements, boots, machetes) and increased the price at which the state buys their agricultural production. These policies, explained in detail in the following sections, had a more significant impact on the peasantry, although without an agroecological focus.

The distribution of bio-inputs, although not recognized as government policy by agroecological farmers, received a great deal of attention during the interviews. Bio-pesticides and bio-fertilizers, produced in state institutions such as the CREE and bio-pesticide plants (Table 3.3), have enjoyed a less centralized distribution mechanism. Cooperatives make

independent contracts with these institutions according to their perceived demand. Nonetheless, a list of problems arose during interviews: costs, transport limitations, planning and availability.

“There are not many costs [of doing agroecology] because most of the things are from the same farm, but we must say that, for example, some products have a high cost, the little wasps that they sell in the CREE are very expensive, I do not buy that” (P006SS)

“...but the supply of biological means [bio-fertilizers and biological pest control] that the state produces have to respond to demand because if not, there is the problem that when you need them [the biological means] they are not available. This goes through the issue of planning, not only of the producer [state] but of the farmers themselves who sometimes do not make the orders in time” (P014SS).

“...there are times when you are a little disappointed because you require a certain biological product, and at that moment, there is not in the CREE, or it is not in the market. It also happens that sometimes we get a little desperate because, in this type of agriculture, you don't see the results immediately as when you use chemical products” (P015SS).

“The biggest limitation that exists with agroecology is that there are some agroecological products that have a faster expiration time than the chemicals, and then you can't acquire them and leave them in storage to use them at the optimal time, and when you need them, there may not be available in the market” (P016SS).

Informally, some interviewees admitted dealing with these shortcomings through the black market. Some bio-products produced in university agricultural institutions in the outskirts of Havana were allegedly high priced in the black market. Nevertheless, the general impression is that the black market for conventional inputs is much greater than for bio-inputs.

3.5.2. Policies combining conventional and agroecological approaches

Several other policies relevant to agriculture combine pro-agroecology with conventional approaches. Communist Party economic resolutions show this ambivalence and the urgencies of pre-crisis and crisis period. The arguments behind the statements contained in the party documents will be explained in detail in the following chapters through the discourse analysis of the presidential speeches.

In October 1991, when the 4th Congress was celebrated, the worst of the economic crisis was still to be seen. The government officially launched the Food Program (explained in more detail in Chapter 6) promoting food self-sufficiency. The main goal and components of the program are summarized in the Economic Resolutions of the party congress as follows:

“The Food Program aims to ensure as quickly as possible the increase of a group of basic foods for the Cuban population, which is feasible to produce in our country through the introduction to the maximum extent possible of the advances in science and technology, a comprehensive investment plan in this field [agriculture], more efficient systems of organization and remuneration, the attention to man [the needs of man] and the mobilization of necessary human resources, the recovery and development of hydraulic capacities, the development of the drainage system and parcel irrigation in the sugar cane, engineering systems in the rice, application of the localized irrigation in plantains and citrus fruits, the construction of improved rational pastures [systems] and application of the electric fence in the cattle ranch, constructions of new facilities for dairies, poultry and pig warehouses, breeding centers, fry for the intensive multiplication of the fresh water specimens, centers of shrimp production, the use of derivatives such as saccharin and protein honey and other agricultural products for livestock feed, the national production of improved seeds, new varieties of vegetables and viands [roots and tubers] that are more

productive and resistant to pests, the development of biological controls, pesticides and biofertilizers, veterinary products that help improve animal health, new means of land preparation, multi-plow, the preparation [training] of oxen to replace tractors, and numerous other measures of this nature. The self-consumption plans of territories and of workplaces, schools and military units are also a contribution that strengthens the mentality of producers and the optimization in the use of the land, which will have to be stimulated by combining adequately the national decisions with the decisions that will necessarily have to be adopted in a practical way in the territories.” (Partido Comunista de Cuba, 1991)⁶³

In technological terms, the food program contained two essential elements of the agroecological movement: a) the production of biological inputs (biological pest controls, biopesticides and biofertilizers) and b) the use of animal traction to replace tractors. The food program was promoted as part of an economic reform, officially called the *Proceso de Rectificación de Errores y Tendencias Negativas* (Process of Rectifying Errors and Negative Trends) begun in the second half of the 1980s. In the face of the evident fall in Soviet imports and support, the food plan was changed from an ambitious agricultural development plan to an attempt by the government to prevent a food crisis. The plan was based on the existing reserves of resources and on the hope that the period of crisis, officially called by Fidel the *Período Especial en tiempos de paz* (Special Period in times of peace), would not be so long and that perhaps the situation in the USSR would stabilize. The reserves were quickly exhausted and the ambitious investment plan behind the Food Program was left only half-way completed.

When the next congress was held in 1997, the peak of the economic and food crisis had been overcome and the party intended to implement “the economic policy in the recovery phase of the Cuban economy” (PCC, 1997). The document did not conceive of a food program style plan, although it still contained ambitious goals (which were not realized) such as achieving 7 million tons of sugar harvests. It was planned that agriculture should contribute to the external balance of the national economy, based on increasing food production, producing exportable items and import substitution. This would require prioritizing the use of inputs in key crops and leaving traditional techniques to other crops. Likewise, the production of biological inputs should prove worthwhile. Urban agriculture and other agroecological alternatives are mentioned, labeled as “*organopónicos* and popular movements” and “as another alternative to increase local food production”.

“The national food production should reach higher yields and achieve a volume of no less than 50 million quintals of viands (roots and tubers) and vegetables for sale by State for the direct consumption of the population, guaranteeing quality and diversity according to demand. The intermediate activities - preparation, sowing and cultural care - will be controlled, paying equal attention to the quality and quantity of the work. In the same way, it will be necessary to make increasingly realistic evaluations with the maximum tension of the balance between resources and objectives, concentrating the former for their most effective use where conditions exist, and applying traditional methods in other places with possibilities of producing efficiently” (Partido Comunista de Cuba, 1997).

“The national production of seeds, by traditional and high-technology means, and the production of biopesticides, biofertilizers and veterinary products should be increased on the basis of economic efficiency and competitiveness with similar imported products. (...) Likewise, we will have to stimulate and strengthen *organopónicos* and popular movements organized to produce rice, grains, vegetables, fruit trees, poultry, pigs and sheep, among

⁶³ The parentheses constitute clarifications to the text made by the author.

others, as another alternative to increase local food production and make an important contribution to territorial self-sufficiency” (Partido Comunista de Cuba, 1997).

In 2011, a longer and more structured set of economic and social policy guidelines (Partido Comunista de Cuba, 2011) were approved by the Cuban government⁶⁴. These guidelines aimed at “updating”⁶⁵ the development strategies in Cuba while trying to overcome a wide range of long-lasting economic and social problems in the country. This document became the socio-economic handbook of the period. From that point, the idea was that every policy change should be coherent and refer to one or more of the Guidelines. Food production and food security issues were written in at the top of the list. In the introduction of the document, a number of limiting factors for the economy are mentioned. The first and prioritized limitation are long extensions of idle lands and low agriculture yields (Partido Comunista de Cuba, 2011).

The Guidelines, officially the *Lineamientos de la Política Económica y Social del Partido y la Revolución* (Economic and Social Policy Guidelines of the Party and the Revolution), constitute a group of principles, organized in 12 chapters related to socio-economic issues (e.g., economic management model, macro and micro-economic policies, domestic and foreign economic policy, science and technology, and social policies). Guidelines related to agroecology are summarized in Table 3.9.

Table 3.9: Summary of agroecology-relevant Guidelines, PCC, 2011, Cuba

Chapter V. “Science, technology, innovation and environmental policy”	Guideline 131	promotes the use of renewable energy sources
	Guideline 133	promotes conservation and rational use of the soil
	Guideline 136	promotes integrated management of science, technology, innovation and environment intending to increase food production
Chapter VII. “Agro-Industrial Policy”	Guideline 187	states the need for “...reducing idle lands and increasing yields through diversification, crop rotation and mixed-farming. To develop sustainable agriculture in harmony with environment, (...) promoting organic fertilizer, biofertilizers and biopesticides production” (PCC, 2011: 27)
	Guideline 201	states the need for “concentrating the investments in the most efficient products, taking into account regional characteristics and industry, focusing first and foremost in the irrigation, the recovery of agriculture machinery, the technological transportation and new indispensable technologies and industrial equipment for assimilating the increasing production and achieving greater efficiency” (PCC, 2011: 28)
Chapter VIII. “Policy for Industry and Energy”	Guideline 230	declares the need for increasing fertilizer production through the recovery of different chemical fertilizers factories
	Guideline 247	stresses the use of renewable energy sources (biogas, eolian energy, sun and others) with an economic impact

Elaborated by the author. Source: PCC, 2011.

Guidelines in Chapter V. “Science, technology, innovation and environmental policy” are coherent with environmental regulations from the 90s. They have affected the agroecological movement positively, but with minimum impact. Chapter VII. “Agro-Industrial Policy” and Chapter VIII. “Policy for Industry and Energy”, nonetheless, express better the government

⁶⁴ A second group of guidelines were published in 2016.

⁶⁵ Raúl’s government named the process the “updating of the economic model”.

agricultural policy, namely the combination of input-substitution strategy, mixed with a conventional approach in prioritized crops.

3.5.3. Regulations that negatively affect the agroecology movement

Globally, GMO production and use are widely considered contrary to sustainable agriculture efforts⁶⁶. Cuban public research institutions have worked on transgenic plants since the end of the 80s. In 2000, the government invested strongly in biotechnology hoping to develop GMOs for domestic (non-tourist) consumption (Wright, 2005). In 2009, Cuban-produced transgenic maize resistant to *Spodoptera frugiperda*, allegedly able to yield almost 10 tons per hectare without chemical pesticides, was planted experimentally on a small scale in different areas of the country (Chan & Freyre Roach, 2012; Funes-Monzote, 2010). In 2010, official media reported that 40 000 ha of GM soybean would be cultivated with Brazilian technical assistance.

Information regarding the results of these experiments is not public and scientists complain about the lack of transparency and public debate concerning the cultivation and consumption of GMO in Cuba (Chan & Freyre Roach, 2012; Delgado Díaz, 2009; Funes-Monzote, 2010), where labeling GMO products is not mandatory. The Cuban government does not have an explicit official policy on GM food. There is no framework law regulating the release and marketing of products consisting of, containing or derived from a GMO (Rondón Cabrera, 2015). Moreover, from 2009 onwards⁶⁷, official media published pro-GMOs articles, reporting on the progress of the research and the benefits of transgenic crops with no or little mention to risks or uncertainties perceived by the agroecological movement.

Apart from producing domestic GM plants, most of US corn and soybean imports contain GM grains (Chan & Freyre Roach, 2012). In a popular television program, in April 2013, Carlos Borroto, from the Center of Genetic Engineering and Biotechnology in Cuba, stated that 100% of import maize corn for human consumption and 80% of the soybean were transgenic (Pasaje a lo desconocido, Abril 17, 2013)⁶⁸.

3.5.4. A lack of other policy instruments

As of 2020, there are no specific economic incentives, subsidy policies, or differentiated markets for agroecological products. Agroecological farmers in particular complain about the absence of price policies and specific markets.

“...you say that somewhere else and they don’t believe you. There are times when production is not encouraged because agroecological products do not have differentiated prices in the market” (P007SS).

⁶⁶ See for example, IFOAM Declaration of 2005 “No a la ingeniería genética” (Mar del Plata, 2005).

⁶⁷ See for example <http://www.juventudrebelde.cu/cuba/2009-02-28/maiz-transgenico-en-valle-del-caonao> ; <http://www.juventudrebelde.cu/cuba/2010-05-16/promueven-produccion-de-maiz-transgenico-en-sancti-spiritus> ; <http://m.cubadebate.cu/noticias/2016/07/31/es-absurdo-prohibir-los-transgenicos-dos-cientificos-conversan-con-cubadebate-podcast/#.V8My8JMrLBI>; <http://www.granma.cu/ciencia/2016-12-16/cultivos-transgenicos-para-la-sostenibilidad-alimentaria-16-12-2016-21-12-20>

⁶⁸ At the time of writing, the Cuban government announced the larger scale application of transgenic maize for animal feed. The expansion of the use of transgenic maize produced in Cuba was denoted as a sign of the soundness of the Cuban system of science, technology and innovation and its capacity to offer its own solutions to the challenges that humanity has (Granma, 30.09.2020, Accessible at <https://www.minag.gob.cu/node/2706>

“Agroecology has one thing against it, and that is that there is no law that differentiates the price of products obtained in an agroecological way from the rest. ... from the state’s point of view this is lacking, for me it is a great limitation, a brake; ...I think that when there is price differentiation, that is what will generalize the use of agroecology, it may even influence the reduction in the sales prices of certain products because you know how much it costs to produce it and it may lead to certain adjustments in the price” (P014SS).

“I think that for the development of agroecology [the following] are key: the role of universities in training and of the ministry of agriculture and price policy, because there must be a differentiation in the prices of agroecological products” (P017SS).

The absence of economic mechanisms in relation to agroecological production can be interpreted in various ways. On the one hand, agroecology is practiced in a country where domestic food demand has not been met and suffers under the impact of a long-lasting economic crisis. On the other hand, creating a new category of special food with higher prices for domestic consumption of those with enough income during an economic crisis would have been unpopular and added to the national discontent with increasing inequalities. Food prices were already considered extremely high during the 90s and are still considered high, estimated in 2006 at 62-75% of family expenditures in urban populations (García-Álvarez & Nova-González, 2014).

Nevertheless, government aversion to rising food prices cannot itself explain the absence of price differentiation for ecological production. The government raised the prices of regulated and non-regulated primary products repeatedly due to limited financial capacities. Additionally, in the same period the government created a parallel market through a chain of stores for the sale of basic products (e.g., cooking oil) and luxury products with the objective of collecting foreign currency. These stores were visited only by people with access to foreign currency through remittances, work with tourism, or other sources of hard currency. Distinguishing the recipient of the benefits (state vs. private farmers) seems to be the driving factor in the absence of these policies. This factor will be addressed in more detail through discourse analysis in subsequent chapters.

However, the dissemination of agroecological practices, whether spontaneously or through government promotion, was primarily focused on pragmatic goals like saving energy, fuel and general inputs (Wright, 2005). Agroecology, as a practice allowed by the government, is better described as input substitution practices that did not respond to environmental concerns or consumer awareness. The latter explains why price differentiation did not appear spontaneously in free peasants’ markets outside government price-controlled food stores.

The absence of price policies and other government incentive mechanisms, combined with the lack of consumer demand for organic products, contributed to the change of focus from organic to agroecology. This transformation in the Cuban context translated into an understanding of agroecology as the minimum use of agrochemicals as opposed to strict organic norms. Moreover, these factors contributed to the movement more closely aligning itself to Latin American agroecology rather than the European organic model (Wright, 2005). Left-wing Latin American agroecology, was, additionally ideologically friendly with Cuban government’s ideology what could help the movement, or at least not damage it.

3.5.5. Contrasting perceptions of government involvement and a green Cuba

There is no consensus in the literature about the level of involvement of the Cuban government with the agroecological movement. As in many other topics of Cuban history, visions contrast depending on the nationality of the observer and the place of publication.

The absence of economic mechanisms and direct policies addressing agroecological and organic agriculture is mainly acknowledged in the literature produced or published outside Cuba, highlighting the lack of policies and the government position as paradoxical and attached to a conventional mentality (e.g., Wright 2005, 2009; Altieri and Funes-Monzote, 2012; Funes-Monzote, 2008; Premat, 2012). Texts written by Cubans, especially by key figures in the Cuban agroecological movement, describe a supportive government and supportive policies, mainly listing the programs and projects in Table 3.3 (See, for example, Funes et al., 2002; Machín Sosa et al., 2010; Vázquez et al., 2017).

These differences in perspective may be motivated by contextual factors. Contradictions with the government may have jeopardized the movement's initiatives. Cuban academics who have authored these texts may fear individual government reprisals that could end their careers or limit their status in Cuba. They may also be manifestations of censorship and self-censorship due to the long-lasting official reticence to allow any negative perspectives about the country.

The pressure of the government for a positive re-telling of the reality of the country can also manifest outside the geographical limits of the country. At the beginning of 2019, the author presented preliminary results of her thesis in an event on Cuba at the University of Augsburg. There, members of the Cuban embassy in Germany, after hearing the presentation, insinuated to the author, during the coffee-break, that the critical visions about the island should be expressed in the island and in the appropriate environments, and not before international audiences. Living in Germany, such pressures probably have less impact than for scientists working and living on the island. Another example is when international interviewees ask the author to carefully use the opinions (expressed during the interview) in a way that does not jeopardize their projects with Cuban institutions.

Nonetheless, in a non-confrontational way, prominent figures of the movement expressed (sneak in) some criticism on the lacking governmental support (see quotations below). The non-confrontational style manifested in 1) the absence of responsible subjects for the actions, and 2) the use of "some", "many" or "various", indicating that it is not a national problem, but of some, many or various undetermined actors.

"We should admit at this point that the principal techniques receiving wide-spread application have only been of input substitution or horizontal conversion varieties (reduced input use, soil recovery techniques, etc.)" (Funes, 2002, p. 16)

"Decision-makers: a call for reflection. Despite these problems and the results demonstrated by agroecology, many local decision-makers continue to bet on the high-input agricultural system... In the workshops..., producers pointed out again and again that the main threats they face are, on the one hand, the difficulty of convincing decision-makers -some of whom still miss an industrial, consumerist, dependent, expensive and destructive style of agriculture- and, on the other hand, the sporadic imports of agro-toxins and the promotion of technological packages" (Machín Sosa et al., 2010, p. 78).

"The appropriation of the theoretical base on agroecology and sustainable agriculture in the country is still insufficient, mainly due to several factors: [list]... (4) the persistence of the paradigm of productivism in conventional agriculture among various relevant actors in the academic, business and political spheres, who continue to consider conventional intensification as the only option for solving immediate food needs" (Vázquez et al., 2017, p. 192).

Moreover, as Premat (2012) shows, the agroecological movement in Cuba grew dependent on global connections and international repute. The romantic representation of an

agroecological Cuba is welcome by the government to serve as positive propaganda⁶⁹. In that sense, depicting a happy green Cuba serves multiple purposes - allowing different personal and group projects (domestic and foreign) with no explicit political agenda to converge with state projects and even socialist ideals⁷⁰.

Research on the Cuban agroecological movement, with the exception of the works of Julia Wright (2005, 2009, 2016) and Adriana Premat (2012)'s study on urban agriculture, pays no attention to the influence of daily life constraints, personal projects, and motivations of the protagonists of the movement on the development of the movement. Although the actions of scientists and farmers cannot be reduced to the influence of material conditions and related considerations, it would be naïve to omit them in a comprehensible analysis. Scientists and academics were affected, like the vast majority of Cubans, by the economic crisis beginning in the 90s. Having international partners and participating in international events also meant better economic returns to alleviate the impacts of the crisis.

Farmers and parcel-owners in the city also received international projects enthusiastically. One agroecological farmer interviewed in the Summer of 2015 stated: “the institutions and organizations that are important for the development of agroecology today are the international projects” (P002SS). This statement underlines the leading role that international institutions had in the development of agroecological practices in Cuba (similar to the Latin American experience). At the same time, it expresses the satisfaction with which farmers received the training and the frequent inputs or various materials associated with the projects. Through the support of international projects, farmers fenced their farms, built biodigesters, and often received minor supplies such as gloves, boots, and fumigation backpacks, among others.

Prominent members of the urban agriculture movement who managed to have their gardens designated as “reference” gardens received visits from tourists or pro-agroecological groups. Some managed to organize gastronomic services for the visits that brought in valuable extra income. Premat (2012) records the positive impacts on the household economy that these visits represented. The same occurred on agroecological farms that today benefit from eco-tourism and guided visits by international pro-agroecological groups⁷¹. For these farmers (in the city or in the countryside) and for those who organize the visiting groups, it is essential to reproduce the vision of a flourishing agroecology movement in the country, and a committed government is part of that retelling.

3.6. Summary of findings

The Cuban agroecological movement can be described as a more or less spontaneous movement in the period of 1989-1996. In this first period, similar to the movement in Latin America, there was not a clear division between organic and agroecological agriculture and there was a particular interest in the certification of ecological production. The movement was

⁶⁹ Cuba also exported its agroecological expertise to Venezuela through agroecology training agreements in place since 2010 (Núñez, 2013).

⁷⁰ Sometimes this convergence is manifested in the existence of symbols of the revolution, busts of heroes, or Fidel's phrases painted on the walls in the farms, or plots of land. The existence of these symbols was recorded by the author during visits to farms and plots, as well as by Premat (2012) and Machín Sosa et al. (2010).

⁷¹ Fernando Funes-Monzote, one of the best-known faces of the Cuban agroecology movement, previously engaged in scientific research, established an agroecological farm on the outskirts of Havana in 2011. In 2017, in statements to the press, he estimated that agro-tourism accounts for about 40 percent of the farm's income (<https://eltoque.com/la-agricultura-cubana-no-necesita-producir-mas>).

made up of a variety of non-governmental bodies, especially national and foreign NGOs implementing small projects in a patchwork manner across the country. Leadership of the movement was exercised by spontaneous leaders (scientists or academics, ACAO, the Funes, CEAS), targeted projects (from ACAO or other NGOs), anonymous farmers, and city gardeners. Universities played a leading role together with externally funded projects to disseminate practices, mostly in the non-state sector where niches of autonomy existed. However, the movement's mode of work, described as "behind the scenes" (Wright, 2005) was not consistent with the *modus operandi* of the Cuban government, which eventually increased its involvement in the movement through quasi-state NGOs and the Ministry of Agriculture.

The separation of agroecological and organic agriculture occurred in a particular way in the Cuban case. First, the state controlled the development of a small organic sector for export purposes. The representatives of the agroecological-organic movement at that time failed to promote organic certification or price differentiation for the domestic market. Eventually, the movement changed its focus to agroecology, although the founding group of the Cuban agroecology movement still has the name organic (*Grupo de Agricultura Orgánica*, GAO).

Was this change ideological or pragmatic? In Latin America, besides a political radicalization, the separation of the agroecological movement was also linked to the adoption of a more integral vision of the food system and the criticism of the conventionalization of organic agriculture. Neither interviews nor the bibliographic review provides evidence that this criticism of organic agriculture existed in Cuba. The most extended reference to the differences between organic and agroecological agriculture between specialists and peasants is that agroecological agriculture allowed the use of chemicals in small quantities. This distinction undoubtedly broadens the movement's framework of action and made it more attractive to day-to-day agricultural practices in Cuba. However, this is not the whole story. During the interviews, it became apparent that early visits in the early 1990s by leading global agroecology figures, such as Miguel Altieri (University of Berkeley) and Peter Rosset (Food First), influenced the movement towards an agroecological approach. These visits resulted in publications that portrayed Cuba as a promising place to demonstrate a nationwide conversion from conventional to ecological agriculture⁷².

In any case, from 1997 onwards, changes occurred in the movement that increased state control of agroecological initiatives. Leadership of the movement shifted to semi-governmental (ANAP, ACTAF) and governmental (INIFAT, Ministry of Agriculture) actors with formalized national organizational structures and standardized work styles (assessments, reports). Although this process of institutionalization, on the one hand, led to the dissemination of agroecological practices to a greater extent, it did not lead to the development of specific policies in support of agroecological agriculture. The movement, now institutionalized, is part of the government and it enjoys and suffers from the pact. Like any entity in Cuba, it enjoys limited space for participation and effective impact on policy making.

In a situation of continued economic isolation, why did agroecology not become the country's official agricultural strategy? How did the period of good economic relations with Venezuela impact the development of the movement and the government's perception of it? It would not be the first time that the government promoted general national and undifferentiated

⁷² For example, Altieri, M.A. (1993) The Implications of Cuba's Agricultural Conversion for the General Latin American Agroecological Movement. *Agriculture and Human Values*, Summer 1993 10(3): 91-92., Rosset P. & Benjamin, M. (1993). Two Steps Forward, One Step Backward: Cuba's Nationwide Experiment with Organic Agriculture. Global Exchange, San Francisco, CA. and Rosset, P. & Benjamin, M. (1994) The Greening of the Revolution. Cuba's Experiment with Organic Farming. Ocean Press, Melbourne, Australia.

policies such as those promoted in previous decades, in line with the green revolution. Cuba cannot afford high levels of imports of agricultural inputs, none of its agricultural products have an important place in the world food market after the dismantling of the sugar industry, the land is divided between peasants and cooperatives, and there is no significant presence of agribusiness (contrary to the Latin American context).

What prevented the government from making agroecology a national strategy aiming to go beyond input savings or input substitution? As will be discussed in following chapters, the limited place of agroecology in Cuban public (government) policy is related to the permanence of policy beliefs aligned with the paradigm of the green revolution (and the furthering of productivist interests) and the classic socialist system.

CHAPTER 4. ARGUMENTS AND MAIN ASSUMPTIONS AROUND CUBAN AGROECOLOGICAL SUCCESS

“We wanted to learn the answers to a host of questions... Is hunger really no longer a problem in Cuba? ... Why is there food rationing in Cuba today?... What are Cuba’s agricultural priorities? Has the importance and role of sugar changed with the revolution? Does Cuba aim to produce its own food and does it succeed? Are private farmers free to grow what they please and sell to whomever they wish? Or may they operate only under government contract? Which are more productive, private or state farms? What progress has been made in organizing cooperatives?

(Benjamin, M., Collins, J. and Scott, M. 1984 No Free Lunch. Food & Revolution in Cuba Today.)

4.1. Introductory remarks

The Cuban case has been described in multiple international publications as a country-wide triumph of the ecological approach over the conventional one (see Annex 4). In an analysis of original articles on agroecology published in relevant databases, Cuba was the second most studied country and had the third most researchers affiliated to the topic in 2012 (Gómez, Ríos-Osorio, & Eschenhagen, 2013). The Latin American movement, from which the pioneers of the Cuban movement found inspiration, reference the Cuban case for the application of agroecological approaches on a large scale (Sabourin, Vázquez, et al., 2017). Prominent figures of global agroecology such as Miguel Altieri (University of California, Berkeley), Peter Rosset (Food First) and Eric Holt-Gimenez (Food First) praise in their works the development of agroecology in Cuba.

However, efforts to measure the dimensions and impact of agroecological practices at regional and national levels are very scarce. Leaders of the movement in Cuba recognize that this scarcity of impact studies weakens the movement’s possibilities⁷³. Initiatives to measure the economic impact of small agroecological systems have been carried out by organizations within the movement. Such is the case of the Antonio Núñez Jiménez Foundation, a representative of the permaculture movement. At its annual event in 2014⁷⁴, its members were asked to present the economic impacts for their families of permaculture yards and plots based on a basic guide of indicators. However, the measurement was overly simple, especially regarding the costs of production.

Other studies measure some impacts on a small scale, such as the study of Lucantoni (2020) that analyzes the impacts on food production, food and nutritional security and living conditions of the conversion to agroecology of one family in the western region of the country. There are case studies on the positive impacts of restoring soil fertility from agroecological practices (Funes-Monzote, 2008; Treto, García, Martínez Viera, & Febles, 2002), ecological

⁷³ Interviews with pro-agroecological experts conducted by the author in the period July 2017-March 2017.

⁷⁴ The event took place in Havana, 10-11 July 2014. The author was invited to participate in the event.

pest control (N. Pérez & Vázquez, 2002; Vázquez & Pérez, 2016), and intercropping and integration of crops and livestock (Casanova, Hernández, & Quintero, 2002; Leyva, Páez, & Casanova, 2016; Monzote, Muñoz, & Funes-Monzote, 2002), among others. In addition, there is growing gray literature and domestic publications (e.g., short run publications of research centers and academic institutions) of low impact that gather specific experiences of the application of agroecological practices.

Pro-agroecology social and economic studies (e.g., Fernandez et al., 2018; Machín Sosa et al., 2010; Peter Michael Rosset et al., 2011; Vázquez et al., 2017) with different levels of accuracy tend to be based on three fundamental assumptions: agroecological agriculture is small-scale, non-state and non-prioritized. Based on these assumptions, these studies put forward production and yield arguments, namely that private agriculture produces more and more efficiently than state agriculture (for example, Chan & Freyre Roach, 2012; Lucantoni, 2020; Machín Sosa et al., 2010; Martin, 2002; Peter Michael Rosset et al., 2011; Vázquez et al., 2017). This is presented as proof of the viability and suitability of agroecological agriculture for the country.

An attempt to quantitatively measure the impact of Cuban agroecology on agricultural productivity and, therefore, on soil improvement was made by Betancourt (2020). His study uses the variable of fertilizer use as a proxy of industrial agriculture and the productivity of two crops, maize and beans, as an indicator of soil improvement. His study identifies, in comparison with Latin American and Caribbean countries, the disappearance of the positive correlation between fertilizer use and the productivity of selected crops. The study concludes that the practice of agroecology in Cuba is the cause of the positive impacts on productivity. Betancourt (2020)'s study, from a statistical point of view, omits the impact of the anti-crisis policies implemented since the 90s (land delivery, opening of free markets, prioritization of food production for domestic consumption), which together served as an important stimulus for producers. Likewise, the selection of maize and bean crops ignores the policy of prioritizing the allocation of inputs to specific crops, which is typical of the agricultural policy on the island. The following discussion addresses these factors in more detail.

The following is an analysis based on the bibliographic review, interviews with experts (Cuban and foreign) and farmers, and available secondary data. It deals with the three generally accepted assumptions on the triumphs of the movement, namely that 1) agriculture by small non-state actors 2) who plant non-prioritized crops (as the representation of agroecology) 3) produce more efficiently than state agriculture and that this is proof of the feasibility of agroecological agriculture. It deals with these three assumptions separately, bringing historical evidence that explains the current state of scale, land management and prioritization strategies of Cuban agriculture. Following this, a comparative analysis of state and non-state production performance of six crops (prioritized and non-prioritized) in the period 1995-2015 is presented. Finally, the key messages are summarized.

4.2. The scale of Cuban agroecology

As early in the history of the revolution as May 1959, the first Agrarian Reform Law was signed. This, combined with a second law signed in 1963, nationalized land belonging to foreign companies (25% of the agricultural land was owned by US companies) and *latifundio* were eliminated. The reform set a maximum of five *caballerías* (67.10 ha) for private farmers. The land expropriated from foreign companies and large national owners, as well as state land, was distributed free of charge to landless peasants (previously working the land), agricultural workers and individuals who requested it, up to an established “vital minimum” of two

caballerías (26.84 ha) for a peasant family of five people⁷⁵. If the family worked an extension between two and five *caballerías*, the peasant could acquire the land above the two *caballerías* threshold by forced purchase from the previous owner or by purchase from the state.

The sale and leasing of the distributed land were prohibited, and the land could only be transferred indivisibly through inheritance (to a single male owner), sale to the state or state-authorized exchanges. Few exceptions were made to the maximum of 67.10 ha. Only strategically valuable farms (sugarcane and cattle) with high yields and where their owners behaved according to revolutionary ideals could maintain extensions greater than five *caballerías*. Or, several brothers acting together and complying with the previous requirements could cultivate an extension not greater than five *caballerías* per brother⁷⁶.

The remaining undistributed land became state property. In the following years, the government implemented different policies that facilitated the leasing and purchase of farms by the state⁷⁷, e.g., incentives such as the construction of modern rural communities and better access to technology for integrating state plans, as well as political pressure. As a result, the state increased its share to 70% of the total agricultural land, including 80% of the livestock and 75% of the sugarcane production (Valdés-Paz, 2009). In addition, the promotion of land collectivization since the mid-1970s⁷⁸ meant that by 1987, the state owned around 83%⁷⁹ of the land, the private sector owned 10.7% and the remaining land was owned by agricultural production cooperatives (Figuroa-Albelo, 2003; Valdés-Paz, 2009).

Fidel stated in speeches in 1989-90 that the state held 80% of the land, cooperatives 12%, and 8% was in the hands of independent farmers (see, for example, speeches in 04.01.89 and 18.03.90). At that time, the state sector was composed of state farms, military farms and plots for self-consumption in state institutions (Table 4.1). At the end of 1992, the size of state agricultural farms averaged 13 413 ha in sugarcane, 28 000 ha in cattle ranching, 27 200 ha in rice, 17 400 ha in citrus and fruit, 4300 ha in *cultivos varios* (miscellaneous crops), and 3100 ha in tobacco (Figuroa-Albelo, 2003).

The non-state sector was made up of Agricultural Production Cooperatives (CPAs), Credit and Service Cooperatives (CCSs) and independent non-cooperative farmers (see Table 4.1 and 4.3). The CPAs, based on the union of peasants' land and means of production, constitute the result of the collectivization process and the 12% of the land referred to by Fidel. In the period of 1997-2015, CPAs averaged between 525 and 580 ha of agricultural land⁸⁰.

⁷⁵ In June 1961 there were 101 805 new agrarian reform owners who received 2 725 910 ha of land (Figuroa-Albelo, 2003).

⁷⁶ Women could not inherit land at that time.

⁷⁷ In 1977, 27 976 peasants had joined state enterprises with some 383 700 ha. In the period 1977-1981, 18 402 farms were purchased with 257 300 ha (Figuroa-Albelo, 2003).

⁷⁸ The cooperative movement (explained in more detail in Chapter 5) between 1977 and 1987 absorbed around 44 thousand farms, an area of more than 1 049 000 ha, which represented 51.3% of the peasant land area in 1978 (Figuroa-Albelo, 2003)

⁷⁹ Fidel stated on 17.05.87, that "State lands, acquired with the first and second agrarian reforms, and also, in a certain way, through purchases of land from peasants who could no longer work it, or who entered into the State's agricultural plans, reached approximately 80%".

⁸⁰ Author's estimates based on Valdés Paz, 2010; ONE, 2000; ONEI 2015, 2016.

The private or independent sector was made up of the CCSs, based on the independent production of its members, and the non-cooperative farmers (or “dispersed peasants”). This distinction is important because, in later discourses, CCSs begin to be included in the category of “cooperatives” (explained in detail in Chapter 5). The official statistics also reflected this change of perspective, making analysis of the private sector more difficult.

Table 4.1: Overview of agricultural production organizations in Cuba

State sector	State farms	Large-scale farms created after the first and second agrarian reform laws (1959 and 1963). Centralized planning of production and allocation of inputs.	
	New-type state farms (GENT)	Created in 1993 from state farms that were not able to be converted into UBPCs. They enjoy more management autonomy than standard state farms.	
	Military farms	Farms from the Ministry of Revolutionary Armed Forces (FAR), including farms of the Young Workers’ Army (EJT) and the Ministry of Interior (MININT)	
	Self-provisioning farms at workplaces and public institutions	Small-medium size plots intended for self-consumption	
Collective production			
Non-state sector	Agricultural Production Cooperatives (CPA)	First created in 1977, farmers had to voluntarily contribute their land and means of production to collective property and work and distribute the output collectively.	
	Basic Unit of Cooperative Production (UBPC)	Created in 1993, through the division of large state farms. Agricultural workers become cooperative members, but with strong state intervention. State enterprise-like entities	
	Individual production		
	Credit and Service Cooperatives (CCS)	Created at the beginning of the 1960s. Farmers own or lease their land, produce independently, but come together as a cooperative to share credit, infrastructure, and markets.	
	Individual farmers, (private property and usufruct)	Farmers own or lease their land and produce independently.	
Mixed sector	Joint ventures between the State and foreign capital	State-controlled selective agreements for key crops.	

Elaborated by the author. Sources: Figueroa-Albelo, 2003; Funes-Monzote, 2008; Valdés Paz, 2010; Nova, 2012

The average size of peasant farms, as well as the number of independent peasants in Cuba, are data that can only be estimated in bits and pieces. Official statistics have been published only intermittently, and data specifically related to private agriculture are rarely included. The literature on the subject shows these discontinuities in official publications and, moreover, reflects the contradictions in the data published by the *Oficina Nacional de Estadísticas* (National Office of Statistics, ONE by Spanish acronyms) and the records of organizations such as ANAP or the Ministry of Agriculture.

In June 1961, there were more than 150 000 private peasants with around 3.5 million hectares (Figuroa-Albelo, 2003). Fidel stated that after the reform there were around 200 000 independent farmers with 20% of the land (FC, 17.05.87). According to Burnhill (2014), in 1965 there were 180 102 farmers on 2 128 418 ha. Official statistics record a decrease in non-state agricultural area (CCS and dispersed farmers who establish commitments with the state) from 1 072 400 ha in 1975 to 734 400 ha in 1976 (CEE, 1983).

At the beginning of the 90s, Fidel, trying to distance the Cuban experience from the collapsing USSR, emphasized in various speeches that Cuba did not have to move to private agriculture. The explanation was that the revolution kept a private sector made up, at that point in time, of around 71 000 independent farmers on 650 000 ha (see, for example, Fidel's speeches in 04.04.89, 20.02.90 and 18.03.90). In 1991, an official document from the *Asamblea Nacional del Poder Popular* (National Assembly of People's Power, ANPP by Spanish acronyms) stated that there were around 70 000 farmers in 1917 CCSs with more than 830 000 ha and around 8000 independent farmers in 33550 ha (ANPP, 1991).

Nonetheless, ANAP reported 2703 CCS with a total of 86 096 members in 1994 (Valdés-Paz, 2009), averaging 10.21 ha per member and 325.3 ha per cooperative⁸¹. In 1998 the numbers were higher, with 119 964 CCS members on slightly more than 1.5 million ha and 10 271 *campesinos dispersos* on 304 600 ha (Valdés-Paz, 2009). Based on ANAP's reports, in 2009 there were 350 thousand families in the peasant sector between CPAs and CCSs, increased by land policies to around 75 000 more by mid-2010 (Rosset et al., 2011).

However, the agrarian reform imposed upper limits (67.10 ha) on the scale of the private sector that are still in force at the time of writing. The "vital minimum" of 2 *caballerías* (26.84 ha) has proven to be more problematic. State policies of buying and leasing land to private peasants stipulated the maintenance of 2-3 hectares for family self-consumption. This, in addition to a set of illegalities, such as the subleasing and the appropriation of idle state land, meant that by 1987 more than 50% of private peasant farms had up to half a *caballería* (6.71ha) (Table 4.2).

Table 4.2: Peasants' farms size in Cuba, 1987

Hectares	% of the total number of farms	Cumulative %
0 - 2.68	23.8	23.8
2.68 - 6.71	27.0	50.8
6.71 - 26.84	41.0	91.8
26.84 - 67.10	7.4	99.2
More than 67.10	0.8	100

Elaborated by the author. Source: Figuroa-Albelo, 2003

⁸¹ González Mastrapa (2016) reports, however, that in 1996, in non-sugarcane agriculture, there were 2348 CCSs with 125 700 members, 23 thousand independent farmers and 60 thousand people working on state-owned plots.

In 1993, the crisis made state large-scale agriculture unmanageable. The state then divided the state farms and immediately created the Basic Units of Cooperative Production (UBPC) (Table 4.1 and 4.3). The workers were converted into cooperative members and made responsible for the production and management of the farms. The land was given in usufruct (use rights) to the UBPCs, remaining state property, and the UBPCs would acquire the means of production with payment facilities (explained in more detail in Chapter 6). At the end of 1993, there were 1556 sugarcane UBPCs and 451 specializing in other crops (Deere, Pérez, & González Mastrapa, 2016). In the period of 1997-2015, the average size of the UBPCs was between 900 and 1025 ha⁸² of agricultural land, being sugarcane UBPCs larger than average and urban agricultural UBPCs smaller than average.

The reforms promoted by the Raúl government beginning in 2008 (see Chapter 7 for more details) gave more space to the non-state sector in agriculture through the provision of idle state lands (Table 4.4). The Raúl government passed a range of decrees in the period of 2008-2014 that allowed individuals to receive land in usufruct (use rights). Landless individuals could obtain up to 13.42 ha (one *caballería*)⁸³ and others could expand their land up to 67.10 ha (limit established in 1963) only if they were members of cooperatives or state farms. Cooperatives and state farms as legal entities could expand their boundaries further.

Given these changes, the relative weight of small-scale, non-state agriculture has become more significant over the years (Table 4.4). However, this increase is not without its uncertainties and regulations that constrain farmer entrepreneurship. The right of usufruct over land is subject to being eliminated if the state considers it necessary. In 2015, the state retained 78.9% of the ownership of agricultural land, with 7.1% owned as part of cooperative ownership (CPA) and 14% by small farmers (CCS and independent farmers) (ONEI, 2016). The land management structure reflected in Table 4.4 also expresses the combination of types of tenure (Table 4.3), for example, CCS members with private and usufruct land and CPAs that increased their extension with state land.

4.3. Land tenure, property, autonomy and agroecology

Cuban farmers or peasants, even those strictly private (*campesinos independientes*), are limited in autonomy by the state (Wright, 2012). Since the first years of the revolution in the 1960s, peasant agriculture has been dependent on the state sector for technical assistance, credit and investment, inputs, mechanization services, and production storage (Valdés-Paz, 2009). Their ability to choose what to produce, how to produce it and to whom to sell it has been limited by pro-state agricultural policies and regulations, resulting in restricted access to inputs and commercialization opportunities.

Government policies aimed at assimilating the private sector were not only motivated by the ideological mandate of eliminating the private class. They also intended the promotion of: a) a technology-intensive model (high levels of mechanization and chemical inputs use, irrigation, agricultural genetics and large-scale production), b) crop specialization, and, c) centralized planning of agricultural activity.

Since 1967, peasants were encouraged to join, in multiple modalities, a single centralized production plan under the direction and control of the state (Valdés-Paz, 2009). There were

⁸² Author's estimates based on Valdés Paz, 2010; ONE, 2000; ONEI 2015, 2016.

⁸³ More recent regulations allow for two *caballerías* (26,84 ha).

three modalities: 1) the “integral plans” (*planes integrales*) and 2) the “specialized plans” (*planes especializados*), which involved the transfer of peasant land to the state, and 3) the “directed plans” (*planes dirigidos*) through which peasants retained the ownership of the land but the farms were articulated in agricultural development programs according to the goals assigned by the state to each rural area (Figuroa-Albelo, 2003). In this way, farmers concentrated their production on a key crop and diversified production was to be only aimed at meeting family needs on around three hectares (Deere et al., 2016). This was believed to increase national production by facilitating technical assistance and access to inputs and machinery for farmers (Burnhill, 2014). In 1972, a total of 136 500 private farms were linked to the state system. Specifically, 24 500 farms were integrated into state enterprises, 86 200 were working independently but subject to the state plan, and the remaining 25 800⁸⁴ refused to be incorporated into any state plan, but delivered their production to the state (Figuroa-Albelo, 2003).

The state controls agricultural inputs and machinery (imports and production), and only state establishments can provide them. Private farmers had a marginal place in centralized input allocation policies (see Chapters 5 and 6 for manifestations of this in the discourse). Deere et al. (1992) describe private agriculture relying on ox plow and family labor, while state farms were fully mechanized. Private farmers’ limited access to inputs (seeds, tools, machinery, irrigation) was further affected by the economic crisis and the policy of prioritizing certain crops. The private importation of inputs, implements and machinery was not permitted. This meant that, in effect, the private peasantry was at a disadvantage compared to state enterprises and CPAs. With this state of affairs, it is appropriate to assume that peasants were indeed already practicing low-input agriculture, at least with non-prioritized crops or special state plans, not because of environmental and health consciousness, but due to context constraints.

On the other hand, the state intermittently allowed private food commercialization (peasant free markets), between 1980 and 1986, and from 1994 onwards (see Chapter 5 and 6 for more details). The opening of free markets had a positive impact on the production performance of the private farmers (Figuroa-Albelo & García de la Torre, 1984; Marshall, 1998; Mesa-Lago, 2014; Rosenberg, 1992), but in a very restrictive environment and after fulfilling state production commitments.

Therefore, peasants have to rely on the state collection and commercialization system and the black market. The collection system relies on plans and agreements based on the farms’ potential productive capacities and on the state interests with respect to the crops. At the end of the 1980s, the production plan to be delivered to the state and the planning of resources to carry out the plan were drawn up between the cooperatives, ANAP⁸⁵, the Private Sector Directorate of the Ministry of Agriculture and the State Collection Company (Deere et al., 2016). In a country where the domestic food demand has not been covered, there will always be space to negotiate crops to a greater or lesser extent (this was confirmed in interview with a CCS representative). Regardless, in times where supply and demand (free) markets were permitted, many farmers continued to rely on the state’s collection system because of a lack of transportation and storage means and inappropriate regulations (e.g., farmers had to sell their produce themselves on the free market).

⁸⁴ These farmers are said to be in better economic conditions (Figuroa-Albelo, 2003).

⁸⁵ In principle the plan included only peasant members of ANAP. However, ANAP accompanied its efforts to bring these farmers into the organization by developing special plans for individual farmers who were not members of ANAP (Deere et al, 2016).

Nonetheless, these peasants, namely individual farmers and CCSs⁸⁶, enjoy more autonomy than state farm workers and members of collectivized CPAs and UBPCs⁸⁷ (See Table 4.3). In a speech in 1992, Fidel spoke contemptuously about private farmers:

“We try with the farmers to use the most appropriate methods: What do they want to sow? The program is so much. So much garlic has to be sown, how many *caballerías* do you want? There you have it. So many carrots to plant, how many do you want? There you have it. ‘I don’t like such a crop’. Don’t worry, that the State will sow it. The State sows today what the farmers don’t like. If they don’t like to sow sweet potato so much, the State sows sweet potato, whatever is missing; if it’s cassava, cassava; if it’s tomato, tomato; if it’s potato, potato. We ask individual farmers: How much potato do you want to plant, so much? Don’t worry. The rest is sown by the state and the cooperatives. The cooperatives work very well and they deliver their products to the farmers, so there is no problem with that.” (FC, 04.04.92)

Scientists and academics who initiated the organic or agroecological movement saw the possibility of putting their ideas to the test on small farmer plots that enjoyed relatively less dependence on the state, namely independent farmers and CCS members⁸⁸. In addition, studies on the experience of the Farmer-to-Farmer methodology in Cuba (Machín Sosa et al., 2010; Rosset et al., 2011) report that CCSs were more agile than CPAs in adapting to special period conditions and adopting new cultivation techniques. These studies, along with the experts interviewed, highlight that, three factors facilitated the adoption and experimentation of agroecological practices in CCSs: productive decisions are made at the farm and family level, private farmers have a greater sense of belonging, and the benefits of work are more evident than in CPAs. In CPAs, on the contrary, decisions need the consensus of the assembly, the cultivation of collective lands and the remuneration for collective results limits the sense of belonging and the link with the results. In the following years, ANAP’s policies promoted the practice of assigning CPA members to specific plots in the cooperative to improve their sense of belonging (Machín Sosa et al., 2010).

Introducing experimentation and the use of low input techniques on state farms with state-defined concerted production plans, assigned technology packages and with very vertical control and power structures would have been time consuming and probably not worthwhile. On the other hand, it was also the interest of international partners to work with small farmers (Wright, 2005), probably motivated by international trends in the organic movement. Premat (2012) find private *parcelas* were spaces of choice for international funders wanting to support

⁸⁶ Private farmers and CCS members, although these limitations, are not all poor. Unfortunately, there are no studies on poverty in rural Cuba, but based on field observations, private and CCS farmers have better economic conditions. Especially during the food crisis of the 90s, they enjoyed the advantage of not being food insecure being able to produce their own food and benefited greatly from the black market and the free farmers’ market. Having better economic opportunities allowed them also to acquire inputs in the black market.

⁸⁷ The levels of autonomy from the state of CPAs and UBPCs suffered variations in different periods, being the last period of analysis 2008-2015 when greater levels of decentralization were allowed by the state.

⁸⁸ Interestingly, farmers highlight how agroecology makes them less dependent from the state: “Unlike conventional agriculture, you cannot submit to large productions because the results are long term and you need a level of resources to be efficient, so the good thing about agroecology is that it makes you independent, you do not have to be thinking if there is fertilizer in the port or if the fuel arrived” (P007SS), “Agroecology makes you less dependent on the state, because you do it with the resources you generate on the farm, it’s like establishing a closed cycle” (P005SS). Their statements forget that was actually their higher autonomy from the state, which in first place allowed them to experiment.

the population without involving of the state. In turn, these *private parceleros* enjoyed a privileged position in the funding schemes of many domestic and foreign NGOs.

Table 4.3: Degree of autonomy from the state for different production structures in Cuba

	Land property	Land management	Produce commercialization	Autonomy from state
State				
Different modalities of state-farms	State	State	State collection agency, state markets, state ration system, social institutions	None
Cooperatives				
UBPC*	State (usufruct)	Cooperative-State	State commitments (75-80% of total production), state collection agency, cooperative markets, peasants' free market	Low-Medium
CPA*	Cooperative and state (usufruct)	Cooperative	State commitments (75-80% of total production), state collection agency, cooperative markets, peasants' free market	Low-Medium
CCS*	Private and state (usufruct)	Private and cooperative	State commitments, state collection agency, cooperative markets, farm-door selling, peasants' free market	Medium
Private				
Individual peasants	Private and state (usufruct)	Private	State commitments, state collection agency, farm-door selling, peasants' free market	Medium-High

Elaborated by the author.

* UBPC Unidades Básicas de Producción Cooperativa (Basic Units of Cooperative Production)

** CPA Cooperativas de Producción Agropecuaria (Agricultural Production Cooperatives)

*** CCS Cooperativas de Crédito y Servicios (Credit and Service Cooperatives)

Thus, the assumption that agroecological agriculture is more represented in non-state agriculture reflects internal factors related to the relative autonomy of farmers from the state. However, this perspective was also promoted externally by the work of international projects and programs (See Table 3.3) with interest in working specifically with small non-state farmers. In interviews with farmers, it is clear that they appreciate being part of international projects and enjoying the benefits these projects bring. Interestingly, the minor tools and inputs (e.g., rubber boots, machetes, gloves, fence wire, spray bags) that these projects distribute to farmers appear to be one of the main benefits of participating in these projects. The impact of these projects and programs on the consolidation of an agroecological mentality has not been measured. Qualitative studies based on in-depth interviews, nonetheless, reflect the presence of a mentality more akin to industrialized agriculture among farmers (Enríquez, 2003; Funes-Monzote, 2008; Nelson et al., 2009; Wright, 2005, 2009).

Table 4.4: Evolution of land management of cultivated agricultural land (% of total hectares), Cuba 1989-2016

	1989	1997	2007	2016
State	78.0	24.4	23.2	19.0
Non-State	22.0	75.6	76.8	81.0
Cooperative	18.7	69.9	67.9	54.8
UBPC	/	47.0	39.8	30.7
CPA	10.2	10.0	10.2	9.8
CCS	8.5	12.9	17.9	14.3
Private individual farmers	3.3	5.7	8.9	26.1
Total	100	100	100	100
(Thousands of hectares of cultivated agricultural land)	(4411.9)	(3701.4)	(2988.5)	(2733.5)

Elaborated by the author. Sources: ONEI, 2017, 2017a; ONE, 2011, 2008, 2000; CEE, 1989

*The data is based on Cuban official statistics on cultivated land (*superficie cultivada*), which comprises the land under temporary and permanent crops, artificial pastures and nurseries, and seed orchards.

** UBPC Unidades Básicas de Producción Cooperativa (Basic Units of Cooperative Production)

**** CPA Cooperativas de Producción Agropecuaria (Agricultural Production Cooperatives)

***** CCS Cooperativas de Crédito y Servicios (Credit and Service Cooperatives)

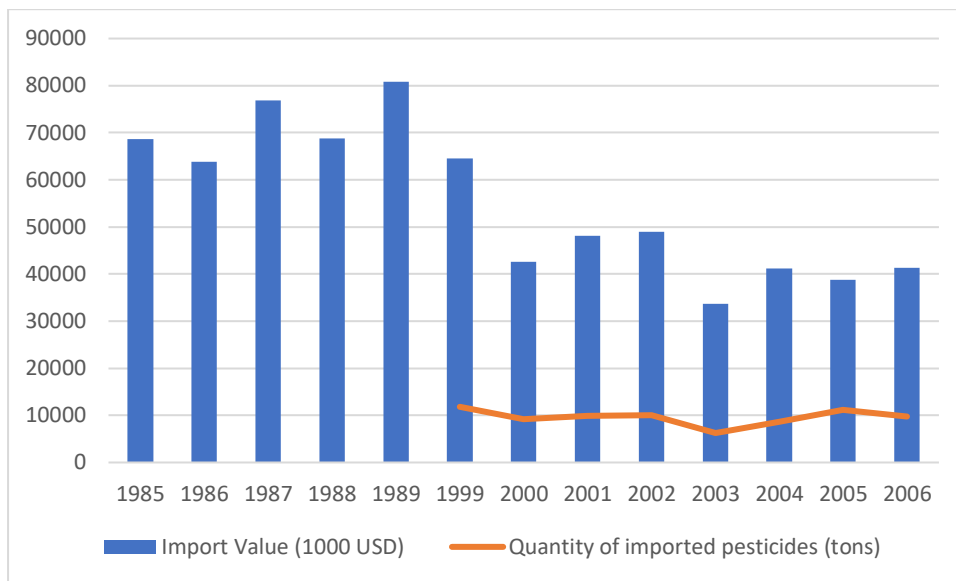
As land is increasingly managed by non-state structures theoretically more space is provided for the agroecological movement, strongly demonstrated by the fact that the percentage of cultivated land managed by CCSs and independent farmers doubled between 1997 and 2016 (see Table 4.4). Nonetheless, as Wright remarks: “campesino production was not necessarily ecological: campesino farmers were relatively wealthy and could afford to access agrochemicals sold on the black market” (Wright, 2005, p. 273). Moreover, in times of economic improvement, resource allocation policies and crop prioritization have proven to be the greatest barrier of the agroecological movement.

4.4. Agrochemicals, priority crops, yields and agroecology

With economic improvement since the late 1990s, the import and consumption of agricultural chemical inputs has slightly increased (Figure 3.1 and 4.1). Although the total aggregated amounts of imports and consumption are lower than in the pre-crisis period (Figure 3.1), an analysis by crop could provide a different picture. Unpublished doctoral research and controlled-circulation studies on the island reflect high levels of pesticide residues in prioritized crops (Wright, 2005, 2012). Moreover, in informal conversations during the field study, specialists confessed to having found the use of pesticides already banned by the organization Pesticide Action Network International for prioritized crops⁸⁹.

⁸⁹ Informal conversations at the Agrarian University of Havana during the 2nd field research period, January – March, 2017

Figure 4.1: Total pesticides trade, Cuba 1985-2006



Elaborated by the author. Source: FAOSTAT_data_6-12-2020. Pesticide Trade.

* There is no information concerning pesticide imports between 1989-1999 or after 2006, nor information concerning quantities imported prior to 1999.

Different studies have identified higher intensities of use of agrochemicals in state-prioritized crops both government-prioritized than in non-prioritized crops (Deere et al., 2016; Wright, 2005). In-depth interviews (experts and farmers) in the field corroborated this assertion. The state controls the importation of chemical inputs and domestic production. The different levels of imports and production over time depend on the fluctuating state purchasing power, investment capacities and levels of prioritization of agriculture in the general political domain in the country.

Decisions regarding chemical input use on farms are taken by state agriculture organizations. This is especially true for prioritized crops through the delivery of “technical packages” decided in the production plan, i.e., inputs, input usage directions, general planting guidelines, and official vertical channels of pesticide distribution. If state instructions are not followed the farmer can be fined. Even if production plans are not met, state inspectors investigate whether the inputs contained in the “technical package” were diverted to other crops or sold on the black market. With these regulations being enforced there is little possibility or incentive for farmers with contracted prioritized crops to convert to organic or an agroecological approach. Moreover, farmers are subject to pressures for increasing production. This productivist approach threatens any attempts of long-term agroecological conversion.

“We have had moments of ups and downs with the topic of agroecology because there are times when with agroecology we cannot respond to high productions, ..., and on many occasions we have to respond to a productive commitment that with agroecology is very difficult for us, it is difficult because resources are scarce and the results are not seen in the short term” (P007SS).

“... sometimes what I was saying happens, a high level of production is needed at a certain moment and with agroecological practices you can reach them in the medium or long term and therefore you have to avoid some steps of agroecology to be able to respond to the growing needs of the population” (P007SS).

Because the “technical packages” are related to conventional or industrialized agriculture, one expects to find significant differences in production levels and yields between the state and non-state agriculture and for prioritized and non-prioritized crops.

The following analysis makes use of the same data accessible to agroecology defendants and consequently has the same limitations. Especially significant in this case is that Cuban statistics on agricultural performance only distinguish between state and non-state productions, making the measurement of strictly private farmers’ performance impossible. In the non-state category, the UBPCs, CPAs, CCSs and independent farmers are included. UBPCs and CPAs, as previously mentioned, are not generally considered agroecological niches. Nevertheless, some success stories in UBPCs and CPAs appear in Funes-Monzote (2008), Wright (2005) and Funes et al. (2002), and are included in the Urban and Suburban Agriculture Program. Lastly, and crucially, Cuban statistics do not reflect farmers’ production for self-consumption (and of course black market) and only gather what was channeled by formal means.

To understand how these data are used in the context of pro-agroecology argumentation, here is a typical example from Machin et al. (2010):

“Another way to tease out the relationship between peasants, food production and agroecology is to look at production data and use of agrochemicals. For example, the production of vegetables, which are typical peasant crops, fell by 65 percent from 1988 to 1994, but by 2007 had rebounded to 145 percent over 1988 levels. This increase came despite using 72 percent fewer agricultural chemicals in 2007 than in 1988. Similar patterns can be seen for other peasant crops like beans (down 77 percent in 1994, but at 351 percent over 1988 levels by 2007, with 55 percent less use of agrochemicals) and roots and tubers (down 42 percent in 1994, at 145 percent of 1988 levels by 2007, with 85 percent fewer agrochemicals). This contrasts dramatically with sugarcane, not a peasant crop, which saw yields fall in 1994 to 25 percent below 1988 levels, and fall another three percent by 2007, precisely the same time period during which production of the peasant crops leaped, and this even though the reduction in agrochemical use in sugar (down just five percent by 2007) was insignificant” (Machín et al. 2010, 52; reproduced also in Rosset et al, 2011).

This kind of analysis overlooks important policy-shifts concerning land distribution (see Table 4.4) and crop prioritization. Before the collapse of the socialist bloc, Cuba was heavily reliant on sugar production, which was 74.7% of the total value of exports between 1985-89 (Pollitt, 2004). In the late 80s, the government launched the “Food Program” (explained in detail in Chapters 5 and 6), moving the focus to staples for domestic consumption in both state and non-state agriculture. This focus increased during the food crisis in the 90s when agroecology practices were spread. After the fall of the USSR, sugar production was intermittently prioritized depending on world market prices and the economy moved to being service driven (tourism and medical services). The comparison of agroecological outputs with sugarcane production in the above quote is tendentious. Sugarcane yields were declining since the mid-1980s for a variety of reasons involving field exhaustion by permanent year-on-year cultivation, soil compaction due to intensive use of heavy machinery, overuse of agrochemicals, dependence on import inputs, and poor planning (Marquetti Nodarse, 2016; Pollitt, 2004). Between 1997 and 2002, the government downsized the sugar industry by closing half of all sugar mills and short after dissolved the Ministry of Sugar (explained in more detail in Chapter 6). This transferred around 1.3 million ha to food production for domestic consumption and a growing tourism sector.

The analysis that follows looks at six specific crops in the period of 1995-2015: potatoes, citrus fruits, beans, maize, tomatoes and sweet potatoes. Potatoes and citrus represent

prioritized crops by the state. Potato cultivation is the paradigmatic example, according to the literature and interviews in the field, of a crop with prioritized allocation of resources and conventional inputs (irrigation systems, regular distribution of fuel, spare parts, fertilizers and pesticides) and also prioritized collection and payment by the state⁹⁰. Citrus fruits, once one of the key products of the exchange with the socialist bloc, are also prioritized by the state and produced on a large scale.

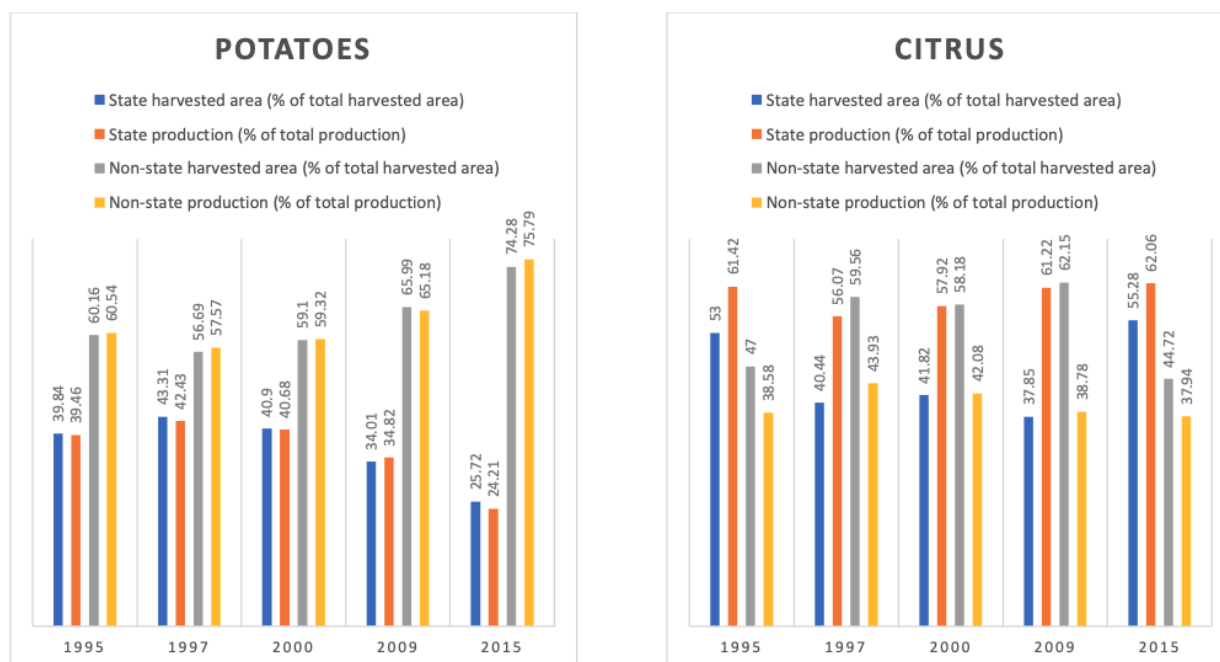
The remaining crops are not priority crops and are associated with small-scale, non-state agriculture. They constitute important crops for the Cuban diet and are produced for domestic consumption. In the case of sweet potatoes and tomatoes, they were selected considering their performance compared within two countries, the Dominican Republic and Costa Rica. According to FAO estimates, in year 2014, yields of sweet potato production in Cuba are higher than in the Dominican Republic and Costa Rica, while yields of tomato production are much lower⁹¹. Nonetheless, sweet-potato and tomato production are both reportedly of the few crops that recovered to pre-crisis levels of production (Brundenius, 2009).

As noted above, much of the perceived victory of the Cuban agroecological movement is based on the assertion that private (non-state) agriculture with a low percentage of the land produces a high percentage of the country's food. The claim is true, but at a nominal level. In 2015, non-state agriculture produced more than 90% of the national production of beans, maize, sweet potatoes and tomatoes (see Figure 4.4) and more than 75% of potatoes (see Figure 4.2). However, once the relationship between the proportion of harvested area and the proportion of production is considered the statement becomes irrelevant (see Figures 4.2 and 4.4). In the case of potatoes, beans, maize, tomatoes and sweet potatoes, the percentage of production with respect to national production is an expression of the proportion of the harvested area. In other words, non-state production is only greater because the area dedicated to these crops has also increased by the same proportions.

⁹⁰ Pro-agroecology interviewees perceive potato cultivation as a whim of the revolution considering the island's climatic conditions and consider the cultivation of other roots and tubers (e.g., sweet potato, taro, manioc) more appropriate for Cuba.

⁹¹ See FAOSTAT_data _21-12-2021. Production. Crops and livestock products.

Figure 4.2: State and non-state land and production of prioritized crops, Cuba 1995-2015



Elaborated by the author. Sources: ONE, 2000; ONEI, 2014, 2016.

The potato is a priority crop with very restrictive regulations for its commercialization. Potatoes are marketed through state-regulated distribution channels at controlled prices and are not allowed to be sold in supply and demand markets. Its absence in regulated establishments has political implications that are expressed in the discontent of the population. With such limited space in the informal market and no space in the private market, official data likely reflect real values.

Potato cultivation, as shown in Figure 4.2, is better represented in state agriculture than other non-prioritized crops (Figure 4.4). Presumably, although there are no data to prove it, UBPCs and CPAs produce a large share of non-state potatoes. In his speech on 29 April 1992, Fidel confirmed this idea when he referred to potato production in the western region of the country. In the speech, Fidel affirms that state farms cultivated 436 *caballerías* and obtained a yield of 6193 quintals per *caballería*, CPAs⁹² cultivated 84.2 *caballerías* and had a yield of 6261 quintals per *caballería* and finally individual farmers (and CCSs) cultivated 17.4 *caballerías* with yields of 4569 quintals per *caballería*. Additionally, one of the famous “Gómez brothers”⁹³ (independent farmer) stands out in the speech as having achieved yields of 11 200 quintals per *caballería*. From 1992 onwards, the land management structure has varied (see Table 4.4), yet no significant differences exist when considering the proportion of harvested land and production or productivity (see Figure 4.3).

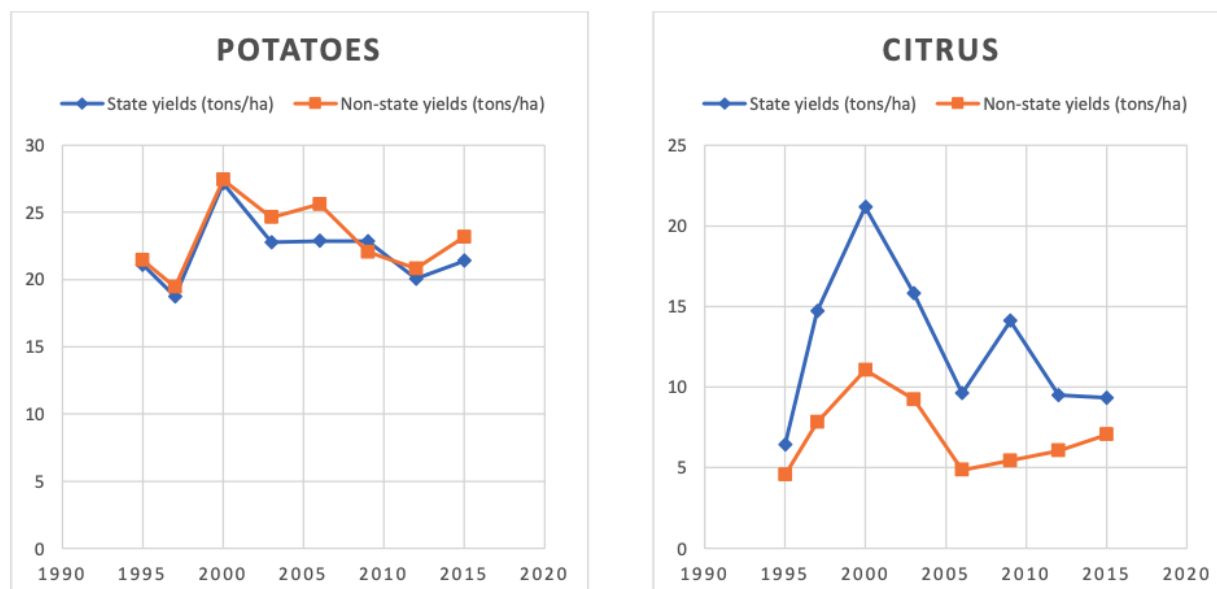
In the literature, there are no recorded experiences of agroecological potato cultivation. However, some years ago, experiments in organic potato cultivation were conducted at two

⁹² At that time, UBPCs had not been created.

⁹³ The Gómez brothers also appear in a speech on 17.05.91 where Fidel highlights their yields in sweet potato production.

agricultural research centers⁹⁴. However, neither of these experiments has been carried out on a large scale for national production.

Figure 4.3: State and non-state yields of prioritized crops, Cuba 1995-2015



Elaborated by the author. Sources: ONE, 2000; ONEI, 2014, 2016

The production levels and yields of state citrus agriculture (Figures 4.2 and 4.3) are, on the other hand, significantly higher than those of non-state agriculture. Citrus fruits constituted the second most important export item of Cuban agriculture in the years of the socialist bloc. More than 80% was produced in state farms with high levels of mechanization celebrated in Fidel's speeches (e.g., speeches from 28.09.86, 17.05.87, and 26.07.90). With the creation of the UBPCs in 1993, an important part of citrus production was formally transferred to the non-state sector. In 1997, over 85% of the land cultivated with citrus fruits was managed by the state sector (44.24%) and the UBPCs (41.44%)⁹⁵.

In 1993, during the peak of the crisis, production fell by 32% compared to 1989⁹⁶. By 2000, production levels had increased, but citrus production was affected by the citrus disease *huánglóngbìng* (HLB; or "citrus greening disease), reported in Cuba in 2007. Hence, production levels and yields fell dramatically. However, the differences between state and non-state performances remain stable between 1997 and 2009 (Figure 4.3). A proportion of the citrus cultivation, as pointed out in previous sections, was produced organically for export. However, this experience can hardly be classified as agroecological. Citrus cultivation was

⁹⁴ See in the press, <https://www.canalcaribe.icrt.cu/estacion-de-indio-hatuey-lidera-siembra-de-papa-agroecologica/>; <https://www.radiosanctispiritus.cu/es/2021/02/producen-papa-ecologica-en-taguasco/>

⁹⁵ Author's estimates from data published by the *Oficina Nacional de Estadísticas* (ONE, 2000).

⁹⁶ Author's estimates from data published by FAOSTAT_data _21-12-2021. Production. Crops and livestock products.

most likely carried out according to conventional standards of scale and mechanization in state farms and UBPCs, only without the application of chemical fertilizers and pesticides.

Figure 4.4: State and non-state land and production of non-prioritized crops, Cuba 1995-2015



Elaborated by the author. Sources: ONE, 2000; ONEI, 2014, 2016.

The non-prioritized crops analyzed are mostly produced by non-state agriculture (Figure 4.4). As a trend, the increase in the proportion of harvested area is reflected in the increase also

in the proportion of national production. However, the yield trend (Figure 4.5) shows that state yields were significantly higher in 2009 for all the crops analyzed.

Until 2006 the state and non-state yields were quite close and showed a similar trajectory. The fall in non-state yields and the increase in state yields between 2006 and 2009 is paradoxical. On the one hand, during Raúl's mandate, measures were implemented that favored non-state agriculture (more detail in Chapter 7). Measures included, for example, the increase in prices paid to peasants for agricultural products, the settlement of state debts with peasants, and the distribution of land in usufruct. While Cuba was hit by four hurricanes in 2008, small-scale peasant agriculture is reportedly more resilient to hurricane and drought impacts (Rosset et al., 2011).

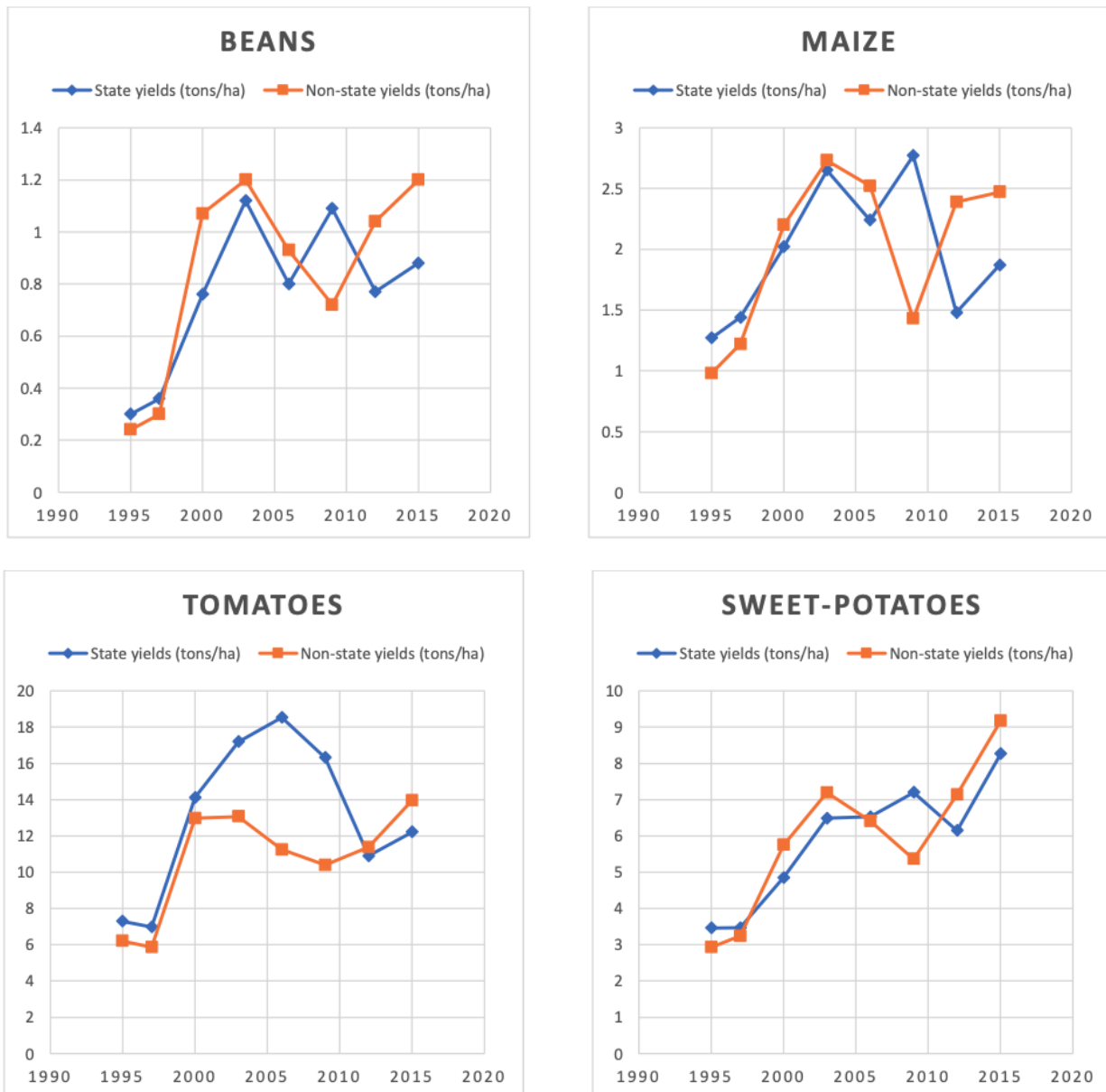
Two explanations seem possible. The first is that, in the context of the world food crisis, the government prioritized inputs to state agriculture because it made up a greater proportion of regulated food distribution to the population through routes such as school and hospital canteens, for example. Fertilizers were also very scarce in 2009 (Figure 3.1), hence this would have been a logical prioritization strategy.

The second explanation is more complex. Between 2000-2009, the proportion of state harvested area of the selected crops declined sharply (Figure 4.4), i.e., from 20.24% to 3.75% for beans; from 18.49% to 4.45% for corn, from 20.84% to 7.69% for tomatoes and from 19.83% to 11.43% for sweet potatoes. The change was the result of the land distribution policies of Raúl's government that began in 2008 (see Chapter 7 for more detail). The thousands of hectares of idle state land distributed among individuals, cooperatives and state farms multiplied the total harvested area of each of these items; 154.87% for beans, 116.59% for corn, 169.87% for tomatoes, and 99.26% for sweet potatoes⁹⁷. The inexperience of the new landholders (according to official reports in 2012, only 23% of the usufructuaries had previous experience in agriculture), and the conditions of the soils handed over (degraded or invaded by marabou and other weeds) may have decreased the sector's productivity. This would also explain the gradual recovery of non-state yields by 2012 and 2015 (Figure 4.5).

The case of tomatoes, however, is unique. Tomato yields are much lower than those achieved in the Dominican Republic and Costa Rica, even when taking the higher value achieved by state agriculture. Figure 4.5 shows the superiority of state yields up to 2012. In 2006, the state yielded 7 tons per hectare more than non-state agriculture and in the other crops studied the most marked differentiation occurred in 2009. In 1993, a study reported that tomato production was receiving preferential fertilizer allocation, only after potatoes, onions and garlic (Deere et al., 2016). Tomato is one of the main crops of the urban agricultural system, in which the use of chemical inputs is prohibited. Unfortunately, there are no data to determine how much of the non-state production is part of urban agriculture. Do the lower yields of non-state agriculture reflect this prohibition and the ecological approach?

⁹⁷ Author's estimates based on data on the harvested area from the *Oficina Nacional de Estadísticas*, ONE, 2000 and *Oficina Nacional de Estadísticas e Información*, ONEI, 2015

Figure 4.5: State and non-state yields of non-prioritized crops, Cuba 1995-2015



Elaborated by the author. Sources: ONE, 2000; ONEI, 2014, 2016

Sweet potatoes, commonly associated with food for the poor in Cuba and with the diet of small farmers, have higher average yields than those of the Dominican Republic, Costa Rica, and the Caribbean in 2015⁹⁸. Their cultivation in the country does not require many inputs because of the island's climate. According to the data published by FAOSTAT, it is the only crop analyzed that has no recorded imports in the period⁹⁹. Its production reflects the area harvested and its yields follow the same trajectory as the other non-prioritized crops.

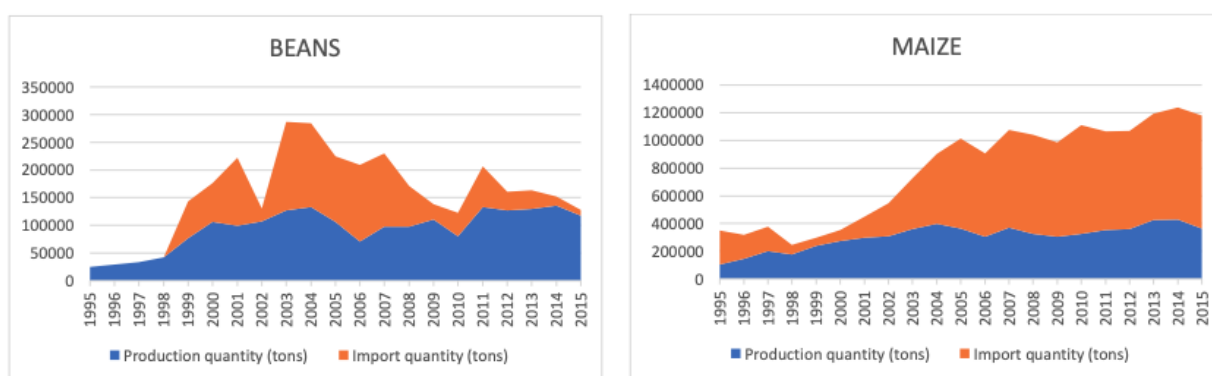
⁹⁸ See FAOSTAT_data_21-12-2021. Production. Crops and livestock products.

⁹⁹ See FAOSTAT_data_21-12-2021. Trade. Crops and livestock products.

Beans are an essential part of the Cuban diet. The non-state sector has historically produced the largest proportion of beans. However, domestic demand is not been met and the country imports beans annually. The amounts imported vary. In 2001 and 2003-2007, the amount imported exceeded annual production (Figure 4.6). In terms of yields, bean production follows a similar trajectory to other products, with non-state yields recovering to 2003 levels by 2015.

The case of maize shows the most marked difference in yields in 2009, when the state had nearly double non-state yields (2.77 and 1.43 tons/ha respectively). It is in this same year, coincidentally, that the experimental cultivation of nationally produced transgenic maize is officially reported. Although average maize yields are higher than those reported in the Dominican Republic, Costa Rica, and the Caribbean region, it appears that the area under cultivation is not sufficient to meet domestic demand and high amounts are imported each year (Figure 4.6). Interestingly, in the period 2002-2012, between 60% and 100% of these imports came from the United States¹⁰⁰.

Figure 4.6: Availability of beans and maize, Cuba 1995-2015



Elaborated by the author. Source: FAOSTAT_data_9-18-2020. Trade. Crops and livestock products

4.5. Summary of findings

Cuban agriculture is mostly small-scale. The private *latifundia* has not been in place since 1959 and the policies implemented since the 1990s have increased the space for small-scale agriculture through the distribution of state lands in usufruct to non-state actors. In collective production cooperatives (CPAs and UBPCs), models have been implemented to link farmers to specific plots of land, in an attempt to imitate the model of independent production cooperatives (CCSs), which in effect expands the space for small-scale production.

Although food production is mostly carried out in non-state organizations, the state has control over the distribution of inputs, machinery, production plans, and most marketing. However, private production has greater autonomy than state production, especially in non-prioritized crops. The autonomy to choose what and how to produce is the result of the state's failure to prioritize certain crops and at the same time the urgency to supply unmet food demand. In these spaces of relative autonomy, influenced by the possibility of experimentation, the general lack of inputs and the special interest of international organizations in spaces of private and small-scale production, agroecological practices were first developed.

¹⁰⁰ See FAOSTAT_data_9-22-2020. Detailed trade matrix

In recent years, non-state agriculture has benefited from policies that encourage food production. The Raúl government (2008-2018) has promoted better prices, land distribution (farmers can expand their area), decentralization of access to some inputs and more marketing opportunities. Cooperatives have also benefited from policies that have increased their relative autonomy.

It is therefore unsurprising that a comparative analysis between non-state and state-owned agriculture, taking into account both prioritized and non-prioritized crops, would produce results showing marked differences in productivity levels, as noted by Machín Sosa et al. (2010), Rosset et al. (2011), Vázquez et al. (2017), and Fernández et al. (2018). However, the analysis by crop at the national level does not show that non-state agriculture has radically higher levels of efficiency than state agriculture and the increases in yields in state agriculture are accompanied by increases in non-state agriculture, with the exception of 2009. More surprisingly, this is true for both prioritized and non-prioritized crops. While no conclusive explanations can be drawn from this analysis, the finding does allow some hypotheses to be made.

Firstly, Cuban agriculture is usually described as the most disappointing sector of the national economy (Brundenius, 2009; García-Álvarez & Nova-González, 2014; Mesa-Lago & Pérez-López, 2005). Many indicators show that its performance is below that of the region and below the levels reached in the country in the mid-1980s. Above all, if attention is paid to the area cultivated by crop, it can be seen that the items that have recovered production levels (in total amounts) have done so from a proportionally higher increase in the area dedicated to that crop or production.

In this regard, the results seem to indicate that state and non-state agriculture face similar challenges, based on their similar production and yield behavior. This conclusion is consistent with the fact that the crop prioritization policy does not distinguish between forms of land management, i.e., potatoes are a prioritized and contracted crop in the state collection system and the allocation of inputs from their cultivation is similar for state and non-state farms.

The non-prioritized crops, with intermittent or practically non-existent input allocation in relation to the country's financial and productive capacities, should then show more clearly the differences that the agroecological approach provides. Since this is not the case, but considering the other services provided by agroecology as a practice (e.g., environmental services and energy efficiency), similar performances of state and non-state agriculture implies both good and bad news for the agroecological movement.

On the one hand, if we assume that the allocation of inputs favors the state sector of non-prioritized crops, it would mean that agroecological systems have achieved production levels similar to conventional ones. On the other hand, if the allocation is similar or non-existent, it would mean that the impact of agroecological practices is limited, or that agricultural practices on state and non-state farms are similar.

Testing these hypotheses requires more specific studies and data collection on farms that can first isolate strictly private production from state production (including military production). Even then, questions would remain regarding how much of the increase in production is a result of agroecological practices, where they are found, and in what proportion the increases are rather related to changes in autonomy and the possibility of improved economic benefits.

CHAPTER 5. THE GREEN REVOLUTION AND CUBAN COUNTER-PERESTROIKA, 1984-1987

5.1. Introductory remarks

In Cuba, the 1980s are popularly regarded as years of economic bonanza provided by trade agreements with the socialist bloc. Economists consider the agricultural performance of the mid-80s, with its unrestricted access to inputs and subsidies from the socialist bloc, a reference point for comparison with the periods after the collapse of European socialism (e.g., Brundenius, 2009; Mesa-Lago, 1993b; Mesa-Lago & Pérez-López, 2013, 2005). Nonetheless, during this period significant economic problems and extraordinary changes in the relationship with the socialist bloc were approaching.

However, Fidel's discourse expressed a considerable state of certainty regarding financial resources to carry out expansive economic and social plans on a national scale. Between 1984 and 1987, the official media recorded 48 speeches (Table 2.1). Fidel addressed agriculturally relevant topics in 39 of them. Through the analysis of these 39 speeches, the strategy for agriculture of the period was identified, the argumentative scheme, the supporting arguments (I. Fairclough & Fairclough, 2012), and the nomination and predication strategies (Reisigl & Wodak, 2001, 2009) that underlie it. The discourse analysis was enriched with historical evidence obtained through literature review, interviews with experts, and secondary data analysis.

For the presentation of the results, quotes are used to exemplify Castro's discursive strategies. The quotes were translated by the author and can be found in the original language (Spanish) in Annex 2. In addition to selected quotes, a set of references in the form "FC, speech date" indicates the presence of the topic of analysis in other speeches. In Annex 1, further details of analyzed speeches are included.

In this chapter, it is shown that Castro's discourse between 1984-1987, contrary to the modernization movement taking place in the USSR, expressed the characteristics of the classical socialist system described by Kornai (1992). This implies that, for example, the party leads and is responsible for economic and social performance, omnipresent party supervision, the predominance of state and quasi-state property and interest in the elimination of private property, as well as the ideal of socialist agriculture. The policy beliefs identified in this period serve as a basis for the analysis of subsequent periods, since their essential elements are present in the political discourse throughout the entire study period (1984-2015).

5.2. The socialist bloc and industrial agriculture

Starting in 1972 Cuba became a full member of the Council for Mutual Economic Assistance (CMEA¹⁰¹). Being part of the economic organization of the socialist countries and the USSR meant better and more stable trade relations and greater access to credits and technical assistance without hard currency costs¹⁰². Under the umbrella of CMEA and previous connections with the Soviets, Cuba received consumer goods and raw materials from the socialist bloc (oil, food, machinery, chemicals, timber, wheat, cotton, butter, steel, and medicines, among others) and exported mainly sugar, citrus, nickel, and shellfish¹⁰³. Price policies benefited Cuba, especially with the USSR. The USSR bought Cuban sugar and nickel at higher prices than those of the world market¹⁰⁴, and Cuba purchased the USSR's oil at low prices (Figueroa-Albelo, 2009; Mesa-Lago, 1993b; Rosset et al., 2011).

“We are not selling sugar at three cents, nor nickel, nor citrus, nor all the productions that we send to socialist countries at miserable prices, they have other, much higher prices, and that produces high incomes for us. Otherwise, how could we acquire the 11 million tons of fuel we spend per year?” (FC, 07.06.85).

The beneficial relations with the socialist bloc allowed Cuba to develop a highly mechanized and technological agricultural sector (see Table 3.1). A distinct impact of these economic agreements was the mechanization of sugar cultivation (cutting and loading sugarcane) and other crops such as rice and citrus fruits and the high levels of importation of fertilizers, pesticides and livestock feed. In 1980, 45% of the cutting and 100% of the loading of sugar cane was already mechanized (Mesa-Lago & Pérez-López, 2005). Additionally, in 1985, state and cooperative agriculture had a tractor for every 37.3 ha of cultivated agricultural land, far more than the world average of 55.3 ha in that period (Figueroa-Albelo, 2003). Between 1984 and 1987, Cuba imported 34 575 tractors, and 74 403 were in use in 1987 (FAOSTAT, 2018). Cuba imported in the same period 242.5 million USD in pesticides and 493.2 million USD in fertilizers (FAOSTAT, 2018). Fertilizer use was highly dependent on imports¹⁰⁵ (see Table 5.1 and Figure 3.1).

Table 5.1: Total Fertilizer Consumption and Import quantity, Cuba 1984-1987

	1984	1985	1986	1987
Consumption (tons)	588 600	585 300	663 000	654 100
Import quantity (tons)	478 079	506 415	515 270	472 590
% of imports/ total consumption	81.2	86.5	77.7	72.2

Elaborated by the author. Source: FAOSTAT. Inputs. Fertilizers archive. Latest Update 08/01/2018. (Access 09/04/2018)

¹⁰¹ CMEA (1949-1991), sometimes COMECON, was an economic organization representing the system of communist international economic relations. Under the leadership of the USSR, this organization promoted economic agreements among the socialist countries of Eastern Europe, Mongolia, Vietnam and Cuba.

¹⁰² The trade among the countries of the CMEA was conducted in transferable rubles (Mesa-Lago, 1993b).

¹⁰³ Fidel referred to the trade relations with USSR, for example, in 04.12.84 and 28.12.84.

¹⁰⁴ In the case of sugar, an average of 5.4 times the world market price was paid (Wright, 2009).

¹⁰⁵ Unfortunately, there is no accessible data on pesticide use or import quantities.

The mechanization and technification of agriculture were, according to Fidel's speeches, an achievement of the revolution and one of its major triumphs (FC, 01.01.84, 17.05.84, 26.07.86, 17.05.87). The degree of mechanization in this period placed Cuba in a privileged position in Latin America, similar to that of other developed countries including the United States (Table 3.1). To celebrate the degree of mechanization meant to celebrate the triumphs of Cuban socialism.

"...the Revolution has freed the worker and especially in the field, from the most inhuman, hardest efforts, to mechanize the preparation of the land, to use chemical means to fight against weeds, to introduce the sugarcane lifting machines, the combines, rice harvesters, motorized transport, shipments of bulk sugar and the mechanization of ports. (...) In these 25 years, since the first Agrarian Reform Law was proclaimed, approximately 10 billion pesos have been invested in our fields, the number of tractors has multiplied eight times, the application of fertilizers has multiplied tenfold, the application of pesticides by four, the herbicides were introduced en masse, the [water] reservoir capacity has multiplied one hundred and twenty-five times in relation to that which existed before the Revolution, and the irrigated areas have multiplied by four, reaching almost one million hectares; around 3,000 agricultural and industrial facilities have been built, and with the collection centers, the schools in the field and the development of our electric industry, large areas of our fields have been electrified, increasing extraordinarily the number of families receiving the benefit of electricity" (FC, 17.05.84).

"... today our *zafras* are carried out relatively comfortably, compared to those enormous mobilizations that we had been obliged to do. Other techniques were introduced; all the land preparation was mechanized in [a] large part of the crops; herbicide was introduced, airplanes were used to spread herbicide, sometimes also to fertilize with urea through the foliar irrigation, and the same thing that happened in the sugar cane fields, it happened in the rice fields: the mechanization of the crops, the construction of large irrigation systems, planting by plane, fertilization by plane, in many occasions, and the mechanized cutting of rice" (FC, 17.05.87).

The arguments to support mechanization and technification combined technical-productive and moral dimensions. Fidel explained how machines and technology increase production and labor productivity (FC, 01.01.84, 17.05.84, 18.05.86, 26.07.86, 28.09.86, 17.05.87). In most cases, he used sugarcane and rice harvesting as paradigmatic examples¹⁰⁶. The second argument is that mechanization had improved working conditions for agricultural workers (FC, 01.01.84, 17.05.84, 26.07.86, 28.09.86, 05.04.87, 17.05.87).

"The work has been humanized. There are no longer 350,000 workers cutting cane throughout the country; they are already around 80,000 or less, the machines have come to do the work. There is no more rice cutting by hand; the *combinadas* come. We no longer plow with oxen; the machines come. We no longer transport the produce in carts; there are trucks. There are no longer men biting stones to make a road, as they did this road (...) We have a tremendous number of resources, fabulous ..." (FC, 26.07.86).

"And what happens today? The worker longs for the machines, sighs! Because it is not the same to cut rice with a sickle, endless hours, bended, than to cut rice in a *combinada*; it is not the same to irrigate fertilizer and pesticide by hand than to irrigate in an airplane or planting in an airplane, which has fabulous productivity, an airplane planting rice or spreading pesticides or fertilizing. The peasant even understands the idea of technification and the idea of working in large areas, etcetera; he understands that the smallholding is

¹⁰⁶ However, he points out that it is the same for almost all crops (except for those in mountainous geographical regions or, like tobacco, are not suited for mechanization).

unproductive, and that is why it is grouped into cooperatives or large state enterprises” (FC, 17.09.87).

In Fidel’s discursive logic, extensive mechanization and high input use (especially the application of fertilizers and pesticides) justified the need for large-scale agriculture and, consequently, the elimination of *minifundia* or smallholdings¹⁰⁷. In short, modern technologies could not be applied in small-scale agriculture (FC, 28.09.86, 17.05.87, 17.09.87). In this way, large-scale agriculture, driven by technological progress, became one of the main arguments to promote land cooperativization (collectivization). With the name “the cooperative movement”, the policy of collectivization was serving two purposes simultaneously: fulfilling productive imperatives (explicit) and eliminating peasants’ private property on land and any form of personal profit through agriculture (implicit).

Another far-reaching impact of the relations with the Soviet bloc was the consolidation of an agricultural policy driven by export crops. Export agriculture was considered a priority in the country’s economic strategy to the detriment of agriculture for domestic consumption. This prioritization was also expressed in division of labor in which state agriculture (with some participation of the cooperative sector) had the primary responsibility for export products and a secondary responsibility for staples for domestic food demand (see Table 5.2). Peasant agriculture, more diversified, and mainly focused on food for self and domestic consumption, was limited by the state policy of specialization on export crops and the opening of the food import market from the socialist bloc (Deere et al., 1992; Figueroa-Albelo, 2003, 2005; Figueroa-Albelo & García de la Torre, 1984). This division was also expressed in state inputs and machinery allocation (Álvarez & Puerta, 1994; Deere, 1992; Deere et al., 1992; Eckstein, 2003; Rosenberg, 1992) and state political support, as will be discussed in this chapter.

Table 5.2: Crops and land property in Cuba, 1987

	State	Cooperative (CPA)	Private (<i>Campeños</i>)	
	(percentage)			
Permanent crops	85.2	8.6	6.2	100
Sugar cane	85.0	11.3	3.7	100
Temporary crops	49.2	12.0	38.8	100
<i>Cultivos varios</i>*	38.7	13.1	48.2	100
Cultivated agricultural land	75.2	10.2	14.6	100

Elaborated by the author. Source: Figueroa-Albelo, 2003

* The cultivation of tubers, roots, and other vegetables are collectively called in Cuba *cultivos varios*.

5.3. Gorbachev and hard currency scarcity

Despite the support of the socialist bloc, the Cuban economy was facing serious problems by the second half of the 1980s. These would be aggravated by Mikhail Gorbachev’s new policies in the USSR and the fluctuations in oil and sugar prices on the world market. Gorbachev, who came to power in 1985, was behind policies with significant impact on Soviet-

¹⁰⁷ The government established limits to private farming through the first and second reform laws of 1959 and 1963. Although the limit was set at a maximum of 67.1 ha, in 1987, more than 50% of private farmers had less than 7 ha, and more than 90% had less than 27 ha (Figueroa-Albelo, 2003).

Cuban trade relations. Gorbachev pushed for economic plans to be strictly enforced and for a balanced trade budget after years of growing deficit (Kapcia, 2008b, 2014; Mesa-Lago & Pérez-López, 2005) (See Table 5.3).

In addition to the accumulation of annual trade deficits with the Soviets, hard currency debt with Western countries was also growing. The debt jumped from 2 989 million in 1984 to 5 657 million in 1987 (Eckstein, 2003; Mesa-Lago, 1989). Hard currency commodity earnings were mainly provided by sugar exports (after fulfilling the Soviet quota) and Soviet oil re-export¹⁰⁸ (second largest export product and the island first source of hard currency) and were intended not only to pay off debt but to finance Western imports (Deere, 1991; Eckstein, 2003). These sugar and oil exports were affected by the drop in the prices of both commodities in the world market and the fall of the value of the dollar in the mid- 80s¹⁰⁹.

Table 5.3: Evolution of merchandise trade Cuba-USSR, 1984-1987

	1984	1985	1986	1987
	(millions of pesos)			
Trade with USSR	8735	9901	9248	9364
% of total trade	68.8%	70.5%	71.8%	72.0%
Exports	3952	4482	3935	3867
Imports	4782	5419	5337	5496
Trade deficit	830	937	1402	1629
% of total trade deficit	47.4%	45.8%	61.65%	73.67%

Elaborated by the author. Source: Mesa-Lago, 1989.

Cuba had problems balancing sugar commitments with the USSR and expected hard currency earnings from the world market. In December 1986, Fidel explained how there were occasions when the obligations with the Soviet Union were not fulfilled in order to sell the sugar in the world market and acquire the necessary hard currency (FC, 02.12.86). At other times, he explained how occasionally commitments were not fulfilled due to pests or bad weather and still the USSR continued to send the oil (and other imports) expected in the plan (FC, 04.12.84, 28.12.84). Slowly, the discourse showed that breaching was not a possibility anymore. On the annual celebration of National Rebellion Day in 1988, Fidel declared that it was necessary to purchase one million tons of sugar annually on the world market in order to fulfill the sugar export commitments with the Soviet Union (FC, 26.07.88).

At the end of 1986, Castro declared that due to the fall in oil prices, oil re-export revenues were cut in half and that hard currency scarcity would greatly impact the normal import levels of agricultural inputs (FC, 02.12.86). This, coupled with the limited access of hard currency from sugar exports, resulted in a) the interruption of payments of Cuba's foreign debt with Western countries; b) the request of rearrangement of the payments through the Paris Club; and c) domestic shortages (Eckstein, 2003; Mesa-Lago, 1989; Mesa-Lago & Pérez-López,

¹⁰⁸ At the end of the 1970s, the Soviets allowed Cuba to re-export the oil that it managed to save from the total imported from the USSR, that total consisting of around 13.3 million tons annually first half of the 80s (Rodríguez, 2011b). According to Fidel's speeches, some 8-11 million tons were used domestically every year (FC, 07.06.85) and the rest was re-exported. Oil re-exports were the second largest export item for Cuba and the most crucial source of hard currency (Deere, 1991; Eckstein, 2003).

¹⁰⁹ In Eckstein (2003)'s view, the increasing dependency on trade with CMEA and the Soviet Union (86% of Cuba's total trade in 1986) was mainly because of the contraction of Western opportunities (Eckstein, 2005).

2005). This tension became evident in December 1986 when Fidel spoke about the consequences of that year's drought:

“It [the drought] has already affected us, in the sugar production in more than one million tons, and as we have made the commitment to fulfill the obligations we have with the socialist countries, and we cannot do as it was sometimes done before, that sugar delivery was simply diminished and was sent to the capitalist market, with this level of effects is very little available sugar for the capitalist markets in 1987. That is part of the set of factors that I have explained which make this year hard in resources in convertible [hard] currency, with the double aggravating circumstance that also affects us in other agricultural productions: they affect the production of milk, of tubers, of vegetables” (FC, 02.12.86).

“This effort was being made, but now it has to be made with much more consciousness, with much more efficiency, with much more wisdom. And in the investment plan, absolute priority -I repeat- is given to products that substitute imports or generates exports in the convertible area. There is a second top priority. It no longer refers to production that generates exports for the convertible area. There is a second issue of maximum priority, and also sacred for us, which is exports to the socialist area: priority attention to production for the socialist area, and to investments that generate exports to the socialist area. This is very clear” (FC, 04.12.84).

The debt crisis was also present in the discourse. In 1985 alone, three international conferences about Latin-American and Caribbean external debt took place in Havana. The debt crisis was mainly explained in Fidel's speeches through the *intercambio desigual* (unequal exchange conditions in the world market) (see speeches FC, 28.12.84, 18.07.85, 03.08.85, 14.09.85, 26.07.86). In the specific case of Cuba, Fidel blamed the fall of sugar and oil prices also on these unequal exchange conditions. Interestingly, it was addressed as an international (external) and general regional problem.

“Regarding sugar, I'll give you another example. In the year 1960, to buy a bulldozer of 180 tons, we had to use 200 tons of sugar; today, to buy that same bulldozer in Japan, we have to export 1 300 tons of sugar. This means that the Japanese sell their bulldozer more and more expensive; they produce it with good salaries, profits from the companies, advertising, everything, and buy six times more sugar with the same bulldozer... That is the unequal exchange; that exchange between raw materials, agricultural commodities and other products that they [Japan and the developed countries] cannot produce them, because when they can produce them there [in developed countries], they burst us, they subsidize [those products' production] and burst us” (FC, 18.07.85).

5.4. Domestic Counter-Perestroika and socialist agriculture

In combination with other internal factors, the complicated economic situation gave birth to the so-called *Proceso de Rectificación de Errores y Tendencias Negativas* (Process of Rectification of Errors and Negative Tendencies, in the following as Rectification Process). Although it was only officially announced in the context of the III Congress of the Communist Party in 1986, it is generally accepted that the policy began at least two years before in 1984¹¹⁰ (Kapcia, 2008b, 2014; Mesa-Lago, 1989; Mesa-Lago & Pérez-López, 2005), at the beginning of the study period.

¹¹⁰ Fidel himself acknowledged that in a speech in 1991.

In contrast to Gorbachev's *Perestroika*¹¹¹, among the main goals of the Rectification Process were to reverse pro-market policies that were said to be creating a negative capitalistic mindset (Corrales, 2007; Eckstein, 2003; Kapcia, 2008b, 2014). Additionally, the rectification aimed to combat corruption and economic inefficiency and eliminate dogmatic copies of the Soviet model (Corrales, 2007; Kapcia, 2008b, 2014). The process officially re-emphasized Che Guevara's moral principles of voluntary work, moral incentives, and anticapitalistic mentality (Kapcia, 2008b, 2014; Mesa-Lago, 1989; Mesa-Lago & Pérez-López, 2005). Eventually, it meant increasing centralization in decision-making and management of the economy and the political decline of the supporters of pro-market economic reforms (Domínguez, 1993, 1994; Rosenberg, 1992).

Mesa-Lago and Pérez-López (2005) describe this period as an idealist cycle¹¹² intended to "recalibrate socialist policies". Eckstein's (2003) view is that, although ideologically justified by the government, the main goal of the process was to deal with underlying economic concerns, namely fiscal problems.

Among the measures implemented in the context of the Rectification Process were a) restrictions or elimination of the housing-construction market, private manufacturing, self-employment, and street vending; b) the underlining of the role of central planning, c) the tightening of labor rules (to fight high absenteeism and labor turnover) and emphasis in moral incentives; and d) price increases (urban transport, electricity, goods in the parallel market) and cuts in the supply of goods and services (e.g., reduction of the quotas in the ration system and elimination of free meals in workers' cafeterias) (Eckstein, 2003; Mesa-Lago, 1989). Regarding agriculture, two of the measures were central: eliminating the Peasants' Free Market (*Mercado Libre Campesino*) and a new emphasis on collectivization (cooperatives).

5.4.1. Revolution and peasants as a general concept in Fidel's discourse

In Fidel's discourse, the *Revolución* (Revolution) was the main protagonist of the country's socio-economic progress (FC, 01.01.84, 17.05.84, 26.07.86). The Revolution, understood as an ongoing process began in January 1959, was used indistinctly to denote the government, the state and the party, as part of the rhetoric of the Cuban socialism. It was discursively constructed as the mother of good works, good intentions, and sacrifices. In the case of agriculture, it was responsible for everything considered to contribute to overcoming primitive forms of agricultural production.

"It [the Revolution] did not tremble or hesitate to resolutely undertake the long and difficult path of economic and social development, starting from a backward, deformed and dependent economy, inherited from colonialism, and in the midst of a brutal economic blockade of those who had been our suppliers of equipment, technologies, projects and raw materials, a tough and difficult road was started, which required countless efforts, perseverance, and sacrifices: ..., the mechanization of the sugar cane harvest and all agricultural activities, the electrification of the fields, the construction of dams, irrigation, and drainage canals; the introduction of fertilization and chemical manures in general,

¹¹¹ *Perestroika* (restructuring) was a policy promoted by the government of Mikhail Gorbachev before the fall of the socialist bloc and the dissolution of the USSR. Its fundamental objective, in parallel with *Glasnost*, was the restructuring of the Soviet economic and political system.

¹¹² Mesa-Lago and Pérez-López consider there to be idealist and pragmatist cycles in Cuba's economic policies that follow a vicious cycle. The ideological tendencies of the government leadership determine idealist and pragmatist periods. Pragmatist cycles are characterized by the implementation of pro-market policies and idealist cycles see the implementation of policies in the other direction (Mesa-Lago and Pérez-López, 2005).

cattle improvement, artificial insemination and many other techniques in our backward agriculture...” (FC, 01.01.84).

The peasants, as a group, appeared in Fidel’s speeches associated with two topics: the revolutionary struggles at the end of the 1950s and the economic and social benefits of the revolution. In many speeches, Fidel emphasized how the peasants were historically involved in the battles in the *Sierra Maestra*¹¹³ together with the rebel movement led by himself. This reinforced the representation of the peasant as a political ally of the revolution (FC, 17.05.84, 18.05.86, 17.05.87).

Additionally, the peasants appeared as beneficiaries of the revolution’s achievements (FC, 17.05.84, 28.12.84, 17.05.87). The first and most important of these benefits was land reform. Among the most mentioned economic benefits were the lack of rent payment for land, loans without interest, the absence of taxes on most crops, and the forgiveness of debts in cases of losses due to climatic disasters. Castro also included those social benefits available to the Cuban population in general: medical services, education, electricity, communications, roads, etc. He also included the creation of a unique peasants’ association.

The idea that peasants lived in very adverse conditions before 1959 and that the revolution changed that panorama is very present in Castro’s discourse (FC, 17.05.84, 28.12.84, 17.05.87). This idea was reinforced every time Fidel promoted changes that implied transformations in agriculture. The historical trajectory of the peasants was an argumentative tool used by Fidel and framed as such: the peasants had little, they fought for the revolution, the revolution has given them much, the revolution asks for changes, and they should be loyal to the revolution (FC, 17.05.87).

“For many reasons, for countless reasons, the time had come to promote higher forms of agricultural production [creation of cooperatives] in our peasant sector, our loyal ally, the firm ally of our working class, our noble, honest and patriotic peasants, our peasant revolutionaries, whose spirit we could see from the first months, from the first days of our landing, throughout the struggle in the mountains and throughout 28 years of the Revolution, in the construction of socialism, in defense of the Revolution and of the *Patria*” (FC, 17.05.87).

The way these theoretically allied peasants responded to this historical sequence is expressed in a clear division in Fidel’s discourse between those loyal and non-loyal peasants. This, in turn, is strongly related to the development of the cooperative movement (collectivization) and the Peasants’ Free Market and Fidel’s related predications.

5.4.2. Collectivization

Cooperativism (collectivization) was formally promoted in the First Agrarian Reform Act in 1959. By 1963, 3526 cooperatives existed: the newly formed *Cooperativas de Créditos y Servicios* (Credit and Service Cooperatives, CCS) and other types of cooperative associations (Figueroa-Albelo, 2003). Still, the government’s priority was to create a strong state agricultural sector (Deere et al., 1992) and it implemented a series of strategies for gradually acquiring land (see Chapter 4). It was not until the late 1970s that the state encouraged

¹¹³ The *Sierra Maestra* is a mountain range where Fidel and his troops fought against Batista's government between 1957 and the end of 1958.

cooperativism again, specifically through the creation of the *Coperativas de Producción Agropecuaria* (Agricultural Production Cooperatives, CPA)¹¹⁴.

To be a CPA member, farmers voluntarily converted their land and means of production to collective property and worked and distributed the output collectively. The government promised CPAs a long list of material incentives: increasing technification¹¹⁵; preferential access to agricultural inputs, technical services, and credit; social benefits (pensions, paid sick leave and maternity leave, and compensation for losses due to accidents); and the construction of cooperative communities, i.e., houses, electricity, and services (Deere et al., 1992; Eckstein, 2003; Gey, 1990; Rosenberg, 1992; Valdés-Paz, 2009). The state also granted land in usufruct to the cooperatives, amounting to 89 012 hectares in 1987 (Figuroa-Albelo, 2003).

All these incentives were aimed at making cooperatives more attractive to individual farmers. In doing so, the state supported the remaining private farmers differently. In the early 1980s, individual farmers (independent members or Credit and Service Cooperative [CCS] members) were disadvantaged concerning access to credit, housing, mechanization and irrigation, and assistance (technical or otherwise) (Deere et al., 1992). Tax policy also benefited CPAs (Deere et al., 1992). In 1987, there were 1418 CPAs with an average of 689 ha, 49 members per CPA, and 14 ha per member (Figuroa-Albelo, 2003).

In addition to the previous incentives, cooperatives were politically encouraged. Although there is no evidence of forced collectivization, the peasants' organization (ANAP) and the communist party exercised ideological persuasion to convince the peasants to join the CPAs. In December of 1980, during the second congress of the party, the policy of promotion of CPAs was ratified. It was stated that CPAs were "... , after state-owned enterprises, the most advanced form of production in agriculture"¹¹⁶ (PCC, 1980). Between 1981 and 1988, 919 party cells¹¹⁷ were established in more than 65% of the CPAs, with around 10 thousand party members (Valdés-Paz, 2009).

Fidel's discourse strongly promoted the total collectivization of national agricultural land to be carried out through the "cooperative movement". After exhausting the formula of land acquisition by the state through leasing, integration into "special plans", or purchase (discussed in Chapter 4), the cooperative movement aimed to absorb the remaining land still in the hands of private farmers (about 8% of all agricultural area). Private farmers were 1) the members of Credit and Service Cooperatives (CSS), in which peasants conserve the property and/or management of their land, produce independently and join only for the management of services and credits, and 2) independent non-cooperative farmers (Table 4.1).

Fidel used four types of arguments in promoting collectivization: technological-productive, bureaucratic-organizational, humanitarian, and moral. In the technological-productive dimension, Fidel points out that technological and scientific advances (machinery,

¹¹⁴ CCS's are cooperatives in which farmers own or lease their land but come together as a cooperative to share credit, infrastructure, and markets. CPAs are cooperatives where farmers share and work the same piece of land.

¹¹⁵ In 1982 they received 8163 tractors, 1130 irrigation systems, 667 trucks, 213 combines and 324 sugar cane lifters (Figuroa-Albelo, 2003)

¹¹⁶ II Congreso del PCC: Resoluciones. Sobre la Cuestión Agraria y las relaciones con el campesinado. <http://congresopcc.cip.cu/wp-content/uploads/2011/03/II-Congreso-PCC.-Resoluciones-sobre-la-Cuesti%C3%B3n-Agraria-y-las-relaciones-con-el-Campesinado.pdf> (Accessed 11/04/2018).

¹¹⁷ Basic organizational unit of the Communist Party of Cuba, present in work centers and neighborhoods with a minimum of three militants.

irrigation systems, fertilization by plane, etc.) cannot be taken to small-scale agriculture (FC, 28.09.86, 17.05.87). Smallholdings are, in this sense, enemies of technological progress and are described as such in the discourse.

“... I explained how land per capita was reduced as the population grows and forces us to use all the land well, with all the technique; that forces large-scale production, highly technified. And when you are going to make an irrigation system, you cannot find 50 smallholdings along the way because you cannot make a canal, nor can you make an adequate irrigation system, nor can agriculture be mechanized. (...), what we have to do is to start from our reality and our experience, from our scarcity of land to look for the maximum of productivity and to look for large-scale and technified production, as we have it in rice, in sugar cane, in citrus, and in many other things. We can get much more, but, woe to us if we had to live on hundreds of thousands of smallholdings, then it is true that getting a chicken out there, or getting anything, getting food for hospitals, for schools, for the workers' canteens, and producing 8 million and a half tons of sugar would be impossible” (FC, 28.09.86).

Additionally, Fidel added an emphasis on the spiritual benefits of collectivization. While pointing to a set of “subjective factors” hindering cooperativization: the conservative and individualistic spirit of the peasants, the custom of the plot and individual work, the distrust in the cooperative, and the peasant's distrust of new things (FC, 17.05.87), he argues that cooperatives can be a source of happiness due to its family environment (FC, 18.05.86).

The promotion of collectivization with positive arguments was accompanied by direct opposition to the *minifundia*, not only in technological terms. Fidel minimized the productive contribution of small-scale agriculture. In his discursive logic, small farmers produced little, in a backward and atomized way, and their production could not meet the food demand of the *pueblo* (people/society) (FC, 18.05.86, 28.09.86, 17.05.87, 17.09.87). This minimization seems especially ideological considering that scientific publications of the time reflected the significant contribution of the peasant sector in certain crops, e.g., 85% of beans, 67% of vegetables, and 52% of bananas (Figueroa-Albelo, 2005; Figueroa-Albelo & García de la Torre, 1984; Mesa-Lago, 1989; Rosenberg, 1992).

Small-scale agriculture, following Fidel's discourse, also had negative impacts on the organization of agriculture: a) it multiplied bureaucratic procedures, b) it complicated technical assistance, and c) it hampered input supply and distribution channels (FC, 18.05.86, 28.09.86, 17.05.87). With this argument, Fidel pointed out the unnecessary efforts that the revolution made with respect to small-scale production¹¹⁸. Even beyond the productive argument, he frames small-scale producers as not contributing what was expected to the revolution and its people.

“... how wonderful will be the day when we will talk to the peasant sector, we will not have to meet with 200 000 peasants, because it is impossible to meet with 200 000 peasants; but it is perfectly possible to meet with 1000 cooperatives, 1500 cooperatives, 2000 cooperatives to discuss any problem ... it is much easier for the socialist state to discuss, talk, exchange opinions, find formulas with 1500 or 2000 representatives of the peasant sector, which have under their direction and control the total of peasant production. We will have it someday because we hope that the day will come when 100 percent of the land of the peasants will be part of the cooperatives” (FC, 18.05.86).

¹¹⁸ After the second agrarian reform law in 1963, Fidel promised that no more expropriations would take place and that the land of private owners would be respected.

“I did not mention, for example, the number of procedures, arrangements, precontracts, contracts, etc., that must be done every day and every year with hundreds of thousands - in this case there were 200 000 individual farmers - the credits for each one of them, the materials and inputs for each one of them in their plots, the plowing in each of the plots, the vegetable or animal sanitary attention and, in the end, the collection of the produce: two chickens, three chickens, four chickens; a pig, a pig and a half, a half pig; 40 liters of milk, a tank to pick it up, and at early hours, ..., bucket by bucket; a *quintalito* (little quintal), more than a *quintalito* or less of rice, beans, and a truck today with bananas, tomorrow another with sweet potatoes, another one with vegetables, and a truck visiting numerous small farms to load, etc., etc., truly prehistoric methods. In the state farm, in the dairy of 288 cows, with electricity, the milk of the two milkings is conserved at the right temperature, waiting for the moment when the truck arrives to load 1000, 1500, 2000 liters of milk; in the smallholding there are 50, 60, 80, 100, to quote an example” (FC, 17.05.87).

Fidel’s language concerning individual farmers was disrespectful and dismissive. He used diminutives, like in the case above: “*quintalito*” (little quintal), diminishing the quality of farmers’ production (FC, 17.05.87). He also qualified their work as using “truly prehistoric methods” (FC, 17.05.87). The negative language intensified when Fidel referred to how private farmers could benefit individually (compared with state agricultural workers) and the difficulties in controlling their activities (FC, 19.04.86, 18.05.86, 02.12.86).

“I am going to see if the day in which all the land is cooperativized and in front of each cooperative, there are men like those who have spoken here, if a merchant can appear to do a business, a scam; I want to know if it will be possible. Today you can still take refuge in some of the tens of thousands of loose pieces that remain around; it is much more difficult to control, much more difficult to guess what they are doing!” (FC, 18.05.86).

“We have the ANAP Congress on May 17th next year. There will not only be the cooperative members present, the farmers of the Credit and Service Cooperatives will also be present, with whom we have to work; we cannot forget the Credit and Service Cooperatives, we have to do an active job there, because right there is where we are fighting the battle against the enemy; against the reactionary enemy, against speculative elements. From that type of element comes from a man like the one with two trucks and the car¹¹⁹. This is a peasant, but, in general, those are not the peasants, but elements that roam the fields that fundamentally concern us.” (FC, 18.05.86).

“I saw one of you yesterday who spoke with great irritation and said he was happy about what he had said about these problems, because, of course, an honest worker, a hardworking peasant has to be really indignant that there are these things. They are laughing in their faces as if to say: “Idiot! You are in the cooperative, you joined the cooperative, I am a millionaire, I have two trucks, I have this, I have workers, I am a pasha, I am a king, I am an emperor!” (FC, 18.05.86).

“It was already here established the desire of the cooperative members that all these elements, that use the land in an incorrect way and carry out practices of sharecropping and lease of land to profit from the work of others, must be expropriated or confiscated. We also believe, and here it was also evident, that the abandonment of the land should not be allowed; without committing, of course, any type of injustice, but with a coordinated work of the Ministry of Sugar, the Ministry of Agriculture, and the ANAP, all forms of absentee ownership in the field, of improper or incorrect use of the property of the land

¹¹⁹ He referred to an example he used earlier in the speech of a private food producer who had several workers and two trucks. In the speech the private food producer is used as a negative example of personal enrichment.

must be stopped. Some measure will have to be taken with those kulaks¹²⁰ that remain around -to use a historical word-; there are some left” (FC, 18.05.86).

On the other hand, Fidel referred to cooperative peasants as “our peasants” (see, for example, FC, 24.02.84) and attributed positive moral qualities to them: they work honestly, they make an effort, and “they earn their bread with the sweat of their brow” (FC, 18.05.86). Additionally, the cooperative movement was sometimes called by Castro as the “peasant movement” (FC, 26.07.86), which stresses that joining the cooperatives is what the peasants, “our peasants”, the revolutionary peasants, should do. Likewise, the land to be collectivized is the land of “*la Patria*” (fatherland) (FC, 24.02.84). With this, Fidel added to cooperativization a patriotic value, and therefore the framing of revolutionary struggle.

“In this percentage of the peasantry that is not yet cooperative, a battle is fought; in that percentage of the land that is not yet cooperativized” (FC, 18.05.86).

The fight against smallholdings, mainly based on technological and productive imperatives, became a fight against private property on land and obtaining private benefits from agriculture through the use of moral and ideological arguments (FC, 18.05.86, 28.09.86, 17.05.87). As we will see later, this confrontation is very clearly expressed in his opposition to the Peasants’ Free Market.

Cooperatives are considered “superior forms” of production in agriculture because they imply large-scale agriculture with greater possibilities for mechanization and technology and greater economic and political control. It is described as a manifestation of the advance of political and revolutionary consciousness and received support from the revolution.

“... we know the perspectives and possibilities of the advance of the cooperative movement among our peasants, which is carried out methodically, without rush, and based on the strictest respect for the principle of voluntariness, in which, in our opinion, lies and will be the success of that movement, whose current rate predicts that in five and a half years, say in six or seven years, almost one hundred percent of the peasant lands will be cooperativized, which, together with the state agricultural enterprises, will allow us to affirm that without rush, with intelligence and wisdom, from the Law of Agrarian Reform, whose 25TH anniversary is commemorated this year, the lands of our *Patria* (motherland), like the industry, will be totally socialized” (FC, 24.02.84).

“And the state enterprises in Cuba supply most of the cane for sugar production, almost one hundred percent of the rice produced in the country, most of which are very important export products, such as citrus fruits; the state enterprises produce all the milk, all the eggs, all the poultry meat, all the pork, all the beef that is distributed to the population and is supplied in social establishments, or hospitals, in schools, everywhere, to that population of almost 3 million, which is additionally supplied in social consumption centers, because in the country it is distributed for 13 million. Nobody will imagine that it came from the free market of the peasants, who supplied a ridiculous proportion” (FC, 28.09.86).

Despite their emphasis in selected speeches, the role of cooperatives in national agricultural production was barely mentioned in the discourse. The cooperative movement played no other function beyond converting all agricultural land to collective property, encouraging the practice of large-scale agriculture, and ensuring a more controllable agricultural organization system. The discourse was fundamentally focused on the extremes,

¹²⁰ Kulaks is a derogatory term used in Soviet political language, which referred in principle to former landowners of the Russian Empire that had large extensions of land. It was used to classify rural landowners as enemies of the people in the early years of the Soviet government. The term was also used for all the deportees, condemned and opposed to the collectivization.

on the state vs. private property struggle. This characteristic is evident when Fidel minimized the value of small-scale agriculture and the free peasants' market. The discourse that promoted cooperativism was based on denoting the advantages of the state enterprise (and large-scale agriculture) and the disadvantages of the individual peasant (smallholding). A reflection on the specific values of cooperativism and collective-non-state property and socialist ideals is not present in the discourse.

This absence is consistent with some authors' interpretation that cooperatives were only a second-best option (Deere et al., 1992; Figueroa-Albelo, 2003). Until the mid-1970s, the government had only promoted state agriculture as the realization of socialist agriculture. By the early 1970s, the state's policy of assimilation of private land was exhausted as soon as the remaining private peasants were unlikely to turn over their land to the state voluntarily. In May 1974, Fidel announced two paths for socialist agriculture: state farms and cooperatives (FC, 17.05.74).

5.4.3. The end of the Peasants' Free Market

The *Mercado Libre Campesino* (Peasants' Free Market) was opened in 1980 through Decree-Law no. 66. The opening of the market was part of a set of pro-market measures implemented from 1971-1985, in what Mesa-Lago and Pérez-López (2005) identify as one of the Cuban government's pragmatic cycles. The law stipulated that private farmers, cooperative members, state farmers, or *parceleros*¹²¹ could sell their production surplus after fulfilling their commitments with the state collection and distribution company (called *Acopio*). The laws of the market would determine the prices. Due to their foreign trade value, some products, such as cocoa, coffee, tobacco, and sugar, could not be sold in the market. The selling of beef was also prohibited. The local government, the *Poder Popular* (popular power), would control these markets (Rosenberg, 1992; Valdés-Paz, 2009).

Officially, the market was intended to ameliorate food production and distribution problems, incentivize peasant production, and eliminate the black market (Rosenberg, 1992). Simultaneously, it aimed to reduce the excess monetary liquidity due to the chronic scarcity of consumer goods (Benjamin et al., 1984; Marshall, 1998).

After several scandals occurred in 1982, especially in certain markets in Havana where illegalities were discovered and widely covered in the press, the government modified Decree-Law 66¹²². In 1983, only private peasants who owned land and were members of the farmers' organization ANAP could sell their produce in the free markets. The government also added the new tax rate of demanding 50% of all benefits (Rosenberg, 1992). These measures created a clear economic and political separation between private farmers and cooperative members.

The elimination of private commercialization of agricultural produce, namely the end of the Peasants' Free Market¹²³, was one of the central topics in Fidel's speeches during the Rectification Process (FC, 19.04.86, 18.05.86, 28.09.86, 02.12.86, 17.05.87). There were two main arguments to prompt this measure: a) the individual profiting of farmers and middlemen (with negative consequences for the cooperative movement and the social egalitarian distribution system) and b) its alleged inadequate role in satisfying domestic food demand.

¹²¹ "*Parceleros*" are owners of backyards, patios or small rural plots used for agriculture.

¹²² The modifications of Decree-Law 66 were contained in Decree-Law 67 and 127, approved in 1982.

¹²³ For a lengthy and detailed analysis on the Peasants' Free Market, see Rosenberg, J. 1992 "Cuba's Free-Market Experiment: Los Mercados Libres Campesinos, 1980-1986" in *Latin American Research Review*, Vol 27, No. 3: 51-89.

According to Fidel, the Peasants' Free Market produced rich peasants because it allowed the independent farmers, who retained a certain number of hectares (Fidel generally used the example of farmers with more than 20 ha) after the 2nd Agrarian Reform, to sell their products in the free market at (high) prices that the state could not control.

“But you imagine, with the Peasants' Free Market - and when the garlic bulb was at one peso and a banana at a certain time at 60 or 70 cents - a farmer with 50 hectares, a farmer with 65 hectares, a farmer with 20 hectares, he becomes rich, he becomes a millionaire. And as that market, really, cannot be regulated, because it would be a contradiction: ‘Hey, I'm going to put the price, instead of a peso, sell the garlic bulb at 15 cents’, the market is no longer free, it's not free anymore, the guy does not take it. The guy goes to that market because he earns much more. Imagine a farmer with 50 hectares; he was going to have more money than Julio Lobo¹²⁴, selling there in the Peasants' Free Market” (FC, 17.05.87).

In the value system promoted by Fidel's discourse and the revolution, “being rich” was (and still is) in itself a negative quality. Individual profiting was associated with a capitalistic mindset. However, he complemented this argument by describing illegalities related to the free market and by denouncing the consumption practices of the peasants who benefited from it. According to Fidel, the peasants did not fulfill their commitments with the state and diverted the state-allocated inputs (technological package intended for state contracted production) to produce the market preferential crops (FC, 19.04.86, 28.09.86, 17.05.87). With allegedly improper profits, these peasants bought houses, cars and traveled to hotels that state workers could not afford (FC, 18.05.86, 28.09.86, 02.12.86, 17.05.87).

Additionally, following Fidel's logic, the market constituted an obstacle to the process of cooperativization; it was a “demoralizing element” since it produced rich peasants (FC, 18.05.86, 28.09.86). Fidel acknowledged that a private peasant, deciding on production goals and participating in the free market, could obtain earnings much higher than what a cooperative member (CPA) could get (FC, 18.05.86, 28.09.86). Therefore, Fidel denounced the peasants' profiting and consumption practices based on revolutionary and moral ideals (FC, 18.05.86).

“...it was not necessary for the cooperatives to go to the Peasants' Free Market, nor was it necessary for the cooperatives to discredit themselves, because I really want to tell you that the people, although they paid and paid very expensive prices for things because they needed certain products, they had a very bad opinion, very bad, of the Free Farmers' Market; of the prices at which the product was sold, of that system of individual enrichment, and the population there felt stolen from. It really hurt me that the cooperative movement, with the acquired prestige, could be the victim of that rejection, of that rejection, of that animosity of the population, without this being a need for the cooperatives, for all the facilities and resources that cooperatives were being offered [by the state and revolution]” (FC, 18.05.86).

“Apart from the economic, political, and moral damage, the Peasants' Free Market was hindering us the development of the cooperatives and creating antipathies against the peasants. As I said yesterday: if an individual with a hectare of garlic could get up to 50 000 pesos in a year, he would hardly join the cooperative movement, under any circumstances (...) (FC, 18.05.86).

“I thought, well, how are we going to ask the cooperative members, who are working honestly, making an effort, earning their bread with the sweat of their forehead, who do

¹²⁴ He referred to a Cuban sugar tycoon millionaire before the revolution, who owned 14 sugar mills, around 12 thousand hectares of land, the second largest collection of Napoleonic memorabilia, and a bank, among other properties.

not go to the Peasants' Free Market and that free-market will continue to subsist so that all those lumpens¹²⁵, antisocial elements continue to profit from this market and so that even those individual farmers or peasants, full of ambition for profit and money, would continue to enjoy the advantages of obtaining all the money that they wanted in that market" (FC, 18.05.86).

According to Castro, the free market also caused discomfort among the population due to the high prices (FC, 18.05.86). The image of a dissatisfied population contrasts with Benjamin et al.'s (1984) description of the period as one in which the free market provided greater diversity and quality of agricultural products. This was argued to be the right of a society that after 25 years of revolution still did not have the quality and variety expected in the supply of food products (Benjamin et al., 1984).

The issue of food prices in the free market is especially problematic for several reasons. State food prices were highly subsidized (Mesa-Lago & Fabian, 1993) and the population got used to those prices as a measure of fair prices. Independent farmers' production for the free market, consisting of the surplus of state-contracted production and non-contracted production, had no state-allocation of input or subsidies. Moreover, independent farmers had to cover transportation costs. It would have been nearly impossible to sell at prices similar to those of state products.

High free-market prices also demonstrated the excess of monetary liquidity and the market's limited scope. The government initial approval of the cooperatives' participation in the free market was intended, among other things, to lower the free market prices (Figueroa-Albelo, 2003; Mesa-Lago, 1989). The minimal involvement of cooperatives, nonetheless, for which state commitments were strongly reinforced and with less opportunity to divert inputs to market production, failed to lower prices.

The issue of inputs is equally problematic. With state control of agricultural supplies, independent farmers had limited access to inputs. The state intended the free market to incentivize food production, but it did not allocate inputs to that production. It was apparent that peasants would produce, as many likely did before, by diverting the inputs given to crops contracted with the state or by acquiring some inputs in the black market, constituting a source of corruption. The population's criticisms of free-market prices were therefore, to some extent, also created by the state since it a) produced the illusion of fair food prices disconnected from production costs, b) limited farmers' access to the markets, and c) imposed strict (sometimes counterproductive) regulations¹²⁶ and high taxation for those participating.

In addition, Benjamin et al. (1984) described how the free market highlighted the inefficiencies of state agriculture and caused the population to wonder why, after so many years of revolution, the state system could not satisfy the population's desires. Contrary to what Fidel's discourse projected, Benjamin et al.'s (1984) study reported that the people complained more and more frequently about levels and quality of state food production after seeing the results of private agriculture. The comparison was aggravated when Cuban-emigre visits were allowed starting in the late 70s and the abundance of the capitalism was described to family members in Cuba (Marshall, 1998).

¹²⁵ A pejorative term, used in socialist slang to denote people who has no class consciousness and are the lowest rung of the society

¹²⁶ Among the regulations applied to farmers participating in the free market was that each year, their share of production for the state would be increased if their sales in the free market increased.

As with independent farmers' production, Fidel stressed that the Peasants' Free Market was unnecessary by devaluing its role in the domestic food supply. Fidel argued that the market only supplied few products at very high prices and for private consumption. As before, he used diminutives such as "all those '*hierbitas*' [little herbs] that the Peasants' Free Market offers" (FC, 18.05.86) and other disrespectful language (FC, 19.04.86, 18.05.86, 28.09.86). Nonetheless, some studies reported that the Peasants' Free Market was indispensable for some agricultural products since it had a monopoly on fresh pork, white cheese, peanuts, okra, green beans, and tropical fruits (Benjamin et al., 1984; Figueroa-Albelo & García de la Torre, 1984; Rosenberg, 1992). It is no coincidence that Fidel continually mentioned garlic as an example of free-market prices (FC, 19.04.86, 18.05.86, 28.09.86, 02.12.86, 17.05.87) since the free market covered 80.99% of national garlic sales (Rosenberg, 1992).

In contrast, Castro asserted that state enterprises produced more and the most important products for the *pueblo* (people/society). He used emotive examples to emphasize this idea, e.g., children's milk and the food for schools and hospitals (FC, 19.04.86, 18.05.86, 28.09.86, 02.12.86). Stressing the private-collective dichotomy and contrasting moral values as honest work and sacrifice with undue profits, Fidel discursively turned the peasants of the Farmers' Free Market not only against the cooperative members but the population in general.

"That's why it was painful to see people selling garlic there at any price, with one hectare of land and working a few hours a year, and earning 50 000 pesos or 60 000 pesos in a year in the Peasants' Free Market, what one of those highly qualified surgeons earns in 12 years. Here there were individual incomes -and I did the math- obtained in a year, which a specialist surgeon, of the best we have in the country, would have needed 60 years. I know many good surgeons, many good doctors in this country, I have not seen them with that ambition for money, they live dedicated to working, devoted to work, they are true communists" (FC, 02.12.86).

The alternative to the free market was a centralized state system of commercialization of agricultural products. Fidel explained how *Acopio* (Collection, state agency) and *Frutas Selectas* (Selected Fruits, state agency for commercialization of fruits for exports and tourism) would be the state companies in charge of collecting and distributing farm products. The farmers' free market would be replaced by the existing *Mercados Paralelos* (Parallel Markets) and state *agromercados* (agricultural markets). The parallel markets were outlets where the state sold surplus quantities of rationed goods and luxury items since the early 70s. The products were sold at high prices that imitated the supply and demand system, but with state control. Ironically, according to Benjamin et al. (1984), prices in the parallel market were as high or higher than in the Peasants' Free Market and part of the produce was coming from private agriculture. This statement was evident when Fidel referred to garlic sales in the parallel market in September 1986. Fidel's complaints about garlic prices in the free market referred to prices between one and two pesos (FC, 19.04.86, 18.05.86, 02.12.86, 17.05.87). In the parallel market, the price was six pesos (FC, 28.09.86).

"There are also some farmers - I saw this in a newspaper - who said that what they didn't like was that they were paid one price, and on the parallel market, they sold it at another. Imagine, with that abundance of money on the street, that enormous abundance, are you going to lower the price? Garlic has already been reduced, it was six pesos, and it's two pesos -I know the prices, don't think I don't know them. Well, the *Frutas Selectas* company pays the farmer 1.50 [pesos] a pound; *Acopio* usually a little less. But the pork, the turkey... Don't believe that the turkeys that are distributed in the parallel market of the capital come from the peasants; they are produced by the state enterprises. With the turkeys that the peasants produce, it is not enough to distribute one turkey per household here every 20 years" (FC, 28.09.86).

Fighting the Peasants' Free Market also had bigger ideological connotations in Fidel's discourse. It represented the struggle between the two systems: capitalism vs. socialism and free-market vs. socialist economic planning systems (FC, 28.09.86).

"...the Parallel Markets, free also, but not the free peasant, because they belong to the whole people, the state administers them, they do not make any individual rich in particular" (FC, 17.05.87).

"When the imperialists talk about it, they make believe that the four speculative cats here supplied this country [referring to the peasants of the Peasants' Free Market], which has long been supplied by socialist, high-tech and large-scale producer enterprises" (FC, 28.09.86).

The peasants who participated in the Peasants' Free Market were discursively constructed using negative predications. Fidel described them on multiple occasions as "speculators", "lumpens", "antisocials", "full of ambition", and "champions of free trade" (FC, 19.04.86, 18.05.86, 28.09.86). In his view, they were contrary to the revolutionary process and exercised undue profits with the market while enjoying all the social benefits of the revolution (FC, 19.04.86).

"You also know how critical I was with the practices of free peasant market when certain individuals sold a garlic bulb for a peso to bag it personally without any benefit for the people; it was not the peasant working honestly, sweating, receiving, on the other hand, all the facilities that the Revolution gives: education for the children, medical assistance, all the possibilities, without missing any; but people who, far from obtaining an honest income by cultivating the land, benefited themselves by trading, stealing, selling high, very high" (FC, 19.04.86).

However, it is worth looking at who is absent in the *campesino*'s discourse (not represented by nomination or predication). There was no mention of those participating in the Peasants' Free-Market, not committing illegalities and not becoming rich. In the same sense, there was no mention of any positive impact or value of the Peasants' Free Market. These discursive exclusions conveniently obscured the reality that the Peasants' Free Market were positively affecting the stability, assortment, and quality of produce, increasing the production and gradually diminishing the black market (Figueroa-Albelo & García de la Torre, 1984; Marshall, 1998; Mesa-Lago, 1989; Rosenberg, 1992).

Fidel announced the end of the Peasant's Free Market in May 1986, during the closing event of the second National Conference of Agricultural Production Cooperatives (FC, 18.05.86). In that occasion and others, Fidel made the cooperative members and the people protagonists of the decision (FC, 18.05.86, 28.09.86, 17.05.87).

"But the strength, the decision, the clarity, the energy with which you [cooperative members] proposed that this market be put to an end, really is tangible and concrete proof of the development of the conscience of the cooperative peasants and of not only the economic and material advantages of the cooperatives, but even the political advantages because here you can already see a different mentality in the cooperative members, they have a conscience, a different mentality compared to the individual producer, and have been able to analyze objectively and in-depth all the negative consequences of that institution [free peasants market], and here, unanimously, to put an end, immediately.

Although I was convinced that the Peasants' Free Market should disappear in a short time, I thought that it would have a few more months to live; however, the ideas you [cooperative members] put forward, your proposals, the unanimous criterion of the cooperative movement that this market should disappear immediately, is what determined that this market should disappear without delay, and all the measures are already being taken so

that, from Monday, or at the latest in this week, the Peasants' Free Market will disappear. We have gone through this experience, which I think has also enriched our knowledge about what should or should not be done to carry out our revolutionary process; I think that the decision taken [the closure of the Peasants' Free Market] will give a strong political, moral, and even economic impetus to the cooperative movement" (FC, 18.05.86).

The reasons behind the closing of the Peasants' Free Market is still a matter of some debate in the academic literature (Eckstein, 2003; Marshall, 1998; Mesa-Lago, 1989; Rosenberg, 1992). Some studies allude to the differences among the political elite (radical and orthodox), with being Fidel the most outspoken adversary of the free market (Marshall, 1998; Mesa-Lago, 1989). Others underline the government fear of the empowerment of private economic actors, allegedly anti-socialist elements in the revolution rhetoric (Mesa-Lago, 1989; Rosenberg, 1992).

5.4.4. Large-scale and technological progress: "Superior forms of agricultural production"

As highlighted in Fidel's speeches, the *minifundia* (smallholding) was at the center of the antagonism towards the relation between independent-private peasants and the free-market. The category of smallholdings was associated with those peasants who remained after the 2nd Agrarian Reform, after state policies of assimilation of land and collectivization. These were peasants who persisted as independent producers and who supplied the free market. Because of this, *minifundistas* (smallholders) were considered obstacles, or "the enemy" (FC, 18.05.86), to be ideologically convinced to collectivize and to combat because of their numerous illegalities and immoral behavior.

However, the discourse on the *minifundio* diverged from that on *campesinos* (peasants). Smallholdings were emphasized as being backward forms of agriculture in contrast to "superior forms of agricultural production" based on technological and productive aspects (FC, 01.01.84, 17.05.84, 17.05.87). Fidel argued that the very existence of *minifundios* was demeaning for the revolution and all its advances (FC, 17.05.84, 28.09.86, 17.05.87).

"We are currently engaged in the struggle to achieve superior forms of production on the lands of the peasants. The cooperative movement, which is relatively new in the Revolution and has reached a great height in the last three years. Currently, around 70 000 *caballerías*, including 6000 provided by the State, comprise 56% of the total land of the peasants, are cooperativized. So, if we add state farms and agricultural production cooperatives, about 90% of our agricultural land today works under superior forms of production" (FC, 17.05.84).

"After 20 years of the Revolution, the fact that a sector of our rural population, an important part of our land, continued to be exploited as at the time when the Spanish conquistadors came to this country was practically a shame; that next to the great revolutionary and social advances, of the great advances in industry, in many aspects of life in the country, we continued with prehistoric methods of agricultural production in an important part of our lands. Moving towards higher forms of agricultural production is not a simple idea, a particular preference of someone, a whim; it is a deep human need -...-, a deep social need, and a deep economic need" (FC, 17.05.87).

Technologically, smallholders were identified with the use of oxen and manual cutting and the corresponding lack of the mechanization desired and used in state enterprises. They were depicted as unproductive and minimized in the discourse and consequently, they constituted

forms of production to be eliminated: “Impossible to return to the time of the ox and the manual cut¹²⁷, impossible!” (FC, 17.05.87).

On the other hand, large-scale state enterprises were considered the best option for revolutionary agriculture. They constituted “superior forms of agricultural production” (FC, 01.01.84, 17.05.84, 17.05.87). State farms prioritized the production of export crops but also produced nearly all the basic foodstuff for the population (FC, 28.09.86, 17.05.87). Its characteristics (scale, permanent labor force) allowed it to apply the most advanced agricultural technologies. State agricultural workers, in consequence, although barely mentioned, were depicted with positive predications (FC, 17.05.84, 17.05.87).

“More than 90% of the poultry and pork meat that is distributed to the population, a large amount of beef, more than 80% of the cane that is supplied to the sugar mills, more than 90% of the rice that is distributed to the population, more than 90% of the milk, more than 80% of the export citrus, the basic agricultural branches, of which he has lived and for which the country’s economy has developed, were produced in higher forms, in state agricultural enterprises. It has been the fruit of the selfless work of hundreds of thousands of our agricultural workers, so generous, who have always been ready for everything; also, in part, of our industrial workers, who separated from their families for months to make the harvest, to help in any crop, in any activity; and also the fruit of the efforts of hundreds of thousands of our students, in that wonderful Marxist and Martian [from José Martí] formula of the combination of study and work; our high school, pre-university, technological students; attending the field, picking vegetables, citrus fruits, tobacco, etc., because our country knew superior forms and very fair forms of production” (FC, 17.05.87).

Even when Fidel denounced the mistakes made in agriculture in the context of the Rectification Process, state agricultural workers and state farms were criticized in an impersonal or indirect way, describing them as victims of socialistic planning mistakes (FC, 18.05.86, 28.09.86). Consequently, they were not to be eliminated, but rather the mistakes of the revolution were to be rectified.

“In our country - as you know - an important part of the land, 80% of the land, is in state companies. It has been fought for, for many years to seek the efficiency of these state enterprises, and some are giving remarkable examples of advanced technical work, high productivity. Even state enterprises are also victims, for a number of reasons, of the consequences of misconceptions - as I said here - of inflated payrolls, of erroneous structures, of offices full of people, of all those kinds of things; but we are studying all of that, and we will not stop until we free the state agricultural enterprises from all those vices” (FC, 18.05.86).

5.5. Discursive strategies and resulting policy beliefs, 1984-1987

5.5.1. Argumentative scheme

As shown above, in the period between 1984 and 1987, the idea of developed and successful agriculture was identified in Fidel’s discourse as large-scale and highly mechanized and technified. In the socio-political order, this agriculture had to produce collectively and for the collective (or shared) good; and it was the communist party and the state’s responsibility to promote and control the shift towards “superior forms” of agricultural production. In Fidel’s words, the ideal was “socialist, technified, and large-scale production enterprises” (FC,

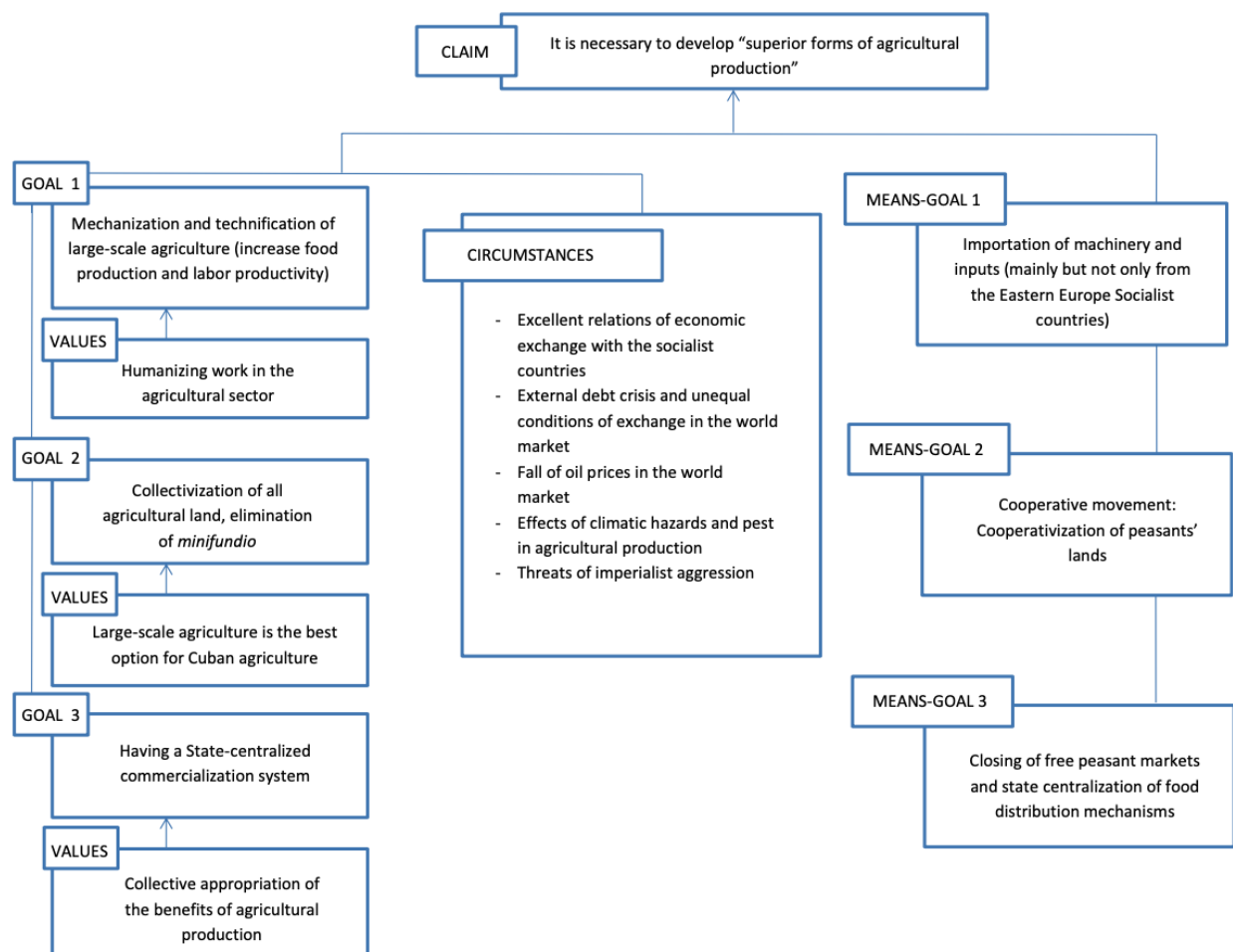
¹²⁷ Fidel referred to the manual process of cutting on sugar cane plantations.

28.09.86), producing both the essential export crops and the food to be distributed domestically.

To achieve “superior forms of agricultural production” required the promotion of three main goals:

- a) high levels of mechanization and technification of agriculture (through the importation of machinery and inputs mainly from the socialist countries of Eastern Europe);
- b) collectivization of agricultural land that was not yet collectively owned (state or CPA) through the “cooperative movement” (*Movimiento Cooperativo*); and
- c) centralization of the commercialization and distribution system by eliminating the Peasants’ Free-Market (see Fig. 5.1).

Figure 5.1: Argumentative scheme, Fidel’s discourse 1984-1987



Elaborated by the author.

The goals were justified in the discourse with a combination of technological, productive, organizational, and moral-ideological arguments. Mechanization and intensive use of inputs increased production output and labor productivity, as well as “humanized” the work of agricultural workers. Land collectivization was necessary because modern technologies and

machinery could not be applied on a small scale. It also simplified the organization and control of agriculture, while it was beneficial for the peasants to live in a community.

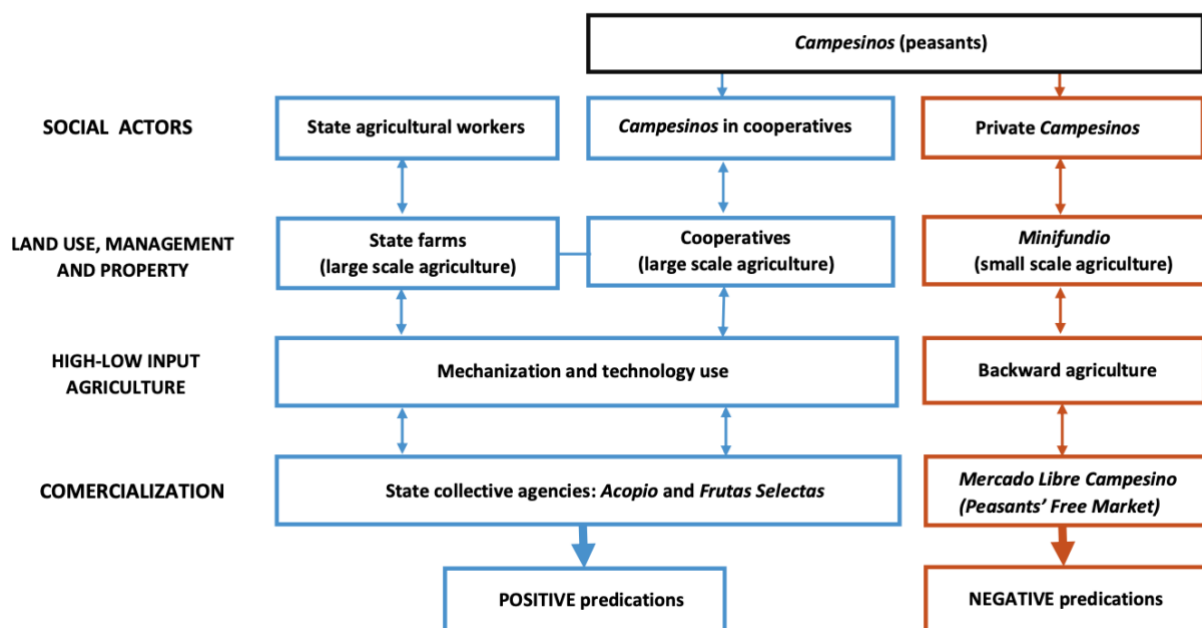
The closure of the Peasants' Free Market, on the other hand, was mostly justified in moral and ideological terms. The free market allowed individuals to obtain considerable profits, usually accompanied by illegalities and models of consumption contrary to the revolutionary and socialist ideal. In doing so, it hindered the development of the cooperative movement and created discontent in the population because of the high prices of agricultural products. In parallel, its unsatisfactory role in fulfilling internal demand was argumentative fodder for closure.

Technologically, Castro's discourse in this period represented the ideal of the Green Revolution and European socialism: economies of scale, crop specialization or monoculture, high use of chemical inputs, and agricultural machinery. In socio-political terms, it expressed the ideals of classical socialism: a statist approach to economic development, with centralized control of resources and their application to state-defined objectives, which is manifested in the promotion of state agriculture and collectivization and the marginalization of private agriculture.

5.5.2. Nominations and predication strategies

The two most important actors discursively constructed in the period 1984-1987 are *campesinos* (peasants), divided into cooperative peasants and private peasants, and state agricultural workers. Both actors are connected in the discourse by three main policy issues: a) land use, management, and property, b) high-low input agriculture, and c) commercialization of agricultural produce (Figure 5.2). Figure 5.2 shows the main nomination strategies and the way they are interconnected. The different colors indicate the two main groups of nominations regarding the predication strategies.

Figure 5.2: Nomination strategies, Fidel's discourse 1984-1987



Elaborated by the author.

The peasants, generally allies of the revolutionary struggle of the late 1950s and beneficiaries of the revolution's policies, should now, following Fidel's discourse, cede their lands and join the cooperative movement. The peasants in the cooperative movement were predicated positively (indicated in blue in Figure 5.2). To cooperative peasants, Fidel attributed qualities in moral and ideological terms consistent with the ideals of the revolution: they are "our peasants", they possess revolutionary consciousness, they are honest, they work hard, they are truthful, and they produce for the collective benefit. With this, they had the qualities expected of the *Hombre Nuevo* (new man) of Che Guevara¹²⁸ and the rhetoric associated with socialism: sacrifice, putting the collective good above the individual interest, disinterest in consumerism, living in austerity, and generosity.

On the other hand, the peasants who did not join the cooperative movement, especially those who participated in the Peasants' Free Market (1980-1986), were predicated negatively (indicated in orange in Figure 5.2). The independent peasants represented in Castro's discourse are a group to be dissolved and described using hostile and disrespectful language. Fidel qualified the independent peasants in terms contrary to the moral ideal of the revolution and socialism. For that, he used anti-capitalist socialist rhetoric: standard-bearers of free trade, hucksters, speculators, full of ambition, lumpens, "kulaks" (FC, 19.04.86, 18.05.86, 28.09.86). They are contrary to the socialist ideal because they are focused on their own profit and not that of the people; they are millionaires, buy houses, buy cars, enjoy hotels, things that honest workers and communists would not and could not do. The peasants were also villains insofar as they committed illegalities (not fulfilling commitments to the state, diverting inputs, promoting corruption, participating in the black market), at the same time that they enjoyed the benefits of the revolution (education, health, subsidies, etc.). They were, in conclusion, an enemy to be fought.

The image of the smallholder farmer was aggravated in the discourse by being positioned as an obstacle to the technological progress that the revolution promoted for agriculture. They were the reason for the existence of the *minifundio*, where they produced with primitive methods and obtained low production levels that could not satisfy the demand of the population. On the other hand, state enterprises and cooperatives were "superior forms of production", where modern agriculture could be carried out. In addition to the technological emphasis in the discourse on large-scale agriculture, Fidel added revolutionary values and qualities that reinforce the identification of collectivized agriculture with Cuban socialism: they produce what is vital for the country's economy (sugar, citrus fruits, export production for exchange with the socialist brothers), they produce for the people, for the schools, the hospitals, the children's milk, they work on what is essential, what is sufficient for everyone and not luxury items for elitist consumption. As part of this system of production, the agricultural workers are positively predicated as "generous".

5.5.3 Resulting policy beliefs and agricultural policy implications

The argumentative scheme and the rest of the discursive strategies in Fidel's discourse in the period of 1984-1987 draw an apparent line between right and wrong (principled beliefs) and the main causal relations (causal beliefs) concerning agriculturally relevant policy matters.

¹²⁸ Che Guevara considered that during the process of struggle and in the development of socialist society the new man would be forged. The new man develops as he abandons the characteristics of the capitalist mentality and is characterized by qualities such as altruism, dedication, and selflessness.

Table 5.4 summarizes the principled and causal beliefs related to different agricultural policy spheres and agricultural-related actors' behaviors and attitudes.

Table 5.4: Policy beliefs, Fidel's discourse 1984-1987

		RIGHT	WRONG
Agricultural policies	Scale	Large	Small
	Technology	Mechanization	Oxen
	Inputs	High usage	Low usage
	Land	Collectivization	Decentralization
	Input allocation	Centralization	Free access to inputs
	Food distribution	Centralization	Market-oriented
Behaviors and attitudes	Living expectations	Austerity, conformism	Consumerism/ extravagance
	Moral stance	Altruism, collectivism	Individualism
	Adherence to government leadership	Loyalty, discipline	Autonomy
Conducive to		Modern developed socialist agriculture	Backward, underdeveloped individualistic agriculture

Elaborated by the author.

In summary, the right approach to agricultural policies and the expected behaviors present in Castro's discourse signaled in Table 5.4 are conducive to a modern developed socialist agriculture. On the contrary, small-scale agriculture, carried out by independent farmers, profiting individualistically, produced a backward, underdeveloped agriculture that clashes with the socialist ideals and promoted-values. No content of the discourse analyzed points to an alternative approach to agriculture. On the contrary, Fidel's discourse between 1984-1987 was imbued with the Green Revolution's perspective (from the technological point of view) and classic socialism (from the economic and political point of view).

These policy beliefs represent what, in terms of Kornai (1992), constitute lasting regularities of the classical socialist system. This period is particularly marked by the government's intentions to extend the collective ownership of land and eradicate private property (through the cooperative movement and the centralization of food marketing). The arguments put forward by Fidel following the logic of Kornai (1992) constitute instruments to justify the need for collectivization by attending to criteria such as economies of scale and the incompatibility of private property with socialist ideology.

The agriculture of this period is usually analyzed exclusively as an expression of the Green Revolution by those studying the development of alternative agriculture in Cuba (e.g., Altieri & Funes-Monzote, 2012; Funes-Monzote, 2008; Funes, 2002; Wright, 2005). Adding to this, the political economy perspective sheds light on the contradictions between technological systems, or those usually discussed in technical terms, for implementing an alternative agricultural strategy like the one proposed by the agroecological movement.

While policy beliefs respond to the model of classical socialism, the promotion of small-scale agriculture with a high degree of autonomy, as the one characterizing agroecological initiatives, will be politically unviable. This political unviability is explained not only because of its technological inconsistencies with the government's mainstream approach, but because

of its political and economic content. As shown in subsequent chapters, the policy beliefs identified in this period remain steadfast in the political discourse, even under the impacts of a severe economic and food crisis.

CHAPTER 6. CONFRONTING THE CRISIS AND TECHNOLOGICAL CHANGE, 1988-1997

6.1. Introductory remarks

This chapter deals with the periods 1988-1991 and 1992-1997. During those years, Cubans witnessed the collapse of the socialist bloc and experienced a severe economic and food crisis that cost them around nine kilos of weight per person, on average (Sinclair & Thomsom, 2001). The government of the island, without political and economic allies, set out to implement countermeasures. These were designed to, on the one hand, sustain minimum levels of food security, and on the other, allow socialism to survive.

1988-1997 was a period of economic, social and political changes, and Castro's discourse showed transitions relevant to the agroecology movement in Cuba. Fidel's discourse moved a) from the hope that the socialist bloc would resist or that the changes could be reversible, to the conviction of the end of European socialism, b) from idealistic optimism characterized by the implementation of ambitious and costly economic and social plans, to pragmatism and the search for short-term solutions, and c) from a reluctance to implement liberalizing measures to justifying decentralization and the discreet opening of the market. This period also saw the development of the first phase of the agroecology movement (explained in Chapter 3).

One hundred sixty-four speeches were recorded from 1988-1997, distributed in two periods of analysis in this research - 62 between 1988-1991 and 102 between 1992-1997. Fidel addressed topics relevant to agriculture in 126 speeches, 51 in the first period and 75 in the second (see Table 2.2). From the discourse analysis, the strategies for agriculture in 1988-1991 and 1992-1997 are identified. Likewise, the argumentative schemes (I. Fairclough & Fairclough, 2012) and the nomination and predication strategies (Reisigl & Wodak, 2001, 2009) for both periods are described. The policy beliefs are analyzed jointly for the two periods at the end of the chapter.

The discourse analysis was enriched with historical evidence obtained through literature review, expert interviews, and secondary data analysis. For the presentation of the results, direct quotes are used to exemplify Castro's discursive strategies. The quotes were translated by the author and can be found in the original language in Annex 2. Due to space and fluidity of the text, only a group of quotations considered illustrative examples are included in the chapter. However, a set of references in the form "FC, speech date" indicates the presence of the topic of analysis in other speeches. In Annex 1, further details of the speeches are included.

Despite the convulsions of the economic crisis and evident transitions in Castro's discourse, the analysis will demonstrate that the policy beliefs identified in 1984-1987 persisted. Thus, contrary to the processes of reform and transition to capitalism occurring in the extinct socialist bloc, Fidel's discourse expressed the maintenance of the lasting regularities of the classical socialist system described by Kornai (1992), which are, in the end, conflicting with the principles and practices of the agroecological movement.

6.2. 1988-1991: Ambitious solutions to prepare for the crisis

Historical studies on Cuba or Cuban agriculture do not identify 1988-1991 as an independent period. It is, however, in terms of political discourse, an exciting and complex period. Influenced by a second stage of the Rectification Process (see Chapter 5) and the economic tensions caused by the decline and end of the socialist bloc, this period witnessed changes in the political discourse regarding agriculture. Between 1988-1991, production priorities drastically changed, restrictions on individual peasants were loosened, and science became a key actor for the development of agriculture.

By 1988, Fidel had stopped focusing on the Peasants' Free Market and other "errors and negative tendencies" of the Rectification Process and began explaining a new plan: *el Programa Alimentario* (the Food Program). In only the four years between 1988 and 1991, the largest corpus of words from Castro's speech was created of all the periods under analysis (Table 2.2) and the highest concentration of agricultural technology topics (see Annex 5). The discourse on the Food Program showed Castro's idealistic optimism about the country's capacities to be food self-sufficient through a highly mechanized, modern, and collectivized agriculture.

Simultaneously, Fidel expressed some criticism regarding the technological limitations of the machinery coming from the socialist bloc and began to refer to economic uncertainties originating from the unstable situation in the socialist countries of Eastern Europe. However, it will be shown that, although the discourse expressed the vagaries of the pre-crisis situation in multiple spheres (land use, technology, import-export policies, labor force), the idea of what constituted a developed and socialist agriculture remained more or less static. The preparatory strategies for a time of crisis in agriculture only departed slightly from the ideal of large-scale and intensive agriculture in the discourse. The same transitory nuance is reflected in other promoted economic measures considered outside the classic socialist paradigm.

6.3. The collapse of the socialist bloc

"We are living [in] a special moment in the world revolutionary movement. We are not going to be finicky about this, we have to call things by their name. There are difficulties in the world revolutionary movement; there are difficulties in the socialist movement. We cannot even say with certainty that the supplies from the socialist bloc, which with the punctuality of a clock have been arriving in our country for almost 30 years, continue to arrive with that security and with that punctuality of a clock. If the country has been doing more than ever with less than ever - and these facts show it - with less currency than ever, it is possible that in the future we will have to continue working and striving, and doing miracles, with problems also in the supplies coming from the socialist area" (FC, 26.07.89).

Before the dissolution of the Council of Mutual Economic Assistance (CMEA) in mid-1991, the exchange between the socialist bloc and Cuba had already deteriorated. The unstable situation in Eastern Europe socialist countries affected the fulfillment of trade commitments

established on a five-year basis (e.g., FC, 26.07.89, 28.01.90, 07.03.90, 03.06.90, 26.07.90)¹²⁹. Consistent with the shift towards the world market, socialist countries began to demand the use of hard currency (instead of convertible rubles) for transactions and prices to be agreed on annually (contrary to long-term agreements) (Deere, 1991; Eckstein, 2003). Moreover, development aid from CMEA fell from 888 million in 1984 to 1.9 million in 1989 (Eckstein, 2003). Simultaneously, sugar exports to the socialist countries, excluding the USSR, fell from about half a million tons to 55 thousand tons in 1988-91 (Eckstein, 2003).

Following the dissolution of the CMEA, the former socialist countries¹³⁰ limited or extinguished trade with Cuba and sustained foreign policy positions that distanced them from Soviet-style regimes (Linden, 1993). Some countries expressed concerns about the state of human rights in Cuba and were involved in controversies with Cuba in the international political arena, especially Czechoslovakia and Poland¹³¹. Linden (1993) argued that the fundamental impact of the fall of the social bloc for Cuba was the loss of the community or reference group, namely, the country's identification as part of the socialist bloc and the "second world".

However, the Eastern European socialist countries were of lesser importance to Cuba than the USSR in terms of general trade and food imports (Deere, 1991). Nevertheless, they were crucial for the supply of machinery and spare parts (Eckstein, 2003). With the progressive decline of the socialist bloc, Fidel began to openly criticize some of the products coming from Eastern Europe and the terms of trade (FC, 26.07.88, 07.03.90, 22.12.91).

"... since we are speaking clearly, we are going to speak very clearly once and for all: there are some of those *cacharros* [rattletraps, dilapidated vehicles] that we are the only ones to buy, and yet we even make them produce, because that is already our specialty in so many years: to grab trinkets and try to get something useful out of them. Yes, because I am going to give you an example: those Bulgarian forklifts no one but us buy them in the world; they are so trash and have so many problems that no one but us buys them, in this kind of trade that was established, with a level of understanding. How many hundreds and thousands, even thousands, of those forklifts are standing there in the warehouses. (...) I don't know where they [the Bulgarians] are going to sell them now. Because they produced other things: sometimes they exported to the capitalists and produced for them better things, ...; but the one [the kind of forklift] they sent to us was not that one, keep that in mind.

Hungarian buses make six kilometers per gallon, they fill the city with smoke, they poison the whole world. We could make statistics of how many people the Hungarian buses kill, because they put a terrible injection pump on those they export, and they also come with an automatic gearbox from Czechoslovakia, I tell you. That gearbox only has two speeds. It makes the bus spend 30% more fuel. I am happy to be able to speak with this freedom, the scruples are over... We have had to swallow bile, I would say, for many years; we are going to get rid of all that, because our engine is much better, the bus we are making is much better; because, well, our people will be tidier to do things or are more determined

¹²⁹ Also, in FC, 28.09.90, 03.02.91, 19.04.91, 10.10.91, 06.12.91, 16.12.91.

¹³⁰ Hungary, Poland, Czechoslovakia (after Czech Republic and Slovakia), German Democratic Republic, Romania, Bulgaria, Yugoslavia, and Albania

¹³¹ For more details, see Linden, Ronald H. 1993 "Analogies and the Loss of Community: Cuba and East Europe in the 1990s" in Mesa-Lago, Carmelo (ed.) Cuba after the Cold War (University of Pittsburgh Press, Pittsburgh and London): 17-58.

to win, they are more revolutionary and that's it! But the things we are doing, we do them well!" (FC, 07.03.90).

This open criticism did not apply to Soviet machinery. The care with which Fidel referred to Soviet contributions (FC, 26.07.88, 26.07.90, 19.04.91) showed different rhythms in the deterioration of relations and, to a certain extent, his opposition to the wave of information produced by Gorbachev's "*Glasnost*" policy¹³². Moreover, in the government's discourse, it could be appreciated that even if the socialist bloc ceased to exist and the CMEA dissolved, Cuba's economic problems would not become so severe as long as the USSR existed (FC, 26.07.90, 19.04.91).

Nonetheless, although not with the same speed and clarity, the relation with the USSR was also becoming complex. Although Soviet and Cuban governments signed a "25-year Treaty of Friendship and Cooperation" and a commercial exchange agreement in 1989 and again in 1990, the exchange conditions were deteriorating from 1986 onwards (Deere, 1991; Mesa-Lago, 1989; Rodríguez, 2011a). From 1986 on, commercial exchange with the USSR decreased between 25 and 35% (Rodríguez, 2011a).

The policies promoted by Gorbachev indicated a reduction in subsidies and the establishment of trade with prices closer to those of the world market (Eckstein, 2003; Kapcia, 2008b; Mesa-Lago, 1989). The prices at which the USSR bought Cuban sugar¹³³ and nickel fell, while the price at which Cuba bought Soviet-oil rose at a comparably more rapid rate (Mesa-Lago, 1993d; Rodríguez, 2011a). Oil deliveries decreased from 13.3 million in 1989 to 10.2 million in 1990, to 8.1 million in 1991, and with a final collapse in the next period to only 1.8 million tons in 1992 (Rodríguez, 2011a).

"The situation with the fuel is tense, very tense! and that is an essential product; we are receiving it in lower quantities than those agreed, than those contracted. The situation is tense with many raw materials that I am not going to list, but which are essential, as essential as fertilizers, metals, wood, etcetera, etcetera, etcetera, for our industrial products and our agricultural productions. Trade with some of the countries of the former socialist community has practically disappeared; it is maintained with others. And we do not complain about the Soviets, I say this with all honesty and all frankness, we do not complain. And why don't we complain, despite the fact that deliveries of some products have been reduced by up to 50%, because we know that the Soviet government is doing everything possible to fulfil the commitments, it is making every effort to fulfil the commitments! Only that its own difficulties and its current objective problems go beyond the willingness to do as much as possible to meet the agreed deliveries, and to continue with its traditional level of economic collaboration with Cuba" (FC, 26.07.90).

Cuba was also particularly dependent on food imports and agricultural inputs from the USSR, e.g., 89% of wheat, 50% of corn, all the flour, and most of the poultry fodder (Deere, 1991; Figueroa-Albelo, 2003; Funes-Monzote, 2008; Mesa-Lago, 1993d; Wright, 2009), (FC, 19.04.91). In a speech delivered in October 1991, Fidel made public the level of uncertainty regarding imports of food and other basic agricultural goods from the USSR. The amounts agreed for 1991 were already small compared to deliveries in the 1980s. Even so, Fidel reported that only 45% of the cereals, no rice, 50% of the peas and less than 20% of the edible fats had

¹³² *Glasnost* (openness) was a policy promoted by Michael Gorbachev's government from 1986 onwards that promoted transparency in government and freedom of speech. For a lengthy analysis, see McNair (1991).

¹³³ The agreed price for the 1981-85 period was 51.16 cents per pound (915 rubles per ton), while in 1986-90, it was 42.9 cents (850 rubles per ton) (Rodríguez, 2011a). Fidel referred to this fact in the central event for the 30th anniversary of Playa Girón's victory. Havana, April 19, 1991.

arrived in the Cuban port. As for agricultural inputs, by the same time, only 16% of fertilizers, 38% of agricultural, construction and transport equipment, 10% of spare parts, and only 1.6% of tires had arrived (FC, 10.10.91).

Other Soviet decentralizing economic reforms affected Cuban-Soviet trade. The Cuban government used to negotiate trade agreements with a small group of institutions (mainly the Foreign Trade Ministry), typical of a centralized economy. At the end of the 1980s, the number grew to around 25 000 companies (Blasier, 1993; Deere, 1991; Eckstein, 2003) (FC, 19.04.91). From 1989 onwards, all Soviet economic organizations had direct access to the world market, and from the summer of 1990, it was decided that all transactions would be carried out in hard currency and based on world market prices (Rodríguez, 2011b).

Relations cooled not only in the economic sphere and not only in one direction. Under the “*Glasnost*” policy introduced by Gorbachev, the Soviet media could openly criticize the socialist system. Since the end of 1987, Soviet publications openly criticized Cuba’s economic performance¹³⁴ (e.g., low profitability of state companies, low labor productivity, overemphasis on moral factors vs economic incentives, low development of technological innovation, monoculture) and the (wrong) use of Soviet aid (Mesa-Lago, 1989, 1993c; Rodríguez, 2011a).

It is difficult to determine how well known the “*Glasnost*” and “*Perestroika*” policies were in Cuba. This is especially true of the “*Glasnost*” policy, since it dealt with freedom of the press and speech. In Mesa-Lago (1989)’s opinion, they were practically unknown among common people. Among intellectuals and young officials, the situation appeared to be different (Domínguez, 1993). Informal interviews¹³⁵ with Cubans who were adults during those years corroborate the impression of Mesa-Lago (1989), although they point out that Cuban students in the USSR were a fundamental source of information. Apart from relying on anecdotal information, it was difficult to become knowledgeable of these subjects because the government immediately censored publications containing criticisms of Soviet, European or Cuban socialism¹³⁶. In a speech at the end of 1989, Fidel declared:

“That is why we have not hesitated to prevent the circulation of certain Soviet publications that are loaded with poison against the USSR itself and socialism. It is perceived that behind them is the hand of imperialism, ... and counterrevolution. Already some of these publications have begun to demand the cessation of the kind of fair and equitable trade relations that have been created between the USSR and Cuba in the course of the Cuban revolutionary process. In two words: that the USSR begins to practice unequal exchange with Cuba, selling more and more expensive and buying more and more cheaply our agricultural products and raw materials, the same as the United States does with the Third World countries or, ultimately, that the USSR joins the Yankee blockade against Cuba” (FC, 07.12.89).

Fidel referred to publications such as “*Sputnik*” and “*Novedades Moscú*” (Moscow Updates), which regularly arrived in Cuba, and since the beginning of the *Glasnost* entailed open criticism of the socialist system. In November 1990, Sputnik published an article named: “Dispel my doubts, comrade Fidel!”, by Mijail Beliat. In addition to questioning the results of years of socialism in Cuba and recounting his disenchantment, Beliat reported the

¹³⁴ For more details, see Mesa-Lago, 1989, pp. 126-130 and Mesa-Lago, 1993, pp. 7-11.

¹³⁵ 15 Cubans, among them intellectuals and officials of the period, were consulted by the author (through e-mails, online chats and by telephone) on this subject in November 2018.

¹³⁶ In the speeches FC, 07,12.89 and FC, 16.12.91.

imprisonment of two Cuban teachers for reading aloud “*Novedades Moscú*” to their neighbors in Cuba (Beliat, 1990).

It is also challenging to estimate Cubans’ level of familiarity with the events taking place in Eastern Europe, but in this case, information was also not easily accessible. In “*Fefita y el muro de Berlín*” (Fefita and the Berlin Wall), a story by Jorge Alberto Aguiar Díaz¹³⁷, the author alluded to this context: “I heard the news from my father. He had a shortwave radio and we listened to Radio Martí. One by one the communist countries fell. When Czechoslovakia fell, I remembered Milan Kundera” (Aguiar-Díaz, 2017, p. 72). Radio Martí, founded in 1985, is a Spanish-language radio station broadcasting to Cuba from Miami, that people secretly heard when having the means and interest.

The complexities of the socialist bloc’s political situation were apparently known to Fidel, who continually referred to the “cables” received from international news through U.S. publications or other sources (FC, 26.07.89, 28.07.89, 07.12.89). This is confirmed when in mid-1989, he publicly warned of the possibility of the disappearance of the USSR:

“There are difficulties and growing tensions and conflicts between USSR nationalities; internal tensions within the USSR are equally evident, and we have witnessed the strike of hundreds of thousands of coal miners in Siberia, Donetsk and elsewhere. That news fills the world reaction with happiness, that news fills the empire [referring to US government] with happiness. (...) We have to be more realistic than ever. But we have to talk, we have to warn imperialism not to have so many illusions in relation to our Revolution and in relation to the idea that our Revolution could not resist if there is a debacle in the socialist community; because if tomorrow or any day we woke up with the news that a great civil war had been created in the USSR, or even woke up with the news that the USSR had disintegrated, which we hope will never happen, even in those circumstances Cuba and the Cuban Revolution would continue to fight and continue to resist!” (FC, 26.07.89).

In informal interviews about this speech, interviewees remembered having had a reaction of disbelief at the possibility that the USSR would cease to exist: “Imagine, my father was a high-ranking military officer and he told me a few days ago: If I had listened to Fidel when he said that ‘if the socialist bloc disappeared’, I would have gone to the Lada¹³⁸ parts store and bought myself things for 20 years!”¹³⁹.

In 1989, although Fidel did not openly criticize the Soviet technological backwardness, he made clear his disagreement with Gorbachev’s policies (FC, 10.10.91, 16.12.91).

“It has been proclaimed that socialism should be perfected. No one can oppose this principle, which is inherent and of constant application to every human work. But is it by abandoning the most elementary principles of Marxism-Leninism that socialism can be perfected? Why do so-called reforms have to march in a capitalist sense? If such ideas had a revolutionary character, as some claims, why do they receive the unanimous and exalted support of the leaders of imperialism? (...) In Cuba we carry out our process of rectification. Without a strong, disciplined and respected party, it is impossible to develop a truly socialist revolution or rectification. It is not possible to carry out such a process by slandering socialism, destroying its values, discrediting the Party, demoralizing the vanguard, renouncing its leading role, liquidating social discipline, sowing chaos and

¹³⁷ Published in Germany in a compilation of short stories entitled “*Unbekanntes Kuba*”.

¹³⁸ Lada is a Russian (formerly Soviet) car brand.

¹³⁹ Informal interview with a Cuban anthropologist about the period of the socialist bloc’s fall and how informed Cubans were about the issue.

anarchy everywhere. In this way a counterrevolution can be promoted, but not revolutionary changes” (FC, 07.12.89).

However, in 1991, Fidel clearly and more openly referred to “the errors committed in the USSR”, e.g., crimes of Stalinism, forced collectivization, personality cult, and abuses of power (FC, 04.04.89, 10.10.91, 16.12.91). With the end of Gorbachev’s rule, Cuba’s main allies in the Soviet government were removed from power (Eckstein, 2003). Boris Yeltsin, who followed Gorbachev in the Russian government, promoted the end of aid to Cuba.

Relations with Western economies were not in any better shape. US policy toward Cuba became increasingly aggressive under the Reagan (1981-1989) and Bush (1989-1993) administrations (Chomsky, 2011; Eckstein, 2003; Kapcia, 2008b; Pérez Jr., 2006). Reagan revived the Cold War discourse. There, Cuba was considered a source of contagion of communism and the source of Central America’s problems (Kapcia, 2008b, 2014). Both governments, linked to the Cuban-American lobby’s growing power in Florida, promoted policies that affected the Cuban economy¹⁴⁰. One of the most important was the pressures exerted on the USSR conditioning development aid to cut economic relations with Cuba (Eckstein, 2003; Mesa-Lago, 1993d). The end of the shipment of arms from the USSR in 1990 (Eckstein, 2003) (FC, 19.04.91) and the removing of eleven thousand Soviet troops in 1991 (Mesa-Lago, 1993d) aggravated the siege situation (Kapcia, 2008b).

In parallel, the debt grew in both hard currency and Russian rubles. In 1989 the debt with Western countries was 7.3 billion USD¹⁴¹, twice as much as in the mid-1980s, largely due to the depreciation of the dollar and low export prices on the world market of Cuban export commodities (Eckstein, 2003). In the East, at the end of 1989, the Soviets claimed a debt amounting to 15.49 billion rubles (Rodríguez, 2011b). This was the largest debt to the USSR of all countries (socialist or not at that moment), followed by Mongolia and Vietnam (Blasier, 1993). The debt to the socialist countries of Eastern Europe was estimated at 2.07 billion rubles (Mesa-Lago, 1993d).

Combined with the loss of economic and political allies and the hostile environment with the US government, prices for fundamental exportable Cuban items fell and oil price rose (FC, 22.11.91, 06.12.91). The disadvantageous situation of prices on the world market aggravated the impacts of the socialist block’s fall on the Cuban economy.

“Here the fundamental factor that affects us in this battle is not that the others collapsed; if the prices of sugar and oil had the same price relationship that they had in 1959, 1960 and 1961, we would not even have to be discussing here what we are discussing” (FC, 22.11.91).

6.4. The arrival of the “special period in time of peace”

In 1989, Fidel started discussing the possibility of a period of economic difficulties due to the events taking place in the socialist bloc (FC, 26.07.89, 28.01.90, 07.03.90). The non-compliance with the trade agreements with the socialist bloc made it possible to anticipate a period of shortages, especially of oil, food, and mechanical spare parts. In the closing speech of the Women’s Federation Congress in 1990, Fidel jokingly asked women to preserve their

¹⁴⁰ For a lengthy explanation, see Eckstein (2003: 93-96).

¹⁴¹ Information on the amount of this debt varies. According to José Luis Rodríguez (former Cuban Minister of Economy and Planning), the debt amounted to 6165.2 million (Rodríguez, 2011).

clothes for the “special period” because probably in up to five years it would only be possible to produce fabric in minimal quantities (FC, 07.03.90).

In this foreseeable “special period”, three main economic sectors would be prioritized: agriculture, tourism and the pharmaceutical-biotechnology industry (FC, 28.01.90, 07.03.90, 18.03.90, 12.05.90, 26.07.90)¹⁴². Social programs (e.g., construction of schools, nurseries, polyclinics, housing) would be stopped for some years, and the forthcoming scarcities (potentially industrial products, food, fuel) would be distributed among the population (FC, 28.01.90, 07.03.90, 18.03.90).

“We know which are the strategic points on which we have to continue working. Let’s say that food programs cannot be stopped, they are strategic. Those that we are doing in the “hydraulic will”¹⁴³, new sources of water, systems of canals and of irrigation, must not stop in any circumstance. If we have 3 million or 5 million tons of oil, we have to maintain these programs, one way or another. Anything else should be stopped first, before those programs. The development programs of the pharmaceutical industry, biotechnology and others in this branch that have great perspectives in this country, we cannot and should not stop them; the programs for the development of certain resources in foreign currency, such as the programs that we are doing in the sphere of tourism, we should not stop them. That is to say that in any restriction, no matter how great it may be, that the country has to do in a situation of special period in time of peace, or in a very difficult situation in peace, derived from these problems, in none of these situations should we stop programs that are strategic for the country’s food or for development. It would take more time, it would subject us to a very strong test, but we would have to maintain the principle not only of surviving, but also of developing” (FC, 28.01.90).

“The general principle - and I am not going to give any more ideas - I would like you to know that it would be, at the very least, that what we have is shared between all of us. Nor will there be beggars here during the special period, because there will be no one who lacks food, whatever there is will be distributed: the electricity distributed, everything distributed. Arms (labor) may be left over, but there will be no one in the street. Maybe we’ll give them books to read, study, cultivate; a little time for television, radio, even all that. Perhaps the citizen has much more time, marvelous! a holiday in a special period, because we may have too many arms in some spheres and have to reduce the working days” (FC, 07.03.90).

In the summer of 1990, Fidel declares the beginning of the crisis with the euphemistic name of “Special Period in time of peace” (FC, 29.08.90). The first three years (1990-1993) were characterized by confusion in light of the definitive collapse of the socialist bloc and the USSR, and the crisis was mainly interpreted by the government as the result of the external impact of these events (Pérez-López, 2002; Romero-Gómez, 2001)¹⁴⁴. The initial attitude was, nonetheless, of hope in the reversibility of the collapse of the socialist bloc, especially of the USSR (Brundenius & Monreal-González, 2001; Pérez-López, 2002). In April 1991, Fidel still contemplated in a speech the possibility that the situation in the USSR would stabilize and that favorable economic relations for Cuba could be maintained (FC, 19.04.91). Besides, there was also the perception that there could be a rapid recovery from the crisis based on the economic

¹⁴² Also, in FC, 28.09.90, 20.12.90, 03.02.91, 19.04.91, 10.10.91, 16.12.91, 27.12.91.

¹⁴³ In the period between 1987 and 1990, the Cuban government promoted the completion of several hydraulic works and the construction of many new ones, as part of the Rectification Process. Fidel called this process “the recovery of the Hydraulic Will”.

¹⁴⁴ The idea of a coming period of uncertainties was present in FC, 28.09.90, 20.12.90, 27.06.91, 10.10.91, 01.11.91, 22.11.91, 06.12.91, 27.12.91.

programs begun in the Rectification Process, the Food Program (to be explained in the next section), the expansion of tourism and the biotechnology industry, and the existence of reserves of many products (Rodríguez, 2011b) (FC, 28.01.90, 07.03.90, 20.12.90, 19.04.91). The measures implemented up to 1993 reflect these interpretations.

The first economic measures focused on the external sector: import substitution, attracting foreign investment, especially in tourism, and seeking new markets for Cuban products (Mesa-Lago & Pérez-López, 2005; Romero-Gómez, 2001). Fidel portrayed tourism and foreign investments as both necessities and undesirable strategies due to the lack of hard currency and capital in general (FC, 10.10.91, 09.11.91, 16.12.91, 22.11.91). In parallel, the government put into effect an economic austerity program (FC, 28.09.90, 26.06.91, 22.11.91): 1) radical energy and raw material savings measures, 2) an extension of the rationing system (foodstuffs, industrial products and services); and 3) the closing of factories or reduced shifts caused by the lack of imported spare parts and fuel (Deere, 1993; Romero-Gómez, 2001). The government's reluctance to implement market-oriented measures in the domestic economy lasted until 1993 (Mesa-Lago & Pérez-López, 2005).

“We have already had to take the first measures with electricity consumption, we have taken other measures, and we have been taking others for months, although with the hope that the deficits could be resolved. We had been reducing fuel consumption to a point where it was impossible to stop taking more radical measures, such as those taken in industry, in transport, those taken with electricity, and so on. New measures have now been taken in relation to the distribution of products. It is inevitable that situations will arise at this time that are impossible to predict, so it is impossible to predict what the situation will be in 1991! What will come? What raw materials will we have? How much fuel? Under what conditions? You cannot give a figure” (FC, 28.09.90).

Food production was at the center of the anti-crisis measures. With high levels of import dependency on main foodstuffs and agricultural inputs from the socialist bloc, and the disadvantageous position of oil and sugar prices in the world market, the Special Period left the government in a difficult situation to provide an appropriate caloric and protein intake for the population. The urgency of the situation is expressed in various speeches in this period, particularly after the summer of 1990 (FC, 28.09.90, 20.12.90, 26.07.91, 17.05.91, 22.11.91).

“In the last 48 hours, I have spent 17 hours with the men of the countryside, meeting with workers or agricultural administrators. On the 15th we had an 11-hour national meeting on livestock. There were all the administrators of the country's cattle companies that produce milk, mainly, and meat, since in this sector the State has a very great weight. There were also the comrade Lugo (president of ANAP) and representatives of ANAP and we analyzed the problems: What to do in circumstances where we have a third of the fertilizers -if any- that we normally had; what to do when we don't have feed for the cattle, we don't have grains; what to do when we receive the equivalent of 400 million liters of milk less per year, which we received through the GDR (German Democratic Republic), with which we had agreements to exchange torula for powdered milk, by virtue of investments we made there; what to do when we are short of significant quantities of milk too, which came in the form of condensed milk or powdered milk or butter from the USSR - from that country we received 16 000 tons of butter a year that is no longer received - and what to do to solve the problems, when precisely we have less fertilizer than ever and less grain than ever for animal feed; when the resources to buy these products in other areas are very scarce. It is a complicated and difficult problem, but nobody here is discouraged by complications or difficulties, and there we analyze, discuss and adopt a series of measures, and not measures in the air, but measures based on experience, measures based on experiments carried out in our research centers and in our fields” (FC, 17.05.91).

At the end of 1991, the Special Period was just beginning. Powdered milk and butter (mentioned in the quotation above) became luxury products in the following years. Nevertheless, in 1991 the government's mood was still optimistic. In August that year, Cuba hosted the 11th Pan-American Games in Havana, which implied considerable expenses in constructing sports facilities and accommodations to receive the invited sportsmen and women and the international press (Carter, 2016). Fortunately for the government, Cuba won the race for gold medals, leaving the US ten medals behind and providing the illusion of the socialist system's superiority.

6.5. The Food Program and the pursuit of self-sufficiency

At the end of the 1980s, the policies implemented as part of the Rectification Process had not produced the expected agriculture results. After the closing of the Peasants' Free Market, agricultural production decreased, especially for those crops produced mostly by the private sector (Eckstein, 2003; Figueroa-Albelo, 2003; Mesa-Lago, 1989, 1993d). The situation was not better in state agriculture, especially non-sugar agriculture, where sales and farms' productivity showed lower figures than those registered in the early 1980s (Eckstein, 2003). Simultaneously, there were labor shortages and violations of labor standards were committed, e.g., absenteeism or non-compliance with productive quotas¹⁴⁵ (Eckstein, 2003; Mesa-Lago, 1989).

Furthermore, the cooperative movement was also struggling. In the late 80s, more than 30% of the cooperatives were not profitable (Mesa-Lago, 1989). Total cooperative agricultural land and the number of cooperative members decreased, mainly due to retirement (Mesa-Lago, 1989; Valdés-Paz, 2009), namely near 45 thousand retirees by 1991 (Figueroa-Albelo, 2003). The right to retirement was one of the fundamental incentives used by the government to attract individual farmers to the cooperative movement. The literature on the subject shows that many farmers near the retirement age joined the cooperatives to ensure a secure income in old age (Deere et al., 1992; Figueroa-Albelo, 2003)¹⁴⁶. Resignations and expulsions caused by undisciplined behavior also affected membership. Between 1988 and 1990, 13 152 cooperative members resigned, and 2425 were separated by disciplinary measures (calculated by the author from data in Deere et al., 1992).

The cooperative movement was also costly for the state. The cooperatives' profits were not enough to pay for the retirement benefits of their members, so the state had to pay (Figueroa-Albelo, 2003; Mesa-Lago, 1989). Between 1984 and 1986, retired cooperative members represented 72.6% of the total number of independent peasants converted into cooperative members between 1983 and 1999. In 1994, there were 45 084 retirees (Figueroa-Albelo, 2003). The calculations on the state fiscal expenditure due to retirement differ in different sources. Fidel refers to this problem in a speech on 03.03.95.

¹⁴⁵ At the end of 1988, it was reported that 12% of agricultural workers (state workers) did not complete eight hours of work and that productivity in state farms had declined (Mesa-Lago, 1989). Fidel refers to absenteeism and non-compliance with work hours on state farms in speeches on 07.11.93 and 26.07.95.

¹⁴⁶ Other unexpected reasons for joining the cooperative movement surfaced in in-depth interviews. One interviewee claims that her grandfather gave his land to the cooperative because he did not have any male children who could inherit the land. At that time, it was legally impossible for women to inherit agricultural land. Other interviewees refer to the pressure peasant women put on their husbands to move to modern communities where they would have greater comforts for themselves and their children.

The promises made to the independent peasants in order to become cooperative members, e.g., the construction of communities (houses, electricity, water, services), mechanization, social benefits (pension, maternity leave, among others), represented expenditures mostly financed by the state (Gey, 1990). In 1991, the government acknowledged some shortcomings of the cooperatives, e.g., excessive investments, low productivity, and the mismanagement of human and material resources (ANPP, 1991).

The domestic agricultural sector was, in summary, affected by the reduction of private farming and the elimination of the incentive of private commercialization, the poor performance of cooperatives and state farms, weather phenomena (droughts and hurricanes) and by the effects of the uncertainties of inputs supply due to failures in agreed deliveries with the socialist countries. Food distribution would be affected, predictably, shortly thereafter by the drop in food imports from the socialist bloc and the difficulties in importing food from the world market due to hard currency scarcities.

In that context, the government launched a large-scale, all-encompassing program for agriculture, the so-called “*Programa Alimentario*” (Food Program). The Food Program was implemented in 1988 in the form of independent development programs focusing on specific branches of agricultural production and marketing (ANPP, 1991). The program was consistent with the Rectification Process” (initiated in 1984-1986) and sought to address the country’s economic, technological and food vulnerabilities, later exacerbated by the end of the socialist bloc and the necessary shift towards the world market (Deere, 1991). Its main objective was food self-sufficiency (national and regional) and import substitution (ANPP, 1991).

This is not the first time that the Cuban government considered food self-sufficiency. In the early years of the revolution, the government promoted food self-sufficiency by reducing sugarcane’s role and diversifying production (mainly basic foodstuffs such as rice, tubers, vegetables and pork) (Benjamin et al., 1984). At the beginning of the 1960s, this diversification strategy was linked to the deteriorating relations with the US, which had been the main trade partner. The government repeated the strategy in the face of the fall of the USSR and the socialist bloc.

Described as an ambitious program (Eckstein, 2003) with unrealistic objectives (Mesa-Lago & Pérez-López, 2005), the Food Program officially aimed to: a) revitalize production in stagnant areas of agriculture (e.g., tubers, roots, vegetables, rice and livestock), b) modernize irrigation and drainage systems, c) address labor shortages through new economic incentives and citizen “mobilizations”, and d) promote the construction of facilities for the development of poultry farming, pig raising, dairies, ... and farm workers’ communities (ANPP, 1991). The program formally included independent farmers’ participation and the introduction of national scientific-technological advances in production (ANPP, 1991). With the arrival of the Special Period, the Food Program became more focused on food security issues (Deere, 1993), domestic innovations and available resources.

A detailed description of the Food Program is contained in the official 198-page document published by the National Assembly of People’s Power in 1991 (ANPP, 1991). Literature asserts that Fidel’s meddling and supervision of the Food Program was extensive (Mesa-Lago, 1993a, 1993d; Roca, 1994), and the official document itself mentions his involvement (ANPP, 1991, p. 5, 198). This is further confirmed by the fact that Fidel’s discourse on agriculture between 1988-91 is mostly devoted to the exposition and explanation of the Food Program. His claims, goals and arguments (argumentative scheme) are embedded in this rhetoric. The depiction of relevant agricultural actors (through nomination and predication strategies) is also

partly constructed while explaining and promoting the means for achieving food self-sufficiency.

In line with the study's objectives, attention will primarily be paid to those elements of the Food Program present in Castro's political discourse, not necessarily reflecting every aspect of the program. The arguments will be complemented with information from the ANPP official document and other secondary sources.

6.5.1. Achieving self sufficiency

Consistent with the Food Program, the focus of Castro's discourse on agriculture changed to the need to satisfy domestic food consumption demands and achieve food self-sufficiency (e.g., FC, 26.07.88, 06, 10.88, 08.01.89, 04.09.89, 26.07.90, 20.10.90, 20.12.90, 03.02.91, 10.10.91). However, this change did not mean a modification of Fidel's agricultural paradigm, as it will be shown in following sections.

“This effort in the Food Program has the essential objective of satisfying the country's needs; it does not have the purpose of exporting. Sugar - as is logical - sugarcane by-products will be exported, and part of the sugarcane production will be dedicated to animal feed. Citrus fruits will be exported, of course, this is a growing program, which already brings us closer to a million tons of annual production, but the Food Program has the fundamental objective of satisfying the needs of the population” (FC, 26.07.90).

Fidel's discourse promoted food self-sufficiency through the following five means:

- i. changes in land use, mainly through an increase in the amount of land dedicated to the production of basic foodstuffs and a decrease in the area dedicated to the cultivation of sugarcane (e.g., FC, 26.07.88, 08.01.89, 26.05.89, 07.03.90, 26.07.90, 03.02.91, 19.04.91),
- ii. intensification of sugarcane production (increase in yields per hectare) and multiplication of its uses and by-products (e.g., FC, 26.07.88, 08.01.89, 26.05.89, 20.02.90, 28.09.90, 01.04.91),
- iii. massive investments in infrastructure for agriculture (irrigation and drainage, dairy farms, pig and poultry centers, among others) (e.g., FC, 26.05.89, 01.10.89, 07.03.90, 28.09.90, 01.04.91, 10.10.91),
- iv. measures to address labor shortages (e.g., FC, 26.07.88, 26.05.89, 28.09.90, 03.02.91, 17.05.91, 10.10.91), and
- v. the use of domestically produced agricultural inputs and machinery (e.g., FC, 28.10.88, 26.07.89, 20.02.90, 03.02.91, 17.05.91, 10.10.91, 22.11.91).

6.5.2. Roots, tubers, vegetables and sugar production

The production of roots, tubers, and vegetables was at the heart of the self-sufficiency program. Roots and tubers (*viandas*) are part of the daily diet of Cubans. However, their cultivation had not been prioritized by state agriculture before (Benjamin et al., 1984; Figueroa-Albelo, 2003). State farms devoted to these crops' production (called “*cultivos varios*” (various crops) farms) exhibited the lowest production levels in state agriculture (Figueroa-Albelo, 2003). Fidel referred to the problems in state various-crops-farms in 1990 and 1991 (FC, 28.09.90, 03.02.91, 22.11.91, 23.12.91).

To increase the production of basic foodstuff, the government allocated more than 20 thousand hectares of sugarcane land to cultivate roots, tubers, and vegetables and planned to increase the irrigation capacities of various-crops-farms (ANPP, 1991). The arguments related to this change are those of the Food Program in general, the need for self-sufficiency, to reduce food imports, and eventually to resist the fall of the socialist bloc (FC, 26.07.88, 08.01.89,

26.05.89, 26.07.89, 07.03.90)¹⁴⁷. At the end of the period, achieving self-sufficiency in roots, tubers, and vegetables began to be linked to qualifications of heroism and to the continuity of socialism itself (FC, 03.02.91).

“That is what we are proposing, that is the decision we have taken, that is the battle we are engaged in, and I say that it is not only an economic and social battle, it is a political and ideological battle. We have to demonstrate and we want to demonstrate that socialism can solve these problems; we have to demonstrate and we want to demonstrate that socialism is going to solve this problem of roots, tubers and vegetables. ...the production of *viandas* and vegetables is the noblest thing we can do.” (FC, 03.02.91)

In the next few years, the production and distribution of food staples increased. As part of the Food Program, the government also intended to improve the food distribution network (only briefly stated here, as it is not vital for the study’s main objectives). The government planned to increase storage capacity, wholesale and retail (four large wholesale markets and 150 agro-markets around Havana), with better refrigeration centers and by allowing state farms and enterprises to deliver their products directly to the markets. The arguments behind these objectives were the need to reduce handling losses, and ration resources, especially fuel (FC, 19.07.89, 04.09.89, 30.09.89, 07.1.89, 03.02.91, 23.12.91).

The Food Program did not consider diminishing sugarcane’s role in the agricultural sector and the Cuban economy. On the contrary, the program promoted increasing its yields per hectare and multiplying its uses in agriculture (FC, 26.07.88, 08.01.89, 26.05.89, 26.07.89, 20.02.90, 26.07.90, 28.09.90, 01.04.91). The increase in yields would come from technology and investments in irrigation and drainage. Fidel specifically and most frequently mentioned the “*drenaje parcelario*” (field drainage method) (FC, 26.05.89, 04.09.89, 25.09.89, 30.09.89, 20.02.90)¹⁴⁸. As in previous periods, in optimistic language loaded with calculations and described by Benjamin et al. (1984) as “naïve”, Fidel projects unrealistic results from the use of this technology (FC, 04.01.89, 20.02.90, 03.02.91, 01.04.91).

“Of course, today we are not only working on the development of milk production, we are working intensely on the application of the technique and on the development of sugarcane production, on the basis of new experiences, from experimental results obtained with the application of field drainage method and irrigation in sugarcane. We have to apply this technique in 60 000 *caballerías* [805 200 hectares] of land and we propose to do it in a few years; they will not reach 10, it is possible that they will not reach eight, it is possible that they will not exceed seven. We are now organizing the brigades, we already have 47, we will have 121 by the end of the year, we will have 200 next year, and we will try to reach 300 in the second half of 1991; more or less, it will be in those figures approximately. When we have that number of brigades, made up with machinery fundamentally built in Cuba, in six more years, starting in 1991, the 60 000 *caballerías* will already have their field drainage method, which, together with irrigation in part of them, will increase sugar production by more than 2 million tons, only through field drainage method and irrigation in those areas.” (FC, 26.05.89)

“Since recent times, important advances have been made in the use of sugarcane for animal feed. Each hectare of our land dedicated to sugarcane can give 50% more; with irrigation, fertilization and field drainage method, it can give twice as much, and a good part of that increase can be dedicated to the production of meat and milk, dedicated to the production

¹⁴⁷ Also, in FC, 26.07.90, 28.09.90, 20.12.90, 03.02.91, 01.04.91, 19.04.91, 17.05.91, 10.10.91

¹⁴⁸ Also, in FC, 19.04.91, 26.07.90, 28.09.90, 01.04.91, 25.07.91, 10.10.91.

of calories and proteins for livestock, creating a solid nutritional base with our own resources” (FC, 08.01.89).

Based on the spectacular results expected from sugar production, namely 10-12 million tons¹⁴⁹, the government was interested in producing animal feed (ANPP, 1991). Animal feed was one of the weak points of agricultural development in Cuba because of the high import dependency from the socialist bloc (Deere, 1991) and its importance for achieving food self-sufficiency. Fidel’s hopes were placed on two sugarcane by-products: saccharin and “*miel proteica*” (protein honey) (FC, 26.07.88, 07.03.90, 03.06.90, 28.09.90, 17.05.91, 10.10.91)¹⁵⁰.

6.5.3. State investments in agriculture

Large state investments in agricultural infrastructure, irrigation, and drainage systems also sustained the state self-sufficiency goal (ANPP, 1991). In 1989, Fidel stated, “Without construction, there is no agriculture” (FC, 25.09.89). The subject of construction was linked to the Rectification Process discourse. Fidel returned to the abandoned construction projects unfinished due to state inefficiencies of the early 80s to announce the new ambitious construction plans of the Food Program (FC, 26.05.89, 26.07.89).

“Our country, with the same resources, can do more, and these times are proving it. In agriculture we are applying new techniques in sugarcane, in rice, in irrigation systems, and all that can make our land give much more. We are building dams at a rate that has never been reached before, after the hydraulic will was rebuilt; there will not be a river here that is not dammed, as long as it can be useful to agriculture. And we are working at a very intense pace in this field, to irrigate, to obtain many more products from our agriculture, to feed the people, because that is the fundamental objective, or to export surpluses” (FC, 01.10.89).

Castro reported on the construction of dams and mini-dams, as part of the recovery of the “hydraulic will” (FC, 26.07.88, 26.07.89, 01.10.89, 28.01.90, 20.02.90, 07.03.90)¹⁵¹, and the construction and modernization of meat, milk, and egg production centers (FC, 26.07.88, 26.05.89, 26.07.89, 25.09.89, 30.09.89)¹⁵². Simultaneously, Fidel’s discourse paid particular attention to investments in a) the field drainage method for sugarcane, b) the *sistema ingeniero* (engineering system) for rice production (leveling technique for rice cultivation), and c) the Fregat center-pivot irrigator¹⁵³ for various types of plantains (FC, 26.07.88, 26.05.89, 04.09.89, 25.09.89, 30.09.89)¹⁵⁴. Along with them, the Food Program relied on national production of supplies and tools for agriculture (hoses, pipes, pumps, Fregat irrigation systems) and machinery (tractors, combines, trailers, harrows) (FC, 28.10.88, 26.05.89, 20.02.90).

Fidel’s discourse about investments, construction plans, and irrigation and drainage system installations was optimistic. As on other occasions, the speech was full of linear calculations

¹⁴⁹ Fidel referred to 10-13 million tons in a speech on 16.12.94. The plan for developing the sugar industry failed disastrously, as we will see in the next sections.

¹⁵⁰ Also, in FC, 22.11.91, 22.12.91)

¹⁵¹ Also, in FC, 28.09.90, 19.04.91, 10.10.91.

¹⁵² Also, in FC, 07.03.90, 26.07.90, 28.09.90, 19.04.91.

¹⁵³ Fregat is a diesel-driven center pivot sprinkler system, usually used in socialist economies. Today Fregat in a Ukrainian enterprise still producing agricultural irrigation machines (<https://fregat.mk.ua/en/main/>).

¹⁵⁴ Also, in FC, 01.10.89, 28.01.90, 20.02.90, 07.03.90, 26.07.90, 28.09.90, 03.02.91, 01.04.91, 19.04.91, 17.05.91, 25.07.91, 10.10.91.

and data about potential future positive results. There was no mention of the costs or financing sources. While optimistic, it was also a discourse charged with a sense of urgency, arguing that the investments and construction “will secure our future”. In the coming period, the end of the socialist bloc and the associated reliance on benefits would wither the discourse’s optimism.

6.5.4. Dealing with workforce shortages

In 1990-91 Fidel denounced state farms’ inefficiencies, workforce shortages (due to lack of incentives), and the excess of bureaucratic personnel, emphasizing the farms dedicated to roots, tubers, and vegetables (FC, 28.09.90, 03.02.91, 22.11.91, 23.12.91). In those speeches, he also referred to the fields’ abandonment during holidays, condemning the general inefficiency in terms of crop timing and workforce planning (FC, 28.09.90, 03.02.91, 22.11.91, 23.12.91).

Fidel acknowledged agricultural state workers’ disadvantageous situation compared with the cooperative and independent peasants (FC, 28.09.90, 03.02.91, 22.11.91, 23.12.91). Cooperative members, especially those who agreed early on to join their land, benefited from the state-promises of housing construction, full-service communities and a pension (FC, 28.01.90, 03.02.91). Independent peasants who participated in the free market (1980-1986) made sufficient profits to build or renovate their houses and pay high wages for daily work on their farms (FC, 28.01.90). On the contrary, state agricultural workers receive neither of those benefits, and state farms’ construction plans were stalled (FC, 03.02.91). The responses to this situation were twofold: 1) mobilize city labor, and 2) invest in constructing agricultural workers’ communities.

“Mistakes? Forgetfulness of the countryside, neglect in the countryside; a certain period in which misconceptions prevailed, in which social development plans were paralyzed in the countryside, in which agricultural communities were ceased to be built, in which agricultural workers were forgotten. Good things were done, like the cooperative movement, and the cooperatives were given resources, facilities, a whole series of things. The peasants were assured the prices, good income; while, really, the agricultural worker in those famous wage reforms constituted ‘the last card of the deck’¹⁵⁵” (FC, 03.02.91).

“What is the tragedy of agriculture in Havana? The lack of workforce and, consequently, weeds. This situation has been saved by the “schools in the countryside” (*escuelas en el campo*), which provide an invaluable service, and the “schools to the countryside” (*escuelas al campo*). But, really, little by little the state various-crops-farms have been left without direct workers, it is the reality; 1700 state *caballerías* (22 814 hectares) for roots, tubers and vegetables with only 1900 direct agricultural workers,” (FC, 28.09.90)

6.5.4.1. Mobilizations

The government mobilized city residents in various ways:

- City employees worked in agriculture for short specific periods, e.g., 15 days or 30 days.
- Secondary level students worked daily in the fields when attending boarding schools (boarding schools were predominant for pre-university students from 10th-12th grade).
- City students (secondary level and university) worked around 30 days per year in agriculture.
- Neighbors, mass organizations, and workplaces volunteered for agricultural work (e.g., Sunday voluntary work).
- Agricultural contingents worked for up to two years.

¹⁵⁵ Expression that means to be of lesser importance. In the case of the quote, Fidel means that state farmers were the least important to the state.

Around 117 thousand Havana residents had taken part in mobilizations by May 1991 (Eckstein, 2003). According to the ANPP (1991), 132 thousand secondary level students and 3355 military forces regularly worked in state various-crops-farms.

In Fidel's discourse, mobilizations constituted a short-term solution to agricultural labor shortages based on political incentives (FC, 26.07.88, 03.02.91). Eckstein (2003) lists, however, pragmatic motives for urban workers to participate in mobilizations, e.g., accumulating job merits, having better meals than in the city and home, alleviating the food burden at home during the mobilization period, and finding possible sources of food supply for their families, among others. Castro qualified those mobilized through positive predications in terms of sacrifice, effort, and ideological commitment (FC, 26.07.88, 03.02.91). According to the discourse, mobilizations, even though they benefited cooperatives, were focused on assisting state agriculture (FC, 23.12.91).

“Two days ago, I had the news that university students were also going to participate, entire schools for 15 days. I said: What a wonderful thing that these tens of thousands of university students also participate in these mobilizations! It helps them, it helps them to educate themselves better, it helps them to form themselves more politically. We do not know what this ideological strengthening is worth in the current conditions in which the world lives, this ideological strengthening in moments of crisis of socialism, that we can show here what socialism can do, that we can show here the strength of our ideas! And not only as a political idea, not only to strengthen the political muscles of the people and the political brains of the people, but to do important, decisive things, in moments of special period, which is what we are living, and to demonstrate that we turn everything around. (...), what is being done now has never been done, never had those crops received the attention they are receiving now, never had they been sown so punctually at the optimum date. It's nice to hear that, it's nice to hear that the crops are as clean as ever, despite the weather, the heat” (FC, 03.02.91).

However, agricultural “contingents” had a preferential space in Castro's discourse among the mobilization strategies (FC, 26.05.89, 01.10.89, 29.09.90, 01.10.90, 03.02.91, 10.10.91, 22.11.91). Unlike other mobilization actors, contingents' workers had significant incentives, i.e., better wages, better shelter and food conditions, and overachievement awards. These military-style groups (Mesa-Lago, 1993d) worked for up to two years, 12 hours a day, and six days a week (Eckstein, 2003) in priority sectors, especially plantain production (FC, 03.02.91). Previously used for construction activities, “contingents” constitute in the discourse an example of greater productivity and dedication (FC, 26.05.89, 01.10.89, 29.09.90, 01.10.90, 03.02.91, 10.10.91). The contingents personify the paradigm of “communist discipline, the spirit of communist work applied in agriculture...” (FC, 01.10.90).

“In the beginning, 15-day mobilizations were conceived, until one day comrade Palmero proposed to create a brigade as a contingent in agriculture, and the idea seemed excellent to me. I said right away: But where do we send a brigade from the ‘Blas Roca’ contingent? To the plantain with aerial microjet, because contingent needs work the whole year, continuous, as we conceive the contingents. At the beginning, a single brigade is conceived, but after the first one arose, we saw that more brigades were needed, since the plantains' *caballerías* with microjet were going to be around 500, including the 100 of *plátano burro* (donkey plantain); and we said: It is better that wherever there is a plantation of these there is a contingent, because it is more suitable to the discipline of the contingent” (FC, 03.02.91).

The better economic incentives given to contingents seems to have created some friction with the agricultural workers. The average monthly salary of agricultural workers was raised

from 128 to 225 pesos, but contingents' salary was 400 pesos (Mesa-Lago, 1993a). Contingent workers received about 68% above-average wages (Deere, 1991). Fidel dealt with this topic with ideological arguments (FC, 22.11.91).

“Of course, today money is not the key. As you know, today there is more money than things to buy, today patriotism is worth much more than money; but the day will come when we have more things to buy with money and then the method of payment will be more important, of course. I know that what the contingents do, they wouldn't do it for any money; I saw it in the construction contingents, what those men did it can't be done for money; the hours they worked, only because they wanted to help their *Patria* (motherland), because they had a high consciousness. What happens is that remuneration is part of the social consideration that that man deserves, and if we do not establish the principle that the agricultural worker should be the best paid, then everyone will want to be what, engineer, professor, philosopher?” (FC, 22.11.91).

6.5.4.2. Agricultural communities

Following the discourse logic, the long-term solution, however, is to provide agricultural workers with better living conditions and economic incentives to work in large-scale state agriculture. This solution appears in the discourse in terms of “*planes integrales*” (comprehensive plans) and the construction of “farming communities” (FC, 26.05.89, 26.07.89, 03.02.91, 17.05.91).

“We intend to build no less than a thousand dairy farms in the next six years. And who can do that? Only socialism can do that, elaborate plans of that nature. Because it is not simply planned to build dairy farms, but to develop integral programs: dairy farms, calf raising, heifers; the electric network of the whole plan for mechanized milking; the roads and highways, the communities where the workers will live with the village and the village with streets, aqueduct, sewerage, nurseries, schools, shops, family doctor, and so on. Comprehensive plans with all the micro-dams that fit in those regions, dams, irrigation systems and some innovations, such as the development of worm farming in those areas, from livestock manure, so that they can produce protein meal of animal origin and can produce humus for agricultural fields” (FC, 26.05.89).

“We have to look for definitive solutions. We calculate how many communities, ..., and locate them. I discussed with the directors of the eight companies, with maps in hand, the location of all the communities, I discussed with them when they wanted to put one on a stony field and I said: The stony field is far away, you should look for a plot of land nearby. Because if we have 22 thousand hectares of state land, won't it be worth spending 100, 200 hectares so that the other 21 800 are well cultivated and produce...? What a community needs are a few hectares and it guarantees us the workforce for one thousand hectares. What does it matter if you use four, five or six, if you are going to be able to have good care of 994, 995, 990 hectares, as they should be taken care of; it is logical, and that people go walking to work, they do not have to use carts or buses, in some cases a bicycle, and that in the case that it is a kilometer or one and a half kilometers away and they can go home for lunch. That is the criterion we have followed in the development of the conception of farming communities, and that it be an agricultural community, not a heterogeneous mix of all kinds of activities!” (FC, 03.02.91).

Fidel's depiction of both “*planes integrales*” and “farming communities” expressed the persistence of the ideal of agriculture from the previous period and the embodiment of the classical socialist system. Described as future “happy-movies-communities”, both are conceived for big state enterprise, in large extensions of state land, with state machinery and infrastructure, enjoying state social services, and with a centralized state system of commercialization and distribution (FC, 26.05.89, 26.07.89, 03.02.91, 17.05.91).

6.5.5. Domestic technological solutions and the new role of science

The government promoted increasing technological and input self-sufficiency levels as part of the Food Program (ANPP, 1991). Combining the optimistic language of the early 80s with the urgencies brought about by the Special Period, Castro addressed this issue considering three main strategies:

- a) the domestic production of agricultural machinery and tools,
- b) the substitution of previously imported agricultural inputs by domestically developed ones based on national science developments and innovations, and
- c) a group of anti-crisis, input-saving measures.

6.5.5.1. *Agricultural machinery*

As in the 1984-87 discourse, the intensive use of agricultural machinery is a source of pride of the revolution with humanist and labor-saving values (FC, 28.10.88, 04.04.89, 26.05.89, 20.02.90, 18.03.90, 12.05.90, 22.11.91, 22.12.91). Sugarcane harvesters (*combinadas*) continued to be the representation of agricultural progress brought about by the revolution. In various speeches in 1988-89, Fidel referred to the production in Cuban factories of KTP-1, KTP-2, and KTP-3¹⁵⁶ combine models, describing the advantages of the new models and production prospects (e.g., FC, 28.10.88, 08.01.89). In 1988, Cuba was the largest producer of sugarcane combines (harvesters), producing 650 machines a year (Eckstein, 2003; Pollitt, 2004), according to Fidel, 6000 in total by 1989 (FC, 04.01.89).

Nonetheless, as the crisis unfolded, the discourse on agricultural machinery changed. Fuel and spare parts were lacking due to the declining deliveries from the Soviet bloc. Hence, tractors were to be substituted by oxen, agricultural implements were adapted to be used with animal traction (instead of tractors), and the focus changed to prioritizing the little available fuel to keep sugarcane and rice combines working (FC, 28.09.90, 10.10.91, 01.11.91, 22.11.91, 16.12.91).

6.5.5.2. *Domestic science developments and innovations*

However, agriculture was not only being affected by the lack of fuel and spare parts. In 1988-89, the future availability of fertilizers, pesticides, and fungicides was uncertain, and in 1990-91 it dropped drastically (Figure 3.1 in Chapter 3). In that context of uncertainty and shortage, national science became a central actor in the discourse on agriculture (FC, 26.05.89, 04.09.89, 20.12.90, 03.02.91, 01.04.91).

“Now, what miracle is demanded of us? What miracle is demanded of us, of the Party, of the communists, of the State, of the people, of the peasants, of the cooperative members, of the agricultural workers? A true miracle that we have no choice but to perform. We are asked to produce more milk and more meat without feed and without fertilizers, and we simply have to do it. We are asked to produce more rice, more sugarcane, more food and more vegetables without fertilizers, often without herbicides, and we have to manage. That is why we are turning to science, ...” (FC, 10.10.91).

¹⁵⁶ KTP-1 was a Cuban-Soviet design chopper harvester weighing about 11 tons used from 1974 onwards (Pollitt, 2004). Cuban government interest in the mechanization of sugar production began from the early years of the revolution. In the early 70s, the Cuban government began with adopting the Australian system of cane harvesting, using the Australian Massey-Ferguson 201 and the Cuban-West German ‘Liberadora 1400’ (Pollitt, 2004). In 1979 there were 407 Massey-Ferguson 201, 157 Libertadora 1400 and 1734 KTP-1 (Pollitt & Hagelberg, 1994). In the subsequent years, the design was improved with KTP-2 in 1986-1989.

Fidel developed two lines of discourse in parallel: 1) science as part of the Food Program, and 2) science as a solution in times of economic crisis. The discourse on science as part of the Food Program is optimistic: "... actually, the food program is the application of technology and science to agriculture, in order to raise productivity per man and per hectare..." (FC, 28.09.90). It focused on the multiple possibilities of science and the future economic benefits that these developed technologies could bring to the country (FC, 26.05.89, 04.09.89, 28.09.90, 03.02.91, 01.04.91, 22.11.91).

As part of this line of discourse, Fidel described scientific developments in detail, such as biofertilizers "azotobacter" and "rhizobium" (FC, 17.05.91, 10.10.91, 22.11.91), and the innovations of the "*multiarado*" (multi-plow) (FC, 22.11.91). He planned construction and investment for large-scale production of these products and estimated outputs for the coming years (FC, 01.04.91, 03.02.90). Scientists were the object of positive predications (FC, 03.02.91, 10.10.91), such as when being compared to the agricultural contingents (FC, 03.02.91).

"The bio-factories are working, because I want to tell you that this Food Program is supported by a whole arsenal of scientific institutions, research centers to preserve the health of animals, the health of plants, to combat weeds. We are developing the production of our own products, pesticides, herbicides or biological products to fight pests, that is one of the branches that we will develop strongly. And, almost in tandem with human health, animal health, not only to protect our human population and our animals but even to export productions for human health and animal health, or to export seeds or many other possible things. (...) Our scientific workers are working with increasing enthusiasm, we could say with a spirit of contingents, several of them with the spirit of the best contingents... Precisely, the idea of contingents arose from a scientific research center. So, they go hand in hand. I can assure you that the effort that is being made in the field of science is impressive and how much that effort promises for our country" (FC, 03.02.91).

The second line of discourse highlighted the situation brought about by the end of the socialist bloc and the lack of basic inputs (e.g., animal feed, fertilizers, pesticides, and fuel). The language showed a situation of urgency, of uncertainty in the future, and a short-term perspective to solve "Special Period" shortages (FC, 20.12.90, 03.02.91, 10.10.91, 09.11.91, 22.11.91). The role of science here was that of a savior and not a developer (FC, 09.11.91).

"... the fundamental priority is the food program and the application of science to produce food in conditions in which we have less feed than ever, or no feed, in which we do not have fertilizers; how to turn, through science, to bacteria that produce fertilizers, to microorganisms that help the assimilation of those nutrients that are in the soil, to new varieties that resist pests, that are more productive, that resist the heat, that resist humidity. All science in terms of what helps us to increase food production, because in the special period the number one thing is food production, when we have stopped receiving so many foods that we exchanged every year with the socialist bloc, at a fair price, not at the prices that sugar has in the world market dump." (FC, 09.11.91).

"We are in contact with every group that has appeared through the faculties of chemistry, through other places where research has been done, we have given them all the support immediately; we look for them, we don't even wait for them to look for us, we go around finding out where they are. We intend to use the scientific potential of the universities much more: the University of Havana -we are using it, it has more research centers-, the Central University of Villa Clara, both in the areas of chemistry and chemical synthesis, agriculture, and in all those fields; Ciego de Ávila, also in other similar fields; Camagüey, Santiago de Cuba; that is, all the universities. We are willing to give a great impulse to the scientific work of the universities. That has priority one in [the] special period" (FC, 20.12.90).

6.5.5.3. Prioritization

In addition, Fidel spoke about the modern fertilizers and pesticides that must continue to be imported (FC, 28.09.90, 17.05.91, 10.10.91, 22.11.91, 16.12.91, 23.12.91). The policy of prioritizing imported conventional fertilizers and pesticides for fundamental crops shows how confidence was placed in conventional production inputs. In the discourse, Fidel emphasized the need of feed for egg production, mechanization for sugarcane, and fertilizer for sugarcane, rice, roots, tubers and vegetables (FC, 28.09.90, 17.05.91, 10.10.91, 22.11.91, 16.12.91, 23.12.91).

“The fertilizer has to be kept for other essential crops - we can’t stop adding at least a little nitrogen to the sugarcane - but we are going to take advantage of all the ash from the collection centers, and that ash has phosphorus, potassium, mineral salts, which we reintegrate back into the soil. (...) A little fertilizer for the cane, for the rice, is essential. We are studying how best to use it, if a part in the form of foliar urea¹⁵⁷, even if it is a minimal part, since rice only admits a small percentage, it is not like the cane that admits a somewhat higher percentage of foliar urea; a little phosphorus and potassium in those poorer soils, and the fertilizer available for direct food production: bananas, potatoes, roots, tubers and vegetables. Sometimes we have no choice but to use it there. We have been analyzing all these things very deeply, looking for formulas” (FC, 17.05.91).

The sense of urgency is also in the official document of the Food Program.

“In the present circumstances, the agencies linked to the Food Program are taking the measures required to continue implementing it under special period conditions. Thousands of work animals are being prepared for traction to replace motorized equipment, work is being done to make maximum use of renewable energy sources and, in particular, the treatment of residuals from agricultural facilities, laboratories are being developed and built for biological control to make it possible to replace imported pesticides; the production of humus and organic matter is being increased to make up for the shortage of fertilizers, and the use of national foodstuffs is being increased in cattle ranching to replace imported ones, among other measures” (ANPP, 1991, p. 7-8).

6.5.5.4. Solutions and agricultural change

Table 6.1 summarizes the technologies and inputs present in Castro’s discourse in 1988-91 based on the analysis of 56 speeches. As indicated in the table, many products developed by science in the period are later considered agroecological. Nonetheless, Fidel did not identify them as such (agroecological, ecological or organic agriculture), neither did he highlight their environmental value. He only alluded twice to the positive impacts of some of the products on human health (see two quotes below) (FC, 17.05.91, 10.10.91). Apart from these comments, the emphasis was on input substitution and food production in a pre-crisis context.

Table 6.1: Overview of technologies and inputs associated with the Food Program present in Fidel’s discourse in 1988-1991

	<i>Involvement of national science</i>	<i>Large- scale/ Small-scale agriculture</i>	<i>Considered as “agroecological practices” by Cuban agroecologists</i>
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¹⁵⁷ Foliar fertilizers are used to add additional nutrients to plants, especially in poor soils. The use of urea in foliar sprays, allows supplementing fertilizers when crops cannot absorb enough nitrogen from the soil due to pH levels or other inhibiting conditions.

Input substitution	Biofertilizers based on Azotobacter and Rhizobium	Yes	Large and small-scale	Yes
	Biological pest control production centers (CREE)	Yes	Large and small-scale	Yes
	Animal feed (Saccharina, proteic honey, torula yeast...)	Yes	Large and small-scale	Yes
	<i>Pastoreo racional Voisin</i> (Voisin's rational grazing system)	Yes	Large scale	Yes
	New varieties of pasture	Yes	Large scale	Yes
	<i>Zeopónicos</i> (Zeolita) (soils with zeolite mixture)		Large and small-scale	Yes
	Vermiculture		Small scale	Yes
	New varieties of seeds	Yes	Large and small-scale	
	" <i>Biofábricas</i> " (laboratories for seed production)	Yes	Large and small-scale	Yes
	Animal traction (Oxen)		Large and small-scale	Yes
" <i>Cortinas rompe-vientos</i> " (wind cutting curtains)	Yes	Large and small-scale	Yes	
Machinery and implements	" <i>Multiarado</i> " (multi-plow) for tractors and for oxen	Yes	Large and small-scale	Yes
	Tillers	No	Large and small-scale	Yes/No (depending on the size and use)
	Combines (sugarcane and rice harvesters)	No	Large scale	No
Irrigation systems investments	" <i>Sistema ingeniero del arroz</i> " (leveling technique for rice cultivation)	Yes	Large scale	No
	" <i>Drenaje parcelario de la caña</i> " (field drainage method for sugarcane plantations)	No	Large scale	No
	" <i>Sistema Fregat</i> " (Fregat irrigation system)	Yes	Large scale	No
	" <i>Sistema de riego por microjet</i> " (microjet irrigation systems)	Yes	Large scale	No

Elaborated by the author. Source: The 56 speeches by Fidel that contain reference to agricultural keywords between 1988-1991.

"Research centers work looking for varieties, looking for fungi and bacteria for the biological control of pests, and it can be said that it is possible for our country to develop as a large producer of these agents for the biological control of pests. It will be one of the branches of development of the country, that is, the medicine of plants, but not through pesticides or poisons; it is necessary to use those poisons as little as possible, because many times with the product they go to man even if measures are taken. That is why the work of scientists looking for biological controls of plagues is so important, just as you, sugarcane growers use the famous *lixophaga* fly against the borer. It would be impossible to water the cane with pesticides; watering 130 thousand *caballerías* of sugarcane with pesticides must be fabulously expensive to fight the borer. (...) So our science is penetrating those lands and who was going to say 32 years ago, when the agrarian reform began, that today we would have tens of thousands of scientists, engineers, technicians of all kinds, dozens of research centers that were looking for microorganisms to fight pests instead of pesticides, looking for microorganisms that provide nitrogen or make assimilable other elements in the soil instead of chemical fertilizers" (FC, 17.05.91).

“We have almost 200 centers in the country that are called CREE¹⁵⁸ that already produce, but we are going to go to industrial productions, quickly, of those biopesticide elements, much healthier than the others; of course, it is not yet possible to replace the others totally, which can intoxicate, poison -- who knows how much poison man consumes along with pesticides, no matter how much he washes the fruit -- and we are applying these biological formulas quickly, as part of the Food Program” (FC, 10.10.91).

The most well-known (and pictured symbol of agroecological agriculture) anti-crisis measure was probably substituting tractors and agricultural machinery for animal traction. Oxen are an ideal representation for the change in this period. From 1984-87, Fidel depicted oxen as a symbol of backward non-mechanized agriculture applied on small-scale peasant agriculture. Even in 1988-91, this idea appears on several occasions (FC, 26.05.89, 20.02.90, 12.05.90, 10.10.91, 09.11.91).

“Before, almost all the land in the country was prepared with animal labor, in which man had to work practically as hard as the ox, and today all that work is done with machines; rice was harvested by hand, today the land is prepared with machines, fertilized with machines, sowed with airplanes, and even fertilized and fumigated with airplanes... the work has been humanized; but in any case, resources do not rain from the sky, we have to produce them with our efforts” (FC, 10.05.90).

The use of oxen came from the lack of fuel and spare parts for agricultural machinery. In the discourse of 1988-91, they were a necessary step backward in the face of the crisis in the supply of inputs and the urgent need to produce food (FC, 28.09.90, 19.04.91, 17.05.91, 10.10.91, 09.11.91, 22.11.91).

“This is the kind of thing we have to do in these times and we are doing it, just as 100 thousand oxen are being tamed, and as soon as we finish, we will tame another 100 thousand more; instead of eating the oxen we have to turn them into work animals. We always try to bring something else, poultry, look for some way to replace that meat, but now, at least 200 thousand animals suitable for slaughter, we have to dedicate them to play the role of tractors, if we have more problems with fuel” (FC, 17.05.91).

“We will search. We have our plants, we have our industries; we are taming oxen, we are doing everything that needs to be done, do you understand? We are not afraid to have to go back to any previous era, because if we have to go backward in the current situation, it is to go forward much further, to be much freer, much more independent, not only politically, but also economically, and to be much more efficient” (FC, 09.11.91).

Although mostly described as a necessary backward alternative, animal traction, like other alternatives implemented in the period, did not escape this period’s optimistic language. Fidel multiplied by hundreds the oxen in the plans, estimated yields per man, and expressed some positive predications to animal traction (FC, 22.11.91, 22.12.91).

“We have tamed more than 100 thousand, we are taming another 100 thousand; they are hundreds of thousands of oxen, as if we had to tame 500 thousand. Well, we will eat a protein of vegetable origin, but we cannot eat the oxen, because we will have to dedicate them to cultivating the land. Something new has been discovered in the ox. The ox was always seen in a special period as something that saves fuel; but now it has been discovered that the ox is something that multiplies work productivity - contingents know it-, an ox does the work of 10, 12, 15 men; when the tractor cannot be put in because it has rained, because the soil is humid, only the ox can be put in with its iron. Then the ox not only

¹⁵⁸ *Centros de Reproducción de Entomófagos y Entomopatógenos* (Entomophagous and Entomopathogenic Reproduction Centers), see Table 3.3 in Chapter 3.

saves fuel, but also does tasks that the tractor cannot do and increases man's productivity. That's a new thing; it means that when the special period is over, the ox should not be completely finished in agriculture. Here is another example of a response to critical situations" (FC, 22.11.91).

The promotion of alternative solutions was accompanied by prioritizing inputs and machinery (raised in 1984-1987 as superior forms of agriculture) for crops considered key, e.g., sugarcane, rice, and the microjet plantains of the contingents. In addition to the prioritized use of existing fuel for sugarcane and rice combines (harvesters), as previously stated, Fidel spoke about the "modern" fertilizers and pesticides that must continue to be imported for sugarcane, rice, roots, tubers and vegetables (FC, 28.09.90, 17.05.91, 10.10.91, 22.11.91, 16.12.91, 23.12.91).

In summary, the discourse on technologies and inputs in 1988-91 shows the instability of the moment. On the one hand, the discourse shows the optimism in the Food Program's plans, the application of science in agriculture, the irrigation and drainage systems, and the manufacture of machinery (see Table 6.1). On the other hand, the optimistic language is combined with the urgency to produce food.

The substitution of conventional inputs by alternative, domestically produced ones is described in parallel as scientific advances and necessary solutions. As in the discourse on oxen, alternative inputs complement the prioritized use of conventional inputs, suggesting that their presence would have been unnecessary in the absence of the collapse of the socialist bloc.

6.6. Peasants in the Special Period

The nominations and arguments related to state, cooperative, and private farming, although fundamentally similar to the discourse of 1984-87, have a distinct and sometimes contradictory nuance in this period. In 1988-91, Fidel portrayed independent peasants as:

- i. a manifestation of the success of the Cuban revolution in the face of the Soviet debacle,
- ii. an obstacle to the national conversion towards a large-scale, high tech, collectivized agricultural system,
- iii. a proof of the unsuitability of the Peasants' Free Market and small-scale agriculture in socialist contexts, and
- iv. a necessary force to secure the population's food supply.

Depictions (ii) and (iii) were consistent with the discourse of the previous period, showing the continuity of the classic socialist ideal that was endangered by the Special Period (reflection in depiction iv).

The events taking place in Eastern Europe and especially the details of Stalin's crimes and the Soviet system appearing through *Glasnost* and *Perestroika* policies seem to have created a context that encouraged Fidel to repeatedly put forward arguments that detached the Cuban experience from the Soviet experience (e.g., FC, 04.04.89, 20.02.90, 18.03.90, 20.10.90, 10.10.91, 16.12.91).

Specifically, from 1988 onwards, Gorbachev's stance on collectivization was radicalized¹⁵⁹, attacking the Soviet bureaucratic apparatus of agriculture and the very basis of the state agricultural system: "We need de-collectivization", "...collective farms were intended when they (the Communist Party) no longer could take bread from kulaks" (Gorbachev, 1988, 1989 quoted in Miller, 2016, p. 113). Fidel's response to this frontal attack on the collectivized

¹⁵⁹ For more detail on the reasons behind this radicalization, see Miller (2016).

state agricultural system was expressed in dealing with three issues: 1) collectivization through the cooperative movement, 2) independent peasants and private ownership of land, and 3) the Peasants' Free Market.

Fidel used two main arguments to distance himself from Soviet forced collectivization (FC, 04.04.89, 20.02.90, 18.03.90, 20.12.90, 26.07.91, 10.10.91, 16.12.91). The first was to highlight the principle of voluntariness with which the cooperative movement in Cuba was carried out (FC, 26.07.88, 20.10.90). The second was to denote the differences between agrarian reforms in Cuba and socialist countries (FC, 26.07.88, 04.01.89, 04.04.89, 20.10.90). Agrarian reform in Cuba transferred most of the nationalized land to the state. In 1975, when the government launched the cooperative movement, the state owned 83% of agricultural land¹⁶⁰. In 1988, only a small proportion of the agricultural land was left for independent peasants, namely 10%, according to Valdés-Paz, (2009), only 8% according to Fidel, (FC, 04.01.89, 18.03.90).

“The way in which our country carried out the agrarian reform was different from the way in which all the other socialist countries did it, because all the others divided the land and we did not divide it. Ah, if we had divided the big cattle *latifundia*, sugarcane *latifundia*, into fractions, into tiny small-scale farms, today we would not be the calorie suppliers for 40 million people in the world. We export enough calories for 40 million people through sugar. We kept those land units and developed them as large production enterprises. We gave the land to the farmer who had it in his possession; to the farmer who was a sharecropper, a settler, a squatter, a tenant, we said: take, here you have the land in property, and then we have not forced him to join cooperatives. We have taken 30 years in the process of uniting those plots, we have gone little by little, on the basis of a strict principle of voluntariness. There can't be a single peasant in Cuba who says he was forcibly put into a cooperative, there can't be! However, already more than two thirds of their land (peasants') are in cooperatives, and they (the cooperatives) are advancing, they are prospering, and, on the other hand, in our country we have 80% of the land in state farms, whose plot for self-consumption is even collectively produced” (FC, 26.07.88).

“We did not have the problems of forced collectivization; nothing similar happened in this country. We still have 650 thousand hectares left in the hands of 71 thousand individual landowners, to whom the Revolution gave the land, freeing them from paying rent, sharecropping, and so on; and we have told them that they can spend all their lives, as long as they want, 100 years if they want, as individual landowners. When we made the Second Agrarian Reform Law, that was proclaimed (that they could keep the land forever) - more than 25 years ago - and that principle has been fulfilled to the letter. We have three forms of land exploitation: the first, and the most important, is that of state-owned enterprises, on which falls the weight of fundamental products in our country, of industrial products and of food production. Secondly, the agricultural production cooperatives, and thirdly, the individual landowners” (FC, 04.04.89).

Perestroika promoted individual farming and expanded the role of private initiative in Soviet agriculture (Miller, 2016). In response, Fidel argued that there was no need to promote private agriculture because it already existed in the Cuban agrarian system (FC, 04.01.89, 08.01.89, 04.04.89, 20.02.90, 26.07.91, 16.12.91). Likewise, given Gorbachev's promotion of the increased role of the market (Miller, 2016), Fidel justified the end of the Peasants' Free Market in Cuba by highlighting the differences between peasants' farm-size in the Soviet republics and Cuba: in Soviet republics, peasants had tiny plots and could not enrich

¹⁶⁰ Estimated by the author from data published in CEE, 1983. Anuario Estadístico de Cuba, 1981.

themselves; on the contrary in Cuba with up to 67 hectares, peasants “could become millionaires” (FC, 20.02.90).

“We don’t have to invent the independent owner, we don’t have to discover him because we know him, since he was from the beginning of the Revolution, and he is still there and will be there as long as he wants, because we are not going to force anyone to collectivize by force; we avoid it, and there is not a single case of an individual forced to collectivize” (FC, 04.01.89).

“Let no one dream that we are going to go towards capitalism or something that resembles it, the private ownership of the means of production or something that resembles it. Besides, we don’t have to invent, for example, the independent farmer, because in all the provinces we have independent producers, individual peasants. How many are left? Seventy thousand, they are not few, they have up to 65 hectares of land, and some are rich” (FC, 20.02.90).

The on-going dismantling of the USSR allowed Fidel to reaffirm the classic socialist rhetoric of the 1984-87 discourse. Fidel used the usual arguments to discredit small-scale peasant agriculture. He sustained the idea that independent peasants contribute little while enjoying the benefits of the revolution. Interestingly, this time, the stated benefits were mostly economic: low taxes, pardoning debts, good credits, input allocation (FC, 07.01.89, 20.02.90, 18.03.90, 17.05.91), as opposed to the social (e.g., health, education, land) and moral benefits (e.g., dignity). At the same time, he again aggressively described how peasants constituted obstacles to the idea of centralized state collectivized agriculture (FC, 04.01.89, 18.03.90, 20.02.90, 01.10.90).

“We know what independent property is, and we also know what it gives and we know what it does not give; because I could list here what comes out of state production, and I would say: those 2.4 billion eggs that the population consumes are produced by the state; and what percentage of rice and sugarcane, and what percentage of milk and beef, almost one hundred percent; what percentage of poultry, what percentage of all fundamental foods - pork, for example, is also almost one hundred percent. So much so that there was talk of the very famous Peasants’ Free Market and the Peasants’ Free Market never gave more than 2% of the supplies, and many times they were products that were previously delivered to the state; but from that moment on they freely sold them at any price. How many people, even friends of ours [foreign intellectuals], have told us: ‘And why did they take away that Peasants’ Free Market?’ And we have to make a complete history of what the Peasants’ Free Market is and what large-scale production is, and how there can be no future anywhere based on small independent farmers. I even accept capitalist agriculture on a large scale, using the technique, enriched seeds, fertilizers, machines, which is what we do on our lands, which today constitute 80% of the country’s land. If not, how do you explain that out of 350 thousand sugarcane-cutters (*macheteros*) we have reduced that figure by almost 300 thousand, since there are about 65 thousand who are left cutting sugarcane. What is that but mechanization? What is that if not productivity? What is that if not application of the technique?” (FC, 20.02.90).

“We can’t privatize anything at all, on the contrary, we have to socialize progressively, because we are not going to confiscate anyone, none of those peasants we are going to confiscate, those who have given us so many lessons on agriculture, those peasants who have taught us what little we can expect from smallholder agriculture, even though they are the most privileged peasants in the world: they have received credits of all kinds, they have been forgiven (debts) lots of times every time an adverse situation has occurred, they pay virtually no taxes; they are the only peasants in the world who don’t pay taxes. We love our peasants, we don’t blame them for having private property; we respect them because they are part of the revolution, they are part of our history and what we have done with them no country in the world has done it... That is to say, what Cuba has done for the

peasants no one has done and what they have done for us no one has done either, because they fought alongside us and they have taught us that agriculture should be socialist, and that what should exist are state-owned large-scale agricultural enterprises, with the application of science and technology, and agricultural production cooperatives. The peasants have taught us that and we are very grateful for it” (FC, 20.02.90).

However, the Food Program’s emphasis on the production of roots, tubers and vegetables, and the Special Period’s imminent arrival created a space for private farmers. Under the policy of prioritizing export crops, non-state farms had produced more and higher quality roots, tubers and vegetables (Deere, 1991, 1992; Figueroa-Albelo, 2003). Additionally, as discussed above, “*cultivos varios*” state farms were reputedly inefficient. This fact is acknowledged in the official text of the Food Program:

“The agricultural production cooperatives (CPA) and the peasants who still cultivate their land individually contribute significant quantities of food for the population, raw materials for national agroindustry and several exportable items... CPAs and individual farmers have a significant role in state-sales of roots, tubers, vegetables, maize, beans, tobacco, coffee and cacao. Nonetheless, in other staple food production like milk, cattle, pigs, poultry and eggs, citrus and sugarcane, the main role is played by the state, although CPAs and individual farmers work harder to increase that production” (ANPP, 1991, p. 193-194).

The document also acknowledged individual farmers’ high productive potential considering their low levels of irrigation compared to state agriculture (ANPP, 1991, p. 198). In order to involve private producers, “... ANAP’s political action is channeled to mobilize the will and interest of individual farmers and cooperative members in supporting the Food Program” (ANPP, 1991, p. 196).

In Fidel’s discourse from the second half of 1990 onwards, peasants began to be enunciated as part of the agriculture government plans (FC, 28.09.90, 03.02.91, 17.05.91). The urgency of food production was evident. The positive tone regarding the peasants intensified. In the speech for the anniversary of the 1st Agrarian Reform Law in 1991, the peasants were again extolled as part of the Revolution’s work. More importantly, in that same speech, Fidel praises the results of specific peasants like “the Gómez brothers” and speaks of “outstanding peasants” who function as advisors to the government (FC, 17.05.91). The “outstanding peasants” are again mentioned at the end of the year for their results in producing roots and tubers (FC, 22.11.91). However, on both occasions, Fidel stated that those peasants are not the majority of peasants (FC, 17.05.91, 22.11.91), and that there are also cooperatives and state-owned enterprises that are very prominent (FC, 17.05.91, 22.11.91).

“Now it is necessary to guarantee the milk to each child and the malanga (taro) to each sick person...; it is necessary to guarantee the food to all the population. That is why we have to make this effort and ask everyone to make a great effort, and yesterday we asked all the agricultural workers, the cooperative members, the peasants. On the 23rd we will have a meeting with the peasants of the Credit and Service Cooperatives. So, we are coordinating the efforts of the state enterprises, the cooperatives and the independent peasants in this historic task of supplying the capital [Havana]” (FC, 17.05.91).

“...the peasant was never forgotten. We can say that our peasants, in general, lack nothing, within our limitations they have many things assured, and have, above all, freedom, dignity, participation in the work of the Revolution, which at this moment becomes a work of universal historical character, and in the defense of the most just ideas, which make us participants in all those dreams for which our liberators fought and in which our peasants so decisively took part, both in those wars of independence and in the last struggles for national liberation.” (FC, 17.05.91)

“It’s logical that they sow well and take good care of their crops if they use the Gómez brothers’ technique, because they have their sweet potato there, I have visited them. They produce even the seed, they have their technique to make it a seed... and they take 10 thousand quintals of sweet potato from one *caballería*. That’s why some of these very outstanding farmers - not all of them are like that, of course, not all of them have the same wisdom, the same experience, the same productivity; but there are a few very outstanding ones in different crops and we have more or less, the list - they are our advisors, when we want to know what can be produced out of a hectare, how it should be done, in what way, what task, what work; they are very wise. I would say that each of these outstanding farmers -and there are a few dozen in the province, as there are also very outstanding cooperatives- are research centers, they are scientists too, just as outstanding state enterprises must be developed as research center... Many times, I say to my colleagues in the *cultivos varios* farms, ‘See how the Gómez brothers have the sweet potato there’.” (FC, 17.05.91)

However, this pro-peasant discourse contrasts with Fidel, showing his distrust of small-scale agriculture and his perception of the peasant as someone more interested in private-economic than productive benefits for the revolutionary common good (FC, 20.02.90). In addition, he clarified that his support for the extensive use of mechanization has not changed, but some crops cannot be mechanized (FC, 22.11.91).

“The important increases here are taking place and have to be produced in those state lands, which is where the bulk of the force has been mobilized. The peasants have a limit in their possibilities, more or less, to produce what they traditionally produced and we have asked them for even greater efforts and we have followed with them correct policies, in our opinion, intelligent policies. We have told them: ‘We need such and more than that. What crops do you prefer? What do you like, garlic? How much garlic do you want to sow, if the program is 150 *caballerías*? Do you want to sow them all? You want to sow 130? Ok, one hundred and thirty.’ They like garlic, because it is a crop with a lot of yield; a lot of yield not in garlic, but in money. ‘Potatoes, the program is so much. How much do you want to sow? The onion plan is so much, how much do you want to sow? In pepper the plan is so much; in carrot so much -so, in each one of the crops-, and don’t worry, what you don’t sow is going to be sown by the state.’” (FC, 23.12.91)

6.7. Discursive strategies, 1988-1991: Transitions and emergencies

6.7.1. Argumentative scheme

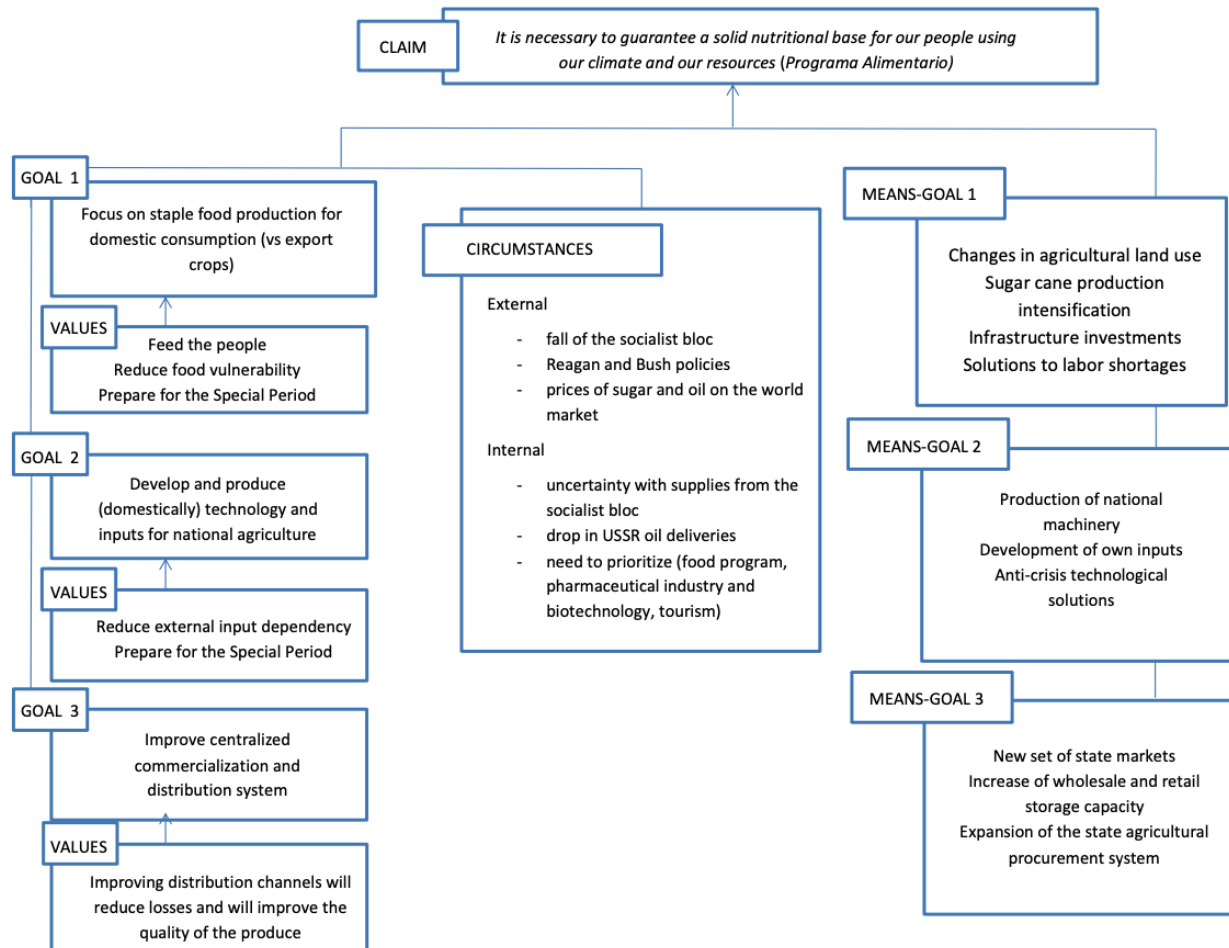
In the period of 1988-91, the agriculture promoted in Fidel’s discourse was closely related to three factors: i) the Rectification Process”; ii) the uncertainty regarding food and basic agricultural input supply caused by the instability of the socialist bloc; and iii) the imminent arrival of the “Special Period”. While the focus in the mid-80s was on developing “superior forms” of socialist agricultural organization and building a technologically “modern” agricultural system, in both Soviet and US terms, the impact of the new circumstances made the claim of this period more modest and pressing: “Programs must be developed that guarantee a solid food base, from our climate, from our natural resources”¹⁶¹ (FC, 08.01.89).

The agriculture promoted in the discourse, most prominently in relation to the Food Program, is expressed in the following goals: a) achieve local and national food self-sufficiency

¹⁶¹ Meaning using our own climate (and) our own natural resources.

(at least in essential foods), b) develop and produce technologies and inputs for national production, and) c) improve the centralized food distribution system (Figure 6.1).

Figure 6.1: Argumentative scheme: Fidel’s discourse, 1988-1991



Elaborated by the author.

The goals and means (by which this claim is realized) are expressed in Castro’s long and detailed explanations of the Food Program. The arguments, however, combined the predominantly optimistic rhetoric of 1984-1987, with descriptions of the worsening circumstances (uncertainties, incoming economic crisis, Special Period), discursively expressed in “urgencies” and “necessities”. The embeddedness of the arguments within these contextual pressures shows a transition from idealized agriculture, or “the agriculture that I dream”, to absolutely necessary agriculture, or “the agriculture that we can/must have”. The latter is even more accentuated in 1992-97, but was already evident in 1988-91.

In the context of the loss of the largest trading partner (more than 80% of trade), the government was once again attempting a strategy of food self-sufficiency and import substitution through the Food Program. The cultivation of roots, tubers and vegetables was considered essential to producing a nutritional base for the population, so it was necessary to allocate more land for their cultivation and mobilize the city’s population for their production. According to the Food Program, sugar production would be intensified through investments in

irrigation and drainage that would increase production by 2-3 million tons. This increase would guarantee, the continuation of its role in Cuba's international trade and the production of animal feed. The national production of sugarcane harvesters (*combinadas*) would also guarantee the mechanization levels that were the revolution's pride.

Also planned was that the production of roots, tubers, and vegetables, as well as other key crops (e.g., rice and citrus), would benefit from investments in irrigation, drainage and the recovery of the "hydraulic will". Agricultural workers would be better incentivized, and the construction of agricultural communities, adjacent to the work fields and equipped with all the necessary services for the workers and their families, would be resumed.

Lastly, research centers would work on increasing agricultural yields and agricultural diversification. To this end, they would develop resistant varieties with better yields for the prioritized crops. Additionally, irrigation and drainage systems would be improved to save water and an integrated pest and disease control system would be developed and rapidly upscaled.

Up to this point, the content of the Food Program was optimistic and expressed the discourse of the Rectification Process, i.e., it is necessary to overcome state farms' inefficiencies, especially those dedicated to the cultivation of roots, tubers and vegetables; it is necessary to rectify the neglect of the state agricultural worker to solve the problem of labor shortage; it is necessary to return to mobilization strategies and politically encourage voluntary work ("train the political muscles"), and overcome the disconnect between science and practice (attributed to the prior erroneous following of the Soviet example). The optimism is manifested through the exaggerated and extravagant use of revolutionary discourse expressed in most areas of the Food Program (and generally in most of Fidel's projects), mostly characterized by setting the goals in physical terms (e.g., numbers of tons, *caballerías*, and contingents) and neglecting other indicators such as costs, inputs, profitability¹⁶², etcetera (Roca, 1994).

Fidel's discourse reaffirmed the idea of a developed and socialist agriculture expressed in the previous period. This was characterized by a large-scale, highly technified and mechanized agriculture, collectively produced for the common good and under the state and political control of the party. Although the focus of production moved towards covering domestic demand, this did not affect the way in which reaching the desired agricultural sector was to be carried out.

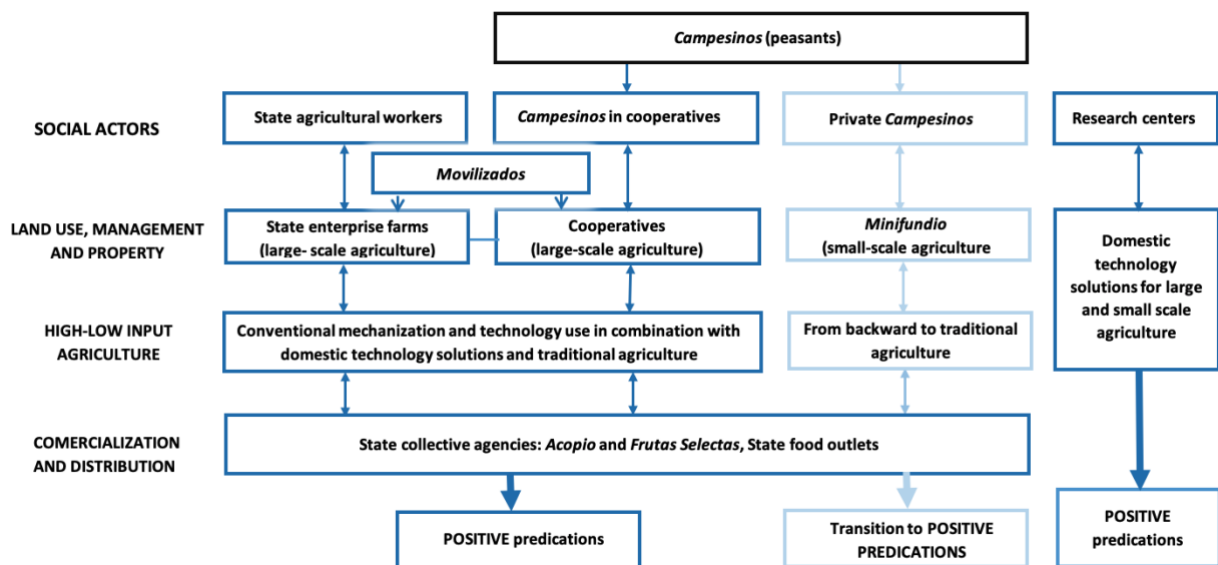
However, with the advance of the collapse of the socialist bloc and the imminence of the economic crisis, the optimistic language was combined with a sense of urgency. The objectives of the Food Program were to deal with the multiple shortages while also confronting the battle for the permanence of the revolution and socialism itself. As part of the urgency discourse, oxen would replace tractors to produce roots, tubers and vegetables and therefore the population would not be able to eat them. Scientists, in the spirit of the celebrated agricultural contingents, were to provide solutions to the shortage of agricultural inputs (traditionally imported from the socialist bloc or produced domestically with imported raw materials) and would adapt farming implements so that they could be used by animal traction to replace tractors. Scientific progress and animal traction were depicted as alternatives and innovations in a context of shortages.

¹⁶² For more examples, see Benjamin et al., 1984: 120-123 and Roca, 1994: 98-101.

6.7.2. Nomination and Predication strategies

In the period 1988-91, Fidel added two new actors to the discourse on agriculture: the “mobilized” and the scientists (Figure 6.2). Both were predicated positively, referring to moral and “revolutionary” qualities. The discourse on the remaining actors remained more or less static as Fidel optimistically addressed the plans of the Food Program and attacked Gorbachev’s policies. However, in this transition moment of the discourse from optimistic to pragmatic, private farmers were predicated more positively, but only when involved in national plans (mostly accompanied by the cooperatives and state farms) or when providing good examples of producing more with less inputs. In this way, the former agricultural context was predicated as traditional instead of primitive or backward.

Figure 6.2: Nomination strategies, Fidel’s discourse, 1989-1991



Elaborated by the author.

Fidel consistently remarked that those “good independent farmers” were not the only ones achieving high yields, and that there were cooperatives and state farms also with excellent results. Still, regardless of the degree of optimism or pragmatism in the discourse, it is clear that large-scale state agriculture and small-scale private farming represented an unresolvable contradiction in the Cuban socialist system. Similarly, the lack of emphasis on collectivization (one fundamental objective of the previous period), expressed simultaneously its depiction as only a secondary option to state farms and the end of its romanticized status of the previous period.

“I conceive of the farmer, I have always conceived of him, as a participant in large-scale production, in the form of cooperatives such as we have them, or in the form of (state) enterprises with modern techniques that guarantee a high standard of living and adequate conditions for the agricultural worker. (...) ... based on the premise that on a large scale much more productivity is obtained and machines are used and the population can be grouped together, we have given impetus to the cooperative movement, in which the living and working conditions of those peasants who had plots have risen considerably, considerably, and our cooperatives have undoubtedly constituted a great advance for the development of agriculture” (FC, 18.03.90).

“You will see, in those 65 *caballerías* [*caballerías* handed over to the Blas Roca contingent¹⁶³], that this can only be done in a socialist agriculture. All these plans for dams, large canals, drainage in the sugarcane fields, [the] engineering system in the rice, large areas of plantain or citrus with microjet [irrigation system], that can only be done in a socialist agriculture. If you divide the Havana plan into seven thousand small farms of one hectare of plantain, will you imagine taking the water to seven thousand different places? will you imagine what the benefit of that plantain would be like? ... Only these productivities are possible and only work of such a productive nature is possible, with a socialist agriculture. The same can be said of sugarcane, rice, and the vast majority of crops. Only a socialist agriculture can make a system of dams, canals and irrigation as the country is doing. Of course, we still have independent farmers and we respect them, we help them and when we can bring them the water, we do it, when the technique can be applied it is applied; but this technique can only be applied in large extensions, it can only be applied in state companies and cooperatives, it is impossible to apply it in the small farms or in the small plots” (FC, 01.10.90).

Confronted with immense challenges and potential catastrophe, it is difficult to deduce both the sincerity of Fidel’s optimism and its potential source. Was it an ideological game to keep the people happy? Confidence in development in Cuba? Stubbornness? Or Castro’s “bunker mentality”, as Mesa-Lago (1993c) described it.

At the end of this period, the Fourth Congress of the Cuban Communist Party (October 1991) took place. Considering the new economic situation, major reforms were expected¹⁶⁴. Instead, politically, the centralized role of Fidel in decision-making was reinforced (Domínguez, 1994), and economically, market-oriented reforms were rejected (Mesa-Lago, 1993c). In general, small adjustments were conceived without changing the economic and political system (Ritter, 1994).

6.8. 1992-1997: Special Period in times of peace

“Of course, the country is making great efforts to produce food in national plans; but the one who sows the garden, the little piece of land that is in the yard of his house, is helping the country in a special period, is saving transportation, fuel, is doing something; Everyone who sows something is helping, everyone who does something” (FC, 22.12.91).

1992 marked the end of the dream of large construction projects associated with the Rectification Process and the Food Program. The productive reserves that sustained the Food Program were depleted until their almost total exhaustion under the impacts of the Euro-Soviet collapse (Figueroa-Albelo, 2003). In April 1992, Fidel announced that some programs were halted due to material deficiencies (FC, 04.04.92). The solutions intensive in inputs and oil supplies were being abandoned, e.g., irrigation and drainage systems for sugarcane, rice, and plantain cultivation, the construction of new dams and farming communities (FC, 20.02.93, 30.06.94, 15.07.94). At the end of 1992, Fidel lamented about the lack of fuel to bring irrigation systems into operation after making all the investments for their installation (FC, 23.11.92).

¹⁶³ The contingents were military-style work collectives created in the late 1980s to carry out tasks prioritized by the government, e.g., construction works (highway, housing, sports facilities), and agriculture. They were characterized by working 6 days a week and having better incomes than other state workers. The Blas Roca contingent is one of the best known and frequently mentioned in Fidel Castro's speeches.

¹⁶⁴ For an extensive analysis on the Fourth Party Congress, see the papers published in Pérez-López, JF (ed.) 1994 Cuba at a Crossroads. Politics and Economics after the Fourth Party Congress. University Press of Florida.

The Food Program then continued with a sole purpose: ensure food security (Deere, 1993) by preventing hunger and malnutrition using low-cost solutions. The issue of food self-sufficiency disappeared from the discourse. In 1993-1994, the government established a new type of agricultural cooperative, prompting the country's third agrarian reform (Figueroa-Albelo, 2003; Valdés-Paz, 1996).

Despite the challenges of the period and the changes implemented in agricultural policy, as will be demonstrated below, the “desired agriculture” remained more or less consistent: large-scale and collectivized. The discourse on agricultural technologies shows the challenges of a context of shortfalls and does not express the ideal of mechanized and technified agriculture of 1984-1987.

6.9. Consequences of the definitive dissolution of the USSR and the socialist bloc

In the period of 1992-97, the consequences of the fall of the socialist bloc and especially of the USSR became much clearer. In 1992, the Russians began to pay the world market price for sugar, i.e., 9-10 cents a pound (Eckstein, 2003; Mesa-Lago, 1993d). This price was much lower than the 51.16 cents in 1985 and the 42.9 cents agreed for 1986-90 (Rodríguez, 2011b). In addition, the new Russia did not grant more credits to Cuba and converted the debt from rubles to dollars (Domínguez, 1993; Rodríguez, 2011a).

Fidel referred to the impact of the end of generous socialist trade in terms of shortages and economic losses in various speeches in 1992-94 (FC, 04.04.92, 05.09.92, 20.02.93, 26.07.93, 26.09.93)¹⁶⁵. Fidel explained with examples how much the country received from the socialist bloc and how much it had stopped receiving (FC, 04.04.92, 05.09.92, 24.12.93, 15.07.94, 16.12.94, 03.03.95). Details concerning the losses in fuel, food and the availability of agricultural inputs (fertilizers, pesticides, machinery and spare parts) were predominant in the speeches.

“From the USSR came all the cotton that our country consumed, from the USSR came a large part of the fertilizer, through the USSR came a large part of the imported food we consumed, cereals and grains for human consumption, and cereals and grains for animal consumption. The country lost everything, the country practically ran out of fuels, Are they or are they not real facts? They left us without fuel, they left us without fertilizer, they left us without feed for cattle, they left us without food” (FC, 04.04.92).

“... I am going to tell you in numbers what the disappearance of socialism in Europe meant for the economy, ... How much we have lost in our import capacity in millions of dollars at current market prices, loss in export prices —that is to say, the difference between the agreed prices that we received with the USSR and other countries, and the prices of what we call the world market garbage dump, because that is where the surplus sugar ends up— : because of the loss of price with the USSR we have lost in sugar 2469 million dollars; with Eastern Europe, 270 500 thousand dollars; in nickel we have lost 30 million; in other products, 14.4. Due to a decrease in the credits, we received -... -, 1463 million - I am talking about annual figures; with the countries of Eastern Europe, 162 million. For credit we received from the International Bank of Soviet Investments, 13 million. Due to higher import prices, we are also losing 80 million. Due to difficulties in locating products - citrus, for example - we are losing 144.6 million; in others, 55 million. In total, for this we are losing 4701 million dollars per year, and they are not the only losses; these are direct losses of what we received from our exports. Indirect losses as a result of the destabilization of supplies, impact on export productions and losses of certain financial facilities, another 1

¹⁶⁵ Also in FC, 07.11.93, 23.11.93, 01.01.94.

billion dollars, which amounts to approximately 5700 million, comparing 1992 to 1989. This comparison indicates that the country's purchase capacity in 1989 was 8139 million against the purchasing capacity of 1992, as estimated, of 2200 million dollars ... Then, our country has lost 70% of its purchasing capacity with that disaster. See what a terrible blow to the economy. I do not tell you to be discouraged, because I know that you are unable to discourage yourself, I tell you so that you have an idea, a measure of the economic damage that all this caused us, and what feats we have to do to solve with 2.2 billion what we previously solved with more than 8 billion in imports. Is it a hard test or not? Is it or not a great feat that is demanded of us?" (FC, 05.09.92).

In the discourse, the domestic crisis was considered to be fundamentally driven by the end of relations with the socialist allies (FC, 04.04.92, 30.06.94, 15.07.94, 12.02.96). To a lesser extent, Fidel condemned the inefficient use of the resources and aid (fuel, tractors, construction machinery) received from soviet-trade relations (FC, 16.12.92, 26.07.93, 24.12.93, 26.07.95), and changes in prices on the world market, mainly for sugar and oil (FC, 04.04.92, 26.07.93).

"I want you to know that for many years we only had to send a telegram to say that the fuel oil was running out, that the gasoline was not enough, that the diesel was not enough and automatically ships with diesel, or fuel oil, or gasoline were sent... Even we became fuel exporters ... Let me tell you that at one point in time what we re-exported from oil was the most important hard currency income the country had... All that, taught us to waste. This country had 80 thousand tractors; everyone went to baseball games, to parties, to visit the girlfriend, in tractors. More aqueducts could have been made; today, a lot of fuel is still spent carrying the water in tractors to the workers' communities. In other words, that kind of relationship perverted us in a certain way" (FC, 24.12.93).

"..., we used to live in a glass urn; it was the full purity in a pure atmosphere, the strong and victorious ideology of socialism, before it fell into the errors, circumstances, betrayals, weaknesses and incapacities that led to disasters. They were the ideal international conditions to do everything we did. There were resources, credits, fuel, machinery; from time to time, we could come across a machine that was from the "*Maricastaña*" era [expression meaning long in the past], right? But there were many machines, much equipment and many useful resources, with which we did countless things. There was food, raw materials, fertilizers, steel, loans, collaboration in all senses, which the Revolution used well" (FC, 04.04.97).

The socialist trade system was depicted as the fairest possible trade conditions for Cuba (FC, 04.04.97). Nonetheless, Fidel's discourse omitted important factors regarding Soviet-Cuban trade relations. Fidel did not mention that Cuba was the most economically dependent country in the socialist bloc, receiving the largest amount of funds in aid, and that it was the most indebted (Blasier, 1993; Linden, 1993; Mesa-Lago, 1993c). Nor did he address Cuban dependency on the socialist bloc as a problem potentially affecting the sustainability of the economic system.

By 1993, economic reserves were depleted and the first economic measures had proven to be insufficient to cope with the worsening situation. The economy collapsed. Table 6.2 summarizes various economic indicators expressing the scope of the crisis.

Table 6.2: Overview of deteriorating economic indicators, Cuba 1989-1996.

<i>Indicator</i>	<i>Change from 1989 to 1993</i>	<i>Change from 1993 to 1996</i>
<i>GDP</i>	↓ 35%	↑ 11,3%
<i>GDP per capita</i>	↓ 42%	
<i>Sugar (physical output level)</i>	↓ 48%	
<i>Nickel (physical output level)</i>	↓ 36%	
<i>Citrus (physical output level)</i>	↓ 32%	
<i>Fish and shellfish (physical output level)</i>	↓ 63%	
<i>Monetary liquidity (as % of the GDP)</i>	↑ from 22% to 73%	↓ from 73% to 42%*
<i>Inflation rate (as % of the GDP)</i>	↑ from 0.5% to 26%	↓
<i>Fiscal deficit (as % of the GDP)</i>	↑ from 6% to 34%	↓ from 34% to 2.5%
<i>Investments (as % of the GDP)</i>	↓ from 28% to 5.4%	↑ from 5.4% to 8.2%
<i>Value of exports</i>	↓ 80%	↑ 72%
<i>Value of imports</i>	↓ 75%	↑ 80%
<i>Trade balance (million dollars)</i>	↑ - 847	↑ - 1791

Elaborated by the author. Sources: Mesa-Lago and Pérez-López, 2005; Figueroa-Albelo, 2003; Brundenius and Monreal-González, 2001; Romero-Gómez, 2001; FC, 20.02.93

Notes: ↓ Decrease; ↑ Increase.

* from 73% to 38% in Romero-Gómez, 2001.

Agriculture, like other economic sectors, was hit hard by the crisis. In addition to the lack of spare parts and limited fuel for agricultural machinery, fertilizer imports fell from 1.3 million tons in 1989 to 300 thousand in 1992 and animal feed fell from 1.6 million tons to 475 thousand tons over the same period (Deere et al., 2016). To make things worse, in March 1993, crops were affected by weather events¹⁶⁶, resulting in a fall of annual agricultural production (estimated in sales to the state) by 23.1% compared to 1992 (Figueroa-Albelo, 2003). The crisis also caused sugar production to fall from 7.1 million tons to 4.3 million tons (Pollitt, 2004)

“Today we depend on sugarcane and what we do is heroic, because, really, when you cut a cane that has no irrigation, that does not have fertilizer, that no longer has tens of millions of dollars in herbicide - because we got used to the herbicide; the possibility of having about 40 million dollars every year for herbicide made people forget about the *guataca* [hoe], and everything was lost: herbicide, fertilizer, irrigation, drainage brigade and plot irrigation, markets, preferential prices for sugar, all that. But even today, at the so-called world price, we need sugar— that cane that lacks everything I mentioned is a fine cane in which the *machetero* [sugarcane cutter] yields much less” (FC, 16.12.94).

As part of the austerity measures implemented by the government, the amount of rationed food was reduced. That, together with the decrease in food imports and limited domestic food

¹⁶⁶ In March 1993, local storms hit western and central Cuba. The damage from the “Storm of the Century” (the name given to the meteorological event) destroyed more than 30,000 homes and caused enormous economic damage.

production, caused a food crisis. With a recommended consumption of 2400 kcal/day, consumption fell from more than 2800 kcal/day in 1989 to between 1670-2310 kcal/day¹⁶⁷ in 1993-1994. Sinclair and Thompson (2001) estimated 20 pounds (around 9kg) of average weight loss. Together with food shortages, the lack of cleaning and hygiene products, medicines and other basic commodities led to an increase in cases of low birth weight, pregnant women with inadequate weight and anemia, tuberculosis, diarrheal infections, influenza, pneumonia, pediculosis and scabs, leptospirosis, among other diseases associated with the crisis (Garfield & Santana, 1997).

One of the most referenced impacts of the food crisis was already evident in 1991. At the end of 1991, the first cases of epidemic neuropathy occurred, with a peak of more than 51 thousand cases between 1992-1993¹⁶⁸ (Franco et al., 2007; Garfield & Santana, 1997). Among the root causes were weight loss¹⁶⁹, low body mass index, low body fat percentage, poor diets and a sugar intake above 15% of total caloric intake (Gay et al., 1995). The government responded to the crisis with the massive distribution of multivitamins¹⁷⁰.

Aggravating the overall picture for the Cuban government, the US administration passed the “Cuban Democracy Act” (*Ley Torricelli*) in 1992, followed by the Cuban Liberty and Democratic Solidarity (Libertad) Act in 1996 (also known as the Helms-Burton act)¹⁷¹, still in place today. Both acts provided the basis for the implementation for economic sanctions aimed at the Cuban government and the countries that cooperated with the island until there was a transition to democracy (free elections and a multi-party system) and a market economy in Cuba.

The *Ley Torricelli* required the termination of all assistance (military, technical or financial) to Cuba from former Soviet republics and other countries under penalty of those governments not being eligible for assistance from the United States or debt cancellation or reduction. It also prohibited foreign subsidiaries of US corporations from trading or investing in Cuba. In addition, it stipulated that any vessel that entered a Cuban port may not enter a US port within 180 days, just as ships carrying goods or passengers from Cuba may not enter a US port. Restrictions were also established for sending remittances to Cuba and exporting food and medicine.

¹⁶⁷ These numbers express the most optimistic and pessimistic caloric intake assessments for the period 1993-1994. Estimates vary by source: 1670, 1863, 1940, 1948, 2000, 2310 (See ONE, 1997; Mesa Lago, 1998; Figueroa-Albelo, 2003; FAO; 2006, 2012; Franco et al., 2007; Wright, 2009, respectively).

¹⁶⁸ Fidel referred to the epidemic neuropathy in speeches on 26.07.93 and 15.07.94.

¹⁶⁹ In 1993, 27% of Cuban adults had lost an average of 5-10 kilos of weight (Franco et al., 2007).

¹⁷⁰ Castro referred to the massive production of multivitamins, enough to deliver 11 million (the Cuban population at that time) daily, on 26.07.93. He also mentioned the nutritional situation and the role of the vitamins on 15.07.94.

¹⁷¹ For the full text of the acts, see the Cuban Democracy Act. Available at <https://www.treasury.gov/resource-center/sanctions/Documents/cda.pdf> (19.06.2019), and the Cuban Liberty and Democratic Solidarity (Libertad) Act of 1996. Available at <https://www.treasury.gov/resource-center/sanctions/Documents/libertad.pdf> (19.06.2019).

By mid-1994, the critical economic and social situation in Cuba prompted the “Cuban Rafter Crisis” (*Crisis de los Balseiros*)¹⁷², the occupation of embassies (Belgium and Germany) in Havana by asylum seekers, protests in the streets (*Maleconazo*), the widespread theft of boats, and attempts to emigrate in all types of makeshift boats to the US. The US was the natural destination for the rafters, not only because it was 90 miles from the northern Cuban coast. Through the Cuban Adjustment Act¹⁷³ of 1966, Cubans arriving in the US, legally or illegally, could obtain residency (a green card) after one year.

Bill Clinton was the US president from 1993-2001. A Castro-Clinton battle shaped the Rafter Crisis. On August 13th, 1994, Fidel announced on national television that Cubans who wanted to leave the country would be allowed to do so. Cuban border guards could not stop the rafters like before. Cubans arriving in US territorial waters could be picked up by US Coast Guard¹⁷⁴, family-organized ships or other organizations, and taken directly to the US, making them eligible for residency. Between August and September 1994, around 35 thousand¹⁷⁵ Cubans emigrated by sea to the US, of which 32362 were sent to the Guantanamo naval base (Ackerman, 1996). With the increase in the number of rafters, in 1995, the Clinton administration came to an agreement with Cuba to pass the “wet foot, dry foot” policy¹⁷⁶. This prevented admission to the US of those Cubans caught on the way (i.e., at sea with “wet feet”), who were then sent back to Cuba. Those who managed to arrive on US soil without being intercepted (i.e., “dry feet”) were eligible to be processed for residency according to the Cuban Adjustment Act, which is still in effect today.

In 1996, The Helms-Burton Act reaffirmed the Torricelli Act and reinforced the sanctions against the Castro government. This law sanctioned international financial organizations that allowed Cuba’s membership (e.g., the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD)). If these organizations authorized loans, the US would reduce payments to these institutions. The act also forbade US citizens or residents from providing any financial assistance to Cuba. Lastly, it prohibited the importation of goods that were either produced in Cuba or were wholly or partially derived from Cuban production¹⁷⁷.

Due to the overall critical situation, the Cuban government was forced to implement a set of measures involving the liberalization of some sectors of the economy and to undertake

¹⁷² For more details on the “Rafter Crisis”, see Ackerman, Holly, and Juan M. Clark. 1995. *The Cuban Balseiros: Voyage of Uncertainty*. Miami: Policy Center of the Cuban American National Council; and Ackerman, Holly 1996 “The *Balseiro* Phenomenon, 1991-1994” in *Cuban Studies*, Vol. 26: 169-200.

¹⁷³ For the full text of the act, see https://www.american.edu/centers/latin-american-latino-studies/upload/cuba_-the-cuban-adjustment-act.pdf (25.01.21)

¹⁷⁴ US Coast Guard picked up 3253 Cubans (record in one day) on August 23th, 1994 (Ackerman, 1996).

¹⁷⁵ These numbers reflect estimations based primarily on survivors. Ackerman’s (1996) article asserts that the mortality of rafters in this period, estimated by both Americans and Cubans, is about 75%.

¹⁷⁶ In place until January 12th, 2017 (repealed by President Barack Obama’s administration).

¹⁷⁷ The Helms-Burton Act contains two unapplied paragraphs concerning (i) the possibility of claiming property and properties expropriated at the beginning of the revolution and (ii) sanctions against entities currently using such property. President Donald Trump’s administration activated these sections of the law in May 2019, allowing Cuban-Americans and US citizens, who claim to have lost properties after the Revolution (1959) to bring before federal courts commercial companies (e.g., Melia, Carnival Cruise and Pernod Ricard) operating in those properties

structural changes. Among the most important are: 1) legalization of the use and possession of foreign currency (Summer, 1993), 2) legalization of “self-employment” in a little more than 100 occupations (Sept, 1993), 3) new fiscal code (August, 1994), 4) new foreign investment law (Sept, 1995) and, 5) reform of the banking system (May, 1997)¹⁷⁸. This period is considered by Mesa-Lago and Pérez-López (2005) as a pragmatic cycle characterized by pro-market policies that began to provide positive results in 1994 (See Table 6.2 above). In the field of agriculture, the government prompted two main changes: the division of large tracts of state land for the formation of cooperatives and the reopening of the agricultural free market. Both measures, among others, will be discussed in greater detail below.

6.10. Policies for agriculture

Fidel’s discourse in 1992 showed his reluctance to make structural changes in agriculture and the persistence of classic socialist system policy beliefs. Even when many Food Program projects were at a standstill, the speech celebrated the results of the investments made in state agriculture and attacked small-scale peasant agriculture. Fidel praised production outputs in the state sector and compared them with independent peasants’ productivity (FC, 04.04.92, 29.04.92, 29.10.92

“A program of 500 *caballerías* [6710 hectares] of banana plantations with microjet irrigation is being developed in the province of Havana, could that be done in the 10 thousand hectares of small farmers to solve the capital city (food) supplies? The supplies of the capital were (produced) by the effort of state-owned enterprises that had great potential and where the technique can be applied, and in cooperatives that also have good potential and where the technique can be applied. Of course, we have to help the cooperatives, it was demonstrated here, and it was demonstrated at the commission meeting; it was clear that some cooperatives - ... - have received up to 700 workers in one day. It is logical that they try to make the norm¹⁷⁹ high. Cooperatives are good, they take care of things, but many require the help of the mobilized or students from boarding schools, because from the countryside many people left, there is not enough work force” (FC, 04.04.92).

In April 1992, Fidel said that state farms had increased production (roots, tubers and vegetables); however, cooperative production had decreased by 2-6% and independent farmers’ production by about 20% (FC, 04.04.92, 29.04.92). Although he admitted that the country was affected by multiple pests and weather events that year, Fidel blamed independent farmers for diverting state resources and supplying the black market (FC, 04.04.92, 29.04.92).

“We have to check from this [decrease] how much was the effect of bad weather and pests, and how much of the diversion of resources was from scheming; of course, I know many very good, excellent peasants, who send all their production to the consumption of the population, but unfortunately they are not all the same and there is always in some the temptation of the car that comes to scheme¹⁸⁰, looking for and offering any price. It could not be said with exactitude in that decrease how much was due to diverted resources of

¹⁷⁸ For a more extensive description of these measures see: Mesa-Lago and Pérez-López, 2005; Romero-Gómez, 2001; Figueroa-Albelo, 2009.

¹⁷⁹ The *norma* (norm) refers to the amount of work expected to be completed by worker per day.

¹⁸⁰ Fidel refers to black market agents who allegedly visited farms to offer better prices to farmers for their products than the state paid, thus affecting food sales to the state. Black market actions were broadly referred as “*trapihear*”. “*Trapihear*”, translated as scheme in the quote, refers to the use of illicit means to profit from the state.

state collection for the black market and how much resulted from the plagues” (FC, 04.04.92; this quotation is repeated nearly verbatim on 29.04.92).

Following Fidel’s discursive rhetoric, the state sector’s increase in production is proof of the adequacy of large-scale socialist agriculture. He presented agricultural results in physical terms (quintals, hectares) with a biased emphasis on the state sector results. The discourse excluded factors positively affecting state outputs, such as labor and input availability and the share of crops harvested land among sectors (e.g., FC, 04.04.92; 29.04.92). Fidel’s analysis omitted the role of mobilizations and contingents (a labor force that supported the state and cooperative sector), which were crucial in dealing with input shortages for state agriculture. Fidel stated that in Havana alone, 500 thousand people had been part of mobilizations (FC, 05.09.92) and a million by the end of 1993 (FC, 07.11.93). Private farmers were only sporadically assisted by mobilizations (FC, 29.04.92, 29.10.92). The research by Deere et al. (2016) collected opinions of state agriculture officials, corroborating that the production increases in state agriculture in 1992 were mainly due to increased labor force amid an abrupt drop in conventional inputs.

Fidel also never mentioned the role played by the extra 20 thousand hectares switched from sugarcane to root, tuber and vegetable state farms as part of the Food Program. Especially in Havana, Fidel declared an astronomic 67.1% increase in the production of roots, tubers and vegetables in the state sector (and a decrease of 2% in cooperatives and 19% in the private sector) (FC, 04.04.92, 29.04.92). This meant 750 *caballerías* (more than 10 thousand hectares, formerly in state sugarcane farms) were transferred to those crops, totaling 22 thousand hectares in Havana alone. Speeches also omitted the crucial role of prioritized access to agricultural inputs and machinery for the state sector.

Private farmers were, as in previous periods, negatively predicated (FC, 04.04.92; 29.04.92). Independent peasants were associated with the black market and the diversion of production (reducing sales to the state collection agency) and resources (allocated by the state for specific crops) for their benefit. According to Fidel, private farmers have “bad practices” in that they a) take better care of the crops that report better incomes and not the ones the people need (Fidel used the example of garlic vs. carrot, and beans vs. tomatoes), b) receive the economic benefits of consistently increased state prices, c) steal the labor from state farms and cooperatives because they can better pay for daily labor force (also in speech FC, 07.11.93), and d) are unfairly privileged because they enjoy greater autonomy than state farms: “they produce what they want and how much they want” (FC, 29.04.92).

While some of the measures of the Food Program aimed at incentivizing production, the government also increased the state collection price of certain crops, including potatoes and garlic (FC, 04.04.92, 29.04.92). Fidel considered it unjust that the state (i.e., the Revolution, the government), paid good prices to independent farmers, allowing them to hire a temporary work force with two to four times higher wages than the state and cooperative farms (FC, 29.04.92). Mesa-Lago (1993a) estimated that private farmers paid their workers between 20 to 50 pesos daily at the peak of the harvest (480 to 1200 pesos monthly). Contingents, the best paid state agricultural work force, received 400 pesos monthly (Mesa-Lago, 1993a). As part of the related discourse, Castro victimized state farming insofar as it was allegedly forced to produce what independent peasants decided not to produce (FC, 04.04.92, 29.04.92). This argument contrasted with the image of the victorious state farms producing the important foodstuffs, and the peasant only a very low percentage of non-essential crops that were previously sold in the Peasants’ Free Market (FC, 04.04.92, 29.04.92).

Fidel concluded that political work must be done with the peasantry, using persuasion and policies of greater control (FC, 04.04.92, 29.04.92). In the second half of 1992, the number of Ministry of Agriculture officials designated to monitor and enforce policies on independent peasants increased considerably. The government created the “area chief” (*jefe de área*), an officer in charge of carrying out delivery plans and guaranteeing the fulfillment of contracts with the state. Such measures had the main function of increasing control over the peasantry’s production and sales to the state in an effort to confront the growth of the black market (Deere et al., 2016). Nonetheless, as stated above, with all hope ended for the restitution of the USSR and the deepening of the economic crisis, the Cuban government was forced to implement measures involving the liberalization of some sectors of the economy and undertake structural changes.

“What we have to ensure with our programs - ... - is that there are proteins and calories for the population. Nothing guarantees that we will be able to maintain the same types of food, nothing guarantees it to us in a special period, but we do have to ensure at all costs that our population has enough calories and protein, and even more, if possible, even more! but it may have to vary, and surely it will have to vary over a period of time, for the simple reason of what do we do with bulls? Do we kill them, in the conditions we are in? Or do we turn them into working instruments to produce food, when we may lack the necessary fuel, even to plough the land? We cannot start importing bull meat, who knows from where...!” (FC, 22.11.91).

Fidel’s discourse, although reluctantly, had to justify new economic measures in agriculture as well. In 1993-1994, large tracts of state land were converted into cooperative units, and the agricultural free market was re-opened. Both measures, among others, will be discussed in greater detail in the following section.

6.10.1. Land

“Today life, reality, the dramatic situation that the world is living, this unipolar world, forces us to do what otherwise we would never have done if we had had capital and if we had had the technology to do it” (FC, 26.07.93).

On September 21, 1993, Decree-Law 142 was approved. It established the need to “carry out important innovations in state agriculture” with the objective of making agriculture more efficient (both sugarcane and non-sugarcane) and to implement transformations that encouraged higher levels of productivity per person with the lowest possible expenditure of material resources¹⁸¹. Under this decree, the *Unidades Básicas de Producción Cooperativa* (Basic Units of Cooperative Production, UBPC) were created by dividing state farms into smaller units, usually based on pre-existing demarcations within the state farms (Figueroa-Albelo, 2009). State agricultural workers would become cooperative members. The land and means of production would be given in free usufruct (use rights) indefinitely, but land ownership remained with the state (Table 4.4 in Chapter 4). The new cooperatives would own the production that would be planned by and sold to the state¹⁸². Cooperatives, the long-standing lesser option to state agriculture in Fidel’s discourse, are predicated using the same arguments used during 1984-1989: organizational, technological, and arguments related to control, along with positive predications compared to independent peasants.

¹⁸¹ In Official Gazette of the Republic, Havana, September 21st 1993 (Gaceta Extraordinaria, La Habana, 21 de septiembre de 1993)

¹⁸² This changed after the opening of the (free) agricultural market in 1994. From then on, the non-sugarcane UBPCs were authorized to sell the surplus of the contracted production to the state in the free market.

“I have discussed with the leaders of these cooperatives, and I must say here that I have a very good opinion of the agricultural production cooperatives and the cooperative members; it seems to me to be an excellent institution, it’s not perfect, I think state enterprises (farms) owned by all the people are more perfect and fairer, I have no doubt about that. It cares for the workers all year round, it cares for the family, it cares or should care about housing and all those things, I say it should because they did not always care properly, neither the enterprises, nor the socialist state did not take care of everything that should have been taken care of the housing for agricultural workers, one of the things we were solving in the Rectification Process. The cooperative is a good production organization. I wish all non-state land were organized in agricultural production cooperatives. Hopefully! It would be the ideal way, because it is much easier to work, it is much easier to collect. In general, cooperatives do not speculate with their productions, they deliver their productions to *Acopio* [state collection agency] collection” (FC, 04.04.92).

Fidel mentioned the UBPC for the first time in a speech in November 1993, a couple of months after its creation (FC, 07.11.93). The way in which Fidel explained the need for UBPCs is especially representative of classic socialist agriculture and of the tensions on which its creation was based. Only three years before, he stated: “Are we going to go crazy now and start handing out the land of state farms or cooperatives, which are giving excellent results?” (FC, 18.03.90). The discourse around UBPCs shows Fidel’s reluctance to divide the state farms and the pressure from the crisis.

In a speech on November 7th speech, 1993, Castro put forward three arguments:

1) State agricultural enterprises (large-scale, collective benefits, highly mechanized and technified) (still) constitute the desired agriculture (FC, 07.11.93, also in 04.04.92, 29.04.92, 29.10.92, and 08.10.97).

“... There is no doubt that the great agricultural enterprise is the most efficient production system in the world, because it allows the application of the technique on a large scale, the sugarcane combines could not be used if it is not in cane fields of a certain extension, where the machines do not have to be bending every 20 meters or every 30 meters. It is impossible to apply the sugarcane harvester in a sugarcane *minifundium*, it is impossible to use the rice harvester in a rice *minifundium*, it is impossible to use the plane to sow or to fumigate in a *minifundium* or in small extensions. I would say that the state farm has accomplished achievements in our country that could not have been done under any other procedure: tens of thousands of hectares of citrus fruits plantations ... would have been impossible without state enterprises; the development of livestock plans ... would have been impossible without the state companies, without them up to one million liters of milk would not have been reached daily in the province of Havana; the development of the rice plans that were made in the country, with its irrigation system, dams and all that, would have been impossible without the state enterprises, really, not even through CPA would it have been possible to approach that; sowing 500 *caballerías* [6710 hectares] of plantain with microjet in the province of Havana in less than three years would have been impossible without the effort of state-owned farms, that is unquestionable” (FC, 07.11.93).

2) Nonetheless, agricultural state-enterprises and farms acquired administrative vices through overgenerosity created by the revolution’s excessive benevolence, which made them inefficient (FC, 07.11.93, also in 16.12.92, 26.07.93, 24.12.93, and 26.07.95).

“It is just that the state agricultural enterprises ... had the same thing happening to everything: the inflated payrolls, the tendency to over-staffing, paternalism, lack of exigency, our super-generous labor legislation and all the vices that the Revolution created, let’s say it frankly, and not with bad intentions, not for lack of love for the people and the workers, but for excess of love for the people and the workers ... What other explanation

or justification do absenteeism have, the reduction of working hours, work four or five hours when you had to work at least eight, and all that was tolerated? All the opportunities in the world were created so that everyone could decide on what they liked best; opportunities for all adults, for all young people, for all children. The work was humanized. How many cane-cutters saved the sugarcane combines? Three hundred thousand sugarcane-cutters ... How many rice cutters? How many weed cutters in the fields that were saved with chemicals and herbicide? How many manual milkers to be replaced by electric machines? How much hard work did the Revolution save? How much did not humanize people's lives? But next to that, the vices that I mentioned: negligence, lack of exigency, accommodation, etc., etc., etc. Agricultural enterprises suffered the same problems; but, apart from that, state-owned farms supplied 80% of the sugarcane, state-owned companies supplied almost one hundred percent of rice, state-owned companies supplied almost one hundred percent of pork, virtually one hundred percent of the 2.5 billion eggs consumed annually, almost one hundred percent of milk and beef" (FC, 07.11.93).

3) The UBPCs are, then, a necessary and definitive measure based on the economic circumstances of input shortages. UBPCs, as cooperatives, have comparative advantages (administrative, control, and political) compared to independent peasants and small-scale agriculture. UBPCs can also replicate CPAs' positive input saving practices and CPAs members' interest in productivity (FC, 07.11.93, also in 17.05.96)¹⁸³.

"... the new form, the Basic Units of Cooperative Production ... It is a step that must be taken, because we consider it the most appropriate and the most convenient in these circumstances, but it is not a step that can be taken reversibly, it is not a step that can be taken today to say: 'No, tomorrow we will take another step.' Tomorrow what the basic units of production will do will be up to them, partly, and up to the country, up to the Party. If tomorrow they were too small and it were perhaps more convenient to join some later, make them larger and instead of 25 or 30 *caballerías* they were 50 or 60 more and those of sugarcane, that would be possible; in short, today it is about the exploitation of these resources, it is a step that we are taking with definitive character, hoping that they work and that they are efficient.

This is much more efficient than the creation of smallholdings, because today a large company of these practically cannot be managed with a great shortage of gasoline, with a great shortage of fuel, with a great shortage of transport. We have to make them smaller, more manageable; but, in addition, we have to look for saving resources. Before, there could be a greater expense of fuel. Of course, where there is not enough exigency and order, more fuel is spent; where there is not enough exigency and order, more herbicide is spent; where there is not enough exigency and order, fertilizers can be used better or worse; where there is not enough exigency and order, the land can be prepared better or worse. Today we have to look for maximum efficiency with the minimum of fuel, with the minimum of fertilizer, with the minimum of herbicide, and we had observed that the best Cooperatives of Agricultural Production (CPAs) had lower rates of fuel consumption, herbicide consumption, of consumption of some products, which is what we need today in all agriculture, because, of course, in the CPAs there was a more direct interest of the worker with the results of the production. In state farms they demanded the rules; but, since the administrator was afraid that the worker would leave, he was tolerant of lax standards. So, to pay more money, each administrator became a labor ministry, he almost set the salary, set a low daily standard so the worker could make two or three times the

¹⁸³ According to Fidel, the decoupling of the agricultural worker with the results of the state farm (i.e., they receive a salary based on a certain amount of work per day set by the administrator without relation to the final results of the farm) constituted one of the leading causes of inefficiency, and UBPCs could eliminate this disconnection (FC, 07.11.93, 03.03.95).

work to be made and earn more money. The same did not happen in the CPAs. Self-consumption was better handled in CPAs, ... In the cooperative there was self-consumption, not only for the worker directly, but also for the family because he lived there. The worker identified more with the results of the production” (FC, 07.11.93).

Castro’s silver lining was that the UBPCs, despite implying the division of large state farms, “save the principle of large-scale” (FC, 17.05.96, 08.10.97). In 1996, there were 1589 non-sugar UBPCs with 130 700 members and 1512.2 thousand ha (around 950 ha per UBPC, around 11 ha per member), and 1123 sugarcane UBPCs with 1555.8 thousand hectares (around 1400 ha per UBPC) (Figuroa-Albelo, 2016; González Mastrapa, 2016).

This decentralization of state land showed the state’s inability to manage long tracts of land without supplies from the socialist bloc and expressed the urgency of creating incentives to keep productive output levels in a context of lacking resources (Deere et al., 2016). Essentially, the government passed the problem on to the backs of agricultural workers. Numerous UBPCs were created from unprofitable state farms, which inherited labor deficit problems, plus the indiscipline and inefficiencies of state farms (Figuroa-Albelo, 2016). The state handed former agricultural workers (limited) control of farms but with the worst context of economic and input availability (e.g., changing machinery by animal traction, which is also more labor-intensive). Additionally, the economic incentives that were provided to new CPA members in previous years were limited.

The UBPCs constituted, in summary, a rapid, government-induced change, a non-spontaneous process (agricultural workers did not promote this change), executed under state regulation and control (Figuroa-Albelo, 2003, 2016). With the creation of this “hybrid halfway between the state company and the true cooperative” (Figuroa-Albelo, 2016, p. 79), the state kept the monopoly over the land property, while controlling, organizing and directing the productive objectives of the new cooperatives, as well as their dimensions (the state decided the size of the UBPC, and could eventually merge or dissolve them). UBPC members were also distinctly different from cooperative and private farmers. They were not part of the ANAP peasant association but of the Ministry of Agriculture’s union, stressing their connection (dependency) to the state and not to the relatively autonomic cooperatives (CPAs and CCSs).

In addition to UBPCs, the government promoted food production on all available land (FC, 05.09.92, 15.07.94, 16.12.94, 03.03.95, 17.05.96, 08.10.97). Decree-Law 142 (September 21, 1993) also established the delivery of small plots (up to half a hectare) that could not be integrated into cooperatives (CPAs or UBPCs) in free usufruct. The plots were given to retirees or people who could not systematically work in agriculture in an effort to improve family food consumption¹⁸⁴. Fidel briefly referred to the *patios*, *solares*, and small family plots in four speeches (FC, 05.09.92, 15.07.94, 16.12.94, 08.10.97).

“We have taken many other measures: whatever little piece of land there is out there, we have offered it to people to cultivate it; orchards have been made, *organopónicos* have been made in cities, everything possible has been done” (FC, 15.07.94).

State workplaces in the cities, state agricultural enterprises and farms, cooperatives, and schools were encouraged to produce food for their canteens and workers. Many institutions created “self-provisioning” areas for crops and small livestock modules. When self-sufficient, the government urged cooperatives to renounce their state ration (Wright, 2012).

¹⁸⁴ After the opening of the (free) agricultural market in 1994, these new holders could also market their production there.

Likewise, from 1994 onwards, the practice of the “*organopónicos*” (organoponics) started by the military in the late 80s began to spread. The development of these ways of production materialized into what from 1997 began to be called the “*Movimiento Nacional de Agricultura Urbana*” (National Movement of Urban Agriculture), described in more detail in Chapter 3.

6.10.2. Reopening of the “free market”

Through Decree 191 (September 1994), the “*Mercados Agropecuarios*” (later known as *Mercados Agropecuarios Libres* or by its acronym MAL) were created. These new markets would operate with freely agreed prices, just like the previous Peasants’ Free Markets. The official objective was to increase the levels of agricultural production for the population¹⁸⁵. All producers (private, cooperative and state), except for sugarcane UBPCs, could sell their produce after fulfilling their contracts with the state. State commitments usually accounted for 70-80% of the production of state and cooperative farms (Figueroa-Albelo, 2016; García-Álvarez & González-Águila, 2016; García-Álvarez & Nova-González, 2014). Producers could sell both the surplus of the production contracted by the state and non-contracted secondary production. Certain prioritized products could not be sold in these markets: potatoes, beef and horse meat, fresh milk, coffee, tobacco, and cocoa¹⁸⁶.

The opening of the free agricultural market responded to the need for urgent changes that would impact the food supply and the reduction of the black market. State food availability decreased drastically. In 1994, there was again a drop in sales of agricultural products to the state compared to the already depressed production of 1993, e.g., 42.9% decline for beans, 25.7% for vegetables and 20.7% for roots and tubers (Figueroa-Albelo, 2003).

Fidel’s return to pro-market policies has been interpreted as the manifestation of the lack of alternatives and the absence of external economic support (Mesa-Lago & Pérez-López, 2005). In 1992, Fidel referred to the previous Peasants’ Free Market as a mistake of the Revolution (FC, 04.04.92). In the discourse on the new agricultural markets, Fidel tried to differentiate it from the Peasants’ Free Market (FC, 03.03.95, 30.04.96, 17.05.96). He highlighted the diversity of actors that would participate this time (all except sugarcane UBPCs) and portrayed the middlemen as the solely most important negative actor (the villain), previously accompanied by private farmers (FC, 03.03.95, 30.04.96, 17.05.96, 08.10.97). Paradoxically, intermediaries were legally recognized in the new markets, being illegal in the previous Peasants’ Free Market.

“In this agricultural market, independent farmers participate, agricultural production cooperatives [CPAs] participate, UBPCs participate, the state participates with those agricultural products that it still maintains and in which it has, among other forces, the Youth Labor Army. The State collects something [taxes], but it is essentially a transfer of funds between private individuals, indisputably. Some acquire more, and acquire truly high incomes that have no comparison with the income of a worker” (FC, 03.03.95).

“Lugo [ANAP’s president] mentioned the intermediaries. Unfortunately, in anything, ..., that type of person can emerge that is not a real producer, but an individual who wants to earn in one day twice or three times what a doctor earns in a month. However, he is a man who goes to the doctor for free, and there they take care of him and save his life at any cost, and they educate their children in schools and also go to universities and have all the

¹⁸⁵ In Official Gazette of the Republic, Havana, September 20th 1994 (Gaceta Extraordinaria, La Habana, 20 de Septiembre de 1994).

¹⁸⁶ In Official Gazette of the Republic, Havana, September 20th 1994 (Gaceta Extraordinaria, La Habana, 20 de Septiembre de 1994).

possibilities. There are some people who are unquestionably selfish, don't let them disturb our work..." (FC, 17.05.96).

Fidel used three main arguments for the reopening of the free market: 1) control inflation (FC, 25.11.94), 2) increase food production (FC, 03.03.95, 30.04.96, 17.05.96), and 3) confront the state's inability to supply food as it had in previous years, i.e., the state could not re-open parallel markets or distribute food at subsidized low prices (FC, 30.04.96). It is apparent in the discourse that opening free markets for food was not a desired measure but one driven by pressing circumstances (FC, 25.11.94, 30.04.96, 17.05.96, 08.10.97).

"Other measures were adopted such as the agricultural market to boost food production, to look for possibilities that some things could be bought, which, in the midst of the situation we had, was not possible, ..., when we could distribute the pork, chicken, egg, milk and all that, at minimum prices they (the conditions, the context) were better. Nor did we have the resources to establish parallel markets to benefit the state. We had to find, however, the way to circulate that money a little, collect a little money, and, in addition, because many people were absolutely convinced that the agricultural market resolved (the problem) and because who had a lot of money in their pockets and had nothing to do with it, he said: 'It is better that there is someone who can supply me with anything at any price.' That's why they complain about the market, but, as I understand it, many of those who complain about the market defend it. For me it is not, far from it, an ideal formula, but it was a way, it was a path, a measure that had to be taken, with its advantages and disadvantages: The middleman figure arose inevitably, and he is there because he is a character associated with the free market. Many say: You have to lower the price. From the moment you start regulating the price there you have to see how things are, it is like regulating the black market, or you establish that measure and prices are free, or you don't establish it. Indeed, many people began to collect mango, guava, products and things that were not collected, to sell them in the agricultural market" (FC, 30.04.96).

In this new market, independent peasants are called on to be "good revolutionaries", increase food production, and market it at affordable prices (FC, 17.05.96). Nonetheless, Fidel highlighted that they could profit preferentially from the market compared to the state and cooperatives, because their production commitments with the state were smaller (FC, 17.05.96).

"I must tell you that the result can be seen... he [ANAP's president] appealed to the patriotic spirit of our peasants, to work, to fight, to raise the supply in those markets, to make more accessible the purchasing value of the peso earned by a worker, or a doctor, or a teacher. What would we do without their work? What would we do without the work of factory workers? What would we do without the millions of workers and employees that the country has? Think of them too, it's generous, they fought alongside you [peasants]. This was the Revolution of the workers and peasants, to which the other workers joined. This Revolution is a daughter, it is the result of the worker-peasant alliance that must always be preserved as something sacred. And, in some of these institutions, as in the UBPCs, workers and peasants are practically the same thing, they join in the same thing, because there are no essential differences between a UBPC and a CPA, or between the service independent farmers provide to the nation and that rendered by them" (FC, 17.05.96).

6.11. The technological issue

In the period of 1992-1997, low input solutions such as biofertilizer production, biological pest control and animal traction (Table 6.1) were repeated. Nonetheless, Fidel stressed that these solutions would not be able to replace the shortages of conventional inputs in the short term (FC, 04.04.92, 05.09.92, 29.10.92, 15.07.94, 03.03.95) and showed an increased interest

in financing imports of conventional inputs and machinery, especially for sugar production (e.g., FC, 29.10.92, 16.12.94, 12.12.96).

“What a great effort our researchers and our scientists have been making to find ways to fertilize crops and control pests by biological means; what an effort to look for new, more resistant varieties. What an effort to find a way to feed the cattle that ran out of cereals and feed, which considerably affects some productions such as milk, because the herds were abruptly deprived of these foods, and demands and enormous effort in the application of new techniques and solutions: rational grazing, sugarcane planting to produce saccharin, leguminous planting, a series of new measures that have been and are being done, that already in some provinces begin to bear fruit, but that could not compensate in a short time the impact of the total suppression of feed in cattle” (FC, 05.09.92).

“To buy medicines and some raw materials we depend on the income we get from selling a little nickel; or to get fertilizer, which we necessarily need despite the application of biofertilizers. Because with biofertilizers you can’t solve everything; I wish it could, I think we would solve it quickly, because they are simpler methods that only require the use of intelligence and equipment that is not very expensive. There are also elements that we are using to multiply the roots of the plants, so that they can capture even the traces of minerals that are in the soil” (FC, 04.04.92).

The end of the plans and construction projects associated with the Food Program influenced the value of science and scientists’ work in the discourse. The way in which Fidel approached domestic scientific or low-input solutions did not have the same degree of optimism with which he projected the results of the implementation, for example, of microjet irrigation or field drainage in 1988-1991. The discourse on science and the scientist, mostly present in 1992, focused rather on the sense of urgency (FC, 04.04.92, 16.12.92, 05.09.92).

“Azotobacter was applied to almost all rice. Of course, azotobacter does not supply all the nitrogen needs of rice, but it does supply an important part of it, and in thousands of *caballerías* azotobacter was applied” (FC, 16.12.92).

“In these times any result must be applied immediately, we have to have a sense of the moment, of the need, of the circumstances; and you have to generalize (upscale)... Of course, the generalization does not depend only on the commissions, much less on the inventors, or on the rationalizers, or on the scientists, the generalization depends on everyone, depends on organizations, depends on the leadership of the state, depends on the leadership of the Party, everyone has to work on what is called generalization, or what we could call the rapid application of any research results” (FC, 16.12.92).

In the absence of previous significant fuel supplies, Fidel placed special emphasis on energy-saving measures and the search for new energy sources such as bagasse, biogas, wood, coal, peat, wind, sun, and miniature hydroelectric plants (FC, 16.12.92). In parallel, he focused on the amount of fuel saved by different technologies, innovations or saving strategies, e.g., the multi-plow (FC, 23.11.92, 16.12.92). Oxen are also still part of the fuel-saving discourse, however, less enthusiastically than in 1988-1991. In October 1992, Fidel declared that more than 100 oxen thousand were tamed, but not the planned 200 thousand (FC, 29.10.92). As with the previous technological solutions, he explained that everything could not be solved with oxen (FC, 29.10.92, 16.12.94, 03.03.95). Animal traction was predicated as a sacrifice in a period of crisis, a step back in a context of fuel limitations, and one that did not render the expected results (FC, 29.10.92, 03.03.95, 08.10.97).

“I have to say that we are forced to produce food without fertilizers, without pesticides, without herbicides, without fuel many times, resorting to animal traction, seeing ourselves with the need to feed 80% of the population living in urban areas ...” (FC, 25.11.94).

“It is impossible to decentralize heavy machines for soil preparation. We must decentralize as much as we can in terms of machinery and equipment, the appropriate ones. The commitment to use the ox is an old commitment from before the Special Period. When plans were conceived for a special period in case of war, of total blockade of the country, we were already talking about the ox; and what work it has cost, in fact, to return in all that was necessary to return to the ox, and in all that was possible to return to the ox; what work it has cost to return to the culture of the ox, to a certain extent. And we have had to make sacrifices, because all the oxen that had to be worked were oxen reduced from feeding the population; because all those animals had a destiny, the sacrifice for the consumption of the population, and hundreds of thousands of animals had to be destined to sugar cane agriculture and to other agriculture, and many of them had accidents and had problems” (FC, 16.12.94).

Together with the oxen, the “*organopónicos*” and other orchards associated with urban agriculture, as well as the centers producing pest solutions (CREE), constituted a very important image of the organic agriculture and agroecological movement in Cuba. These are practically absent in Fidel’s discourse from the period. *Organopónicos* were listed as another measure to boost food production through land distribution (FC, 15.07.94, 17.05.96, 08.10.97) and were predicated as efforts in difficult times that make a contribution to the sale of fresh vegetables in the cities (FC, 30.09.96, 29.12.97). CREEs, not by name but by their function, were also in Fidel’s discourse at the end of 1997 (FC, 08.10.97).

“... how they have achieved the feat of offering the vegetables *por la libre* [by free, it refers to non-rationed system] practically throughout the city with the products that are made there, in all those spaces that were empty... They are new things, fruit of this time of sacrifices, which have exerted a tremendous influence on people. Like all this, it shows, first of all, the growing awareness that our people are acquiring and the mobilization capacity of the Party and mass organizations. It is precisely in these difficult times that people grow and are capable of doing things that we have never seen in the history of the Revolution and that we did not see when there were many resources in this country, when we had double the fuel, triple the fertilizers, millions of tons of fodder to produce food. It has been a goal that has been set with enormous seriousness” (FC, 30.09.96).

“Now we have the fight against this plague of the Thrips palmi¹⁸⁷ ... In these cases, we have always taken, when possible, biological measures. And one of the things that agriculture has done is to look for biological elements, and there are more than 200 centers that produce some of these elements to combat different pests, which affect food, vegetables and other things” (FC, 08.10.97).

“I think that one of the best things that has been done in the special period are those urban vegetables that help so much the population so they can go looking for fresh vegetables, buy them directly, without intermediaries. I understand that the Ministry of Agriculture will make a greater effort to increase productivity per square meter, and also to create new areas. It is a good lesson of the special period” (FC, 29.12.97).

In the previous quotation (FC, 29.12.97) it is also apparent that *organopónicos* were not one of Fidel’s projects but originated from the Ministry of Agriculture. With such widespread use in Fidel’s discourse of “we” as a subject (usually entailing state, government, party and

¹⁸⁷ Fidel refers to the Thrips palmi Karny pest, which in December 1996 began to affect Cuban agriculture (especially crops such as potatoes, beans, peppers, eggplants, cucumbers, squash and soybeans). Due to the lack of chemical means, pest management alternatives were implemented, involving the release of entomophages, the production of entomopathogenic fungi, and cultural control measures such as crop rotation and association and the use of mechanical barriers. For more details see, González-Muñoz, Carlos 2011 “Alternativas para el Manejo de Thrips palmi Karny en Cuba” in *Métodos en Ecología y Sistemática*, Vol. 6(3): 89-108.

revolution), this demarcation is particularly revealing. Since 1994, the Ministry of Agriculture had an Urban Agriculture Department and the movement was further institutionalized in 1997 (see Chapter 3).

Contrasting the lack of attention to urban agriculture and low-input solutions, Fidel devoted considerable time to explaining the policy of prioritizing conventional inputs for certain crops that were considered strategic (FC, 04.04.92, 29.10.92, 23.11.92, 26.07.93, 07.11.93, 16.12.94, 12.12.96, 23.11.96). Fidel emphasized sugarcane production (and secondly rice, potatoes, and plantains) (FC, 23.11.92) and the needed fertilizers and machinery for their production (FC, 29.10.92, 23.11.92, 26.07.93, 07.11.93, 16.12.94, 12.02.96, 23.11.96).

Fidel stressed that no solutions with biofertilizers have been found for sugarcane that allowed traditional fertilizers to be replaced at scale, and that it was necessary to import urea and irrigate with ammonia (FC, 29.10.92, 23.11.92). Low-input solutions (e.g., the use of ash from sugar mills and organic fertilizer such as azotobacter) were described as insufficient to solve the problem. According to Fidel's calculations, they would only be enough for less than 10% of all the *caballerías* of sugarcane ratoons (FC, 23.11.92). In November 1992, Castro explained in detail how the scarcely available NKP fertilizers should be distributed among crops, i.e., nitrogen for sugarcane ratoons and rice, potassium and phosphorus for potatoes and plantains (FC, 23.11.92). In addition, he mentioned the production of ammonium nitrate in two factories in Cuba (FC, 29.10.92, 23.11.92) and the strategy of injecting processed ammonia directly into the soil with machines (FC, 23.11.92). The discourse was prolific in details concerning the number of *caballerías* that could be fertilized, costs of importing fertilizer and the tons to be applied and imported, as well as production capacities of the domestic plans (FC, 23.11.92).

The results of the 1991/92 harvest, estimated between 6.6 and 7.1 million tons of sugar, with yields between 49.1 and 54.9 tons per hectare (ONE, 2000; Pollitt, 2004), gave some optimism to the discourse on sugarcane. Even with the loss of the preferential prices of the socialist agreements, sugar production had a dominant place in the eyes of the government as an essential source of foreign exchange in the world market. The good results of the 1991/92 harvest, probably thanks to the combination of labor mobilization and remaining resource reserves, gave a false illusion that these production levels could be maintained.

“We have revenues from nickel, nickel has also dropped in price; we have revenues from fishing exports, mainly lobsters and shrimps; we have exports of tobacco, coffee, liquors, biotechnology products and the pharmaceutical industry, medical equipment, services; we have income from tourism, it is the fastest growing, it is growing rapidly but it is far from being sufficient, it will take years before income from tourism begins to compete with income from sugarcane, before income from biotechnology, the pharmaceutical industry and medical equipment compete with sugarcane, it will take time. We have important programs under development that should increase the country's revenues, but it takes time” (FC, 23.11.92).

In the following years, sugar production and yields per hectare fell sharply. The 1992/93 harvest produced 4.3 million tons with yields of 35 tons per hectare (ONE, 2000; Pollitt, 2004). Evidence suggest that, in addition to the drop in agrochemical supplies, limited active irrigation capacities, low efficiency sugarcane varieties, the depletion of reserves, and the decline in

international market revenues¹⁸⁸, the short-term production maximization policies implemented by the state aggravated the situation (Peters, 2003; Pollitt, 2004).

According to Pollit (2004), the government's decision to harvest almost all available sugarcane, limiting the proportion of the crop that remains from one season to the next, reduced the maturity and average yield of sugarcane and increased the costs in the coming years¹⁸⁹. Thus, one year's gains, probably experienced in the 1991/92 harvest, would be converted into higher costs and reduced output in the following years. This would be consistent with Fidel's emphasis on cane shoots and the need to fertilize them (FC, 29.10.92, 23.11.92, 12.02.96) and his comments on the impact of low yields in the overall production costs of sugar in 1994 (FC, 16.12.94). The 1994/95 harvest produced 3.3 million tons of sugar with yields of 28 tons per hectare¹⁹⁰ (ONE, 2000; Pollit, 2004).

At the end of 1994, Fidel began talking about the importance of "recovering the sugarcane" (i.e., recovering the productive outputs) and the need to find financing for agrochemicals (FC, 16.12.94, 12.02.96; 31.03.96, 28.05.96 [1], 28.05.96 [2]). Probably influenced by the incentive created by an increase of sugar prices on the world market in 1994-1996, conventional sugarcane fertilization and machinery became increasingly a focus of attention in the subsequent discourse (FC, 16.12.94, 12.02.96, 31.03.96, 26.07.96, 16.12.96, 23.11.96). The production of KTP combines and other machinery for the sugar industry reappeared in Fidel's speeches (FC, 12.02.96; 31.03.96, 28.05.96 [1], 28.05.96 [2], 26.07.96).

"Ah! But there may come a day when the weight of the cane in the economy is much less, that day has to come, and that has to come from science and technology. Although, even if we are a developed country in the future, we do not have to give up sugarcane, just as, say, Australians do not give it up despite their income and development; then we will have to have it well mechanized and we will have to re-create, and start up all those irrigation and field drainage brigades, and look for good yields, cost reduction and maximum efficiency" (FC, 16.12.94).

In the same discourse, mechanization acquires other justifications to those already used in the period of 1984-1991. In the new context, the need for mechanization is argued in terms of labor force shortages and the costs of mobilizations and contingents (FC, 07.11.93, 16.12.94). Additionally, mechanization is predicated as a measure that the Revolution had to take for others to study university careers and become professionals in other areas (e.g., FC, 16.12.94, 26.07.96).

"We are always saying: Will there not be a machine to sow tobacco? How can it be mechanized? Having a tobacco sowing machine ..., how to surround the seed of a material that allows it to be sown as cabbage is sown, for example, or tomato that is sown with machines, ..." (FC, 15.01.97).

This new discourse on mechanization is accompanied, as in previous periods, by the identification of mechanization and the intensive use of conventional technologies with the expression of fundamental (proud) achievements of the Revolution (FC, 01.01.94, 16.12.94, 25.03.95, 30.04.96, 28.05.96[1], 28.05.96[2]).

¹⁸⁸ The fall in the export value of sugar was estimated for the 1989-1993 period from 4.3 billion pesos to 0.7 billion pesos (Pollit, 2004).

¹⁸⁹ For further explanation see Pollit, 2004: 328-330.

¹⁹⁰ Yields of other sugar-producing countries in millions of tons in 1994 were: US 74, Brazil and India 67, Mexico 69, Australia 92. <https://ourworldindata.org/grapher/sugar-cane-yields?time=1994> (Accessed 09.02.2021).

“Thirty-five years building dams, canals, roadways, roads, agricultural facilities of all kinds, dairies, laying poultry farms, meat poultry farms, pig fattening farms; 35 years creating agricultural farms, agricultural production cooperatives, credit and services cooperatives. Thirty-five years mechanizing agriculture, so that all that sugarcane cut by hundreds of thousands of hungry workers was cut with machines; 35 years mechanizing agriculture, so that the work could be done in a much more human way; 35 years mechanizing the constructions, mechanizing the ports, building bulk sugar terminals and docks with modern cranes, to use the most modern loading and unloading systems in the ports; 35 years mechanizing crops such as rice, whose harvest was all done by hand” (FC, 01.01.94).

“But the Revolution humanized the work, and no one makes roads with a pick, shovel and *mandarria* (heavy hammer), no one carries sugar with a 325-pound sack on his shoulder; today no one ploughs the land by hand or with oxen, there are not enough oxen; today the rice is not cut with a sickle; today goods are not transported with draught animals, although we must use it to the maximum, because we are in the conditions in which we must make a tremendous effort. Today we have no choice but to spend a high amount of fuel, with prices rising. While we drill and increase our oil production, while we look for technologies that are more efficient in saving energy, while we do all that, we must fight more efficiently and work more efficiently to achieve all that, and one day we will achieve it, and more” (FC, 28.05.96 [1]).

In July 1996, Fidel referred to the advances in domestic production of combines. He mentioned technical modifications and the advantages of the new domestically-designed models, detailed the levels of production and distribution of combines, highlighting the need of centralized use of the combines (FC, 26.07.96). Tractors also returned to the discourse in 1996 with reference to carts for increasing tractor production and tractor re-motorization (FC, 12.02.96; 31.03.96, 26.07.96).

“In the past they [Spanish colonists] brought men and enslaved them, as many of you know, to cut the cane. Today our sugarcane is more honest, it is more dignified, it is sweeter, because we sustain it with the effort and sweat of the Cubans, no one has to come to cut it. Volunteers will come, and the machines will come especially, which, as I told you, will be better and more efficient; each time they will lose less time, each time we will have a little more means of transportation ...” (FC, 28.05.96 [2]).

Along with the “sugarcane recovering” discourse came nostalgia for the times of abundance of inputs. Irrigation and field drainage reappeared in the discourse (FC, 31.03.96, 30.04.96). Rice combines and rice production plans also reappeared, associated with rising world market prices (FC, 30.04.96, 26.07.96), along with citrus production as part of the “recovering of our fundamental crops” (FC, 30.04.96).

“I am sure that on the path we were on we would have reached enough sugarcane production to produce 10, 11, 12 and 13 million tons of sugar, because our country had the potential to do it and because we had a huge market at our disposal” (FC, 16.12.94).

“More than food, I must refer to the food we can now produce; we could not ask that state farms produce the number of poultry, or the number of pigs, or the amount of milk that we could produce at other times when we had enough feed to do so with imported raw materials. It [undetermined, suggesting the state, the government, the country] works in the production of food in difficult conditions, missing many products, and often fertilizers; but the effort is seen in the fields, the sowing is seen in the fields, and I have no doubt that they will soon be able to fulfill that goal of producing more food and more vegetables than the historical figures” (FC, 30.09.96).

In 1997, nonetheless, both the Minister of Agriculture and the Minister of Sugar¹⁹¹ were replaced. The newly appointed Minister of Sugar was a military general that would be advised by Ramón Castro, Fidel's oldest brother and an agricultural engineer (Pollitt, 2004). Under the new management of the sugar industry, the cutting of unripe cane was prohibited, prices for producers were increased, and 45 sugar mills were closed in order to reduce production costs and increase efficiency (Pollitt, 2004). Fidel addressed the issue on October 8th, 1997.

6.12. Discursive strategies, 1992-1997

6.12.1. Argumentative scheme

The discourse of 1992-97 is the discourse of the crisis of the contingencies (economic, political and social) of the “Special Period in times of peace”, of the shortages derived from the disappearance of the socialist bloc, and of the survival of the revolution. This period's claim is to avoid famine (Figure 6.3). Circumstances paralyzed the Food Program's large investments, and with this, the optimistic language associated with its subprograms disappeared.

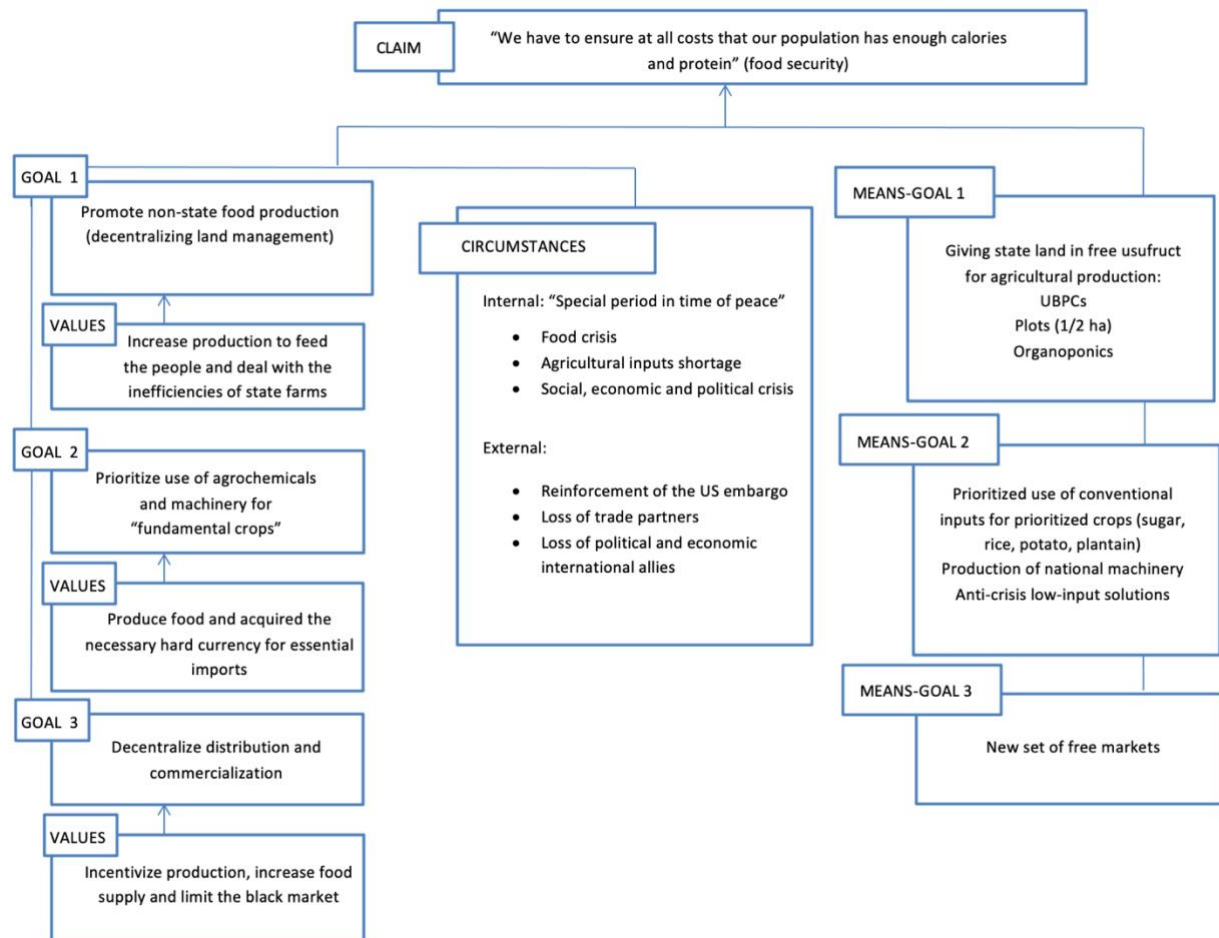
The goals were aimed at coping with and resisting the economic crisis and were expressed in terms of “what was imposed on us”, showing that they were not desired measures. The arguments supporting the goals are imbued with explanations of shortages and comparisons with previous supply levels.

The goals presented in the discourse to guarantee food security for the population are expressed in the following objectives:

- a) decentralize land management through the distribution of use rights for state lands among non-state actors,
- b) prioritize the use of agrochemicals and machinery on “key crops”, and
- c) decentralize the distribution and commercialization of food.

¹⁹¹ Sugar Ministry (in Spanish, Ministerio del Azúcar, MINAZ) was an independent ministry until 2011.

Figure 6.3: Structure of practical reasoning, Fidel’s discourse, 1992-1997



Elaborated by the author.

Castro’s discourse on agriculture showed the struggle between the usual conflicting pairs: large-small scale, private-collective property, and private-collective (state) appropriation. In a period of economic tensions, the discourse showed the transition from Fidel’s reluctance to apply measures that would alter the place previously assigned to state, cooperative and private agriculture to being forced to support decentralizing and pro-market measures since the end of 1993.

The decentralization of state land and the opening of a new agricultural free market were painful measures for Fidel. Less than ten years earlier, the discourse had directly promoted the collectivization of land and the centralization of production and commercialization during the “process of rectifying errors and negative tendencies”. As part of that discourse, Fidel expressed extreme opinions against the Peasants’ Free Market, private peasants and small agriculture. From 1993 onwards, the situation forced him to support and justify to the population the need for an intermediate solution: cooperatives not as large as the state-owned ones, but still large-scale; and a free market, but with another name.

The differences between Fidel’s approach to the plans associated with the Food Program in 1988-91 (“what we were doing”), with the creation of the UBPCs, and the reopening of the free markets (“what we now have to do”) illustrate his position with respect to the new measures. In contrast to the detailed and optimistic language of the food program plans, Fidel addressed both measures in few speeches and that only after their official approval to justify

their necessity and without detailing any projections of their anticipated results. To make matters worse, both measures were based on the state's inability to manage large tracts of land without Soviet resources, especially fuel, and to supply food through centralized systems as in previous years.

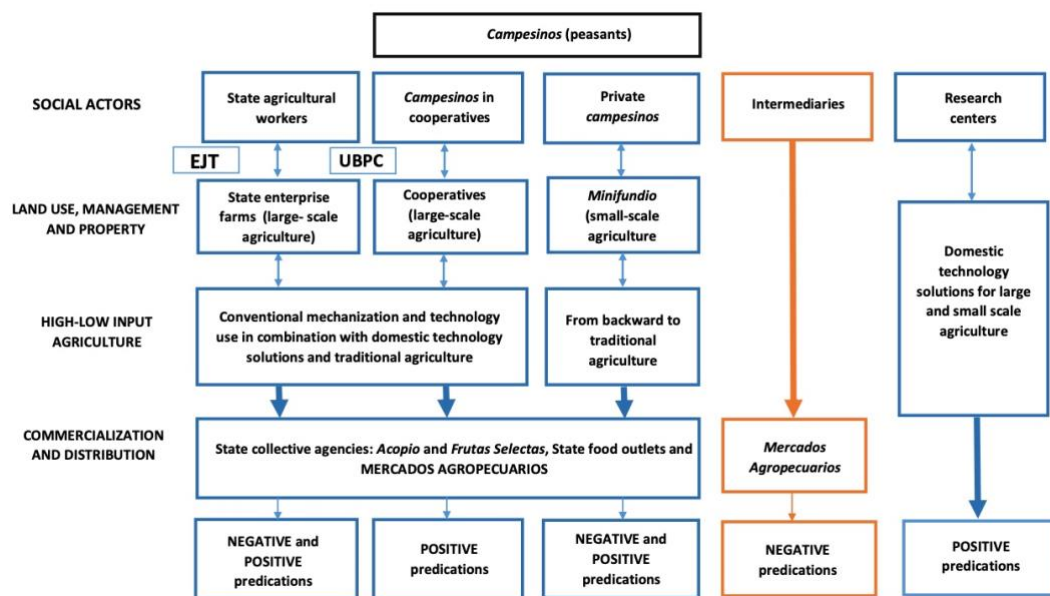
The creation of the UBPCs was further justified based on the accumulated inefficiencies of state enterprises. UBPCs were described as only a solution of last resort, but still with extensive state control and continuation of large-scale practices. Markets were to provide incentives for food production and control inflation.

Meanwhile, the discourse on technology and low-input technological solutions diminished. Fidel declared that low-input solutions would not be sufficient to solve the agriculture problems and focused rather on the discourse of prioritizing conventional inputs and the recovery of key crops, mainly sugarcane. Following Castro's discourse, the cultivation of sugarcane was to be prioritized because it would provide the country with the foreign exchange needed for essential imports. Moreover, other sources of foreign exchange for the country such as tourism and the pharmaceutical industry would still take time to be primarily relied on. Its production was to be carried out mostly by the remaining state farms and the new UBPCs, where state control was still significant.

6.12.2. Nomination and predication strategies

During 1992-1997, the map of actors involved in food production became more complicated than in previous periods. However, despite the changes driven by the anti-crisis economic measures, the nomination scheme maintains the basic structure of the 1984-1987 discourse, indicating the permanence and stability of policy beliefs regarding the agricultural actors. Figure 6.4 summarizes the nomination and predication strategies of Castro's discourse in 1992-1997. The orange and red colors denote the presence of negative predications.

Figure 6.4: Nominations and predications, Fidel's discourse 1992-1997



Elaborated by the author.

*UBPC Unidades Básicas de Producción Cooperativa (Basic Units of Cooperative Production)

**EJT Ejército Juvenil del Trabajo (Youth Labor Army)

The main changes in the nomination strategies occurred in “socialist” agriculture (state and cooperative). The agricultural mobilizations, present in the 1988-1991 discourse, began to disappear from the discourse at the beginning of the period, which was probably related to the lack of fuel and the mobilizations’ associated costs (e.g., electricity and food costs for those mobilized in the camps). Nevertheless, the mobilization and participation of the military in agriculture, especially through farms and markets of the *Ejército Juvenil del Trabajo* (Youth Labor Army, EJT) and, to a lesser extent, the members of the police and other military forces, are present in the discourse (e.g., FC, 05.09.92, 03.03.95, 17.05.96).

The cooperatives, as part of the discourse that explained and justified the creation of the UBPCs, were qualified according to the arguments already pointed out in previous periods. The UBPCs, were depicted positively through highlighting their intermediate characteristics between state enterprise and cooperatives as well as their large scale, state control, and the direct linkage of the worker with the productive results. However, the members of the UBPCs were not qualified in the discourse. Fidel referred to the new cooperative members in terms of what was given to them by the state, and the challenges they would face being responsible for production.

Private agriculture was again the object of Castro’s criticism at the beginning of this period for allegedly diverting resources, associated participation in the black market, and their decreased sales to the state. However, as part of the discourse on the new agricultural market, they were urged to be good revolutionaries and sell their production at low prices. The market intermediaries played the role of villain and received negative predications. This ambivalent approach to the private sector and market coordination is characteristic of classic socialist reform processes described by Kornai (1992). Even when its necessity is recognized, its features are irreconcilable with the ideology of classical socialism.

Those who were given up to half a hectare of land for family consumption were not described in the discourse. The provision of land in usufruct to these small producers was listed as one more coping measure of the crisis, without a fundamental role in national agriculture.

As in previous periods, a clear demarcation was retained between socialist (state and cooperative) actors and private farmers regarding land use and management, and levels of use of conventional inputs and technologies. In this period, however, all actors (except sugarcane UBPCs) could participate in the free market after fulfilling the productive commitments with the state. Though, the negative predications were concentrated on the actor whose only connection to agriculture was selling on the free market.

6.13. Resulting policy beliefs and alternative agriculture, 1988-1997

The period of 1988-1997, which is the subject of analysis in this chapter, coincides with a stage of more or less spontaneous and non-institutionalized development of the agroecological movement in Cuba (see Chapter 3 for more details). The importance given by the government to finding low-input technological solutions in 1988-1992 is coherent with the impulse given by domestic scientific contributions to agroecology and with the leading role of the scientists in the agroecological movement. Technological solutions that some researchers had been exploring for the substitution of conventional inputs in the 80s found the ideal political environment to be implemented.

On the one hand, the shortages of oil and other inputs produced in Cuba a “peak oil” situation that put the government in the difficult situation of finding short-term solutions to

maintain an indispensable minimum of food security for the population. All solutions had to be considered. Not only were they considered but, until 1992, optimistically interpreted in their future capacities for agricultural development in the country. Such is the case of the bio-fertilizer based on azotobacter.

Fidel referred to this bio-fertilizer's characteristics such as how it worked and the associated agricultural outputs and future production capacities in multiple speeches between 1991-92 (FC, 17.05.91, 10.10.91, 22.11.91, 22.12.91, 04.04.92, 16.12.92). Roca (1994) explains that Castro was informed by scientists, during a visit in 1991 to a laboratory where azotobacter was produced, that 100 thousand liters of the product could be produced by the end of the year. Fidel considered the amount insufficient, and within three days, arranged for production to be increased to one million liters for the same time frame (Roca, 2004). In November 1991, Fidel declared that hundreds of thousands of liters of azotobacter were already being produced, and that the following year production could be increased to 8, 10, 15 million (FC, 22.11.91).

This first phase of the agroecological movement also benefited from an economic and political opening (or rather the lack of capacities for control) by the government in the first years of the crisis. For example, it became possible to create foundations and associations and work with and receive funds from foreign organizations. The first organic (after agroecological) organizations and associations emerged during this period. Domestic organic and agroecological agricultural initiatives benefited from the influence and funding of foreign NGOs and intellectuals. The granting of usufruct land in the cities and in the countryside, the increase in state prices to peasants, and the opening of the free market also positively affected the movement, as they created a mass of small landholders without inputs and interested in producing food for family consumption and in obtaining extra funds in a context of economic crisis. Nonetheless, these small-scale producers did not reach a prominent place in the political discourse of the period.

Castro's interest in large-scale centralized production meant focusing mainly on those domestic solutions with potential for large-scale application, as evidenced by his interest in one million liters of azotobacter production and his consistent attention on other technological projects of the Food Program (e.g., microjet irrigation systems, the field drainage method for sugarcane plantations, the leveling technique for rice cultivation, and rational grazing system).

Small-scale agriculture solutions, like urban agriculture, were portrayed as efforts brought about by the crisis and declining food imports. Fidel made this explicit in 1995 in an interview with Mexican journalist Vázquez Raña, published in *Granma* (the Party official newspaper) on February 8th of that year:

“We were supporters – I, very much - and I thought and I think that this is the solution, that the agricultural problem requires the intensive application of technique and machines ... I believe in large farms, I don't believe in the *minifundio*, I say it sincerely. (...) we were looking for productivity per man and per hectare based on intensive and large-scale production. (...) We had to suspend in agriculture many of the programs to intensify production and increase productivity when our imports were reduced by 70 percent” (FC, Interview with the Mexican journalist, Vázquez Raña, *Granma*, 08.02.95).

Furthermore, every time Fidel referred to the deficiencies of what was no longer (sufficiently) imported, he alluded to fertilizers, pesticides, fuels and machinery (FC, 26.07.93; 26.09.93; 01.01.94; 15.07.94, among others). The speech did not express a technological change for agriculture, namely, Fidel never referred to the importation of organic inputs or low-cost, more environmentally friendly solutions, similar to those being developed in the

country. With this, Fidel’s discourse perpetuates a policy of prioritization that devalues domestic efforts: domestic actors (peasants, scientists, others) produce “solutions” to short-term context-related problems and “alternatives” (almost all agroecological, or low-cost as shown in Table 6.1), while the government deals with the importation of conventional technologies to distribute centrally in prioritized targets. This division is maintained in the next period.

However, Castro’s approach to the issue of technologies and the role of national science for agriculture between 1992-1997 showed a decreasing interest in domestic and low-input solutions and the end of the optimistic language around the potential of these products for the country’s agricultural development. This trend of the decline of the technological theme in the political discourse on agriculture increased in the period of 1998-2015, an observation confirmed by the quantitative analysis (see Annex 2). In contrast, the way in which Fidel addressed the “sugar recovery” expressed the prolongation of the classical socialist perspective for agriculture. Sugar production may have constituted the only space, in the midst of the crisis, in which a state (or semi-state in the UBPC format), large-scale, mechanized and high input form of agriculture was both possible and in line with the goal of confronting the crisis. The mechanization of sugar and the national production of the KTP combines represented both industrial agriculture throughout the periods under analysis as well as the sources of pride and triumph of the revolution in Fidel’s discourse.

The argumentative scheme and the discursive strategies of nomination and predication of Fidel’s discourse between 1988-1997 express the continuity of principled and causal beliefs for the agricultural policy of the period 1984-1987. However, parallel to the demarcation between the “right”, which also identifies what is desired, and the “wrong”, which identifies what is not desired, in this period, there is the “necessary” which expresses what was imposed by the crisis (Table 6.4).

Table 6.4. Policy beliefs, Fidel’s discourse, 1988-1997

		RIGHT	WRONG	NECESSARY
Agricultural policies	Scale	Large	Small	Small-Medium
	Technology	Mechanization	Oxen	Oxen
	Inputs	High usage	Low usage	Low usage
	Land	Collectivization	Decentralization	Decentralization
	Input allocation	Centralization	Free access to inputs	Prioritization
	Food distribution	Centralization	Market-oriented	Market-oriented
Behaviors and attitudes	Living expectations	Austerity, conformism	Consumerism/ extravagance	Austerity, conformism
	Moral stance	Altruism, collectivism	Individualism	Altruism, collectivism
	Adherence to government leadership	Loyalty	Autonomy	Loyalty
Conducive to		Modern and developed socialist agriculture	Backward, underdeveloped, and individualistic agriculture	Survival of socialism

Elaborated by the author.

Table 6.4 summarizes the principled and causal beliefs regarding different agricultural policy spheres and actors' expected behaviors and attitudes. What is considered right and wrong in the 1984-87 period remained so in 1988-96. Large-scale agriculture, with its high levels of mechanization and input use, collectivized and centralized characteristics, and workers who are altruistic, loyal and with austere expectations regarding lifestyle, is conducive to modern socialist agriculture. On the contrary, small-scale, non-mechanized, low-input, decentralized, and market-oriented agriculture, in which producers are autonomous and inclined to consumerism and profiteering, leads to backward and underdeveloped agriculture.

The "necessary" category (Table 6.4) combines elements of the approach considered "wrong" for agricultural policies (signaled in orange) with the behaviors and attitudes considered "right" (signaled in blue). In summary, in Castro's discourse, the country was forced to divide and distribute state land, use oxen and seek low-input solutions, and open the agricultural free market because, without inputs from the socialist bloc and in the situation of shortage of fundamental inputs, the desired state and collectivized agriculture could not function. However, it was also deemed necessary that actors retained the behaviors and attitudes considered appropriate according to the socialist mindset. These sacrifices would, against the odds, lead to the survival of socialism.

The extent to which this "new agriculture", not abundantly present in Fidel's speeches, was a compromise is confirmed by the absence of a definition of this new agriculture. Instead, it constituted a way to avoid hunger as a survival strategy, with no long-term development expressions.

In the period of 1996-2006, more far-reaching political processes in the country impacted the agroecological movement, leading to its growing institutionalization and greater levels of state control. These processes will be addressed in the next chapter as they are intrinsically related to the political environment of the coming period.

CHAPTER 7. THE END OF THE AGRICULTURAL TECHNOLOGICAL DEBATE, 1998-2015

7.1. Introductory remarks

This chapter analyzes the discourse of the periods 1998-2007 and 2008-2015, the former being the last period with Fidel Castro in power and the latter the first term of his brother, Raúl Castro. By the end of the 90s, Cubans had experienced some economic improvements that signaled the hardest years of the economic crisis were over, and the Cuban government had strengthened relations with new political and economic allies, especially Venezuela and China. Fidel, protected by the new alliances and driven by recent conflicts with the US, launched his last ideological battle. In 2006, when Fidel's health did not allow him to continue, Raúl assumed power and led a peaceful transition to a new leadership style while promoting economic reform. Although the Castro brothers' agricultural perspectives were vastly different, both discourses lack discussions regarding agricultural technologies. Various factors influenced this absence in their discourses.

In 1998-2015, a total of 377 speeches were considered for the analysis. The Castros addressed agricultural topics in 157 of them. In 1998-2007, Fidel delivered 312 speeches and short essays referred to as "Reflections", the greatest number of all the periods studied. However, Fidel's speeches equate to the second smallest corpus of words (agricultural content) and the lowest proportion of corpus words to total words (Table 2.1). This reflects the declining interest in agriculture in the political discourse and the increasing interest in ideological political debates. Raúl, less inclined to delivering speeches, only gave eight speeches on average per year. Although agriculture was one of the most important focuses of his economic reform, his speech on agriculture registered the second-lowest proportion of corpus words of his total 65 speeches (Table 2.1).

The analysis of the 157 speeches and Reflections was conducted using the same methodology as in previous chapters. Through the research, it was possible to identify the strategy for agriculture of the two periods, the argumentative schemes, the supporting arguments (I. Fairclough & Fairclough, 2012), and the nomination and predication strategies (Reisigl & Wodak, 2001, 2009) in Fidel and Raúl's discourse. The policy beliefs are analyzed jointly for the two periods at the end of the chapter. Historical evidence obtained through literature review, interviews with experts, and secondary data analysis enriched the discourse analysis.

For the presentation of the results, multiple quotes exemplify the Castros' (Fidel and Raúl) discursive strategies. The quotes were translated by the author and can be found in the original

language in Annex 2. For reasons of space and fluidity of the text, only illustrative examples are included in this chapter. However, a set of references in the form “FC, speech date” and “RC, speech date” indicates the presence of the topic of analysis in other speeches. In Annex 1, further details of the speeches are included.

Through the analysis, it will be shown that the Castros’ discourse between 1998-2015, although altered by Raúl’s socialism pseudo-reform and reform (Kornai, 1992), maintained core regularities of the classic socialist system, e.g., the party as the leader and responsible for economic and social performance, omnipresent party supervision, and the predominance of state and quasi-state property. Therefore, the principled beliefs remain mostly unaltered. Nonetheless, Raúl’s position regarding agriculture at the end of the period was one of advocating certain changes in agricultural policy beliefs that were expressed in the idea of a “viable agriculture”.

7.2. 1998-2007: Fidel’s last ideological battle and the new economic allies

By the second half of the 1990s, the worst of the economic crisis had passed and Cuba had proven to not be part of the falling European socialist dominos. Nevertheless, political tensions accumulated internally and externally, and economic issues were still far from being solved. Beginning in 1996, political tensions with the US regained prominence. US-Cuba conflicts added to government concerns of domestic issues such as increasing inequalities, youth discontent, unemployment, the confrontation with dissident initiatives and groups, and the aging of the country’s ruling class (Font, 2008a; Kapcia, 2008a; Mesa-Lago & Pérez-López, 2005). The combined effect of internal and external factors formed the basis for Fidel’s “Battle of Ideas” and the beginning of a new “idealist cycle” (Mesa-Lago & Pérez-López, 2013, 2005), indirectly financed by the new economic and political allies, especially Venezuela.

7.2.1. Political circumstances prompting the “Battle of Ideas”

Relations with the US worsened, not only because of the Torricelli and Helms-Burton Acts. In 1996-1997, several key events caused the conflict to escalate. In 1996, Cuban military forces shot down two planes belonging to the Miami-based organization “Brothers to the Rescue” (February 1996)¹⁹², killing four pilots, and two Cuban planes were hijacked for migratory purposes (June and August 1996)¹⁹³. In 1997, bombs exploded in Havana tourist hotels (in July and September), and Cuban intelligence discovered sabotage attempts in Havana and Varadero touristic locations.

In January 1998, Pope John Paul II’s visit to Cuba provided the government with the media coverage¹⁹⁴ needed to project an optimistic image of the political and social situation as well as tolerance and religious openness (J. O. Pérez, 2005). Between the 21th and the 25th of January 1998, Pope John Paul II held masses in four cities in Cuba. The government aimed to

¹⁹² For more detail, see Spector, J. 2001 *The Cuba Triangle: Sovereign Immunity, Private Diplomacy, and State (IN-) Action*. Reverberations of the “Brothers to the Rescue” Case, *The University of Miami Inter-American Law Review*, Spring - Summer, 2001, Vol. 32, No. 2 (Spring - Summer, 2001), pp. 321-360, and <https://www.nytimes.com/1996/02/25/world/exiles-say-cuba-downed-2-planes-and-clinton-expresses-outrage.html> [Accessed 03.03.2021].

¹⁹³ For more detail on the 1996 hijackings, see <https://www.refworld.org/docid/3ae6ac8618.html> and http://self.gutenberg.org/articles/list_of_cuba-us_aircraft_hijackings [Accessed 03.03.2021]. Fidel referred to the airplanes’ hijackings on 03.06.98.

¹⁹⁴ More than 3 thousand accredited journalists broadcast from Cuba. However, international media prominence was nullified when the Monica Lewinsky scandal occurred in the same month.

divide the Florida anti-Castro lobby by winning over believers, settling differences with the church in Cuba, gaining legitimacy abroad and inside the island, and winning the Pope's open criticism of the embargo (Kapcia, 2009). In the masses, the Pope addressed human rights, family, religious freedom and condemned the US embargo.

In September 1998, five Cuban spies (“*Los cinco*” or “*Los cinco héroes*”, in Cuban political jargon, also known as “the Miami five”, or “the Cuban five”) were arrested in Miami¹⁹⁵. A year later, a Cuban boy was found a few miles from Florida (November 1999). The child was taken secretly by the mother and found with “wet feet”¹⁹⁶ as the raft's only survivor. Following US-Cuban agreements, the boy, Elián Gonzalez, should have been returned to his father in Cuba. Instead, his mother's family in Miami took him in and refused to send him to Cuba. This event began a political dispute between the Cuban American community in Miami and the Cuban government on the island. A month later, amid the daily government-organized protests for the return of Elián¹⁹⁷ to his father in Cuba, Fidel launched the “Battle of Ideas”. The marches and demonstrations did not stop when Elián returned in June 2000. They began to be held in opposition to George W. Bush's aggressively isolationist policies and demanded the Cuban five's return (who were tried in 2001 for conspiracy and espionage and sentenced to between 15 years and two life terms).

In the internal political context, several events revealed the government's position concerning those voices not aligned with the official discourse. In 1996, Raúl led a purge process against intellectuals and Cuban NGOs for allegedly helping to subvert the Revolution (see Chapter 3). The Center for American Studies (CEA)¹⁹⁸ was one of the institutions affected by the purge, where discussions on Cuban economic reform were taking place and a book on

¹⁹⁵ The Cuban Five (Gerardo Hernández, Antonio Guerrero, Ramón Labañino, Fernando González and René González) were a group of Cuban intelligence officers, known as the *Red Avispa* (Wasp Network), who based in Miami, provided information to the Cuban government about Cuban-American organizations such as the Alpha 66 group, the F4 Commandos, the Cuban American National Foundation, and Brothers to the Rescue. The five Cubans were arrested by the FBI in 1998 and sentenced in 2001 in Florida to sentences ranging from two life sentences to 15 years in prison.

¹⁹⁶ With the increase in the number of rafters arriving to the US, in 1995, the Clinton administration passed the “wet foot, dry foot” policy that prevented admission to the US of those Cubans caught along the way (wet feet). Those who managed to arrive without being intercepted (dry feet) were eligible for asylum through the Cuban Adjustment Act of 1996. The act allowed Cubans arriving to the US, legally or illegally, to obtain residency (green card) after one year.

¹⁹⁷ For more detail on the Elián González case, see: Juan Orlando Pérez 2005 “The Cuban Propaganda War: the Story of Elián González” in Javnost The Public Journal of the European Institute for Communication and Culture, 12: 1, 85- 102.

¹⁹⁸ For more detail, see Mauricio Giuliano 1998 *El Caso CEA. Intelectuales e Inquisidores en Cuba ¿Perestroika en la Isla?* Miami: Ediciones Universal; Alberto F. Álvarez García and Gerardo González Núñez 2001 *¿Intelectuales vs revolución?: El caso del Centro de Estudios sobre América, CEA.* Montreal: Ediciones Arte D.T., 2001; and Haroldo Dilla Alfonso 2011 *The Rise and Fall of a Cuban Think Tank*, Havana Times, March 27. Available at <https://havanatimes.org/opinion/the-rise-and-fall-of-a-cuban-think-tank/>

the topic¹⁹⁹ had recently been published. Also in 1996, a group of dissidents was imprisoned before holding a conference on human rights in Havana²⁰⁰.

Beginning in 1998, the Varela Project, led by Osvaldo Payá, managed to gather more than the ten thousand signatures required by the constitution to request a referendum. The Varela Project promoted freedom of speech, free elections, amnesty for political prisoners, and allowing the creation of small private businesses. The project and its leader gained momentum in 2002-2003. In 2003, Cardinal Jaime Ortega²⁰¹ made requests to the government consistent with the Varela Project and former president of the US, Jimmy Carter, addressed the topic on Cuban national television in Spanish during his visit in 2002. The government dismissed the Varela Project proposal, alleging faults in gathering the signatures, and later campaigned against it. This resulted in a referendum in which the constitution was modified, making explicit the irrevocability of the socialist system in Cuba²⁰².

In 1999, Law no. 88, “Law for the Protection of Cuba’s National Independence and Economy”, known by dissident voices as “*Ley Mordaza*” (Gag Rule), was passed. Law 88 sanctioned “those acts aimed at supporting, facilitating or collaborating with the objectives of the Helms-Burton Act, the blockade and the economic war against our people, aimed at disrupting the internal order, destabilizing the country and liquidating the Socialist State and the independence of Cuba”²⁰³. Sentences from 2 to 20 years in prison, heavy fines and confiscation of property would apply to those who committed political crimes such as providing information to foreign journalists or US agencies of any type (receiving payment for such services was considered an aggravating factor), distributing and possessing subversive materials, and participating in demonstrations or activities that “sought” to destabilize the country. In March 2003, 75 dissidents were arrested under Law 88 and sentenced to long prison terms (55 remained in jail in 2019). This event is known as the “black spring” and negatively affected Cuba’s political relations with the European Union²⁰⁴.

In 2001, George W. Bush was elected president of the United States. In 2003, Bush created a Commission for Assistance to a Free Cuba aimed at “bringing an end to the ruthless and brutal dictatorship, assist the Cuban people in a transition to representative democracy and in

¹⁹⁹ Published in English as follows: Carranza Valdés, J., Gutiérrez, L. and Monreal, P. 1998 Cuba: Restructuring the Economy - A Contribution to the Debate. The Institute of Latin American Studies, University of London

²⁰⁰ See Larry Rother 1996 “Citing Crackdown on Dissidents, Cuban Group Cancels Conference”, *New York Times*, February 20th, 1996

²⁰¹ The Cardinal Ortega (1936-2019) was a Cuban figure of great political relevance in the process of improving relations between the Catholic religion and the Cuban government, and the process of normalization of relations between the governments of the United States and Cuba.

²⁰² For more information on the Varela project, see Larry Rother 1996 “Citing Crackdown on Dissidents, Cuban Group Cancels Conference”, *New York Times*, February 20th, 1996, and Susan Eckstein 2003 Chapter Nine Epilogue: Dollarization and its discontents in the Post-Soviet Era in *Back from the future: Cuba under Castro*, pp. 219-243.

²⁰³ For the full text of the Law, see <https://www.cubanet.org/htdocs/ref/dis/021699.htm> [Accessed 03.03.2021]

²⁰⁴ For more detail on Law 88 and the Black Spring see: Kapcia, 2008 Chapter 7 Rescuing the Revolution in the 1990s: Crisis, Adaptation and the Return to Basics in Cuba in *Revolution. A History since the fifties*, pp. 157-178; and Mesa-Lago and Pérez-Lopez, 2005 Chapter 1 Half a Century of Economic and Social Policies in Socialist Cuba, 1959–2004 in *Cuba’s Aborted Reform*, pp. 1-26.

establishing a free market economy”²⁰⁵. In 2004 and 2006, the commission published two separate plans²⁰⁶ to accelerate the transition in Cuba. The plans were complemented with new travel restrictions (only Cuban-Americans with direct family ties could visit the island once every three years), the promise to provide 80 million dollars to dissidents and anti-government programs, and the strengthening of existing economic sanctions.

In addition, between 2003 and 2004, some reformist voices were removed from their positions in the Cuban government, including the three ministers (economy, finance and prices, and basic industry)²⁰⁷. Their roles were taken over by representatives of the political orthodoxy, beginning a process of recentralization of policy-making, limiting the private sector and of policies aimed at de-dollarization of the economy (Mesa-Lago & Pérez-López, 2013).

7.2.2. The Battle of Ideas

The “Battle of Ideas”²⁰⁸ describes an overarching economic, political and social strategy that included around 170 government programs²⁰⁹. These programs were not only dedicated to the confrontation of US government policies (e.g., first the return of Elián Gonzalez and later the Cuban Five), but also to the expansion of the education and cultural awareness of the population, with a strongly defined ideological character. There is consensus in the literature that the primary purpose of the Battle of Ideas was to reinforce Cubans’ ideological commitment to the revolution, especially the young (Font, 2008b; Kapcia, 2005; Lee Anderson, 2006).

This shift from economic to ideological and social priorities has been interpreted as Fidel’s return to an idealistic (vs. pragmatic) cycle that sought to reverse the economic reform begun in the previous period (Mesa-Lago & Pérez-López, 2013, 2005), and to consolidate political orthodoxy and its political power (Font, 2008b). The focus on youth is considered Fidel’s response to the concern about replacing the leadership of the revolution and how to deal with potential opposing social groups (Kapcia, 2005).

As part of these programs, “emergency training schools” were set up in different areas: social work, primary education, nursing, art instruction, and computing. Small university campuses were opened in each municipality of the country that could be accessed by graduates of emergency courses. Courses were opened for young people to complete their pre-university education and prepared them for university entry. All participants received an income during

²⁰⁵ Press Center. The Honorable John W. Snow Prepared Remarks to the Greater Boca Raton Chamber of Commerce and the South Florida Business Alliance August 13, 2004 Boca Raton, FL. <https://www.treasury.gov/press-center/press-releases/Pages/js1856.aspx>

²⁰⁶ For more information on these plans visit: <https://georgewbush-whitehouse.archives.gov/news/releases/2004/05/20040506-7.html> and <https://georgewbush-whitehouse.archives.gov/news/releases/2006/07/20060710-1.html>

²⁰⁷ For more detail see Mesa-Lago and Pérez-Lopez, 2005 Chapter 1 Half a Century of Economic and Social Policies in Socialist Cuba, 1959–2004 in *Cuba’s Aborted Reform*, pp. 1-26.

²⁰⁸ For more detail, see Mauricio A. Font 2008 “Cuba and Castro: Beyond the Battle of Ideas” in Mauricio A. Font (ed.) 2008 *A changing Cuba in a changing world* (New York, Bildner Center for Western Hemisphere Studies), pp. 43-72; and Kapcia, A. 2005 “Educational revolution and revolutionary morality in Cuba: the ‘New Man’, youth and the new ‘Battle of Ideas’” in *Journal of Moral Education*, Vol 34, No.4 Dec 2005 pp. 399-412.

²⁰⁹ In a speech on 01.17.2006, Fidel referred to all the programs that are taking place in Pinar del Río (the westernmost province of the country) as part of the “Battle of Ideas”. This speech shows the variety of programs and directions that the Battle of Ideas took.

their period of training (referred to as “study as employment”). Government officials raised the argument that it was better to pay the young for education than to pay for the costs of prison facilities.

The Social Workers Program was the most publicized program, with its members used as “shock troops”²¹⁰ (Kapcia, 2009) by Fidel for all kinds of purposes: fighting corruption²¹¹, distributing kitchen utensils and light bulbs to the population, emergency work, and other Battle of Ideas-related tasks. For the general population, the government launched the *Universidad para Todos* (University for All) program, which consisted of courses on a wide range of topics broadcasted on national television. Two new television channels were created for this purpose, making half of all available television programs educational. The Battle of Ideas also impacted health services. Studying medicine was possible in municipal university campuses, and the government renovated hospitals and clinics.

Fidel’s *Revolución Energética* (Energy Revolution) was also promoted in the Battle of Ideas (FC, 17.01.06). As part of the Energy Revolution, the government sponsored the replacement of old electrical appliances (mostly Soviet or American from the pre-1959 period) that were high electricity consumers (e.g., Soviet and American refrigerators, incandescent bulbs, Soviet televisions and fans) with new, more modern ones. New household appliances (e.g., electric rice and multi-purpose cookers²¹², and water heaters) were also offered to family units. The equipment distributed was predominantly of the Chinese “Haier” brand and was either paid directly or in instalments by recipients in Cuban pesos. The use of electricity for cooking and boiling water was considered the best strategy to substitute the use of kerosene, usually provided to families through the ration book. The Energy Revolution also included improving the electricity service infrastructure, installing generators and finding less costly electricity generation options (e.g., wind power). This objective was closely linked to the country’s most important thermoelectric plants collapsing due to their technological obsolescence in 2004 (Rodríguez, 2011b).

The Battle of Ideas involved significant state investments in construction plans, costs of boarding schools, educational materials and supplies, and massive purchases from China. All evidence indicates that this campaign was possible thanks to the economic cooperation of new political allies in Latin America, closer relations with China and the increase in nickel prices on the world market (Font, 2008b; Mesa-Lago & Pérez-López, 2013). However, the evidence also suggests that the costs were unsustainable and a case of economic mismanagement. Later on, Raúl’s government put an end to many of the programs that were part of the Battle of Ideas under a policy of cutting social spending and limiting state subsidies (López-Segrera, 2011).

As part of the discourse surrounding the Battle of Ideas, farmers were addressed as part of the revolutionary struggle previous to 1959 and the revolution’s beneficiaries, especially with regard to land reform (FC, 15.02.02, 04.04.02, 01.06.02). The land reforms (1959 and 1963) and further acts of nationalization at the beginning of the Revolution played an essential role in giving meaning to the context. These were ideologically connected based on their historic

²¹⁰ Shock troops is a military term indicating military formations that must lead the attack, usually highly trained and equipped and prepared for high mobility.

²¹¹ Social workers were sent to work at gas stations to measure the illegal diversions that occurred in these facilities. In 2006 they also participated in a national survey of the use of machinery and fuel in agricultural production units (FC, 17.01.06).

²¹² In March 2005, Fidel appeared two times on national television showing how to use the new cookers (FC, 08.03.05, 25.03.05).

impact on US-Cuban relations and their relevance to the recent US Helms-Burton Act, which enabled the possible legal justification of claiming properties confiscated at the beginning of the revolution and sanctions against entities currently using such property.

“The socialist revolution has created more landowners than capitalism had created in Cuba for centuries. Hundreds of thousands of peasant families today own their land, for which they do not even pay taxes. Hundreds of thousands of others own them in free usufruct and exploit them individually or cooperatively, and are owners of machinery, workshops, livestock and other assets. Most importantly, the Revolution turned the Cuban people into owners of their own country. What it eradicated was the ownership of the fundamental means of production, financial institutions and other vital services in the hands of looters and exploiters of the people, who enriched themselves at the expense of the sweat of the workers, or were for the exclusive use of the privileged and rich, where the poor and blacks were excluded. The nostalgia about the property that the head of an imperial government [Bush] may suffer could be satiated by seeing that, in addition to the peasants, millions of families in the cities are now owners of the homes they occupy, for which they do not even pay taxes” (FC, 01.06.02).

7.2.3. New economic allies

Hugo Chávez became president of Venezuela in 1999 and Cuba and Venezuela’s governments signed cooperation agreements in 2000 and 2004²¹³. The first agreement (October 2000) stipulated the shipment of up to 53 thousand barrels of oil per day, equivalent to 2.4% of average Venezuelan production (Díaz-Polanco, 2006), about one-third of the island’s domestic needs and one-sixth of all total Cuban imports (Erikson, 2005; Mesa-Lago & Pérez-López, 2005). Venezuela became rapidly Cuba’s most important trading partner: total trade with Venezuela grew from 464 million USD in 1999 to 7.1 billion USD in 2007, 4.4 billion USD of that in the service sector, consisting mostly in medical and educational services (Romero, 2010).

Between 2000 and 2004, Venezuelan oil imports were carried out in dollars with favorable payment terms for Cuba: 80% had to be made at market prices and paid within 90 days, and 20% could be paid at the average annual price over 5 to 20 years. One-fifth of the latter amount could be paid through medical and sports services (Mesa-Lago & Pérez-López, 2005; Romero, 2010). Between 2001 and 2003, Cuba’s accumulated debt with PDVSA (the Venezuelan oil company) was around 752 million USD, equivalent to 80% of the company’s total debt (Erikson, 2005; Mesa-Lago & Pérez-López, 2005). However, as a result of the new cooperation agreement, in 2004, PDVSA increased daily oil shipments to about 90 thousand barrels²¹⁴ (Erikson, 2005; Mesa-Lago & Pérez-López, 2005). In 2005, the figure increased to 100 thousand barrels per day at the preferential price of 27 dollars a barrel, which was the price agreed between the two countries that remained the same when world market prices were at 65

²¹³ *Convenio Integral de Cooperación Venezuela-Cuba* (2000) <http://www.fidelcastro.cu/es/documentos/convenio-integral-de-cooperacion-venezuela-cuba-2000> and *Acuerdo entre el Presidente de Venezuela y el Presidente de Cuba, para la aplicación del ALBA* (December 14 2004) <http://www.fidelcastro.cu/es/documentos/acuerdo-entre-el-presidente-de-venezuela-y-el-presidente-de-cuba-para-la-aplicacion-del>

²¹⁴ The estimates referring to the number of daily barrels of Venezuelan oil that arrived at the Cuban port in those years differ according to the source: 90 thousand (Erikson, 2005, Yáñez, 2005), 82 thousand (Mesa-Lago and Pérez-López, 2005), 98 thousand (Romero, 2010), other sources assert that they reached 100 thousand barrels per day or more.

and 75 dollars a barrel in 2006 and 2007, respectively). This preferential oil price represented an estimated subsidy to Cuban economy of 2.5 billion in 2007 (Mesa-Lago, 2008).

The amount of oil imported beyond domestic demand allowed Cuba to apply the same strategy as had been done with Soviet oil. Cuba re-exported Venezuelan oil (refined in Cuba) and other oil by-products (Hernández-Catá, 2019). Changes in oil market prices benefited Cuba since the signed agreements did not change when oil prices rose. The value of oil imports from Venezuela between 2004 and 2007 is estimated at some 8.29 billion USD²¹⁵.

The 2004 agreement, which came into effect in 2005, also stipulated that Cuba would provide Venezuela with a more significant number of medical and educational services. Among the most important were: 30 thousand doctors, 600 clinics, 600 rehabilitation centers, 35 diagnostic centers, 100 thousand ophthalmological surgeries, 10 thousand scholarships for Venezuelan medical students, training of medical personnel in Venezuela (40 thousand doctors and 5 thousand specialists in health technology), a literacy campaign (benefiting 1.4 million Venezuelans), an education campaign for students up to 6th grade (benefiting 1.2 million Venezuelans), high school, universalization of higher education, training of workers, plus campaign to eliminate illiteracy in Latin America, among others (Díaz-Polanco, 2006; Feinsilver, 2008). In 2007, it was estimated that there were 39 thousand Cuban employees in Venezuela, mostly health personnel (Romero, 2010). This dynamic of exchange with Venezuela, together with the downsizing of Cuba's sugar industry from 2002 onwards (to be discussed in later sections), led to a change in Cuba's development strategy from exporting goods to exporting professional services (Mesa-Lago & Pérez-López, 2013).

The agreement signed in late 2004 also included the *Alianza Bolivariana para América* (Bolivarian Alliance for America, ALBA as the Spanish acronym) with economic, social and political regional objectives. Although Venezuela was the main ally, Cuba also benefited politically and economically from the center-left governments in Latin America: Argentina, Brazil, Paraguay, Uruguay, Bolivia, Ecuador and Nicaragua. These countries also imported Cuban services such as the so-called Operation Miracle (free cataract and other eyes-related surgeries), scholarships to study at the Latin American School of Medicine in Havana, and the method *Yo sí puedo* (Yes, I can), an adult literacy method applied in Latin American and African countries.

From 2001 onwards, China would also become one of the most important international allies (second only to Venezuela) for Cuba. After the Chinese president's visit to Cuba in 2001, an economic and technical cooperation agreement was signed that included credits of up to 6.5 million USD without interest, and a total of 200 million for the modernization of telecommunications, bilateral agreements in the areas of sports, educational exchange, and maritime affairs (Erikson, 2005).

Trade exchanges between Cuba and China grew in this period. China imported mainly sugar, nickel, biotechnology products, fresh and processed citrus, aluminum and tobacco. Cuba, on the other hand, imported rice, beans, industrial products, textiles, and electronics (such as those already mentioned in the section on the Battle of Ideas), as well as benefiting from an increase in Chinese tourists to the island. In addition, China gave millions of USD in donations, extended debt payments, and invested in the nickel industry. Relations with both China and Venezuela also involved political engagement in international arenas (before the United Nations and other international organizations).

²¹⁵ Estimated by the author from data published by Hernández Catá, 2019.

7.3. Agricultural sector performance

The signs of economic recovery experienced since 1995 slowed down in this period, with economic performance still far from pre-crisis levels²¹⁶. The 5th Communist Party Congress, held in October 1997, set ambitious economic and social objectives for the five-year plan (quinquennium in Cuban political jargon) of 1998-2002 that were not met²¹⁷ (Mesa-Lago & Pérez-López, 2005). Some of these objectives were noticeably exaggerated, such as producing 7 million tons of sugar per year (PCC, 1997), considering the sugar industry's performance at that time and post 1991.

In 2001, the trade deficit reached the record figure of 3.2 trillion USD and in 2003, the value of exports and imports were 70% and 46% below the levels of 1989, respectively. Meanwhile, the external debt had increased to 11 billion²¹⁸ (Mesa-Lago & Pérez-López, 2005), and further increased to 15.8 billion in 2007 (Mesa-Lago, 2008). Although the value of remittances grew steadily since 1990, reaching 800 million USD in 1999 (Eckstein, 2003) and 915 million USD in 2003 (Mesa-Lago & Pérez-López, 2005)²¹⁹, the economy was mostly at the mercy of fluctuating commodity prices of sugar, nickel and oil on the world market along with the effects of the 9/11 US terrorist attacks on the tourism sector. By the end of the period, the new economic alliances and the shift to a service economy (promoting medicine and other professional services and exporting these to mostly Latin America and secondly Africa) improved the general economic situation.

In 1998-2007, agriculture was not abundantly addressed by Fidel (Table 2.2), even though this is the period in which he delivered the greatest number of speeches and Reflections²²⁰. Within the agricultural discourse, Fidel concentrated the most on international debates regarding food production. Soybean production and criticism of ethanol production in global

²¹⁶ For a detailed comparison with the pre-crisis economic parameters see Mesa-Lago, C. and Pérez-López, J. 2005 Ch. 2 The Economic Crisis, Partial Recovery, and Stagnation. In Mesa-Lago, C. and Pérez-López, J. Cuba's aborted reform. Socioeconomic Effects, International Comparisons, and Transition Policies. University Press, Florida, pp. 27-70, and Mesa-Lago, C 2008 The Cuban Economy at the Crossroads: Fidel Castro's Legacy, Debate over Change and Raúl Castro's Options. Working Paper. Real Instituto ELCANO.

²¹⁷ For a detailed analysis of the economic and social objectives and the levels of achievement in the five-year period 1998-2003 and until 2004, see Mesa-Lago, C. and Pérez-López, J. 2005 Ch. 2 The Economic Crisis, Partial Recovery, and Stagnation. In Mesa-Lago, C. and Pérez-López, J. Cuba's aborted reform. Socioeconomic Effects, International Comparisons, and Transition Policies. University Press, Florida, pp. 27-70, and Mesa-Lago, C 2008 The Cuban Economy at the Crossroads: Fidel Castro's Legacy, Debate over Change and Raúl Castro's Options. Working Paper. Real Instituto ELCANO.

²¹⁸ This figure does not include the debt with ex-socialist countries and with Venezuela.

²¹⁹ The numbers do not include informal transfer mechanisms or informal remittance channels, especially in place when US set caps on remittances to Cuba. For more detail, see Eckstein 2003, Chapter 9. Epilogue. Dollarization and its Discontents in the Post-Soviet era, pp. 219-243.

²²⁰ At the end of this period, Fidel, having been absent from the public sphere since the end of July 2006, began writing short essays in March 2007 which were published under the name of "Reflections of Comrade Fidel" or "Reflections of the Commander in Chief". The "Reflections" were widely published in the written, radio and television media. For more detail on the content of the Reflections in the context of ethanol, see: Font, Mauricio A. 2008 "Cuba and Castro: Beyond the Battle of Ideas" in Mauricio A. Font (ed.) 2008 A changing Cuba in a changing world (New York, Bildner Center for Western Hemisphere Studies), pp. 43-72 and the Reflections of FC, 02.27.07, 03.28.07, 03.04.07.

contexts occupied for a significant proportion of the relatively limited reference to agriculture in the discourse, especially in 2007.

The discourse on domestic agriculture was brief compared with previous periods and was different in that it did not address agricultural technologies. The prior emphasis on domestic technology solutions and the actors involved disappeared from Fidel's agricultural discourse. The scarcity of references to agriculture denoted the transition from a discourse in which domestic food production for domestic consumption was prioritized to the pre-crisis strategies of producing key export and tourism sector-relevant crops (e.g., tobacco, cacao, sugarcane for rum production), and increasing food imports.

7.3.3. Downsizing the sugar industry, UBPCs' performance, and machinery centralization

Following the process that began in 1997 (see Chapter 6), in April 2002, the government announced the "restructuring"²²¹ of the sugar industry to achieve efficiency and competitiveness, increase food production, and develop a sustainable agricultural sector. This restructuring included shutting down 71 of the 156 sugar mills in the country²²². Of the remaining 85 plants on a total area of around 827 thousand hectares, 71 would continue to be dedicated to producing raw sugar and 14 would be dedicated to producing alcohols and molasses.

The initial project aimed to both maintain the production of 4 million tons of sugar annually (FC, 21.10.2002) and produce a diversity of sugarcane-byproducts. The remaining sugar industry should guarantee 700 thousand tons for domestic consumption as well as provide molasses, liquid sugar for the food industry, bagasse for energy production, yeast, organic sugar, cane wax for the production of high molecular weight alcohols, sorbitol, furfural, fatty acids, jams, and other traditional or new products (FC, 21.10.2002). The restructuring also meant converting 1.378 million hectares for food production and eliminating more than 100 thousand jobs²²³.

This far-reaching change in the country's agricultural policy was officially justified by referring to (a) low world market prices for sugar, (b) negative prospects for the future of the sugar market, and (c) excess sugar production capacity in relation to future needs (Álvarez & Pérez-López, 2006). In October 2002, Fidel explained it in terms of the unfavorable relations between the price of sugar and oil on the world market, i.e., the rise in oil prices and the fall in sugar prices, the high costs of sugar production (oil, mechanization, fertilizers), and the frequent hurricanes and droughts of recent years (FC, 22.10.02). Fidel repeatedly referred to the low unstable world market prices vs the former fixed Soviet prices (e.g., FC, 03.06.98, 28.09.00, 17.11.05, 01.05.06).

²²¹ Other times called "resizing", "reconversion", "downsizing" or "rationalization" of the sugar agribusiness. Restructuring is how Fidel referred to it in a speech on 21.10.02.

²²² Of the 71 deactivated plants, five were converted into museums for tourism, five were left on stand-by for future needs, and 61 were totally dismantled (of these, 45-50 plants had already closed as part of the downsizing reform of 1997).

²²³ Workers who became unemployed after the closure of the sugar mills were offered the opportunity to study and be trained for other jobs, receiving their previous salary and / or payment from the state during the time of study. At the end of 2003, there were around 122 thousand workers enrolled in courses receiving the salary prior to the restructuring (Álvarez and Pérez-López, 2006).

Other international and domestic contextual factors accelerated the decision to dismantle much of the national sugar industry²²⁴. Internationally, the imminent Iraq conflict increased oil prices, 9/11 reduced tourism, and Venezuelan oil shipments were interrupted in April 2002 when the attempted putsch against Chavez resulted in tighter management of their fuel supply. Together, the increased sugar production in other countries, mainly India and Brazil (Peña, 2003; Peters, 2003; Salazar-Carrillo, 2013), and the market space occupied by high fructose corn syrup (Peters, 2003; Salazar-Carrillo, 2013) limited the long-term prospects of the Cuban government.

Internally, several constraining factors also arose: rising sugar production costs, falling yields per hectare, shortages of inputs (spare parts, fertilizers, chemicals, fuel and machinery) and lack of investment and diversification (Marquetti Nodarse, 2016; Salazar-Carrillo, 2013). Production costs increased from 7-8 cents per pound in the 1970s to more than 20 cents in the late 1990s (Salazar-Carrillo, 2013), 50-70% above the world market price of 6-9 cents (Peters, 2003). Yields per hectare fell by 38% in the period 1990-2000 (Peters, 2003), while the highest producing countries in the world sugar market doubled Cuban yields.

Results of the “restructuring”, aggravated by the oil scarcities, did not occur as expected. Sugar production fell: the 2002-2003 harvest totaled 2.2 million tons and the 2003-2004 harvest 2.38 million tons (ONE, 2007). The results plummeted in 2004-2005 with 1.16 million tons and in 2005-2006 harvest only 1.11 million tons (ONE, 2007). Along with climate and input shortages, the drop in sugar production may also be related to the fact that 72% of sugar was produced by sugarcane-UBPCs (Marquetti Nodarse, 2016; Peters, 2003), most of which were created from unprofitable state agricultural enterprises with meager yields (Figueroa-Albelo, 2016), and were now also facing machinery shortages. In 1998, Fidel addressed the lack of UBPCs’ profitability, signifying that most such issues were in sugarcane UBPCs (FC, 03.06.98).

More dramatically, food production fell after the restructuring since farmers in the dismantled mills did not manage to boost food production as the government had expected. Several factors contributed, including that mill workers and sugar farmers, after years dedicated to sugar production, had no experience producing non-sugar crops and lacked the necessary agricultural machinery (Mesa-Lago & Pérez-López, 2005). Additionally, part of the land was degraded because of historic monoculture and because the country was affected by droughts and hurricanes²²⁵.

When in 2005 world market prices for sugar were again high, Fidel revisited the issue of sugar in 2005 and 2006 (FC, 17.11.05, 01.05.06). In these speeches, he explained the need for the end of the Cuban sugar industry for the following reasons: heavy machines destroying cane fields, low prices on the world market, and the end of preferential prices with the Soviets (FC, 17.11.05). In 2006, he referred to sugar production of just over one million tons and the rise in world market prices, and that better prices were expected in 2007 (FC, 01.05.06). In the same speech, he explained:

²²⁴ Since the mid-1990s, some sugar mills had already been temporarily closed and, in 1997, a plan began to be drawn up that aimed to concentrate sugar production on the best soils, diversify the production of sugar by-products and increase efficiency and reduce the costs of sugar agribusiness (Álvarez and Pérez-López, 2006).

²²⁵ Hurricane George, in 1998 impacted on sugarcane agriculture and “*cultivos varios*” (see in speeches FC, 28.09.98, 21.11.98). Between 2001 and 2002 Cuba was affected by three hurricanes: Michelle (Nov. 2001), Isidore (Sept. 2002) and Lili (Oct. 2002). Then followed Charley (Aug. 2004), Ivan (Sept. 2004), and Denis (July 2005). The long drought between 2004-2005 was considered the most critical in 100 years.

“Sugar production was no longer a business under any circumstances; these sugar prices are cyclical because all the agreements that protected sugar prices are over, and what there is today is chaos in sugar production, as in many other branches of the world economy. We are taking advantage of the favorable situation and the fact that the alcohol that goes with gasoline has reached such a high price as it is” (FC, 01.05.06).

With better sugar prices in the world market, the government eventually changed the strategy again. The objective was set to triple the production in two years through greater investment, 120 thousand additional hectares for planting sugar cane, increasing the number of mills in operation, importing of spare parts, and greater use of fertilizers and herbicides (Mesa-Lago, 2008). Still, the strategy did not work²²⁶. Since the sugar industry’s downsizing, Cuba had to import sugar to meet its international commitments and domestic demand (Mesa-Lago & Pérez-López, 2005; Pollitt, 2004).

The performance of non-sugar agriculture did not show significant progress. Of 13 key agricultural outputs, only five items (citrus, bananas, tomatoes, beans and pork) in 2000 and four (bananas, tomatoes, beans and pork) in 2007 reached levels higher than those of 1985²²⁷ (Brundenius, 2009). The results were disappointing considering the increase in agricultural land dedicated to non-sugarcane production.

State support to Agricultural Production Cooperatives (CPAs) decreased due to policies of handing over land to individuals and the creation of UBPCs. CPAs experienced a reduction in total membership and the number of cooperatives. In 1998, there were 1156 CPAs with 59 858 members (ONE, 2000, 2008a). In 2006, the number of CPAs was reduced to 1102 with 52 270 members (ONE, 2008b). Moreover, in 2006, around 20% of total CPA members were retired or nearing retirement (Chan & Freyre Roach, 2012). In terms of agricultural area, the average size per cooperative increased despite a decrease in the number of members per cooperative (i.e., about 52 members in 1998 down to 47 in 2006) (ONE, 2000, 2008b).

Nonetheless, CPAs did not seem to have the profitability problems of the UBPCs. In 1999, Fidel assured the population that 85% of all CPAs in the country were profitable and contrasted CPAs’ peasants with UBPCs agricultural workers (FC, 17.05.99). The UBPCs, following Castro’s discourse, although a good idea, had acquired certain vices associated with state enterprises (FC, 17.05.99).

“Life has shown that peasants were better able to pool their land and farm it with high efficiency; individual peasants have shown their ability to reduce costs and gain efficiency when they pool their land, and that was certainly a big step forward. They are more apt than agricultural workers when they become owners of production, of the means and managers of their own production [UBPC members]; peasants are more inclined to save, by tradition. The others [UBPC members] got used to the great expenses of the administrations and to another form of administration, and some of those vices were transferred to the UBPCs, despite the advantages that it meant for them, in many ways, to really be the owners of those productions, let’s say; and some collectives received tremendous state plantations, like rice plantations that had already been adapted, the engineering system was well developed, or other methods of productivity” (FC, 17.05.99).

²²⁶ For a more detailed description of the performance of the sugar industry in Cuba in the period 2001-2012, see Mesa-Lago and Pérez-López, 2005: 43-51.

²²⁷ Claes Brundenius uses 1985 for his analysis as the peak of a period of sustained economic growth that began in 1970. From 1986 onwards, the economy entered a period of stagnation, which was aggravated by the end of the socialist bloc.

Although data for UPBC agricultural output is lacking²²⁸, in 1998, only 25% of the sugarcane UBPCs²²⁹ and 42% of the non-sugarcane UBPCs were profitable (Figuroa-Albelo, 2003). A variety of factors drove the unprofitability of UBPCs: a) poor organization and control of production, b) deficient internal development strategies, c) insufficient supply (quantity and timing) of inputs, fuel, spare parts, agricultural machinery services, d) lack of basic working tools, e.g., clothing and shoes, e) costly and low-productivity mobilized labor force, and f) climatic conditions and pests (González Mastrapa, 2016). Furthermore, UBPC members lacked basic incentives for production. Around 80% of UBPCs production plans were contracted to the state (Figuroa-Albelo, 2016). State collection prices, centrally set by the state, did not reflect production costs or provide production incentives. Besides, the government was in no condition to offer the initial incentives presented to new CPA members, such as housing construction for UBPC members.

In 2003, 40% of the total UBPCs and 62% of the sugarcane UBPCs reported losses (Mesa-Lago & Pérez-López, 2005). In the years 2006-2007, only 44% were profitable (Mesa Lago, 2008). Although the UBPCs received government aid, e.g., 399 million pesos in 1998 (Figuroa-Albelo, 2003) and 135.6 million between 2002 and 2006 (Chan & Freyre Roach, 2012), their yields were low. Other UBPC difficulties mentioned in the literature are: lack of autonomy, indebtedness, and limited access to the free market (Donéstevez-Sánchez & Muñoz-González, 2017; Figuroa-Albelo, 2003; Nova-González & Figuroa-Alfonso, 2018), which resulted in a lack of incentives for members.

The state controlled critical decisions for the UBPCs such as annual production plans, allocation and control of fuel and fertilizers, harvest schedules, and investments (Chan & Freyre Roach, 2012). The UBPCs were also responsible for much of the food supply for regulated consumption and social institutions at low subsidized prices. In this way, a portion of what was considered the state's responsibility was transferred to the workers in a critical moment (Donéstevez-Sánchez & Muñoz-González, 2017). Only being allowed to limited participation in the free market, declared income of UBPCs members were half or less than half of CCS members and independent private farmers declared incomes (Table 7.1). UBPCs' lack of incentives and limited inputs also manifested in large areas of idle land, accounting in 2007 for 37.8% of the national agricultural inactive area (ONE, 2008a).

Table 7.1: Comparison of declared average monthly earnings per farmer among different types of farmers, Cuba 1994-2004

	Year			Increase (%)
	1994	2000	2004	
CCS*	209		1139	445%
Independent farmers			1714	
CPA**	151		264	75%
UBPCs***		581	675	16%
UBPC “La Miriam” (highest income registered)	150		715 ^a	376%

²²⁸ Unfortunately, deeper analyzes of the UBPCs performance are affected by the lack of statistical information. National statistics on agricultural production groups the results of the UBPCs under the heading of non-state agriculture, where the CPAs, CCSs and private farmers are also found, making any analysis of their results by crops impossible. For this reason, information on UBPC results is based on literature and discourse.

²²⁹ Fidel referred to the problems of the UBPCs in speeches on 03.06.98 and 17.05.99.

Elaborated by the author. Source: Chan and Freyre Roach, 2012

^a in 2008

* Cooperativas de Créditos y Servicios (Credit and Service Cooperatives)

** Cooperativas de Producción Agropecuaria (Agricultural Production Cooperatives)

*** Unidades Básicas de Producción Cooperativa (Basic Units of Cooperative Production)

Due to the lack of resources and the deterioration of agricultural machinery, agriculture was largely dependent on intensive labor. In 1998, the UBPCs had an average of one worker per 11.7 ha (Figueroa-Albelo, 2003). UBPCs received some agricultural machinery from the former state-farms, but other heavy machinery, especially that of the sugar industry, was centrally maintained and relatively unavailable to UBPCs. Fidel addressed the issue in May 1999, promoting heavy machinery centralization (FC, 17.05.99).

“Those are the Basic Units of Cooperative Production. They [UBPC members] manage them [the cooperatives], they are the owners of the production, and some of them even obtain some big machines, such as a combined sugarcane machine; because in these circumstances we always try, in agriculture, to preserve the heavy equipment, such as bulldozers or other similar equipment, whose capacities would be too much for one of these cooperatives, to keep them in centralized enterprises, and that the Agricultural Production Cooperatives or the UBPCs receive the service of those big machines. All the vehicles, tractors, farm implements, all that is theirs, they have it. Now, if it is a great sugarcane combine, very expensive, with high power engines and much more productivity, they could not have it because they would have too many machines there. Furthermore, within a harvest schedule, we have to cut sugarcane in this area, in the other one; these are more at the level of a sugar mill, although there are cooperatives, CPAs and others that have some of the first machines we made, that work them and exploit them well. The most modern ones, the biggest ones, are costly and need to be maneuvered with. Sometimes it rains here, and you have to move to another area, according to the cane’s ripening, the humidity of the soil, etc. That’s why some equipment stays centralized” (FC, 17.05.99).

7.3.2. Private farmers’ cooperatives and large-scale agriculture

In June 1998, the “First National Meeting with Credits and Services Cooperative (CCSs) Presidents” took place in Havana. One of the main issues at the meeting was the ANAP’s Movement²³⁰ of the *Cooperativas de Créditos y Servicios Fortalecidas* (CCSF, Strengthened CCSs). Before the creation of UBPCs, CCSs benefited from services being offered by state agriculture (the sole provider), including machinery. After 1993, the CCSs were affected by the transfer of the state’s assets to UBPCs. The strengthening of the CCSs included allocating equipment (e.g., irrigation) and machinery for collective use among cooperative members and improving their structure, including adding personnel for administration, accounting, and veterinary services.

Fidel participated in the closing event of the meeting with CCSs’ presidents, and delivered a speech to mark the occasion (FC, 03.06.98). The following year (1999), he addressed farmers again on the 40th anniversary of the Agrarian Reform Act (FC, 17.05.99). These two speeches are essential for understanding Fidel’s discursive approach to private peasants and large-scale state agriculture in the period 1998-2006. In these speeches, the peasants were depicted as “the soul of the Revolution” (FC, 17.05.99), “the Revolution not only gave them the land, but the dignity, the *Patria* (Motherland), the honor” (FC, 03.06.98), “the land for the peasants is a by-

²³⁰ The ANAP gave the name of Movement to many of its initiatives, like the Farmer-to-Farmer Movement. This does not imply that these were grass-roots political initiatives.

product of the Revolution” (FC, 03.06.98), and “the peasants’ results are the product of will and patriotism” (FC, 17.05.99). Fidel no longer mentioned ‘independent peasants’ and instead referred to those in this category as CCS members. The CCSs were founded at the beginning of the Revolution²³¹, but only at this point were they explicitly represented in the political discourse. In previous periods, CCS members were referred to as private/independent peasants and, along with the non-cooperative independent peasants, received harsh criticism from Fidel. Although now positively predicated, the discourse on CCSs preserved the collectivization arguments of the earlier periods.

“This meeting is the fruit of two years’ work in a process of strengthening the Credit and Service Cooperatives, one of the most difficult, most complicated institutions, because they’re spread out in many different places. It always makes the work much more difficult, including the use of resources. Furthermore, they have relatively few resources, as we’ve seen, but they’ve spent two years in a movement, which I’d say is a very wise one, with the whole peasant wisdom. They’ve done things little by little. Now they can go a bit more quickly...” (FC, 03.06.98).

“He [ANAP’s official] also told us how the number of CCSs is already over 600, with the character, as they are called, of strengthened cooperatives. It consists of a series of measures taken to make the work of these CCSs more efficient. They are made up of individual peasants but compared to the CPA where the lands were pooled; they have tractors, trucks, combines, all the equipment that a small peasant cannot have. In these CCSs, where individual producers are grouped together, they needed, for example, a tractor and have sought a tractor that serves many of the peasants; or a truck, or other vehicles, or other means that help the work. ... before the effort, they [the ANAP] dedicated it to unification [collectivization], and it was seen as the ideal solution, and without a doubt it is, the union of the lands, in order to be able to create better working and living conditions for the peasants, because, in each of these cooperatives, the CPAs made the town, the school next to that town, and along with this, many other advantages (...) they are cooperatives [CPAs] that were created over many years with the merger of the lands of the peasants... CCSs were cooperatives to support individual peasants, each working their own land. Of course, they did a lot of credit management and issues related to the interests of the peasants..., but they had no other advantages. The individual producer, with six hectares, ten hectares, twelve hectares, twenty hectares, could not have large combines and large tractors. They would be underused. Especially, after the Special Period, when the minimum conditions no longer existed, really, to continue advancing in the process of land unification [collectivization], ... to create larger agricultural units where a much better use of the machines, of the combiners, etc. could be obtained, imagine, a sugarcane combine cannot work on five hectares here, ten hectares there; mechanized cutting would become absolutely unaffordable, it becomes impossible, the lack of resources made it inevitable to change policy and reduce the size of the agricultural units.” (FC, 17.05.99)

As noted above, Fidel used the organizational, technological and humanitarian arguments identified in the 1984-1988 period (Chapter 5) to denote the superiority of the Agricultural Production Cooperatives (CPAs) where land was collectivized. Unlike in 1984-1988 discourse, in 1998-1999 Fidel did not portray the CCSs as obstacles, although they were depicted as “difficult” institutions, as well he stressed that crisis conditions, not a change of perspective, did not allow the process of collectivization to continue.

²³¹ In 1963, there were 3526 cooperatives in the country, among which included CCSs and other forms of cooperative associations (Figueroa-Albelo, 2005).

Along with collectivization, large scale agriculture was a fixed characteristic of Fidel's desired agriculture. This was manifested in the recurrence of the arguments justifying the cooperative movement in Fidel's discourse. Unable to explain his support for private agriculture using revolutionary ideals, the crisis, stated as "the current circumstances", "the sudden disappearance of these resources", or "the new situation", became the grammatical subject of the sentences and the cause of the transformations in agriculture (FC, 03.06.98). The changes, i.e., the creation of UBPCs and CCSFs, are predicated as "new formulas", "new ideas", "experiments", "new forms of production", and "other methods" (FC, 03.06.98).

"Current circumstances made new things, new ideas, new formulas essential. Also, the current circumstances helped us to discover that we came from a time of fat cows, very fat cows, of abundance, of much abundance of resources, to a time of very great scarcity, of lean, very lean cows, and they helped us to discover the way in which resources were used or even many resources were squandered" (FC, 03.06.98).

"I mean, agriculture had many failures, but there were resources and progress was made. It was the practically sudden disappearance of all those resources that forced us to become fully aware of how we had to use resources optimally and overcome negative trends, how we had to adapt all our work in agriculture to the conditions we have today and look for new formulas that are lasting, not transitory or conjunctural" (FC, 03.06.98).

"The new situation forced us to reanalyze, rework and accelerate the development of new ideas. As I was telling you today, the solutions to the problems in the harsh conditions in which our country is currently struggling, with the hardened blockade of the hegemonic power, are not written in any book, because it has never happened anywhere; quite simply, our country has become -as I said- a creator of formulas to face our current difficulties resolutely" (FC, 03.06.98).

Following Castro's logic, it was the crisis and the special period to blame for the halt in land collectivization and the reason state agricultural farms had to be divided up. Collective land ownership was argued to be the desirable option. The same logic applied to mechanization. Only tobacco and coffee were exempted due to their "unfortunate" inability to be mechanized and harvested in large areas of land (FC, 17.05.99, 22.06.00). These crops nevertheless gained importance in this period because of their potential as hard currency providers.

7.3.3. Food supply, key tourism and export crops, US agricultural products and Latin American allies

High prices in agricultural markets, undoubtedly a source of popular discontent in a population divided between those with access to foreign currency and those with state salaries in pesos, occupied Fidel's attention in several speeches in 1998 and 1999 (e.g., 03.06.98, 17.05.99). Prices in agricultural markets remained stable but high between 1994-2000 and increased in 2002 (Mesa-Lago & Pérez-López, 2005). Fidel blamed intermediaries for keeping prices high (FC, 03.06.98), describing them as "parasitic minorities", who enrich themselves and become "millionaires with your sweat [cooperative peasants]" and the pockets [funds] of the workers of our country" (FC, 03.06.98). In the same speech, before an audience of CCS members, he portrayed peasants with positive revolutionary moral qualities in regard to the new markets: the peasants of the CCS "did not seek enrichment but honor, and put the interests of the country and the revolution over economic interests" (FC, 03.06.98). These accolades were echoed several months later when he discussed wealthy and honest peasants (FC, 28.09.98).

"The money of all of those who trusted the banks and kept their money there --some who had a little bit, some who had a little more and some who had a whole lot; some, who had accounts in different banks, just in case, based on previous experiences, all the money was

respected. Even those who accumulated quite a lot [of money] were able to keep their money. Of course, there are many decent, honest people among them. I know very hard-working, honest farmers, who without the agricultural market or anything like it, have accumulated 300 thousand; 400 thousand or 500 thousand pesos because they had very high yields. Ten thousand quintals of potatoes brought 40 thousand or 50 thousand pesos per year, and they put that money in the bank. There are those who earned their money that way. Others, as you know, earned it either selling at very high prices or one way or another” (FC, 28.09.98).

The enrichment and prioritization of personal economic interests were, as has been addressed above, contrary to the revolutionary ideal. This separation of private peasants (CCS members) from intermediaries (FC, 03.06.98) had a very important symbolic meaning. After being vilified in the late 80s, they were framed as contributing to society by supplying food to the *pueblo* (people/society). Nonetheless, as can be appreciated in the quote above, the honest peasants had accumulated large sums of money, not by selling their products in the free market, but to the state.

However, Fidel was not relying only on domestic production. A variety of strategies aimed at increasing food supply were described in Castro’s speeches (e.g., FC, 03.06.98, 28.09.00, 13.08.01, 01.05.06). Traditional products, such as rum (from sugarcane), high-quality cocoa butter (FC, 26.07.05), and tobacco (FC, 03.06.98, 21.11.98, 17.05.99, 22.06.00), would increase hard currency earnings through tourism and sales on the world market. The development of protected and semi-protected crop areas to produce high-quality vegetables for national consumption and export was also planned (FC, 26.07.05, 01.05.06). The discourse on tobacco resembled Fidel’s previous enthusiasm with the Food Program.

“... one of the branches of the country’s economy that produces the most resources: tobacco production, which we want to continue expanding and, ..., we’ve been doing tests all across the island. And, all across the island, tobacco grows well, and good tobacco—in all the provinces... How much tobacco are we going to produce? We have to achieve production of 300, 400, 500 million cigars. The tobacco market is limitless. And Cuba’s prestige with tobacco, in terms of the quality of its tobacco and the preferences shown by the world, is also enormous, really. ... an important source of hard currency for the country. If we produce 300 or 400 million cigars, how much income would that produce for the country, and how many things couldn’t we do for the country, for agriculture and for the credit and service cooperatives? ... But we can bring in hundreds of millions of dollars a year with just tobacco production, in the export of finished products” (FC, 03.06.98).

In 2000, some embargo restrictions were removed by the President Clinton’s administration, allowing food and medicine imports from the US. However, trade had to be carried out with direct and advanced payments (advanced cash payments or through financing provided by third-country intermediaries), even though Cuba was without access to credit or other forms of financing. Nevertheless, shortly thereafter, the US became the largest supplier of agricultural products to Cuba (Eckstein, 2003; Mesa-Lago & Pérez-López, 2005). Fidel referred to the food trade with the US for the first in 2002 (FC, 26.06.02, 28.09.02, 05.01.05, 09.02.05).

“The increase of US imports has been based on very precise analysis and calculations of the comparative economic advantages of gains and losses in hard currency related to local productions, and on indispensable import increases. No Cuban worker has been nor will be affected since special circumstances enable us to fully respect their income and to offer them the opportunity to follow middle or higher-level studies, which will extraordinarily

raise their self-esteem and social recognition. The country will thus have more funds available for its economic and social development” (FC, 28.09.02).

Between 2001 and 2004 (combined), more than one billion dollars were paid in direct purchases (Mesa-Lago & Pérez-López, 2005) and more than 1.9 billion in 2007 alone (Mesa-Lago, 2008). In 2005, referring to the positive results of trade with American farmers, Fidel commented that payments had been made without fail and that relations were growing (FC, 01.05.05, 02.09.05). Some Cuban economists, however, pointed out that these agreements have had some negative consequences for domestic agriculture, such as the stagnation of poultry production (García-Álvarez, 2003; García-Álvarez & Nova-González, 2014) and diversion of resources to other local products (Chan & Freyre Roach, 2012).

At that time, both the import and export of agricultural goods and processed foods and products could only be carried out by the state. Especially after 2004, when the Ministry of Foreign Trade regained control of exports and imports, as well as the role of regulating and approving the country’s international transactions as part of a set of economic centralization measures of this (idealistic) period (Mesa-Lago and Pérez-López, 2005). The increase in the food supply through imports and exporting key traditional crops meant returning the control of a large part of the food supply system to the state.

However, at the end of the period, it became apparent that new economic alliances, i.e., ALBA, Venezuela, and China, were producing the intended results. Since 2001, Fidel had spoken in grand and optimistic terms about industrial production of soy-based products and Cuban innovations on soy yogurt and other by-products (FC, 13.08.01). New construction and production plans were communicated to the public during a speech on May 1st 2006. Fidel spoke with the optimism of prior periods using large numbers in reference to tons, factories, increases in the production of various products, e.g., hogs, eggs and industrial food products like soy yogurt, chocolate, noodles, and tomato sauce, among others (FC, 01.06.06). He mentioned that national fertilizer production increased by 130% and input supply was guaranteed (FC, 01.06.06). The de-emphasis on domestic food production may also signaled the return of (or hope for the return of) past practices of food importation and also possibly to the conventional agriculture of the 1980s.

7.4. Urban agriculture and its space in the discourse

As described in Chapter 3, from 1997 onwards, the agroecological movement experienced processes of institutionalization. The ACAO (Cuban Organization of Organic Agriculture) was absorbed by the ACTAF, a government-approved NGO, and converted into the GAO (Organic Agriculture Group). The National Association of Small Farmers (ANAP) expanded the farmer-to-farmer movement to the whole country. The urban agriculture movement was centralized by the Ministry of Agriculture. There is no reference to these processes in Fidel’s speeches. Organic and agroecological agriculture has only a very marginal presence in the discourse. *Agroecología* (agroecology) and *orgánico* or *orgánica* (organic) are not mentioned in Fidel’s discourse, nor are depicted the actors who practiced these forms of agriculture. When using urban agriculture and organoponics as proxies for agroecological agriculture, referred to in few speeches, no name was given to the relevant actors. There was also no mention of who they were or what characterized them, therefore not nominated or predicated.

“Urban agriculture” appeared in one speech when Fidel explained the structure of domestic agriculture to foreigners during the celebration of the 40th anniversary of the Agrarian Reform Act (FC, 17.05.99) (see quotation above). There, urban agriculture was associated with the *organopónicos*. Fidel depicted *organopónicos* as one of many “efforts” to supply the city population with food, a “formula” associated with the Special Period (FC, 03.06.98, 28.09.00).

“In summary, there are the individual peasants, who make up the Cooperatives of Credits and Services; the peasants who have been cooperativized constitute the CPAs; the state lands of the large companies that were given to the workers are the UBPCs, and, apart from that, small plots of land that many citizens have for self-consumption and for some productions that go to the market. In addition, there is urban agriculture, which are the *organopónicos* that have been created after the special period in the cities, some of which belong to the municipality and others to a small group of farmers or citizens of the city who are in charge of production and marketing” (FC, 17.05.99).

“I am convinced that we are in a position to achieve these advances, and we have to keep in mind that this is what the people will appreciate most, the impulse to these activities, from the little urban garden, which produces kilograms of vegetables per square meter, that is being promoted throughout the country; everything, we must not discard any possibility and look for the most practical formulas, more intelligent in how to market, how to distribute” (FC, 03.06.98).

“Those 30 million quintals of vegetables that are produced today in the city gardens were not produced before the special period, there were extensions of land cultivated with tomatoes and other vegetable crops, but only in agricultural fields, not in the cities themselves; this is part of the effort that has been made, in one way or another, trying to guarantee self-sufficiency and trying not to lack the most essential [foodstuffs], especially for children” (FC, 28.09.00).

In September 2003, the United Nations Convention to Combat Desertification and Drought took place in Havana. Fidel’s speech at the convention referred to the *organopónicos* using a language more akin to that of the United Nations. This was the only occasion that Castro referred to the environmental benefits of *organopónicos* (FC, 01.09.03).

“Our country, blocked for more than four decades, when the socialist camp collapsed and was forced to face an extremely difficult situation, was able to produce and is producing, in available spaces within the cities, more than 3 million tons of vegetables per year in *organopónicos*’ crops, with the use of straw and agricultural waste, using drip or microjet irrigation, a minimum expenditure of water, providing additional employment to nearly 300 thousand citizens and without emitting one kilogram of carbon dioxide into the atmosphere” (FC, 01.09.03).

In the midst of the optimism of 2006, Fidel once again mentioned *organopónicos* (FC, 01.05.06) (see quotation below). These *organopónicos*, however, seem to be run by the state or possibly the military, with expensive inputs and forming part of a large-scale development plan.

“In the program of protected vegetable cultivation on land of the Ministry of Sugar, 462 of a plan of 2800 *organopónicos* have been completed, another 1 647 are in process, and 691 have not begun, we hope that as soon as this harvest, whose efforts I have pointed out, is finished, construction or completion will be accelerated. The production of vegetables is very important and especially in these centers that are expensive and produce high-quality items, a large number of spices; I am sure that beans and many other products that are going to be consumed, [we] will be able to season them much better. We lack culture about that, even though *organopónicos* have taught us a lot. In intensive gardens - another category - 369 of 376 planned have been completed, and in cultivation houses, the 112 planned have been completed; of these, 108 have already been planted” (FC, 01.05.06).

Both an absence of alternative agriculture and consistent references to past experiences of the bonanza times of conventional agriculture are dominant characteristics of Fidel’s discourse in this period. When Fidel recalled “what the country was doing”, he did so in terms of (i) irrigation, drainage, leveling techniques, dams; (ii) dairies, hog, and chicken plans; (iii) large

citrus production plans; and (iv) Fregat irrigation machine factories (FC, 03.06.98, 26.07.98, 03.02.99, 28.09.00). The production of biological inputs, low-cost innovations and animal traction were not mentioned. At the same time, the idea was repeated that the triumphs of the revolution were being upheld in terms of mechanization and irrigation (see, e.g., FC, 26.07.98, 03.02.99, 21.10.02), and oxen were referred to as a symbol of non-mechanized agriculture of the past (FC, 28.09.00, 21.10.02).

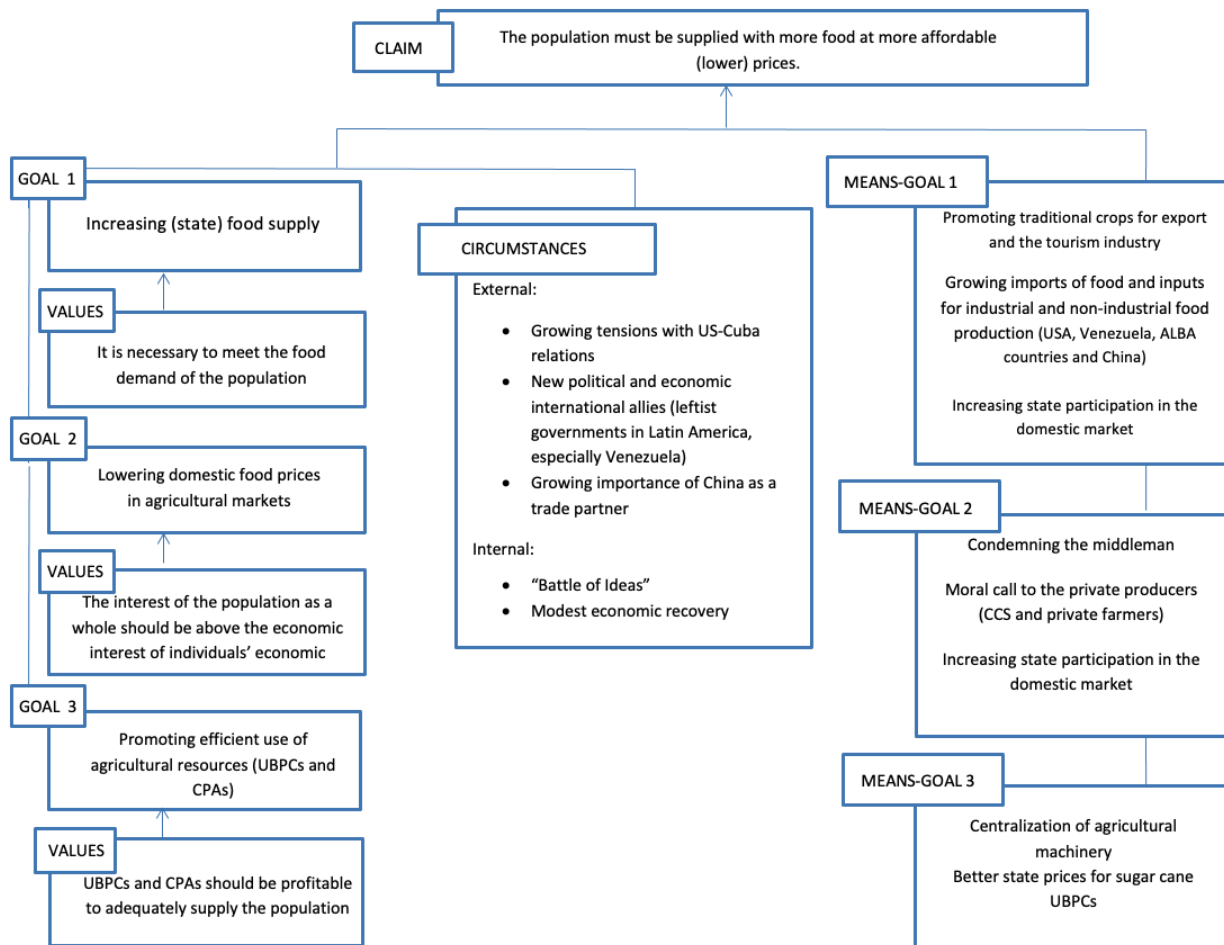
7.5. Discursive strategies, 1998-2007

7.5.1. Argumentative scheme

As discussed above, Fidel's discourse in 1998-2007 was not markedly focused on agriculture. The discourse on domestic agriculture was very scarce and did not outline or discuss a clear road map or strategy as in previous periods. Instead, a combination of "formulas" and "efforts", alleviated by the economic alliances at the end of the period, aimed at improving food availability at affordable prices. As shown in Figure 7.1., the dominant claim of the period was focused on increasing food supply without a noticeable emphasis on increasing domestic production as a means to achieving this. The technological and scientific discussion of previous years on how to develop modern agriculture was also lacking in the discourse of this period. More specifically, the familiar emphasis on technologies as drivers of higher productivity levels was absent.

The problems of agriculture for domestic consumption manifested, according to the discourse, in a) the insufficient availability of products in the markets, b) the high prices of products, linked to the profiteering of intermediaries, and c) the inefficient use of resources, especially by UBPCs (see FC, 03.06.98, 17.05.99). The strategies of the period expressed in speeches are summarized as follows: 1) increasing food supply through a combination of import, export, and production, 2) lowering food prices in domestic markets, and 3) promoting the efficient use of inputs and resources.

Figure 7.1: Argumentative scheme, Fidel’s discourse 1998-2007



Elaborated by the author.

Rum, cocoa, and tobacco, either through their sale on the world market or in the tourism industry, would provide the hard currency needed for the economy as well as food and medicine imports. Imports of agricultural products from the US would help supply domestic demand. Increased food imports could be carried out leveraging the closer relations with Venezuela, China and ALBA countries.

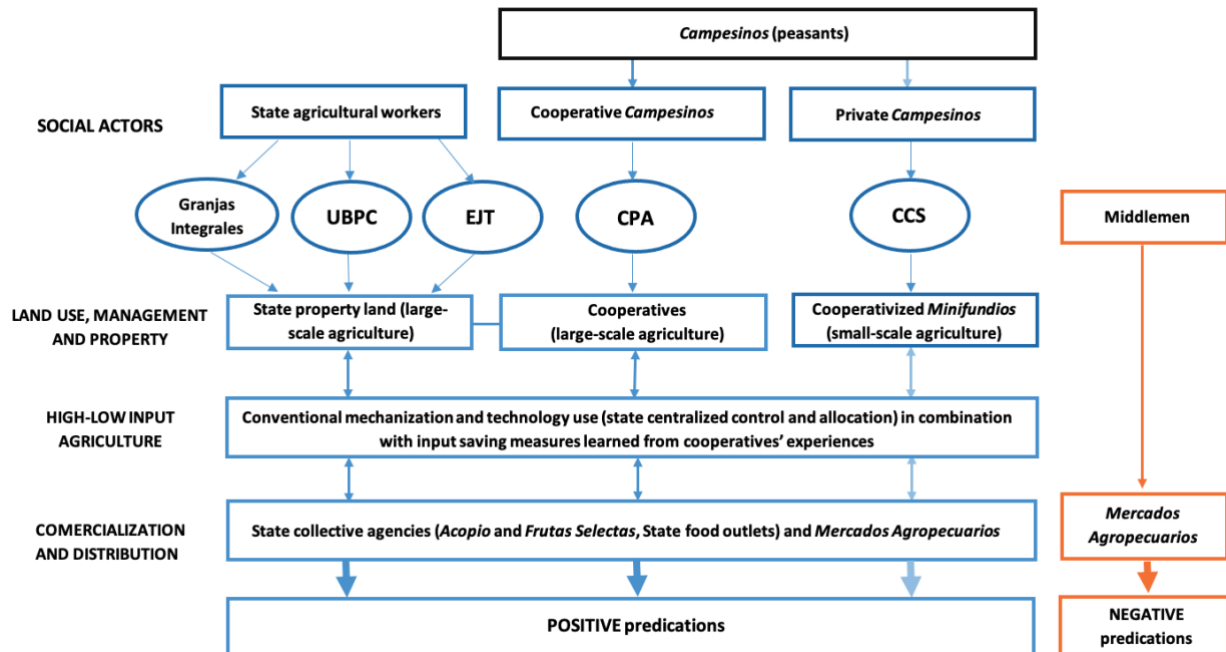
In Fidel’s discourse, lowering food prices in the domestic market would be fulfilled using two main arguments. The first, made explicitly, was to condemn middlemen and make a moral appeal to peasants to sell at affordable prices. The second, made implicitly, was to increase the state’s participation in the domestic market through the centralized sale of imported food products.

To increase efficiency in the cooperatives, following Fidel’s discursive logic, heavy agricultural machinery would be stored and managed centrally by the state with the objective of achieving a more efficient allocation of the scarce machinery and the state collection prices of some products would be raised. The arguments behind these measures and strategies are not based on appeals to technology or productive ideology. On the contrary, they are impelled by the crisis that is increasingly mentioned as the cause for the efforts and formulas that “we” (the country, the government, the state, Fidel, the party, the people) must apply and that were also an obstacle to the desired plans of the Food Program (1988-1992).

7.5.2. Nominations and predications

The diminished role of agriculture for domestic consumption in Fidel’s discourse from 1998-2007 was also expressed in the nomination and predication discursive strategies of the period. Figure 7.2 summarizes the nomination and predication strategies of Castro’s discourse in 1998-2007. The orange color denotes actors being negatively predicated.

Figure 7.2: Nominations and predications, Fidel’s discourse 1998-2007



Elaborated by the author.

* Granjas integrales (Comprehensive farms)

** UBPC Unidades Básicas de Producción Cooperativa (Basic Units of Cooperative Production)

*** EJT Ejército Juvenil del Trabajo (Youth Labor Army)

**** CPA Cooperativas de Producción Agropecuaria (Agricultural Production Cooperatives)

***** CCS Cooperativas de Crédito y Servicios (Credit and Service Cooperatives)

The map of agricultural actors is less complex than that of the previous period due to the absence of agricultural technologies in the discourse. This warranted the removal of scientific research centers and scientists as part of the relevant discourse.

In the “Battle of Ideas” discourse, peasants were predicated as part of the revolutionary struggle and beneficiaries of the land reforms at the beginning of the revolution that triggered the first confrontations with the US. In this discourse, peasants constituted an abstract category encompassing all peasants (in cooperatives or not) and fulfilling an ideological function of reaffirming the worker-peasant alliance of Cuban socialism.

The agricultural workers, now members of UBPCs, had not proven to be as efficient as the peasants grouped in the CPAs or the CCSs. Following Fidel’s discursive logic, although UBPCs were now owners of the production received machinery and other inputs for production, and that the prices for collection were high, they inherited vices from the state enterprises that are reflected in their profitability problems. The *granjas integrales* and the

military farms (EJT) were mentioned as belonging to the state sector, but were not mentioned in any other substantive context.

The CPAs, further highlighted by the absence of state farms in the discourse, are described as the “ideal solution” for private peasants, following the arguments historically used to justify collectivization. Private peasants, now nominated as members of the CCSs, are described as dignified peasants, part of the revolution, and urged to produce food at affordable prices. Intermediaries, associated with the discourse on markets, were portrayed negatively.

The absence of the technological debate in the discourse was added to the lack of discussion on land use. The common method of attacking smallholdings was infrequent and mild. Now, smallholdings were framed as not ideal, but also not an obstacle to agricultural development (as was the case in previous periods). Only the free market maintained its negative predication.

It is difficult to discern whether the reason behind a lack of emphasis on domestic agriculture as a fundamental source of domestic food in this period. It may be related to the ideal of desired agriculture (state or socialized) of previous periods having proven to be inefficient or perhaps only inapplicable in this period. The main focus of the 1992-97 period was on the UBPCs, a compromise between the state farm and the cooperative that maintained the desired large-scale agriculture and strong state control. The production performance of UBPCs confirmed that independent farmers, mostly represented in the discourse by CCS members, were more efficient and achieved better results. Even Fidel acknowledged it in 1998 and again in 1999 (FC, 03.06.98, 17.05.99). Nonetheless, the discourse expressed the tension between recognizing that private farmers achieved higher levels of efficiency and defending large-scale mechanized production.

Fidel repeatedly explained how “important things” were being carried out by state agriculture and addressed the plans of the Food Program (1988-1992): e.g., large irrigation systems, dams, canals, dairy farms, pig and poultry production sheds, citrus production plans, rice engineering systems, and the Fregat machine factory. The plans were thrown off course “when we were surprised, and the collapse of the socialist bloc came, and we lost the markets, we lost everything, fuel, raw materials, food, credits, and this tremendously hard period began” (FC, 03.06.98). In other words, the Food Program strategy was appropriate, but the circumstances forced us (Fidel, the government, the state, the party) to look for alternatives. The use of the crisis as the cause of the transformations in agriculture, combined with the repeated mentioning of the Food Program plans (representative of state socialist agriculture), shows the separation between what was “suitable” (the Food Program) and what was actually viable in the context of the crisis. The notion of what is “viable” becomes more evident in Raúl’s discourse from 2007 onwards, as discussed in the section 7.10.

7.6. 2008-2015: Change in power, updating the revolution?

On 26 July 2007, Raúl stated that Cuba had very serious socio-economic problems and that “structural and conceptual changes” had to be implemented to deal with those problems (RC, 26.07.07). In the speech, Raúl stated that milk production had to increase to the extent that a glass of milk per day could be distributed to every Cuban and stop being a rationed good limited to children (from 0 to 13 years of age, or from 0 to 7 in times of scarcity) and the sick.

This caused a considerable amount of speculation and excitement regarding the direction of the country and was actually censored in the transcription of the speech in the official press.²³²

The speech was a great surprise to the Cuban people and foreign observers, creating expectations of economic reform inside and outside Cuba²³³. Domestic food production was one of the key topics of the speech, highlighting very early that Raúl's approach to agricultural policy would be divergent from the past.

“Currently, the price of powdered milk is over 5200 dollars the ton. Therefore, should domestic production not continue to increase, to meet consumption needs in 2008, we would have to spend 340 million dollars on milk alone... This is the case with practically all products the country imports to meet, essentially, the needs of the population, ... products that I think can be grown here --it seems to me that there is plenty of land-- and we had good rains last year and this. As I drove in here, I could see that everything around is green and pretty, but what drew my attention the most, what I found prettier was the *marabú* [a thorny bush] growing along the road. (...)

No one, no individual or country, can afford to spend more than what they have. It seems elementary, but we do not always think and act in accordance with this inescapable reality. To have more, we have to begin by producing more, with a sense of rationality and efficiency, so that we may reduce imports, especially of food products --that may be grown here-- whose domestic production is still a long way away from meeting the needs of the population.

We face the imperative of making our land produce more, and the land is there to be tilled either with tractors or with oxen, as it was done before the tractor existed. We need to expeditiously apply the experiences of producers whose work is outstanding, be they in the state or peasant sector, on a mass scale, but without improvising, and to offer these producers adequate incentives for the work they carry out in Cuba's suffocating heat. To reach these goals, the needed structural and conceptual changes will have to be introduced” (RC, 26.07.07).²³⁴

In February 2008, Raúl officially took charge of the government with the official title of President of Council of State and Council of Ministers, after having replaced Fidel in the second half of 2006 for medical reasons. In 2011, he became First Secretary of the Communist Party, holding the country's most important political position.

Raúl, less given to delivering speeches in number and length (see Table 2.2), promoted popular consultation and the so-called “updating of the Cuban economic model”. He projected himself as a pragmatic leader focused on the real economic issues of the country (e.g., the trade balance and reducing the fiscal deficit) and on cutting unnecessary and excessive expenses (RC, 24.02.08, 01.08.09, 20.12.09, 04.04.10, 19.04.11).

²³² The fragment of the speech where Raúl Castro refers to milch distribution can be found in YouTube, <https://www.youtube.com/watch?v=ZONOLPzV4Xw>, Accessed: 02.06.2021.

²³³ The speech was later censored and then disappeared from the media. On 24.02.2008, Raúl referred to the speech: “The international doomsayers of the death of the Revolution tried to present in their favor the criticisms that arose during the study and reflection of the speech of July 26 in Camagüey, without understanding that it was a critical debate within socialism. This was amply confirmed, a few months later, by the results of our elections, which concluded last January 20th”.

²³⁴ This fragment was taken from the English translation of the speech, <https://www.granma.cu/granmad/2007/07/27/nacional/artic01.html>, Accessed: 21.12.2021.

“The adverse scenario of the world economy and our own difficulties demand that we maximize the possibilities offered by the mutually advantageous relations that we have been developing with friendly nations in every continent, particularly with the sister Bolivarian Republic of Venezuela, ... Our primary duty is to adjust our foreign currency spending to the amounts we can bring in. The victory in this battle shall depend on the steady increase of production either marked for export, or that can efficiently replace imports or bring about savings, and on ensuring a greater and better offer of services to people from other countries, since tourism as well as healthcare bring in considerable incomes” (RC, 27.12.08).

Raúl’s government promoted the elimination of some free or highly subsidized services (RC, 24.02.08, 11.07.08, 01.08.09, 20.12.09, 04.04.10, 19.04.11). The costs associated with the Battle of Ideas launched by Fidel in the previous period consumed the costs of social services, accounting for namely 55% of the state budget and 37% of GDP in 2007-2008 (Mesa-Lago, 2014). Raúl’s reduction of state expenditures led to the closure of costly projects such as Municipal Universities, the Social Workers’ Program, and the secondary rural schools (RC, 11.07.08, 01.08.09). Also, rationed products were reduced (e.g., RC, 18.12.10), some officials’ prerogatives such as hotel vacations at preferential prices were eliminated, and a drastic cutting of staff in the state sector was promoted. When the latter measure was announced, Raúl stated that around one million state workers should be absorbed by the non-state sector (RC, 04.04.10)²³⁵. However, in 2013, 88% of the cost of rationed products was still subsidized, which represented an amount of 25 billion pesos for the state (Mesa-Lago, 2014).

Raúl’s government also removed old prohibitions²³⁶, allowing Cubans, for example, to stay in tourist hotels (April 2008), to buy and use cell phones, and to purchase computers and other electro-domestic equipment (March 2008). With significant social impact, his government allowed the purchasing and selling of houses and cars (October-November 2011) and eliminated the *carta-blanca* (“white-card”), the mandatory official permission needed for every Cuban to travel abroad (October 2012). The self-employed (private) sector was further expanded²³⁷, and non-agricultural cooperatives were allowed in specific sectors. Raúl also promoted the limit of two five-year terms for key party and government positions²³⁸ (RC, 29.01.12, 07.07.13).

In the domestic agricultural sector, Raúl’s government promoted important changes (described in detail in the section 7.7). However, it also faced a period of great international tension. Although enjoying the consolidated economic (and political) alliances, especially with Venezuela, but also with Brazil, other Latin American ALBA countries, Vietnam, China, and Russia (RC, 23.07.12), Raúl’s government had to deal with the global financial crisis beginning in 2008 and rising world market prices for food (e.g., RC, 26.07.07, 11.07.08, 27.12.08), the falling of nickel prices in the world market (RC, 27.12.08) as well as the crisis in Venezuela

²³⁵ In 2011, around 140 thousand workers were dismissed from the state sector (Mesa-Lago & Pérez-López, 2013). Removing one million proved to be a difficult task with strong resistance among workers and their managers. *Procesos de idoneidad* (adequacy processes) were promoted to select the disposable workers. The government rescheduled the goal of 1 million to the period 2011-2014.

²³⁶ For a lengthy description of Raúl’s government policies see

²³⁷ The government approved 178 occupations for self-employment (up from 156) and allowed the self-employed to hire up to five workers and to be contracted by state entities. Also, private restaurants were allowed to expand from capacities of 12 to 50 chairs, among others measures. For more details, see Mesa Lago & Pérez López, 2013, Chapter 5 “The Reforms, the National Debate and the Party Congress”.

²³⁸ Raúl finished his term in 2018, and Miguel Díaz-Canel is the current head of government of the country.

and the death of Hugo Chávez. In the domestic context, hurricanes and droughts limited agriculture performance, namely four hurricanes in 2008²³⁹ and one in 2012 (RC, 27.12.08, 31.12.08, 26.07.13) and droughts in 2009, 2010 and 2015 (RC, 26.07.09, 01.08.10, 15.07.15).

“... concerning food, the country paid this year 907 million dollars more than in 2007, and of these, close to 840 million were due to price increase. These prices have been decreasing in the past few weeks, but the prices of our main export items have decreased even more. In 2008, the average price nickel was 41% lower than in 2007 and 80% lower than that year’s record. Also, the prices of sugar and seafood, among other export items, have sustained a decrease” (RC, 27.12.08).

In terms of discourse, Raúl did not express the dichotomies about scale and appropriation of benefits present in Fidel’s speeches. However, Raúl also did not confront his brother’s perspective or explicitly introduce conflicting views. After the domestic and international reaction to the July 26th 2007 speech, Raúl declared in July 2008 that Fidel was reviewing and giving approval to Raúl’s speeches, as well as the measures to be implemented (RC, 11.07.08). Additionally, Raúl accompanied his speeches with quotes and references to Fidel’s past interventions or highlighted his brother’s approval (e.g., RC, 24.02.08, 11.07.08, 26.07.09, 29.01.12, 23.07.12).

“Now it is more important than ever to rationally invest our limited resources, essentially in obtaining profits that will allow us to pay for the country’s already high social expenses. Food production, import substitution and increased exports continue to be fundamental lines of action. Besides, savings, which as comrade Fidel has guided, are today our most immediate and feasible source of resources.” (RC, 11.07.08).

The discourse on agricultural technologies, already absent in the previous period, was not present in Raúl’s speeches. On the contrary, the major emphasis was on boosting production through increasing land availability, labor force and incentives. In relation to the nomination strategies, Raúl’s discourse, although brief, placed two more actors in the field of domestic agriculture, i.e., the military farms and urban agriculture.

7.6.1. Introduction of the Guidelines on the Economic and Social Policy of the Party and the Revolution

The general economic reform promoted by Raúl was coined the *actualización* (updating). The term reflects the careful intention to not make radical changes, but rather to modernize/adapt/adjust the existing model. In 2011, at the Sixth Party Congress (the previous congress was held in 1997), a guiding document was approved after being submitted to national public debate²⁴⁰. The document listed the objectives and perspectives of the “updating” and was named *Lineamientos de la Política Económica y Social del Partido y la Revolución* (Guidelines of the Economic and Social Policy of the Party and the Revolution; hereafter referred to as the Guidelines)²⁴¹. The Guidelines aimed at “guaranteeing the continuity and irreversibility of socialism, the economic development of the country, and the increase of the population’s standard of living” (PCC, 2011: 5).

²³⁹ Hurricanes Gustav, Ike, Paloma, and Fay in 2008 and Sandy in 2012.

²⁴⁰ The government published a draft of the Guidelines to be discussed publicly in every neighborhood and every work place. After every debate, a report should be submitted indicating every participant comments and suggestions for the final document.

²⁴¹ In 2016, some modifications to the Guidelines were approved and a new document was published. Available at https://siteal.iiep.unesco.org/sites/default/files/sit_accion_files/11169.pdf [06.03.2021]

The document emphasized that the prevailing economic system would continue to be based on the socialist ownership of fundamental means of production and on centralized planning rather than the market approach (PCC, 2011). However, it was stated that greater autonomy would be granted to state enterprises and that other forms of ownership and management would be recognized and promoted, while the concentration of wealth would be avoided (PCC, 2011). Raúl's discourse on the Guidelines legitimized the document's approach (RC, 23.07.12, 07.07.13).

“...its success [the updating process] will depend on the preservation and development of socialism in Cuba, a prosperous and sustainable socialism which, while ratifying social property - ... - over the fundamental means of production, recognizes the role of other forms of non-state management; it reaffirms planning as an indispensable instrument in the direction of the economy, without denying the existence of the market” (RC, 07.07.13).

The “updating” contained, following Kornai (1992)'s framework, both features of pseudo-reform, i.e., not altering the basis of the classical socialist system and focusing on the perfection of control and planning while introducing some decentralization, and reform tending towards an increase in the private sector, giving some room for market coordination, experimenting with self-management in state-owned companies, and timid political liberalization. Raúl's approach to debate and criticism of the system was considered unprecedented, despite remaining within socialist parameters (Mesa-Lago & Pérez-López, 2013).

“Harmony in planning and organization is essential in socialism. Its absence can lead to a chaos more dangerous than that characteristic of capitalism, where the laws of the market end up establishing a certain order and equilibrium, even at the cost of the sacrifice of billions of human beings on a global scale” (RC, 11.07.08).

The (pseudo-)reform created significant expectations domestically and abroad. In addition to the aforementioned measures, the “updating” promised the elimination of the dual currency system²⁴², a significant reduction of the state sector, and the gradual elimination of the rationing book²⁴³; the latter being especially contrary to the revolution's long-lasting egalitarianism values. Politically, it promoted debate and urged scientists (economists and social scientists) to contribute to the “updating” of the socialist model. The opening was manifested in the tolerance of certain criticism in the written press and in scientific publications (e.g., in journals such as *Temas* and *Espacio Laical*), in the release of 130 political prisoners in 2010, and in the authorization for the “*Damas de Blanco*”²⁴⁴ to hold demonstrations on Sundays (Mesa-Lago & Pérez-López, 2013). These amendments, combined with the promised transformations in the economy, provoked certain internal and external political reactions, which likely prompted Raúl's comments at the First Party Conference in January 2012.

“As was to be expected, ..., there has been no lack of criticism and exhortations from those who, confusing their most intimate aspirations with reality, deluded themselves that the Conference would consecrate the beginning of the dismantling of the political and social system conquered by the Revolution, over more than half a century, with the support of the majority of Cubans. In this sense, it was no coincidence that its first objective states: ‘The Communist Party of Cuba, the superior leading force of society and the State, is the legitimate fruit of the Revolution, at the same time its organized vanguard and the one who

²⁴² The currency reform started in January 2021.

²⁴³ The rationing book currently remains in place.

²⁴⁴ “Women in White” is a dissident women's group created after the “black spring” in 2003 by the mothers and wives of political prisoners.

guarantees, together with the people, its historical continuity...Our adversaries and even some who sympathize with us, disregarding the history of permanent aggression, economic blockade, interference and the media siege, expressed in the incessant campaigns of the supposedly free press, mostly subordinated to the predominant imperial interests, all of which the Cuban Revolution has had to face, demand from us, as if it were a country under normal conditions and not a besieged square, the reinstatement of the multi-party model that existed in Cuba under the neo-colonial rule of the United States. To renounce the principle of a single party would be tantamount, quite simply, to legalizing the party or parties of imperialism on patriotic soil and sacrificing the strategic weapon of the unity of Cubans, which has made the dreams of independence and social justice for which so many generations of patriots, ...” (RC, 29.01.12).

As described in Kornai (1992)’s work, the reform is opposed by a strong countertendency to conserve as much of the political structure of the classical system as possible, specially the monopoly of the Communist Party, which signals the political limits of the reform. Starting in 2012, actions against dissident groups increased, especially before the visit of Pope Benedict XVI in March of that year (Mesa-Lago & Pérez-López, 2013). In the subsequent years, other events prompted similar reactions such as the visit of Pope Francis in 2015 and when, in December 2014, Raúl Castro and Barack Obama announced the beginning of negotiations for the reestablishment of diplomatic relations between Cuba and the US.

7.7. Raúl’s agricultural policies

Among the many pressing issues of Raúl’s updating of Cuban socialism, increasing food production and reducing food import dependency was one of the most important. Chapter 7 of the Guidelines on agro-industrial policy (PCC, 2011, pp. 26–29) reflected these priorities and stressed the following objectives:

- Reducing food import dependency
- Reducing state funding (subsidies) for domestic agriculture
- Allowing greater autonomy to producers
- Restructuring the supply and input allocation system
- Transforming the collection and marketing system
- Achieving territorial and local self-sufficiency (urban and suburban agriculture), “using local resources and with extensive use of animal traction” (PCC, 2011:29)
- Increasing yields through the use of diversification, rotation and polyculture
- Prioritizing resources for export crops, import substitution crops, and the most efficient producers.

Between August 2006 and the beginning of 2008, while still only substituting for Fidel, Raúl already implemented some measures that had a positive impact on private and cooperative agriculture. The state settled its debts with agricultural producers in 2008, increased the state collection prices of basic products such as milk, food and vegetables²⁴⁵, and eased farmers’ access to agricultural inputs²⁴⁶. Raúl referred to these measures in 2007-2009 speeches as necessary steps for incentivizing food production (RC, 26.07.07, 26.07.09, 20.12.09).

One of Raúl’s early experiments was allowing farmers to deliver the milk directly to local ration outlets without further processing, with the intention of saving fuel and steps in the

²⁴⁵ The increase in prices at which the state bought products from farmers did not lead to an increase in food prices for the population.

²⁴⁶ For a more extensive summary of Raúl’s measures, see Mesa-Lago and Pérez-López 2013 Chapter 5, and Chan and Freyre Roach, 2012 pp. 45-48.

distribution process (e.g., RC, 26.07.07, 26.07.09, 20.12.09). He stressed this solution, like others, “responds to today’s existing situation, where dreams of the vast imports of fodder and other inputs of the past decades, when the world was very different from what it is today, are just that: dreams” (RC, 26.07.07), and highlighted the value of local solutions (RC, 24.02.08).

“... there is also the tendency to apply the same recipe everywhere. As a result, and perhaps its worst consequence, many think that every problem requires national measures to be solved. Local initiative is effective and viable on many issues, as has been demonstrated by the direct distribution of milk... The experience already covers 64 municipalities in 13 provinces of the country, 40 of them fully covered... In addition to guaranteeing the punctuality and quality of this essential product, ... this program made it possible to save more than 6 thousand tons of powdered milk whose purchase would have exceeded 30 million dollars, considering the average price in the period of five thousand fifty dollars per ton. Besides, foreign exchange expenses were reduced by 2.6 million dollars, including some 600 thousand liters of fuel” (RC, 24.02.08).

Raúl addressed the food situation considering external and domestic factors. He detailed the extent to which world market prices rose by using essential items as prominent examples, e.g., powdered milk, rice, chicken, fertilizers, oil (RC, 26.07.07, 11.07.08, 27.12.08). Regarding the domestic context, Raúl described fields plagued by the *marabú* bush (RC, 26.07.07, 26.07.09), the decreasing trend in the harvested area over the years (RC, 11.07.08), the existence of abundant idle land to cultivate (RC, 11.07.08, 26.07.09, 20.12.09, 16.04.11, 19.04.11), and high food prices in domestic markets (RC, 11.07.08, 15.07.15).

“In July 2007, the cost of importing a ton of rice had already risen to 435 dollars, today it requires spending 1110 per ton ..., among the most important increases are the prices of fertilizers, essential for higher yields. One of the most important, the complete formula for various crops, raised its price from 303 dollars per ton in July 2007 to 688 dollars at this time. Another widely used fertilizer, urea, cost about 400 dollars a ton a year; now it costs almost 700 dollars. It looks like the devil’s work!” (RC, 11.07.08).

“We have to definitely reverse the decreasing trend of the area of cultivated land, which between 1998 and 2007, in only nine years, decreased by 33 percent..., which was considerably influenced by the limitations imposed by the Special Period. In short, we must turn to the land; we must make it produce! ..., there cannot be a suitable hectare left unplanted, first of all, on the immediate periphery of every town and city. It is much cheaper to make the best use of the land nearby than to move workers or students over long distances... Thus, we avoid losses and low productivity” (RC, 11.07.08).

In Raúl’s discourse, food production was considered a national security matter (FC, 26.07.09, 20.12.09) and domestic agriculture should be carried out with the resources that the economy could afford (FC, 24.02.08, 11.07.08, 26.07.09, 20.12.09, 04.04.10). This pragmatic approach to economic decisions distinguished Raúl’s discourse from Fidel’s grandiloquence on socialism’s all-encompassing powers.

“In these circumstances, priority will be given to the promotion of activities that guarantee income and import substitution, as well as food production, with the aim of gradually reducing existing dependence on the foreign market in this area. We have already said that the development of our agriculture is a matter of national security” (RC, 20.12.09).

“Without a strong and efficient agriculture that we can develop with the resources at our disposal, without dreaming of the great allocations of other times, we cannot aspire to sustain and raise the food supply of the population, which still depends so much on importing products that can be grown in Cuba” (RC, 04.04.10).

Raúl spoke about a period of limited resources using a colloquial and down-to-earth language (e.g., RC, 11.07.08, 26.07.09). Implicitly, he expressed some criticism of Fidel's past idealism and Battle of Ideas (e.g., RC, 11.07.08, 26.07.09) while promoting economically realistic socialism, achieving a trade balance and reducing the fiscal deficit.

"In socialism, it is indispensable that in economic plans, the allocation of resources be strictly adjusted to available income. We cannot aspire that 2 and 2 are 5; 2 and 2 are 4; rather sometimes in socialism 2 and 2 gives 3" (RC, 11.07.08).

"The land is there, here are the Cubans, we will see if we work or not, if we produce or not, if we keep our word or not! It is not a question of shouting '*Patria o Muerte!*', '*Abajo el Imperialismo!*', the blockade hits us, and the land is there, waiting for our sweat. In spite of the fact that the heat is increasing, we have no choice but to make it produce. I think we agree (Exclamations of: 'Yes!' and applause)" (RC, 26.07.09).

In two written "Reflections" of 2008 (April 16 and October 2), Fidel showed some disagreement with the approach of the new government. Still, later in 2009 (January 22), he promised to reduce his "Reflections" so as not to interfere and delay the decisions to be taken by the party and the state, dedicating his writing from that moment onwards mostly to international affairs and history (Mesa-Lago & Pérez-López, 2013, pp. 193–194).

Raúl's discourse, less idealistic and more grounded in reality, also translated into his approach to land use, tenure, and agricultural technologies. Raúl's discourse showed no preference regarding land property and management (RC, 24.02.08, 11.07.08, 26.07.09, 20.12.09). His position on private agriculture in the socialist system was unparalleled in the history of the revolution, and for those keeping track of Fidel's previous discourse, it should have been surprising.

"... there are remarkable experiences of producers who achieve good results by combining science with ox, organic fertilizer, other traditional means and above all a lot of efficient work. I admire the great socialist state enterprise, including the agricultural ones, and we will not give up on them. I know several that produce efficiently. This in no way denies the role of the cooperative in its various forms and of the small farmer, of whom I can also give very outstanding examples. These are all forms of ownership and production that can coexist harmoniously, as none of them is antagonistic to socialism. (...) land, resources and all the necessary support will be increasingly available to those who produce efficiently, whether it be a large company, a cooperative or an individual farmer. (...) That is why I am an admirer and firm defender of the great socialist industrial, agricultural or whatever state enterprise, but I do not underestimate either the cooperatives or the peasants, as we said" (RC, 11.07.08).

"We called, at that time [26.07.07], to generalize as quickly as possible and without improvisation each experience of the outstanding producers of the state and peasant sector, and to stimulate the hard work they do, as well as to solve definitively the harmful unpaid bills by the state in the sector" (RC, 26.07.09).

Technologically, Raúl's approach can be summarized as "combining science with the ox" (RC, 11.07.08), or as the Guidelines put it, "combining the use of animal traction with advanced technologies" (PCC, 2011, p. 28). Raúl expressed his discursive position in this regard by not discussing which technology was better. The short-term pragmatic perspective, influenced by the urgency of dealing with long-lasting economic problems in the country and agricultural inefficiency, may not have allowed for a long-term discussion about which agriculture the country ideally needed or which agriculture was desired.

The absence of a preferred technological approach manifested in the heterogeneity of government-approved agricultural approaches at the time. During 2008-2015, the urban agriculture movement was, with Raúl's involvement, expanded to suburban areas (to be discussed in section 7.8), the cultivation of domestically developed transgenic maize on military farms began (see Chapter 3), and the policy of prioritizing conventional inputs for key crops continued.

In the speeches studied, Raúl never mentioned the cultivation of GMOs (genetically modified organisms) in the period 2008-2015. Nonetheless, the cultivation of GMOs was, at that time, strictly limited to military farms, most probably with Raúl's approval and possibly indicating the use of the "advanced technologies" referred to in the Guidelines (PCC, 2011, p. 28).

Raúl's prioritization approach focused on three indicators: a) crops intended for exports, b) crops intended to substitute imports, and c) supporting the most efficient producers (RC, 26.07.07, 11.07.08, 20.12.09). This threefold prioritization policy was ratified in the Guidelines (PCC, 2011).

7.7.1. Distribution of idle state land

The land was a critical variable in Raúl's approach to agriculture. Following his discursive logic, money spent on food imports was irrational when "almost half of the arable [state] land was idle or poorly exploited" (RC, 26.07.09). Hence, a significant part of the policies implemented in 2007-2015 focused on land distribution.

"Regarding one of the most discussed topics in the meetings: food production and its high prices, the country is working with the urgency that this vital issue requires, due to its direct and daily impact on the lives of the population, especially those with lower incomes. Progress has been made in studies and will continue to be made as quickly as circumstances permit so that the land and resources are in the hands of those who are capable of producing efficiently so that they feel supported, socially recognized and receive the material compensation they deserve" (RC, 28.12.07).

In July 2008, Raúl announced the distribution of idle state land to individuals, cooperatives and state farms²⁴⁷, aiming "to increase food production and reduce food imports" (Decree-Law 259). Through Decree-Laws 259, 300 and 311, which came into effect in 2008, 2012 and 2014, respectively, it was permitted to distribute land in usufruct (use rights, not ownership) of up to 13.2 hectares (one *caballería*) to landless individuals and up to 67.1 hectares (five *caballerías*) to members of cooperatives or state farms to expand their land. Cooperatives and state farms, as legal entities, could thus expand their boundaries. Use rights were granted for ten years to individuals and 25 years to cooperatives and state farms. In both cases, the right to use the land could be extended at the end of the period.

Although revolutionary for the Cuban context, the measures have been interpreted by many as insufficient (Brundenius & Pérez, 2014; García-Álvarez & Nova-González, 2014; Mesa-Lago & Pérez-López, 2013). The example of Vietnam, where land was given to peasants for 50 years and with greater autonomy for production and commercialization, is perceived as a more successful example (Brundenius & Le Dang, 2014; De Miranda-Parrondo, 2014; Mesa-Lago & Pérez-López, 2013; Pérez-Villanueva, 2014; Vidal-Alejandro, 2014). The Vietnam model was certainly known by Raúl, who visited Vietnam in 2012 and referred to the economic relations with Vietnam in various speeches (RC, 26.07.07, 18.12.10, 23.07.12).

²⁴⁷ Non-agricultural state companies could also ask for land to provide food for their workers.

Little is written about the composition of the new landholders. Data for 2011, before Decree-Law 300 came into effect, reported that individuals represented 98% of the total of applications for land- 79% of which were landless individuals and 70% with no previous farming experience (Chan & Freyre Roach, 2012). Anecdotally and through informal contacts, it can be assumed that a substantial proportion of those landless applicants were peasants' direct family. The distribution of land was perceived by family farms as a strategy to expand their land.

“The distribution of land in usufruct is advancing at a satisfactory pace, although insufficiencies persist, in some municipalities more than in others. Of the more than 110 thousand applications made, nearly 82 thousand have been approved so far, covering some 690,000 hectares, or 39 percent of the idle area” (RC, 26.07.09).

“About 920 thousand hectares have been given to more than 100 thousand beneficiaries, representing 54% of the total idle area” (RC, 20.12.09).

By the end of 2012, the official media reported that more than 1.5 million hectares were handed over to 174 thousand people. In the same official note, it was stated that only 23% of the beneficiaries had previous experience in agriculture (Mesa Redonda, Nov 1, 2012 “*Decreto-Ley 300, en busca de la productividad de la tierra*”), which could negatively impact policy outcomes in the short term.

7.7.2. Raúl's policy of removing the obstacles holding the agricultural sector

Despite the agricultural prioritization measures implemented, in 2010, the planned output for sugar and other agricultural production was not fulfilled “because of management errors and also because of the effects of the drought” (RC, 01.08.10). The negative results of the sugar industry (unmet production targets and low yields) had their momentum between 2010 and 2011. The production plan was fulfilled only at 85% in 2010 and 80% in 2011 (Mesa-Lago & Pérez-López, 2013), two ministers were dismissed, and the Ministry of Sugar (MINAZ) was dissolved and its functions redistributed among other related ministries.

Cuba continued importing sugar (although less in quantity and value) from Colombia, Brazil, and more recently France, to meet its international commitments and domestic demand (“Cuba Increases its Sugar Imports from France!,” 2018; Mesa-Lago & Pérez-López, 2005; Pollitt, 2004). To reduce the impact of shortages, the government artificially reduced domestic demand in 2011 by diminishing the quota per person from five pounds to four pounds per month in the rationing system; as a result, national demand decreased from around 700 thousand to 600 thousand tons (Mesa-Lago & Pérez-López, 2005). Plans to increase supply involved foreign capital for agricultural development coming from Brazil, now permitted since Raúl's opening to foreign investment, better state collection payments to farmers, and guaranteeing input allocation (fertilizers, herbicides and machinery) (Mesa-Lago & Pérez-López, 2005).

In 2012, Raúl stated that “results in agriculture were still modest” (RC, 23.07.12). Considering the timing of the statement, the disappointing results in the agricultural sector seem to have prompted a new set of government actions. Decree-Law 300 was passed in 2012, improving Decree Law 259 and expanding the prerogatives given to the new usufruct grantees (e.g., building houses and stables on the land and hiring non-family temporary workforce).

In 2012, in an effort to increase the performance of UBPCs, the government passed Resolution 574 from the Ministry of Agriculture²⁴⁸. The resolution granted UBPCs more

²⁴⁸ Gaceta Oficial Extraordinaria No. 037, La Habana, 11 de septiembre de 2012.

autonomy from state agricultural enterprises. This had the effect of empowering UBPCs' assemblies, enhancing its self-supply mechanisms and allowing UBPCs to sell to tourism facilities, as other farmers were already doing at the time. These measures were part of Raúl's discourse on placing "all types and forms of production on an equal footing" (RC, 11.07.08, 23.07.12) and were aimed at solving UBPCs' profitability problems.

According to state media, in 2012, there were 1989 UBPCs²⁴⁹. Twenty-seven percent were profitable, 57% had financial problems, and 16% (327) were in the process of being dissolved or merged due to their losses and long-lasting unprofitability (Mesa Redonda, 26 Septiembre 2012, "*Las UBPC hacia su real autonomía*"). The UBPCs had accumulated debts of more than 1.2 billion pesos, including debts for the purchase of resources and inputs from the state, tax debt, and accumulated losses due to their inefficiency. To deal with this problem, the government established a tax of five percent of all sales that the state would allocate to those struggling UBPCs so that they could pay their bank debts. In addition, the government decided to write off all the tax debt of the UBPCs and to allocate 116 million pesos from the state budget to subsidize the UBPCs and cover bank and budgetary debt (Mesa Redonda, 26 Septiembre 2012, "*Las UBPC hacia su real autonomía*").

Additionally, Raúl's government implemented changes in the commercialization system in 2012-2013 (Nova-González & Figueroa-Alfonso, 2018). In 2012, new agricultural markets were opened with non-agricultural cooperative management. In 2013, independent farmers were allowed to sell their products directly to tourism facilities (mainly hotels); more actors were authorized to market agricultural products in markets of various types, such as small stalls and street vending; and cooperatives were allowed to market their products directly. Raúl's approach to the free agricultural market was less radical than Fidel's approach, prompting broader and less regulated participation of agricultural actors in a more diverse set of markets (RC, 20.12.09, 23.07.12).

"One of the issues that requires a greater response to these productive efforts is to solve the distribution so that the products reach the population without delay. It is not only a matter of allocating resources but also of organizational forms and other measures that facilitate it, among others, so that, after complying with the deliveries agreed with the State, the producers can sell the surpluses directly on the market, under the rules of supply and demand" (RC, 20.12.09).

7.8. Military, urban, and suburban agriculture

Raúl's involvement with urban agriculture can be traced back to the late 1980s when the military extended *organopónicos* throughout the country to help ensure food availability (Companiononi et al., 2002, 2017; Premat, 2012). It has been relatively common practice for socialist countries that survived the collapse of the Berlin Wall to use the military as a disciplined workforce to undertake key tasks in reform processes or in times of crisis (Mora, 2004)²⁵⁰. In 1993, Raúl outlined the path of military agriculture with a simple quote: "Beans are worth more than guns"²⁵¹. With a budget reduced by the crisis, no more armaments from

²⁴⁹ Between 2009 and 2013, the total number of cooperatives was reduced by 15% (972) in all its forms (Donéstevez-Sánchez & Muñoz-González, 2017). In 2015, there were a total of 5049 cooperatives, distributed in 1684 UBPCs, 877 CPAs and 2488 CCSs (Donéstevez-Sánchez & Muñoz-González, 2017).

²⁵⁰ For more detail on the role of the military in the Cuban economy, see Mora (2004) *Military Business: Explaining Support for Policy Change in China, Cuba, and Vietnam*, *Problems of Post-Communism*, 51:6, 44-63.

²⁵¹ Interview by Mario Vázquez Raña with Raúl Castro, *El Sol de México*, 21 April 1993.

the USSR and no Soviet troops in the country, the military expanded its role in agriculture and other sectors of the economy²⁵².

In his time, Fidel did not refer to military agriculture beyond mentioning the EJT (Youth Labor Army) farms, which was described in terms of mobilization efforts rather than an agricultural enterprise. Raúl, Minister of the Armed Forces from 1959 to 2008, emphasized more clearly the role of military farms and the experience of military agriculture²⁵³ (RC, 11.07.08). Military agriculture was positively predicated, highlighting its efficiency levels.

“First, we [the military] said that beans were as important as guns, and when the situation got worse, we came to say that beans were more important than guns... There were no regrets or justifications. The troops marched to the agricultural fields, and in a relatively short time, they produced their food, except for those that were not logical or possible; we [the military] are not going to produce salt or sugar, or wheat, which cannot be produced in Cuba. Simultaneously, the business structures that gradually took over those productions were organized, and the combatants returned to their usual activities. The *Unión Agropecuaria Militar* [Military Agricultural Union, UAM] was created... The FAR [Ministry of Revolutionary Army Forces] continues to produce food and already supplies 79% of its needs, now through 24 large military agricultural companies where thousands of civilian employees work. Most of them also work efficiently and generate profits” (RC, 11.07.08).

Nonetheless, military farms were not enough to feed the population. In the early 90s, Raúl and his wife, Vilma Espín (head of the women’s organization and symbolically considered the country first lady), co-published *El Libro de la Familia* (The Family Book), which described how to create a vegetable garden and offered tips for survival with minimal resources (Premat, 2012). Raúl also facilitated the authorization for the establishment of renowned urban gardens, attaching some “political pedigree” (Premat, 2012, p. 31) to some of them. Such was the case of the organoponic garden of retired general Sio Wong on Fifth Avenue in Miramar, Havana, which was denied authorization from city institutions and the garden of Pastorita (a well-known revolutionary veteran) in the Santovenia nursing home in Old Havana, which bypassed procedures by calling Raúl directly for authorization (Premat, 2012). These and other supportive actions have earned Raúl the nickname “the godfather of urban agriculture” and being recognized as the political driving force in the development of the movement (Premat, 2012).

Raúl’s discourse predicated urban agriculture very positively (RC, 11.07.08, 2012.09). He highlighted urban agriculture’s benefits for food production, but also described benefits regarding employment and nutritional value. Nonetheless, as in previous periods, urban agriculture (and by extension agroecology) was predicated as a solution in a context of input scarcity in contraposition to advanced modern technologies.

“There are the magnificent results of urban agriculture, which without resorting to mobilization or large expenses carries out a remarkable production of vegetables and has contributed to the habit of consuming this important food and also provides employment to more than 300 thousand people, including some 67 thousand women and around 40 thousand retirees. These are realistic proposals for a country whose resources do not always allow it to use modern technologies, which are very productive but expensive and

²⁵² In 1999, military companies controlled 89% of exports, 59% of tourism income, and 60% of commercial transactions in foreign currency, among others (Mora, 2004).

²⁵³ During Raúl’s government, key government positions were replaced by senior military personnel closer to Raúl. For more details see Mesa-Lago and Pérez-López (2013), pp. 169-172.

which also consume fuel. We will use them when economically justified, as we have been doing with agricultural machinery and tools, chemicals, irrigation systems and protected crops, with encouraging results, although still incipient” (RC, 11.07.08).

Raúl’s focus on land availability and the use of idle land moved the urban agriculture program forward. As of April 2009, instructed by Raúl, the urban agriculture program was extended to suburban areas²⁵⁴. Suburban agriculture was defined as the agriculture within a 10 km radius outside cities and towns and within a 2 km radius of small villages (MINAG, 2014).

“These are ideas about how agriculture and livestock farming should be in Cuba at the present time, when about 75% of the population is urban, which does not mean that the remaining 25% work in the countryside. Therefore, there cannot be a suitable hectare without sowing, first of all, in the immediate periphery of each town and city. It is much more economical to make the best use of these nearby lands than the unaffordable transfer of workers or students over long distances, sometimes to work half a day. This way, we avoid losses and low productivity” (RC, 11.07.08).

“Flying, mostly by helicopter, all over the country, I sometimes order the pilot to turn around and go to any town, city, etc. ... in most of them, there is plenty of good quality land left over, stuck to our patios, that is not cultivated; and that is where a plan is being made to move forward, with intensive crops, putting them under irrigation where it is possible that there is water and that there are resources to put it in. If one day there is a lack of fuel in this crazy and changing world, that food is close at hand, that we can bring it in a cart with horses, with an ox or push it by ourselves. ... We cannot feel at ease as long as there is a single hectare of land without a useful job and someone willing to make it produce waiting for an answer [from those in charge of land distribution]” (RC, 26.07.09).

“In this direction, the Suburban Agriculture program is called to play a decisive role under management models that involve both the state enterprise and the cooperatives, individual farmers, land users and other forms of production. In this sphere, as in all others, it is necessary to free the productive forces from restrictions on their development” (RC, 20.12.09).

The political support to urban and suburban agriculture was expressed in the Guidelines, where typical agroecological practices are listed, e.g., the use of organic fertilizers, bio-fertilizers and bio-pesticides, local seed production and conservation, the use of local resources, and animal traction (PCC, 2011, pp. 26–29). Nonetheless, as in Raúl’s discourse, priority was given to investment in conventional inputs for prioritized production, i.e., generating external income or substituting imports with more efficient producers (PCC, 2011, pp. 26–29).

7.9. Discursive strategies, 2008-2015

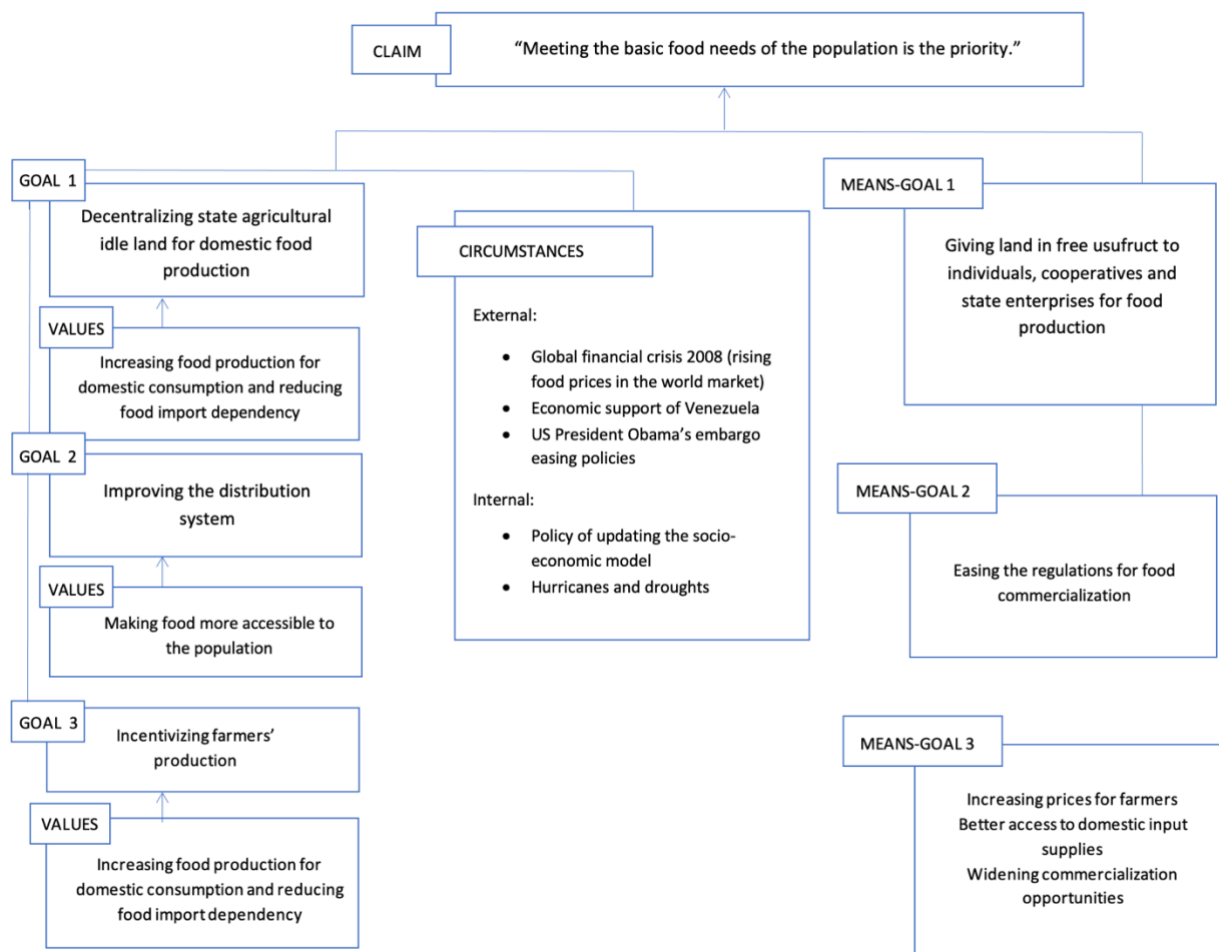
7.9.1. Argumentative scheme

In Raúl Castro’s discourse between 2008-2015, the desired long-term agriculture is not explicit. However, the period’s claim was very apparent: it is necessary to increase food production and decrease/substitute food imports. The claim was discursively constructed predominantly from contextual imperatives rather than from a long-term planning approach. The desired agriculture, in the short term, was that which produced food efficiently, regardless of its scale, level of input use, or applied technologies.

²⁵⁴ Online communication with Ministry of Agriculture official in charge of the urban agriculture movement, December 2020.

To meet the claim, the main strategies were 1) decentralization of idle state land by providing it in usufruct, 2) improvement of the food marketing and distribution system, and 3) incentivizing farmers with better prices, access to inputs and greater marketing opportunities (Figure 7.5). The main arguments justifying the claim were related to the international context and the failures of the Cuban agro-industrial system, i.e., the increase in food and agricultural input prices on the world market and the possibility of producing these foods domestically by increasing efficiency. In the background were the arguments put forward to deal with the general problems of the economy, such as the need to reduce the fiscal deficit.

Figure 7.3: Argumentative scheme, Raúl Castro 2008-2015



Elaborated by the author.

Raúl's previous involvement in military agriculture and the urban agriculture movement seems to have nuanced his approach to agriculture in terms of land use and management, input use, and technologies. The success of the military organoponics and military support for urban agriculture was discursively expressed in the absence of prejudice regarding small-scale farming, the use of oxen and low inputs. Simultaneously, the cultivation of transgenic maize and other crops in large-scale military farms with prioritized access to inputs may have

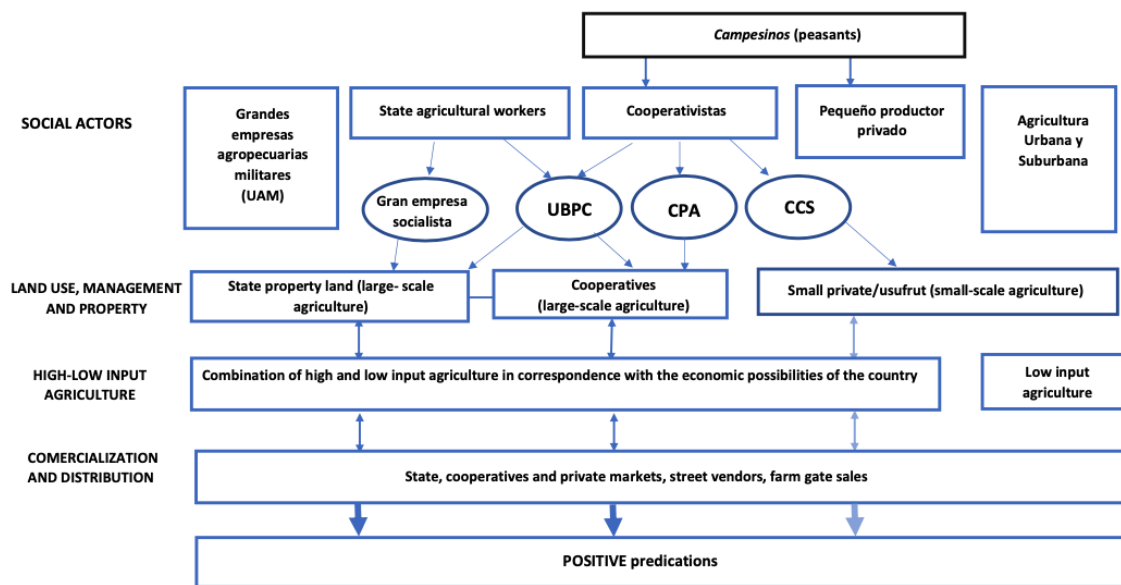
influenced Raúl's openness to the use of a diversity of perspectives and strategies in agriculture.

Following Raúl's discursive logic, a set of measures would help boost food production and "free the productive forces from restrictions to their development" (FC, 20.12.09). The land would be given to whoever requested it for food production. A variety of forms of commercialization would be made available to producers, and the prices of the state collection company would be raised to encourage the state sale of food. The UBPCs would be granted greater autonomy to increase productivity. In a context of scarce resources, those that proved to be very efficient, produced for export, or substituted imports, would have priority access to conventional inputs. However, all efficient production would be encouraged regardless of scale, use of technologies or form of tenure.

7.9.2. Nomination and predication strategies

In Raúl's discourse, the system of nominations and predications was simpler than in previous periods under Fidel. This is due both to Raúl's tendency to give fewer and more targeted speeches as well as his focus on boosting food production regardless land tenure and scale. Figure 7.6 summarizes the nomination and predication strategies in Raúl's discourse in 2008-2015. To better appreciate the evolution of the nominated actors and productive structures, Figure 7.6 retains the same design of the previous periods.

Figure 7.4: Nominations and predications, Raúl Castro 2008-2015



Elaborated by the author.

* Grandes empresas agropecuarias militares (Big Military Agricultural Enterprises), UAM Unión Agropecuaria Militar (Military Agricultural Union)

** UBPC Unidades Básicas de Producción Cooperativa (Basic Units of Cooperative Production)

*** EJT Ejército Juvenil del Trabajo (Youth Labor Army)

**** CPA Cooperativas de Producción Agropecuaria (Agricultural Production Cooperatives)

***** CCS Cooperativas de Crédito y Servicios (Credit and Service Cooperatives)

The absence of negative predications for agricultural actors, denoted by the lack of orange color in Figure 7.6, was distinctive in Raúl's discourse. Another divergence was that he

expressed no preference for any of the actors in terms of scale, technology or ownership/tenure. Raúl's discourse emphasized that good experiences and results should be recognized and replicated regardless of the productive form of origin.

Raúl's discourse on agricultural actors also grouped them differently. Military agriculture is independent from state agriculture, and the "*cooperativistas*" (cooperative members) included the UBPCs, CPAs and CCSs. In previous periods, UBPCs were described as being closely aligned or part of state agriculture and the CCSs were considered private agriculture. Raúl's inclusive language on cooperatives is consistent with his policy of eliminating obstacles and putting all production forms on an equal footing. In doing so, he created a space for urban agriculture within the nominations. Following his discursive logic, none of the forms of production represented in Figure 7.6 contradicted Cuban socialism, neither (private) food markets nor obtaining a high income from agricultural production, if this was honestly earned.

7.10. Resulting policy beliefs and alternative agriculture, 1998-2015

The period 1998-2015 began with the re-centralization of the economy and political power that meant the deceleration, halt, and active reversal of the economic reforms of the early 90s, described by Mesa-Lago and Pérez-López (2013, 2005) as the beginning of another idealistic cycle. These general political processes prompted the agroecological movement's institutionalization as well as growing limitations for autonomous spaces of the economy and civil society.

ACAO (*Asociación Cubana de Agricultura Orgánica*, Cuban Organic Agriculture Association) was founded in 1992 by agricultural scientists associated with the Higher Education system and was absorbed by a government-aligned Cuban NGO in 1999. It was renamed GAO (*Grupo de Agricultura Orgánica*, Organic Agriculture Group) and placed under the Ministry of Agriculture (see Chapter 3). This transition had several costs, among them the cancellation of the 1999 International Organic Agriculture Meeting. Soon after, however, the GAO became one of the ACTAF's key departments, the latter of which benefited from GAO's success in attracting international funding from various organizations. The biannual meetings resumed in 2001²⁵⁵ and the journal "Organic Agriculture", published since 1995 by ACAO, continued to be published from ACTAF²⁵⁶.

ANAP, the national association of farmers, extended the movement to promote agroecological practices with the farmer-to-farmer method throughout the country in 1997-2001 (Chapter 3). They created the Agroecology Department within ANAP's organizational structures at the national and regional levels and a farm classification system based on the degree of agroecological integration at farm level. Urban agriculture began to be coordinated by INIFAT (a research center attached to the Ministry of Agriculture) in 1997 (Chapter 3). Organizational structures were established throughout the country for the diffusion of the urban agriculture experience, as well as training schools and evaluation systems.

The movement continued to develop based on the institutionalized structures and projects supported by external funding (see Table 3.3). As discussed in Chapter 4, it is particularly difficult to evaluate the achievements of the agroecological movement and its extension in Cuba due to the lack of precise and disaggregated information, not only on agroecological and non-agroecological production, but also on productive forms and crops. Therefore, an analysis on specific developments can only be made based on specific assumptions (Chapter 4).

²⁵⁵ The author participated in the 2012 event.

²⁵⁶ The author was part of the editorial board in 2012-2014.

Likewise, the overlapping of structures and pro-agroecological programs make partial data from each institution incompatible with the general analysis.

In any case, the policies implemented by Raúl's government from 2008 onwards positively affected the agroecological movement. The granting of usufruct land, the opening of markets and the increase in state collection prices heightened the role of small-scale agriculture and granted it greater autonomy than in previous periods. Also, in 2009, Raúl extended the urban agriculture movement to suburban areas, further promoting agroecological practices.

However, neither Fidel's nor Raúl's discourse, with the exception of references to urban and suburban agriculture, described the institutionalization processes of the agroecological movement or prized the advances of the movement in the period. Moreover, the changes that favored the movement were always imbued in a discourse on scarcity and plight, either in the form of the crisis as a subject in Fidel's discourse (1998-2007) or realistic options in times of scarcity under Raúl's government. Agroecology was not nominated in the discourse, and its related practices were part of the discourse of solutions, formulas, and efforts for domestic production with a short-term view.

In addition, the logic of prioritization maintained throughout the period of the analysis delegitimizes the advances of the agroecological movement, i.e., prioritized crops and leading producers received preferential allocation of conventional available inputs. In the same way, agroecology is identified in the discourse as the extreme opposite of agricultural practices making use of advanced technologies, as in the expressions "by combining science with ox, organic fertilizer, other traditional means" (FC, 11.07.08), or as the Guidelines put it, "combining the use of animal traction with advanced technologies" (PCC, 2011, p. 28). This had been previously expressed in Fidel's discourse as the conflict between the modern and the backward or traditional.

The argumentative schemes (See Fig. 7.1 and 7.3) and the strategies of nomination (See Fig. 7.2 and 7.4) of the periods 1998-2007 and 2008-2015, although different, do not radically alter the principled and causal beliefs related to the agricultural policy of 1984-1987. Fidel's focus on the Battle of Ideas left little space for agriculture. However, in his speeches during 1998-2001, the continuity of the principled and causal beliefs is apparent, especially through references to expected behaviors and attitudes, loyalty, altruism, and austerity. The market and individual appropriation continue to be enemies of the revolution: "I have not heard a single expression here among the hundreds of comrades who were present and spoke that reflected the primacy of economic interests over the interests of the homeland and the Revolution" (FC, 03.06.98).

Raúl's discourse, even though it alters some aspects of the political belief system, typical of the "updating" or (pseudo-) and reform discourse (Kornai, 1992), does not confront his brother or the previous ideology after July 2007. His land distribution policy did not alter the land ownership structure, ensuring that the state maintained the monopoly over land ownership. However, as Fidel added the category of "necessary" as a justification for policies in 1992-1997, Raúl added that of "viable". Raúl's description of what was "viable" differs from Fidel's "necessary" in that it is less pessimistic and more realistic. The "necessary" discourse expressed a state of victimization. The revolution was considered a victim of the end of European socialism, the confrontations from the US, and the unintentional mistakes of the revolution itself. These were the reasons given for moving away from the plan of modernization and agricultural development. Raúl's discourse of the "viable", on the contrary, does not evoke the plans of the past and focuses on how to produce with efficient agriculture based on the pragmatic management of the limited resources available to the country.

Table 7.2: Policy beliefs, Castro’s discourse, 1998-2015

		RIGHT	WRONG	“VIABLE”
Agricultural policies	Scale	Large	Small	No preference
	Technology	Mechanization	Oxen	Combination of technologies
	Inputs	High usage	Low usage	Combination of high and low input usage
	Land	Collectivization	Decentralization	Decentralization
	Input allocation	Centralization	Free access to inputs	Prioritization of major inputs and free access to minor inputs
	Food distribution	Centralization	Market-oriented	Decentralization and market-oriented
Behaviors and attitudes	Living expectations	Austerity, conformism	Consumerism/ extravagance	Each person must live in keeping with his/her contribution to society
	Moral stance	Altruism, collectivism	Individualism	Pragmatic altruism
	Adherence to government leadership	Loyalty	Autonomy	Loyal autonomy
Conducive to...		Modern developed socialist agriculture	Backward, underdeveloped individualistic agriculture	Efficient agriculture based on pragmatic management of limited resources different actors

Elaborated by the author.

Table 7.2 summarizes the principled and causal beliefs regarding different spheres of agricultural policy and the expected behaviors and attitudes of the actors relevant to agriculture. The categories of “right” and “wrong” remain as a backdrop because of their indissoluble connection with the classic socialist system, expressing the continuity of the model. “Viable”, on the other hand, typical of Raúl’s discourse does not alter what is considered “right” but does reclassify some of what is considered “wrong” as now being viable. This change denoted the beginning of a pragmatic cycle (Mesa-Lago, 2013) and signaled the reassessment of some elements of the official ideology and the presence of reform policy-beliefs in the discourse. Viable agriculture can be both large or small-scale and combine all types of technologies and levels of input use. The market for agricultural products is not condemned, nor is the relative accumulation of an honestly earned income. The perspective of egalitarian austerity was replaced by each according to his/her contribution, and a pragmatic distribution of social benefits was intended to replace the wastefulness in social policies and excessive spending.

CONCLUSIONS AND CONCLUDING REMARKS

Main findings and discussion

The adoption of sustainable approaches to agriculture in the long term requires more than an exclusively technical discussion. Regardless of the benefits of particular technologies, the processes of mass adoption of agricultural approaches is mediated by broader economic and political processes. This research has provided evidence on the influence of the political environment and policy beliefs on the adoption of low-input farming practices in Cuba, which formed the basis of the agroecological movement.

The mass application of low-input farming practices in Cuba in the 90s have been qualified as a unique opportunity for large-scale conversion to ecological agriculture (narrative 1) and internationally cherished as the victory of the ecological approach (narrative 2). The narrative of opportunity was based on the contextual feasibility of applying low-input agricultural approaches in the wake of the demise of the socialist bloc and the accelerated decline in the availability of agricultural inputs, spare parts and oil. This opportunity was expressed in the inability of the Cuban government to carry out its ideas for agricultural development, based on the exploitation of large tracts of socialist-owned land (state or cooperative) and the intensive application of agrochemicals and irrigation (centrally allocated). This latter characteristic also contributed to promoting alternative agriculture through the socialist distribution, centralized collection, and marketing of food. Although less acknowledged in the literature, the contextual feasibility was also grounded on the diminished capacities of the government, brought about by the crisis in the first half of the 1990s, to control and monitor the activities of civil society and actors in the agricultural sector. This period of relative autonomy allowed for the creation of independent organizations such as the Cuban Association of Organic Agriculture (CAOA), an opening to the cooperation of foreign NGOs focused on working with small private producers, and the spontaneous development of urban agriculture by anonymous farmers and city gardeners.

The narrative of victory over conventional agriculture was based, in the first place, on the correspondence between historical policies of the revolution (e.g., land reforms which limit the accumulation of land and wealth), and anti-crisis policies implemented by the Cuban government (e.g., the division of state lands and distribution among small producers and cooperatives). These created the pre-conditions for the spread of agroecological agriculture; specifically, the space for small-scale, non-state agriculture in the Cuban agricultural system. The redistributive character of both the historical land policies of the revolution and of the anti-crisis policies, as well as the minimal impact of transnationals and agribusiness in the Cuban agro-food sector also contributed to its uptake. The importance of these factors is strengthened

given their particularity to the Cuban experience when compared to other Latin American countries.

Second, the victory perspective benefited from the long-term scarcity of inputs (contextual viability) that, in combination with the government's crop prioritization policy (i.e., scarce inputs are allocated to centrally prioritized crops), allowed for relatively stable spaces where agrochemicals and other inputs typical of conventional agriculture were very limited or inaccessible. Finally, the victory narrative also relied on the spaces of relative autonomy of small-scale private agriculture (with greater possibility than state agriculture to decide what and how to produce, how to design farms, and to experiment with agroecological inputs) and the special interest of international agencies in the spaces of private and small-scale production.

In sum, the victory narrative is based on the dominance, facilitated by contextual viability, of non-state, small-scale agriculture and the scarcity of inputs, especially in non-prioritized crops. It is also supported by the fact that the non-state sector produces, *de facto*, a large proportion of the food produced in Cuba. However, the comparative analysis of state and non-state production in priority and non-priority crops (described in Chapter 4), showed that the results of non-state production are proportional to the share of cultivated area per crop, which has increased in recent years due to the government's land distribution policies. In addition, the analysis by crop did not show marked differences between the yields of state and non-state agriculture. On the contrary, similar trends of increases or decreases emerged, depending on the years, in both prioritized and non-prioritized crops. This suggests that the government's prioritization policy may be the fundamental factor influencing the level of input use for the island's agriculture and, therefore, the spaces where agroecology can be developed.

Internally, the narrative of the victory of the agroecology movement was also encouraged by the prohibition of toxic agrochemical application in urban agriculture because of its proximity to the population in the cities, the lack of certifications or strict standards, and the related widespread understood definition among peasants and agroecologists that agroecological crops can have agrochemicals applied to them in small quantities. The combination of this loose definition that allows agroecological productions to be classified as such despite sporadic allocations of inputs (which depend on the financial availability of the government or the black market), and the fact that Cuba has not been able to match the availability of agrochemicals with the period before the fall of the socialist bloc, leads some to consider Cuba as "practically agroecological". This perspective reinforces aspects of agroecology's contextual rather than political viability in the country in the long term. Depending on their positionalities, individuals reinforce the overall narrative of victory through a process of selective retelling that was addressed throughout the study, based on their personal, academic, and occupational objectives and constraints.

One surprising finding of this research was the absence of the victory narrative of the agroecology movement in the political discourse. As described in Chapter 3, from 1996 onwards, the Cuban government began to view the openings promoted in the first half of the 1990s with suspicion and promoted processes of centralization while reinforcing control and monitoring of private activities and foreign relations. This manifested in processes of institutionalization of the agroecological movement that had previously developed more or less spontaneously, increasing government control of agroecological initiatives through state organizations and quasi-state NGOs ("mass organizations" in socialist jargon, with strict party control).

These institutionalization processes limited the healthy confrontational character that characterizes the debate between pro-alternative agriculture organizations and conventional

agriculture institutions and that qualify the creative conflict relations expressed by Michelsen (2001) (see Chapter 1). The relatively spontaneous organizations and initiatives from which the so-called Cuban agroecological movement emerged may have helped sustain the debate on the political agenda for the promotion of alternative agriculture. Additionally, they could have served as independent organizations and a political force, thereby further reinforcing the movement's identity.

Instead, the institutionalization of the agroecological movement moved towards pure cooperation (Michelsen, 2001) (see Chapter 1), where the institutions representing agroecological organizations became part of the governmental and semi-governmental system of agriculture. They were subsequently represented only by the peasants' organization, the Ministry of Agriculture, and institutions belonging to the council of the state. As part of the pure cooperation, criticism of conventional agriculture and calls for expanding the space of agroecological agriculture weaken in political spaces (though cautiously maintained in private contexts). This was mediated by a highly centralized political environment along with a lack of toleration for debate and political action outside the frameworks of party and official ideology.

A purely cooperative relationships between pro-agroecology and conventional agriculture organizations, in a political environment where the government enjoys a considerable degree of autonomy, means that the scaling out and up (Chapter 1) of agroecology is only possible if mainstream institutions perceive agroecology as part of mainstream agriculture and if it is considered a priority for the state. In Cuba, the processes of institutionalization and transition to pure cooperation did not result in a regulatory framework specifically supportive of agroecological agriculture, as shown in Chapter 3. However, some regulations that facilitate small-scale agriculture, motivated by the disruption to the political environment caused by the crisis, were put in place.

The degree to which agroecological practices constituted a disruption in the political environment caused by the crisis was also demonstrated by examining political discourse. The analysis of the Castros' discourse in the period 1984-2015, presented in Chapters 5, 6 and 7, revealed the permanence over time of policy beliefs regarding agricultural policy and the expected behaviors of agricultural actors and the general population that clash with the principles and practices of agroecology in Cuba (Chapter 3) and that are characteristic of the classical socialist and socialist reform system (Chapter 1). The identification of policy beliefs was carried out based on the description of principled beliefs (demarcation between right and wrong) and causal beliefs (causal relations that show expectations in relation to the application of policy instruments) that were identified from the analysis of the argumentative schema and other discursive strategies in the discourse of Fidel and Raúl in five historical periods.

As could be seen in Chapters 1 and 3, the practice of agroecology implies certain technological approaches (more frequently addressed in the scientific literature on the movement), but also economic, political and social approaches with respect to agriculture. Technologically, agroecology is based on the application of ecological principles, dependent on technical and/or traditional knowledge, the design of agroecosystems with minimal use of agrochemicals, and the intensive use of knowledge and information to maximize ecosystem resources and minimize the need for external inputs. It opposes industrial agricultural practices such as intensive tillage, monoculture, irrigation, high use of inorganic fertilizers and chemical pest control, genetic manipulation, industrial animal husbandry, and top-down research and extension systems.

From the economic, political and social point of view, the application of agroecology demands the existence of people with stable access to land. In the Cuban case, this has been guaranteed by land distribution policies after the revolution and after the crisis, although with a certain level of uncertainty in the usufructuary sector (Chapter 4). Although there are some attempts and experiences of applying the agroecological approach to large-scale agriculture at the international level (Chapter 1), the predominant approach has been the application of agroecological principles by small producers with levels of autonomy that allow them to experiment with agricultural practices and designs specific to the contexts of application and to the needs and knowledge of peasants, with minimal dependence on external inputs.

Producers must also find themselves in a context that allows them to face the conversion process, including moving from the input substitution phase to the redesign of agroecosystem (Chapter 1). This process implies medium- and long-term benefits, as well as an approach based on measuring results using output per hectare as opposed to the traditional approach of tons per hectare and internalization of costs (Chapter 1). Producers also need markets and consumer recognition of agroecological products, which, outside of Cuba, have been formed through decentralized strategies such as solidarity markets and community markets, and in the promotion of participatory certification as opposed to conventional certification systems. The scaling of agroecology, on the other hand, has implied the application of horizontal participatory methodologies, the empowerment of peasants and the self-determination and autonomy of peasant organizations from non-state-centric approaches.

The analysis of the discourse of the period 1984-1987 in Chapter 5 identified the policy beliefs prior to the collapse of the socialist bloc and the imperatives that drove the implementation of low-input agriculture strategies that led to the agroecological movement. Fidel's discourse in this period, which served as a baseline for the analysis of later periods, was imbued with the perspective of the Green Revolution (from the technological point of view) and classical socialism (from the economic and political point of view), and was characterized by the promotion of anti-agroecological policies.

As described in detail in Chapter 5, a modern, developed socialist agriculture, expressed in the development of "superior forms of agricultural production", is constructed through agricultural policies and behaviors typical of the classical socialist system described by Kornai (1992). The classical socialist discourse promoted the economy of scale, superiority and dominance of state and quasi-state (cooperative) ownership, with high levels of mechanization and use of (imported) agrochemical inputs, centralized resource allocation and marketing systems, and party control and direction (responsibility) of agricultural development in the country. The expected behaviors of austerity, conformity, altruism, collectivism, loyalty and discipline were considered necessary for modern, developed socialist agriculture. In contrast, small-scale agriculture, carried out by independent, individually profiting farmers, was derided for being outdated, underdeveloped, and clashing with the socialist ideals and values promoted by the revolution.

None of the analyzed discourse in the period 1984-1987 pointed to the possibility of an alternative approach to agriculture, neither in its technological nor political dimension. On the contrary, large-scale agriculture and the intensive use of inputs and machinery were considered fundamental drivers of productivity, understood as tons per hectare, with little regard to cost considerations. Moreover, the discourse of the period promoted the government's intentions to extend collective land ownership and large-scale agriculture by eradicating small private property through the cooperative movement and the centralization of food marketing. The centralized supervision and paternalistic party control of agricultural management processes was also prominent in the discourse, along with an extremely negative view of the independent

farmer, portraying him as contrary to revolutionary ideals and morality and as an obstacle to the development of technologically modern revolutionary agriculture.

With these policy beliefs as a baseline, Chapters 6 and 7 addressed the crisis discourse (1988-1997), which coincides with the period of spontaneous development of the agroecological movement, and the recovery discourse (1998-2015), which coincides with the processes of institutionalization of the agroecological movement. More specifically, Chapter 6 addressed the deterioration of trade relations with the socialist bloc, the arrival of the economic crisis and the strategies for coping with the crisis, among which was the application of low (or no) input agricultural practices. The analysis of the discourse showed the permanence of the principled and causal beliefs of the period 1984-1987, representative of the ideology of the classic socialist system. Policy belief of the “necessary” also emerged, with nuances of the ideology of reform (Chapter 1), where low-input strategies for agriculture began to take root.

The policy belief of what was “necessary” expressed the impositions of the crisis, the concessions imposed on official ideology, and the strategy Castro found to give coherence to the timid policies of decentralization and openness to market coordination produced in the first half of the 1990s. The “necessary” combined elements of the “wrong” approach to agricultural policies (i.e., dividing and distributing state land, using animal traction to replace machinery, seeking low-input solutions, and opening the agricultural free market), with the “right” behaviors and attitudes (i.e., austerity, conformism, sacrifice, altruism, collectivism, and loyalty to the revolution and the party). The achievement of the “necessary” would not allow for the creation of a developed socialist agriculture, but it did allow for the survival of socialism.

The political discourse did not show a change in the technological or political vision in relation to the construction of a socialist and developed conventional agriculture. Fidel showed initial optimism (until 1992) in some solutions produced by Cuban scientists (in state institutions) and which he perceived as having the capacity for large-scale production and distribution, consistent with the centralizing ideal of the revolution. Nevertheless, the solutions of small-scale agriculture, such as urban agriculture, were presented as efforts provoked by the crisis and the decrease in food imports, namely, an expression of what was “necessary”.

In the period 1998-2015 (Chapter 7), the technological debate on agriculture practically disappeared from the Castros’ political discourse for several reasons. The ideological battles waged by Fidel in his last period in office (until 2006-2007), based on political and economic circumstances discussed in detail in the first half of Chapter 7, were the focus of most of the discourse. The scarce discourse on agriculture indicated a return to the promotion of the old pattern of exporting key products (now also for use in the tourism industry) and of the advantages of state-based food importing and distributing that renewed relations with the Latin American left (especially Venezuela) and China allowed.

The discourse from mid-2007 onwards (with Raúl in power), on the other hand, promoted new reform or pseudo-reform transformations (Chapter 1). As part of the (pseudo-)reform discourse, some aspects of the policy belief system were altered. Just as Fidel added the policy belief of “necessary” as a justification for policies in 1992-1997, Raúl added that of “viable”. “Necessary” implied a state of victimization, in which modern socialist agriculture could not be carried out due to the collapse of socialism, the U.S. embargo, and the unintended errors of the revolution. The “viable”, on the other hand, resembled in many ways the ideology of reform (Chapter 1). Without questioning the leadership and power of the party and the superiority of collective ownership, some elements previously conceived of as features of capitalism are now

described as non-contradictory to socialism and the gradual elimination of some responsibilities of the state to individuals is promoted.

Thus, as part of the (pseudo-)reform discourse, the basic principled and causal beliefs described for the period 1984-1987 (Chapter 5) remained as a backdrop given their indissoluble connection to the classical socialist system, expressing the continuity of the model. However, controlled doses of the “wrong”, i.e., development of the small private sector and room for market coordination, are reclassified as “viable” (i.e., non-contradictory with socialism). Viable agriculture could now be both large or small-scale and combine all kinds of technologies and levels of input use, expanding the space of socialist agriculture previously prescribed by Fidel (i.e., large-scale, socialist-owned, input- and machinery-intensive). The market for agricultural products was no longer condemned, nor was the limited accumulation of honestly earned income. The perspective of egalitarian austerity was replaced by that of each according to his or her contribution, and a pragmatic distribution of social benefits was intended to replace waste and overspending in social policies. Facilitated levels of autonomy were thought to retain loyalty to the party and the Revolution.

The policies implemented by Raúl’s government from 2008 onwards positively affected the agroecological movement in that they enhanced the role of small-scale agriculture, gave it greater autonomy than in previous periods, and extended the urban agriculture movement to suburban areas as part of a policy of eliminating idle land. However, neither Fidel’s discourse of ideological battles nor Raúl’s discourse of reform described the processes of institutionalization of the agroecological movement or valued the advances of the movement that took place in this period. Agroecology was not represented in the discourse, and its typical practices were part of the discourse of what was “necessary” and “viable” for domestic food production, with a short-term vision and in contrast to what were framed as ideal modern and advanced options.

Some elements are common to the 1988-1997 and 1998-2015 discourse that show the marginal role of agroecology in the political discourse on agriculture: 1) the lack of representation of agroecology as a movement and its actors, 2) the nostalgia and remembrance of the past times of abundance and the great agricultural development plans, 3) the logic of prioritizing conventional inputs for crops considered strategic, and 4) the polarization of agroecology.

The absence of a defined or clearly portrayed agroecology in the political discourse demonstrated its detachment from agroecological innovation and practices, especially those associated with small-scale private agriculture. The word “agroecology” was never mentioned in the discourse from any period, and its proxies, urban agriculture and organoponics (directly connected to the Ministry of Agriculture after its institutionalization), were mentioned only sporadically. This form of agriculture was neither celebrated nor contested. The absence of both direct contestation and direct recognition had political effects and fostered different narratives. Both government actors and representatives of the agroecological movement selectively applied a narrative of victory, despite no deliberate framing of support for the agroecological paradigm from the government. Any support was therefore either unintended or indirect, by way of secondary political objectives.

Expressions of nostalgia for periods of abundance, grand plans for industrial agriculture, and the discourse on crop prioritization are evidence of the permanence of the industrial paradigm of agriculture in the political discourse. Moreover, the discourse on the policy of prioritization of centrally selected crops by the state devalued the efforts of national actors (peasants, scientists, others) representing them as “solutions”, “alternatives”, and short-term

“formulas”, while the government was concerned with the import and allocation of conventional technologies and machinery (considered advanced and more productive) for centrally prioritized goals. The discourse on prioritization also expressed the prolongation of the classical socialist perspective for agriculture of the omnipresent, paternalistic and controlling state.

Similarly, the proxies of agroecology are identified in the discourse as the extreme opposite of agricultural practices that make use of advanced technologies. In Fidel’s discourse, it was manifested in the conflict between modern agriculture and backward (original) and traditional (later, with a less negative connotation) agriculture. Raúl expressed it, under the criterion of the “viable”, as the need to combine “science with oxen, organic manure, other traditional means” (RC, 11.07.08), or as stated by the party, “combining the use of animal traction with advanced technologies” (PCC, 2011, p. 28).

The changes in agricultural practice towards low-cost agroecological agriculture (technological change imposed by circumstances) were not immediately expressed in changes in the belief system (causal and principled) regarding agricultural policy. This demonstrated the permanence of core beliefs regarding scale, ownership, land use, and the market, akin to the classic socialist paradigm. Raúl’s arrival to power, as a disruption to the system that opened possibilities for transformations, expressed a reform discourse that nuanced some of the long-held beliefs characterizing the classical socialist system.

Despite some marginal changes, small-scale agriculture with a high degree of autonomy such as agroecological initiatives, the development of decentralized markets, and organizational strategies will be politically unviable as long as policy beliefs continue to reflect to the model of classical socialism. This political unviability is explained not only by the technological contradictions between agroecological agriculture and the government’s dominant focus on industrial agriculture, but also by political and economic (unspoken) contradictions. As long as agroecology or scaling of agroecology as a process is tied to the private peasant sector (disconnected from bureaucratic coordination), it has little chance of spreading as a national agricultural ideology or of converging with the ideology or policy beliefs of classical or reformist socialism.

However, the story of agroecology in Cuba has unexpected twists and turns. In 2016, a few months before he died, Fidel had three meetings with Fernando Funes (a recognized leader of agroecology in Cuba), and visited his farm outside Havana. The records of these visits reveal the former leader’s interest in the innovations and practical applications of agroecological approaches at Finca Marta and the ideas of Fernando Funes in general. Reflecting on this research and the power of Fidel’s character to manifest in political discourse and official ideology raises the question: What would have been different if that visit had taken place much earlier?

On the theoretical and methodological approach and its limitations

The theoretical and methodological approach of this thesis was the result of a process of overcoming obstacles and adapting to a complex study context and was shaped by the author’s personal life (Chapter 2). The resulting approach attempted to provide a glimpse into underemphasized or omitted areas of the analysis of the agroecology movement in Cuba.

The theoretical-methodological strategy, built iteratively on defeats and obstacles during fieldwork, was also shaped by data availability. It is no coincidence that the small number of peer-reviewed articles on Cuba on the Web of Science database are mostly based on small samples and qualitative methods. The resulting strategy and access to the Castros’ speeches,

enabled this research, which addressed the agroecology movement's links to politics - an area that had not yet been explored in depth. The first readings of the speeches led to more questions that led the inquiry into the field of political economy and specifically the political economy of socialism. In that sense, the periodization used for the discourse analysis might have benefited from a greater consideration of the periodization of economists rather than agronomists, who have focused on the rhythms of change in agriculture. Nonetheless, relying primarily on agricultural periods emphasized this aspect of the historical progression of Cuba and allowed for supplementary economic commentary.

The approach to the subject attempted to offer a non-partialized view, but the qualitative interpretation that underlies the methodologically and the author's positionality must be considered. Special effort was made to move away from the notions of "Cuban exceptionalism" that we Cubans grew up with and has been reproduced in much of the scientific literature. The approach to the literature also tried to balance the use of domestic and foreign and sympathetic and critical sources. These included texts with political affiliation to the Cuban government, texts of strong criticisms of the so-called "Florida Cubanologists", and the European, American and Latin American literature of varying degrees of sympathetic or critical perspectives on the Cuban political and economic system and the experience of socialist and agroecological agriculture in the country.

The discourse analysis carried out focused on the analysis of the abundant public communication of Fidel and Raul Castro as government/state/party leaders. Although the study could have benefited from other sources of political communication, the perspective adopted focused on the analysis of the Castros' discourse as a manifestation of the dominant ideology and complemented this perspective with bibliographical and historical sources, testimonies and statistics.

Recommendations for future studies

Some important questions initiated in this research continue to be pressing questions that deserve attention, such as: What are the costs and benefits (economic and environmental) of agroecological agriculture at the farm level? What is the impact of agroecological agriculture on family, local, and national food security? To continue answering these questions, the particularities of the research context require a well-honed field entry strategy and long periods of fieldwork to deal with delays in authorizations, to build suspicion-free rapport in authorizers and research subjects, and to ensure close supervision of research assistants.

This thesis struggled with other institutional barriers, such as the way statistics are collected and published in the country, which limit the analysis of secondary data. The verification of some of the hypotheses put forward in the text, especially in Chapter 4 on arguments around agroecological "success", would benefit from more specific on-site studies to collect farm data. This would (at least initially) enable the isolation of figures describing strictly agroecological production from conventional production and private agriculture from state production (including military production).

As mentioned above, studies on Cuban agroecology would benefit from the analysis of other spaces of political communication in state institutions related to agriculture. However, to arrive at relevant conclusions this would likely require high levels of authorization and long stays in Cuba to participate in a sufficiently wide range of activities and meetings where policy is discussed and organized. Future studies on political discourse in Cuba would also benefit from going beyond the thematic analysis and taking full advantage of more complex quantitative discourse approaches.

A debt of this research is to bring the peasant perspective on the politics and political economy of the agroecological movement. Areas of inquiry that appeared throughout this research, and that deserve targeted studies, include the issue of autonomy and dependence of producers to the government/state/party system, their relations with the political discourse on agriculture, and the narratives of agroecology and their personal projects. It would also be fruitful to establish comparisons between prioritized and non-prioritized producers and to address other issues such as the black market for conventional and biological inputs and corruption in agricultural collection systems.

Final remarks

Since this research began in 2015, Cuba has changed quite a bit. Fidel died, Raúl left the government and later stepped down from leadership of the party, and now a non-Castro occupies the leadership of the government and the party. Obama promoted openings, Trump closed them, Latin American leftist governments fell from grace. In 2020 and 2021 alone, hurricanes, a global pandemic that has brought economic decline, and the government's response to a new wave of dissent have provoked demonstrations unprecedented in the history of the revolution.

It is impossible to confidently predict the future of Cuban socialism and its ideology, and this research does not pretend to make any attempt. Despite what the future holds, unveiling the narratives of history is of relevance for the construction of the future and better policies. Specifically, this thesis has contributed to a better understanding of the relationship between government and agroecology in Cuba. More generally, it adds to the growing literature on discourse analysis and policy analysis and global scientific debates on the relations among political environments, policy beliefs, and the development of non-conventional agriculture.

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Annex 1. List of referenced speeches by period

Fidel Castro, 1984-1987

1984	
Jan 1 st	On the occasion of the XXV anniversary of the triumph of the Revolution, Santiago de Cuba, Cuba.
Feb 24 th	Closing ceremony of the XV Congress of the CTC, Havana, Cuba.
May 17 th	Central ceremony for the 25th anniversary of the Agrarian Reform Act, Granma, Cuba.
July 26 th	Central ceremony in commemoration of the XXXI Anniversary of the Assault on the Cuartel Moncada, Cienfuegos, Cuba.
Nov 11 th	Inauguration ceremony of the Pediatric Medicine Congress Cuba/84, Havana, Cuba
Dec 4 th	Closing event of the National Forum of Energy, Havana, Cuba.
Dec 28 th	Conclusions of the VII Ordinary Period of Sessions of the National Assembly of People's Power, Havana, Cuba.
1985	
June 7 th	Closing event of the Meeting on the situation of women in Latin America and the Caribbean, Havana, Cuba.
July 18 th	Closing event of the Trade Union Conference of Latin American and Caribbean Workers on External Debt, Havana, Cuba.
July 26 th	Central ceremony in commemoration of the XXXII Anniversary of the Assault on the Cuartel Moncada, Guantánamo, Cuba.
Aug 3 rd	Closing event of the Latin American and Caribbean Trade Union Conference on Foreign Debt, Havana, Cuba.
Sept 14 th	Closing event of the Youth and Student Dialogue of Latin America and the Caribbean on Foreign Debt, Havana, Cuba.
Sept 28 th	Central Act for the 25th Anniversary of the Creation of the Committees for the Defense of the Revolution, Havana, Cuba.
1986	
April 19 th	Central event for the XXV Anniversary of the Victoria de Girón, Havana, Cuba.
May 18 th	Closing event of the II National Meeting of Agricultural Production Cooperatives, Havana, Cuba.
July 26 th	Central ceremony in commemoration of the XXXIII Anniversary of the Assault on the Cuartel Moncada, Sancti Spiritus, Cuba.
Sept 28 th	Closing event of the 3rd Congress of the CDR, Havana, Cuba.
Dec 2 nd	Closing event of the Deferred Session of the III Congress of the Communist Party of Cuba, Havana, Cuba.
Dec 19 th	Delivered in Céspedes Park in Bayamo, Cuba
1987	
April 5 th	Closing event of the V Congress of the Young Communist League, Havana, Cuba.
April 20 th	Inaugural Session of the Sixth Ministerial Meeting of the Group of 77, preparatory to UNCTAD VII, Havana, Cuba
May 17 th	Closing event of the VII Congress of the ANAP, Havana, Cuba.
July 26 th	Central ceremony in commemoration of the XXXI Anniversary of the Assault on the Cuartel Moncada, Artemisa, Cuba

Sept 17 th	Closing event of the VIII Conference of the American Association of Jurists, Havana, Cuba.
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Fidel Castro, 1988-1991

1988

July 26 th	Central event for the XXXV anniversary of the assault on the Moncada barracks, Santiago de Cuba, Cuba.
Oct 6 th	Central Act for the inauguration of the teaching polyclinic Mártires de Calabazar, the Rehabilitation Center of the Cardiocenter of the hospital "William Soler" and the Victoria School of Cuito Cuanavale, Havana, Cuba
Oct 28 th	Inauguration of the Combined Medical Equipment and Blood Bank, Havana, Cuba

1989

Jan 4 th	Central event for the XXX anniversary of the triumph of the Revolution, Havana, Cuba.
Jan 8 th	Central event for the XXX anniversary of Fidel's Entry to Havana, Havana, Cuba.
April 4 th	In occasion of Michael Gorbachev visit to Havana, Havana, Cuba.
May 26 th	On the occasion of the XXV anniversary of the foundation of "Los Naranjos", Havana, Cuba.
July 19 th	On the occasion of the inauguration of 7 health system facilities, Havana, Cuba.
July 26 th	Central event for the XXXVI anniversary of the assault on the Moncada barracks, Camagüey, Cuba.
Sept 4 th	Central event on the occasion of the beginning of the 1989-90 school year, held at the "Solidarity with Namibia" school, Havana, Cuba.
Sept 25 th	On the occasion of the inauguration of Varadero's International Airport, Varadero, Cuba.
Sept 30 th	On the occasion of the third anniversary of the revitalization of the Microbrigades Movement, Havana, Cuba.
Oct 1 st	On the occasion of the second anniversary of the foundation of the "Blas Roca Calderío" contingent, Cuba.
Nov 7 th	In occasion of the inauguration of the fabric for housing materials "Roberto Milián Milián", Havana, Cuba.
Dec 7 th	Memorial service for internationalists who fell during the performance of honorable military and civilian missions, Cacahual, Cuba.

1990

Jan 28 th	Closing event of the XVI Congress of the CTC, Havana, Cuba.
Feb 20 th	Extraordinary session of the National Assembly of People's Power, Havana, Cuba.
March 7 th	Closing event of the V Congress of the Federation of Cuban Women, Havana, Cuba.
March 18 th	Meeting with Brazilian intellectuals in Sao Paulo, Brazil.
May 10 th	In occasion of the inauguration of the hotels "Paradiso" and "Sol Palmeras", Varadero, Cuba.
July 26 th	Central event for the XXXVII anniversary of the assault on the Moncada barracks, Havana, Cuba.
Sept 28 th	Central event for the XXX anniversary of the CDR, Havana, Cuba.
Oct 1 st	In occasion of the third anniversary of the "Blas Roca Calderío" contingent, Pinar del Río, Cuba.
Dec 20 th	Closing event of the IV Congress of the FEU, Havana, Cuba.

1991

Jan 28 th	Inauguration of the family doctor's office-house built in the municipality of Plaza by the student contingent "Antonio Guiteras", Havana, Cuba
Feb 3 rd	Closing event of the Provincial Assembly of the Party in Havana, Havana, Cuba.

April 1 st	Inauguration ceremony of the "Proeza Laboral" refrigerated facility, Alquizar, Cuba.
April 19 th	Central event for the XXX anniversary of the victory of "Playa Girón", Havana, Cuba.
May 17 th	Event for the Peasant's Day, the XXX anniversary of ANAP and the XXXII of the first agrarian reform act, Quivicán, Cuba.
Oct 10 th	Inauguration of the IV Congress of the Communist Party of Cuba, Santiago de Cuba, Cuba.
Oct 14 th	Closing event of the IV Congress of the Communist Party of Cuba, Santiago de Cuba, Cuba.
Nov 9 th	Latin American Trade Union Meeting for Workers' Rights and Freedoms in the face of neoliberalism, Havana, Cuba.
Nov 22 th	Closing event of the V Congress of the Union of Agricultural and Forestry Workers (Sindicato de Trabajadores Agropecuarios y Forestales), Havana, Cuba.
Dec 16 th	Closing event of the VI National Forum of Spare Parts, Equipment and Advanced Technologies, Havana, Cuba.
Dec 22 th	Closing event of the V Congress of the Union of Agricultural and Forestry Workers, Havana, Cuba.
Dec 23 th	Union Leaders' meeting, Havana, Cuba.

Fidel Castro, 1992-1997

1992

April 4 th	Closing event of the VI Congress of the UJC, Havana, Cuba.
April 29 th	Closing event of the potato harvest in Havana in "Sonrisa de la Victoria" camp, Güira de Melena, Cuba.
Sept 5 th	On the occasion of the XXXIX anniversary of the Assault on the Cuartel Moncada and the XXXV anniversary of Cienfuegos city Uprising, Cienfuegos, Cuba.
Oct 29 th	Closing event of the XII regular session of the National Assembly of People's Power, Havana, Cuba.
Nov 23 th	On the occasion of giving the flag of the canecutters contingent "Primero de Mayo", Havana, Cuba.
Dec 16 th	Closing event of the VII Forum of Spare Parts, Equipment and Advanced Technologies, Havana, Cuba.

1993

Feb 20 th	Second working meeting with the candidates for deputies to the national assembly and delegates to the provincial assembly of People's Power of Havana, Havana, Cuba.
July 26 th	Closing of the event for the XL anniversary of the Assault on the "Moncada" and "Carlos Manuel de Céspedes" barracks, Santiago de Cuba, Cuba.
Sept 26 th	Closing event of the IV Congress of the CDR, Havana, Cuba.
Nov 7 th	Closing event of the Assembly of Work Balance, Renewal and Ratification of mandates of the PCC in the City of Havana, Havana, Cuba.
Dec 24 th	Closing event of the VI Congress of the Union of Journalists of Cuba, Havana, Cuba.

1994

Jan 1 st	Central event for the 35th anniversary of the triumph of the Revolution, Santiago de Cuba, Cuba.
June 30 th	Closing event of the I Congress of Family Medicine, Havana, Cuba.
July 15 th	Closing event of the International Workshop on Epidemic Neuropathy, Havana, Cuba.
Nov 25 th	Closing event of the world meeting of solidarity with Cuba, Havana, Cuba.
Dec 16 th	Closing event of the 9th Forum on Science and Technology, Havana, Cuba.

1995	
March 3 rd	Closing event of the VI Congress of the Federation of Cuban Women, Havana, Cuba.
March 25 th	Closing event of the V Congress of the University Students Federation, Havana, Cuba.
July 26 th	Central event for the XLII anniversary of the Assault on the "Moncada" and "Carlos Manuel de Céspedes" barracks, Guantánamo, Cuba.
1996	
Feb 12 th	In sugar mill "Cándido González, Camagüey, Cuba.
March 31 th	In sugar mill "Perú", Jobabo, Las Tunas, Cuba.
April 30 th	Closing event of the XVII Congress of the CTC, Habana, Cuba.
May 17 th	Central event for the XXXV anniversary of ANAP and the XXXVII of the first agrarian reform act, Ciego de Ávila, Cuba.
May 28 th [1]	Event celebrating the fulfillment of the Sugar production Plan of the Province of Holguín, in sugar mill "Nicaragua", Banes, Holguín, Cuba.
May 28 th [2]	Event celebrating the fulfillment of the Sugar production plan of the sugar mill "Fernando de Dios", Holguín, Cuba.
July 26 th	Central event for the XLIII anniversary of the Assault on the "Moncada" and "Carlos Manuel de Céspedes" barracks, Holguín, Cuba.
Sept 30 th	Mass rally in Revolution Square "Ernesto Guevara", Santa Clara, Cuba.
1997	
Jan 15 th	Central event for the Cuban Science's Day, Havana, Cuba.
April 4 th	Central event for the XXXV anniversary of the UJC, Havana, Cuba.
Oct 8 th	Presentation of the central report to the V Congress of the Communist Party of Cuba, Havana, Cuba.
Dec 29 th	Closing event of the Provincial Meeting of Cadres and Leaders of the Capital, Havana, Cuba.
Fidel Castro, 1998-2007	
1998	
Jun 3 rd	Closing event of the first national meeting of CCSs' presidents, Havana, Cuba.
July 26 th	Central event for the XLV anniversary of the Assault on the "Moncada" and "Carlos Manuel de Céspedes" barracks, Santiago de Cuba, Cuba.
Sept 28 th	Closing event of the V Congress of the CDR, Havana, Cuba.
Nov 21 th	Closing event of the XII National Forum of Science and Technic, Havana, Cuba.
1999	
Feb 3 rd	In the Aula Magna from the Central University of Venezuela, Caracas, Venezuela.
May 17 th	Central event for the XL anniversary of the First Agrarian Reform Act, Havana, Cuba.
2000	
Jun 22 th	In interview with the former general director of UNESCO, Federico Mayor Zaragoza.
Sept 28 th	On the occasion of the XL anniversary of the CDR, Havana, Cuba.
2001	
May 1 st	On occasion of the Workers' International Day, Havana, Cuba.
Aug 13 th	Event of launching the electrical interconnection system that will supply energy to the northern area of Brazil, Santa Elena de Uairen, Venezuela.
2002	
Feb 15 th	Closing event of the IV International Meeting of Economists, Havana, Cuba.
Oct 21 th	Inaugural event of the training courses for sugar industry workers, Artemisa, Cuba.
2005	

Nov 17 th	On the occasion of the 60 th anniversary of Fidel's entrance to the university, University of Havana, Cuba.
2006	
Jan 17 th	On the occasion of the culmination of the assembly of the generators in Pinar del Río province, Pinar del Río, Cuba.
May 1 st	Event for the Workers' International Day, Havana, Cuba.
2007	
Feb 27 th	Telephone conversation between Fidel Castro Ruz and Hugo Chávez Frías, during the radio broadcast of Program "Aló Presidente" No. 269.
March 28 th	Reflections of the Commander in Chief: "More than 3 billion people in the world condemned to premature death by hunger and thirst".
April 3 rd	Reflections of the Commander in Chief: "The internationalization of Genocide"

Raúl Castro, 2008-2015

2007	
July 26 th	Celebration of the LIV anniversary of the attack on Moncada and Carlos Manuel de Céspedes barracks, Camagüey, Cuba.
Dec 28 th	Session of the VI Legislature of the National Assembly of the People's Power, Havana, Cuba
2008	
Feb 24 th	Closing event of the constitutive session of the VII Legislature of the National Assembly of the People's Power, Havana, Cuba.
July 11 th	Closing event of the first ordinary session of the VII Legislature of the National Assembly of People's Power, Havana, Cuba.
Dec 27 th	Second Period of sessions of the VII Legislature of the National Assembly of People's Power, Havana, Cuba.
2009	
July 26 th	Central event for the LVII anniversary of the Assault on the "Moncada" and "Carlos Manuel de Céspedes" barracks, Holguín, Cuba
Aug 1 st	Third ordinary period of sessions of the VII Legislature of the National Assembly of the People's Power, Havana, Cuba.
Dec 20 th	Closing event of the National Assembly of People's Power, Havana, Cuba.
2010	
Aug, 1 st	Fifth Regular Session of the VII Legislature of the National Assembly of People's Power, Havana, Cuba.
Apr, 4 th	Closing event of the 9th Congress of the Young Communist League, Havana, Cuba.
2015	
July 15 th	Closing event of the V ordinary period of sessions of the VII Legislature of the National Assembly of People's Power, Havana, Cuba.

Annex 2. List of quotations in original language

In Chapter 5

Period 1984-1988

“Nosotros no estamos vendiendo el azúcar a tres centavos, ni el níquel, ni los cítricos, ni todas las producciones que enviamos a los países socialistas a precios miserables, tienen otros precios muy superiores, y eso nos produce elevados ingresos. De lo contrario, ¿cómo nosotros podríamos adquirir los 11 millones de toneladas de combustible que gastamos por año?” (FC, 07.06.85) <http://www.cuba.cu/gobierno/discursos/1985/esp/f070685e.html>

“... la Revolución ha liberado al trabajador, y especialmente en el campo, de los esfuerzos más inhumanos, más duros, al mecanizar la preparación de tierra, al emplear medios químicos para luchar contra las malezas, al introducir las alzadoras, las combinadas de caña, las cosechadoras de arroz, el transporte motorizado, los embarques de azúcar a granel y la mecanización de los puertos. (...) En estos 25 años, desde que se proclamó la primera Ley de Reforma Agraria, se han invertido en nuestros campos aproximadamente 10 000 millones de pesos, el número de tractores se ha multiplicado ocho veces, la aplicación de fertilizantes se ha multiplicado por diez, la aplicación de pesticidas por cuatro, se introdujeron masivamente los herbicidas, la capacidad de embalse se ha multiplicado ciento veinticinco veces con relación a la que existía antes de la Revolución y las áreas de regadío se han multiplicado por cuatro, alcanzando casi un millón de hectáreas; se han realizado alrededor de 3 000 instalaciones agrícolas e industriales, y con los centros de acopio, las escuelas en el campo y el desarrollo de nuestra industria eléctrica se han electrificado grandes áreas de nuestros campos incrementando extraordinariamente la cantidad de familias que reciben el beneficio de la electricidad.” (FC, 17.05.84) <http://www.cuba.cu/gobierno/discursos/1984/esp/f170584e.html>

“... hoy se realizan nuestras zafras en forma relativamente cómoda, si se compara con aquellas enormes movilizaciones que nos habíamos visto obligados a hacer. Se introdujeron otras técnicas; se mecanizó toda la preparación de la tierra, gran parte de los cultivos; se introdujo el herbicida, se usaron los aviones para regar el herbicida, en ocasiones también para fertilizar con urea mediante el riego foliar, y lo mismo que ocurrió en la caña, ocurrió en los arrozales: la mecanización de los cultivos, la construcción de grandes sistemas de riego, la siembra en avión, la fertilización en avión, en muchas ocasiones, y el corte mecanizado del arroz.” (FC, 17.05.87) <http://www.cuba.cu/gobierno/discursos/1987/esp/f170587e.html>

“El trabajo se ha humanizado. Ya no son 350 000 obreros cortando caña en todo el país, ya son alrededor de 80 000 o menos, las máquinas han venido a hacer la tarea. Ya no hay corte de arroz a mano, vienen las combinadas. Ya no se ara con bueyes la tierra, vienen las máquinas. Ya no se transporta en carretas, están los camiones. Ya no es el hombre picando piedras para hacer una carretera, (...). Tenemos una cantidad de recursos tremendos, fabulosos, ...” (FC, 26.07.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f260786e.html>

“¿Y qué ocurre hoy? ¡El trabajador suspira por las máquinas, suspira! Porque no es lo mismo cortar arroz con una hoz, horas interminables, doblado, que cortar arroz en una combinada; no es lo mismo regar el fertilizante y el pesticida a mano, que regar en un avión o sembrar en un avión, que tiene una productividad fabulosa, un avión sembrando arroz o regando pesticidas o fertilizando. El campesino comprende incluso la idea de la tecnificación y la idea de trabajar en grandes extensiones, etcétera; comprende que el minifundio es improductivo, y por eso se agrupa en cooperativas o grandes empresas estatales.” (FC, 17.09.87) <http://www.cuba.cu/gobierno/discursos/1987/esp/f170987e.html>

“Ya nos ha afectado [la sequía] en la producción azucarera en más de un millón de toneladas, y como nos hemos hecho el compromiso de cumplir las obligaciones que tenemos con los países socialistas y no podemos hacer como a veces se hacía antes, que sencillamente se disminuían las entregas de azúcar y se enviaban al mercado capitalista, con esta afectación es muy poca el azúcar disponible para los mercados capitalistas en el año 1987. Eso forma parte del conjunto de factores que he explicado, que hacen duro el año en recursos en moneda convertible, con la doble agravante de que

nos afecta también en otras producciones agrícolas: afectan producciones de leche, de viandas, de vegetales.” (FC, 02.12.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f021286e.html>

“Se venía haciendo este esfuerzo; pero ahora hay que hacerlo con mucha más conciencia, con mucha más eficiencia, con mucha más sabiduría. Y en el plan de inversiones, prioridad absoluta — repito— a las producciones que sustituyan importaciones o generen exportaciones en el área convertible, ya se sabe y se están estudiando todas estas inversiones, tienen prioridad número uno. Hay un segundo punto de máxima prioridad. Ya no se refiere a las producciones que generan exportaciones para el área convertible. Viene una segunda cuestión de máxima prioridad, y también sagrada para nosotros, que son las exportaciones con destino al área socialista: atención prioritaria a las producciones para el área socialista, y a las inversiones que generan exportaciones al área socialista. Es bien claro. (FC, 04.12.84) <http://www.cuba.cu/gobierno/discursos/1984/esp/f041284e.html>

“Con relación al azúcar, les voy a poner otro ejemplo. En el año 1960, para comprar un buldócer de 180 toneladas, teníamos que emplear 200 toneladas de azúcar; hoy, para comprar ese mismo buldócer en Japón, tenemos que exportar 1 300 toneladas de azúcar. Quiere decir esto que los japoneses venden su buldócer cada vez más caro, lo producen con buenos salarios, ganancias de las empresas, publicidad, todo, y compran seis veces más azúcar con el mismo buldócer. Nosotros podemos producir seis veces más azúcar y compramos las mismas cosas que antes con la sexta parte. Eso es el intercambio desigual; ese intercambio entre materias primas, productos básicos agrícolas y otros productos que no pueden producir ellos, porque cuando los pueden producir allá, nos revientan, lo subsidian y nos revientan.” (FC, 18.07.85) <http://www.cuba.cu/gobierno/discursos/1985/esp/f180785e.html>

“No tembló ni vaciló [la Revolución] en emprender resueltamente el largo y difícil camino del desarrollo económico y social, partiendo de una economía atrasada, deformada y dependiente, heredada del colonialismo, y en medio de un brutal bloqueo económico de quienes habían sido nuestros suministradores de equipos, tecnologías, proyectos y materias primas. Fue iniciado un camino duro y difícil que exigía incontables esfuerzos, perseverancia y sacrificios: ...; la mecanización de la cosecha de la caña y de todas las actividades agrícolas, la electrificación de los campos, la edificación de presas, canales de riego y drenaje, la introducción de la fertilización y la química en general, la mejora del ganado, la inseminación artificial y otras numerosas técnicas en nuestra atrasada agricultura...” (FC, 01.01.84) <http://www.cuba.cu/gobierno/discursos/1984/esp/f010184e.html>

“Por muchas razones, por infinidad de razones, había llegado la hora de impulsar formas superiores de producción agrícola en nuestro sector campesino, nuestro leal aliado, el aliado firme de nuestra clase obrera, nuestros nobles, honestos y patriotas campesinos, nuestros revolucionarios campesinos (APLAUSOS), cuyo espíritu pudimos comprobar desde los primeros meses, desde los primeros días de nuestro desembarco, a lo largo de la lucha en las montañas y a lo largo de 28 años de Revolución, en la construcción del socialismo, en la defensa de la Revolución y de la Patria.” (FC, 17.05.87) <http://www.cuba.cu/gobierno/discursos/1987/esp/f170587e.html>

“... expliqué cómo se reducía el área de tierra per cápita a medida que crece la población, y que obliga a utilizar bien toda la tierra, con toda la técnica; que obliga a la producción en gran escala, altamente tecnificada. Y cuando se va a hacer un sistema de riego, no se puede encontrar 50 minifundios por el camino, porque no puede hacerse un canal, ni puede hacerse un sistema de riego adecuado, ni puede mecanizarse la agricultura. (...) lo que debemos es partir de nuestra realidad y de nuestra experiencia, de nuestra escasez de tierra para buscar el máximo de productividad y para buscar la producción en gran escala y tecnificada, como la tenemos en arroz, en caña, en cítrico, y en otras muchas cosas. Podemos sacar mucho más, ¡pero, ay de nosotros si tuviéramos que vivir de cientos de miles de minifundios!, entonces sí es verdad que conseguir una gallina por ahí, o conseguir cualquier cosa, conseguir alimentos para los hospitales, para las escuelas, para los comedores obreros, y producir 8 millones y medio de toneladas de azúcar sería imposible.” (FC, 28.09.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f280986e.html>

“... qué maravilloso será el día en que cuando vayamos a hablar con el sector campesino, no tengamos que reunirnos con 200 000 campesinos, porque es imposible reunirse con 200 000 campesinos; pero sí es perfectamente posible reunirse con 1 000 cooperativas, 1 500 cooperativas, 2

000 cooperativas para discutir cualquier problema. (...) ... es mucho más fácil para el Estado socialista, discutir, hablar, intercambiar opiniones, buscar fórmulas reunido con 1 500 o 2 000 representantes del sector campesino, que tiene bajo su dirección y control el total de la producción campesina. Lo tendrá algún día, porque aspiramos a que llegue el día en que el ciento por ciento de las tierras de los campesinos formen parte de las cooperativas.” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“No mencionaba, por ejemplo, la cantidad de trámites, arreglos, precontratos, contratos, etcétera, que hay que hacer todos los días y todos los años con cientos de miles —en este caso eran 200 000 campesinos individuales—: los créditos para cada uno de ellos, los materiales y los insumos para cada uno de ellos en su parcela, la aradura de la tierra en cada uno de los pedacitos, las atenciones sanitarias de tipo vegetal o animal y, al final, los acopios de los productos: dos gallinas, tres gallinas, cuatro gallinas; un puerco, puerco y medio, medio puerco; 40 litros de leche, un tanque para que la recoja, y a horas tempranas, ..., cubo a cubo; un quintalito, más de un quintalito o menos de arroz, de frijoles, y un camión hoy con plátanos, mañana otro con boniato, pasado otro con vegetales, y un camión visitando numerosos minifundios para cargarse, etcétera, etcétera, métodos verdaderamente prehistóricos. En la granja estatal, en la lechería de 288 vacas, con electricidad, se conserva la leche de los dos ordeños a la temperatura adecuada, esperando el momento en que llegue el camión a cargar 1 000, 1 500, 2 000 litros de leche; en el minifundio son 50, 60, 80, 100, para citar un ejemplo.” (FC, 17.05.87) <http://www.cuba.cu/gobierno/discursos/1987/esp/f170587e.html>

“Yo voy a ver si el día en que todas las tierras estén cooperativizadas y al frente de cada cooperativa haya hombres como los que aquí han hablado, si podrá aparecer un mercachifle de esos a hacer un negocio, un chanchullo; yo quiero saber si será posible. Hoy todavía se pueden refugiar en algunas de las decenas de miles de pedazos sueltos que quedan por ahí, ¡es mucho más difícil controlar, mucho más difícil adivinar qué es lo que están haciendo!” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“Tenemos el Congreso de la ANAP el 17 de mayo del próximo año. Ahí no estarán solo presentes los cooperativistas, estarán también presentes los campesinos de las cooperativas de créditos y servicios, con los cuales hay que trabajar; no podemos olvidarnos de las cooperativas de créditos y servicios, hay que hacer un trabajo activo allí, porque allí es donde estamos librando la batalla contra el enemigo; contra el enemigo reaccionario, contra elementos especuladores. De ese tipo de elemento sale un hombre como el de los dos camiones y el automóvil. Este es un campesino; pero, en general, no son los campesinos, sino elementos que merodean por los campos los que nos preocupan fundamentalmente.” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“Yo veía ayer a uno de ustedes que hablaba con mucha irritación y decía que se sentía feliz de lo que se había planteado sobre estos problemas, porque, naturalmente, a un honrado trabajador, a un campesino trabajador tiene que indignarle realmente que haya estas cosas. Se están riendo en su cara, como diciendo: “¡Idiota!, tú estás en la cooperativa, te metiste en la cooperativa; yo soy millonario, tengo dos camiones, tengo esto, tengo trabajadores, ¡soy un pachá, soy un rey, soy un emperador!” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“Ya aquí quedó establecido con toda claridad el deseo de los cooperativistas de que todos estos elementos, que utilizan la tierra de una manera incorrecta y llevan a cabo prácticas de aparcería y de arrendamiento de tierra para lucrarse del trabajo de los demás, deben ser expropiados o confiscados. Creemos, además, y aquí quedó también patentizado, que el abandono de la tierra no debe permitirse; sin cometer, desde luego, ningún tipo de injusticia, pero con un trabajo coordinado del Ministerio del Azúcar, del Ministerio de la Agricultura y de la ANAP, se debe poner fin a toda forma de propiedad ausentista en el campo, de uso indebido o incorrecto de la propiedad de la tierra. Alguna medida habrá que ir tomando con esos kulaks que quedan por ahí —para usar una palabra histórica—; quedan algunos.” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“En este porcentaje del campesinado que todavía no está cooperativizado, se libra una batalla; en ese porcentaje de la tierra que todavía no está cooperativizado.” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“... porque conocemos las perspectivas y posibilidades del avance del movimiento cooperativo entre nuestros campesinos, que se realiza metódicamente, sin precipitaciones, y partiendo del más estricto respeto al principio de la voluntariedad, en lo cual, a nuestro juicio, radica y radicará el éxito de ese movimiento, cuyo ritmo actual augura que en un quinquenio y medio más, digamos en seis o siete años, casi el ciento por ciento de las tierras campesinas estarán cooperativizadas, lo que, unido a las empresas agrícolas estatales, nos permitirá afirmar que sin precipitaciones, con inteligencia y sabiduría, a partir de la Ley de Reforma Agraria, cuyo XXV aniversario se conmemora este año, las tierras de nuestra patria, al igual que la industria, estarán totalmente socializadas.” (FC, 24.02.84) <http://www.cuba.cu/gobierno/discursos/1984/esp/f240284e.html>

“Y las empresas estatales en Cuba suministran la mayor parte de la caña para la producción azucarera, casi el ciento por ciento del arroz que se produce en el país, la mayor parte de producciones muy importantes de exportación, como los cítricos; las empresas estatales producen toda la leche, todo el huevo, toda la carne de ave, toda la carne de cerdo, toda la carne de res que se distribuye a la población y se suministra en los establecimientos de carácter social, o en los hospitales, en las escuelas, en todas partes, a esa población de casi 3 millones a la que se suministra adicionalmente en los centros de consumo social, porque en el país se distribuye para 13 millones. Nadie se vaya a imaginar que eso salía del mercado libre campesino, que suministraba una proporción ridícula.” (FC, 28.09.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f280986e.html>

“Pero ustedes se imaginan, con el mercado libre campesino —y cuando la cabeza de ajo estaba a peso y un plátano en determinado momento a 60 ó 70 centavos—, un campesino con 50 hectáreas, un campesino con 65 hectáreas, un campesino con 20 hectáreas se hace rico, se hace millonario. Y como ese mercado, realmente, no se puede regular, porque sería una contradicción: "Oiga, le voy a poner el precio, en vez de a un peso, venda la cabeza de ajo a 15 centavos", ya no es libre el mercado, ya no es libre, el tipo no lo lleva. El tipo va a ese mercado porque gana mucho más. Imagínese un campesino con 50 hectáreas, iba a llegar a tener más dinero que Julio Lobo (RISAS), vendiendo allí en el mercado libre campesino.” (FC, 17.05.87) <http://www.cuba.cu/gobierno/discursos/1987/esp/f170587e.html>

“... no era necesario que las cooperativas fueran al Mercado Libre Campesino, ni era necesario que las cooperativas se desprestigiaran, porque quiero decirles, realmente, que el pueblo, aunque por necesidad de obtener ciertos productos pagaba y pagaba caro las cosas, tenía una opinión muy mala, muy mala, del Mercado Libre Campesino; de los precios a que se vendía, de ese sistema de enriquecimiento individual, y la población cuando llegaba allí se sentía robada; realmente a mí me dolía que el movimiento cooperativo, con el prestigio adquirido, pudiera ser víctima de ese rechazo, de esa repulsa, de esa animadversión de la población, sin que aquello fuera una necesidad de las cooperativas, por todas las facilidades y recursos que a las cooperativas se les estaban ofreciendo [la Revolución].” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“Aparte del daño económico, político y moral, el Mercado Libre Campesino nos estaba entorpeciendo el desarrollo de las cooperativas y creando antipatías contra los campesinos. Como yo decía ayer: si un individuo con una hectárea de ajo podía sacar hasta 50 000 pesos en un año, difícilmente se incorporaba al movimiento cooperativo, bajo ningún concepto.” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“Yo mismo pensaba: bueno, cómo les vamos a pedir a los cooperativistas, que están trabajando honradamente, haciendo un esfuerzo, ganándose el pan con el sudor de su frente, que no vayan al Mercado Libre Campesino y ese mercado libre va a seguir subsistiendo para que todos esos elementos lumpens, antisociales, sigan lucrando con ese mercado y para que, incluso, aquellos agricultores o campesinos individuales, llenos de ambición de ganancia y de dinero siguieran disfrutando las ventajas de obtener todo el dinero que les diera la gana en ese mercado.” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“Por eso resultaba doloroso ver gente vendiendo ajo ahí a cualquier precio, con una hectárea de tierra y trabajando unas horas al año, y ganar en el Mercado Libre Campesino 50 000 o 60 000 pesos en un año, lo que uno de esos especialistas altamente calificados de cirugía gana en 12 años. Aquí hubo ingresos individuales —y yo saqué la cuenta— obtenidos en un año, que un especialista de cirugía, de

los mejores que tenemos en el país, habría necesitado 60 años. Conozco muchos buenos cirujanos, muchos buenos médicos en este país, no los he visto con esa ambición de dinero, viven dedicados al trabajo, consagrados al trabajo, son verdaderos comunistas.” (FC, 02.12.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f021286e.html>

“También hay algunos campesinos —lo vi en un periódico— que decían que lo que no les gustaba era que les pagaban un precio y en el mercado paralelo lo vendían a otro. ¡Figúrense!, con esa abundancia de dinero que hay por la calle, esa enorme abundancia, ¿vas a rebajar el precio? Ya el ajo se rebajó, estaba a seis pesos y está a dos pesos —yo me sé los precios esos, no vaya a ser que crean que no los conozco (APLAUSOS). Bueno, pues la Empresa de Frutas Selectas paga a 1,50 la libra al campesino; acopio normalmente un poco menos. Pero el cerdo, el pavo... No vayan a creer que vienen de los campesinos los pavos que se distribuyen en el mercado paralelo de la capital, los producen las empresas estatales. Con los pavos que producen los campesinos, no alcanza para repartir un pavo por núcleo aquí cada 20 años.” (FC, 28.09.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f280986e.html>

“... mercados paralelos —libres también, pero no el libre campesino, pues pertenecen a todo el pueblo, los administra el Estado, no enriquecen a ningún individuo en particular.” (FC, 17.05.87) <http://www.cuba.cu/gobierno/discursos/1987/esp/f170587e.html>

“Cuando los imperialistas hablan de eso, hacen creer que aquí los cuatro gatos especuladores esos suministraban a este país [refiriéndose a los campesinos del Mercado Libre Campesino]. A este país hace mucho rato que lo vienen suministrando las empresas socialistas, tecnificadas y productoras en gran escala.” (FC, 28.09.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f280986e.html>

“Saben bien ustedes también lo crítico que fui con las prácticas del mercado libre campesino, cuando ciertos individuos vendían una cabeza de ajo en un peso para embolsárselo personalmente sin ningún beneficio para el pueblo, no era el campesino trabajando honestamente, sudando, que recibe, por otro lado, todas las facilidades que le da la Revolución de educación para los hijos, de asistencia médica, todas las posibilidades, sin que le falte ninguna; sino gentes que lejos de obtener ingresos honrados cultivando la tierra, se enriquecían comerciando, robando, vendiendo caro, carísimo.” (FC, 19.04.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f190486e.html>

“Pero la fuerza, la decisión, la claridad, la energía con que ustedes [cooperativistas] plantearon que se le pusiera fin a este mercado, realmente es una prueba concreta, palpable, del desarrollo de la conciencia de los campesinos cooperativistas y de las ventajas, no solo económicas y materiales de las cooperativas, sino, incluso, políticas, porque aquí se puede apreciar ya una mentalidad distinta en los cooperativistas, tienen una conciencia, una mentalidad diferente a la del productor individual, y han sido capaces de analizar con objetividad y con profundidad todas las consecuencias negativas de esa institución [Mercado Libre Campesino], y plantear aquí, de manera unánime, que se le ponga fin, de inmediato.

Aunque yo estaba convencido de que el Mercado Libre Campesino debía desaparecer en breve tiempo, pensé que iba a tener algunos meses más de vida; sin embargo, las ideas expuestas por ustedes [cooperativistas], las proposiciones de ustedes, el criterio unánime del movimiento cooperativo de que ese mercado debe desaparecer de inmediato, es lo que determinó que ese mercado desaparezca sin dilación alguna, y ya se están tomando todas las medidas para que, desde el lunes, o el máximo en esta semana, desaparezca el Mercado Libre Campesino. Hemos atravesado por esa experiencia, que creo que también haya enriquecido nuestros conocimientos sobre lo que debe o no debe hacerse para llevar adelante nuestro proceso revolucionario; pienso que la decisión tomada [el cierre del Mercado Libre Campesino] le va a dar un fuerte impulso político, moral e incluso de tipo económico al movimiento cooperativo.” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

“En la actualidad estamos enfrascados en la lucha por alcanzar formas superiores de producción en las tierras de los campesinos. Marcha adelante el movimiento de cooperativización, que es relativamente nuevo en la Revolución y que ha alcanzado un gran auge en los últimos tres años. Ya actualmente alrededor de 70 000 caballerías, que, incluyendo 6 000 cedidas por el Estado, comprenden

el 56% del total de las tierras de los campesinos, están cooperativizadas. De modo que, si sumamos las granjas estatales y las cooperativas de producción agropecuaria, alrededor del 90% de nuestras tierras agrícolas trabajan hoy bajo formas superiores de producción.” (FC, 17.05.84) <http://www.cuba.cu/gobierno/discursos/1984/esp/f170584e.html>

“Después de 20 años de Revolución ya empezaba a constituir prácticamente una vergüenza el hecho de que un sector de nuestra población rural, una parte importante de nuestras tierras, siguieran siendo explotadas como en la época en que llegaron a este país los conquistadores españoles; que al lado de los grandes avances revolucionarios y sociales, de los grandes avances en la industria, en muchos aspectos de la vida del país, continuáramos con métodos prehistóricos de producción agrícola en una parte importante de nuestras tierras. Avanzar hacia formas superiores de producción agrícola no es una simple idea, un gusto particular de alguien, un capricho; es una profunda necesidad humana — ...—, una profunda necesidad social y una profunda necesidad económica.” (FC, 17.05.87) <http://www.cuba.cu/gobierno/discursos/1987/esp/f170587e.html>

“Más del 90% de la carne de ave y porcina que se distribuye a la población, una gran cantidad de la carne de res; más del 80% de la caña que se suministra a los centrales azucareros; más del 90% del arroz que se distribuye a la población; más del 90% de la leche; más del 80% del cítrico de exportación, las ramas agrícolas fundamentales, de las cuales ha vivido y por las cuales se ha desarrollado la economía del país, se produjeron bajo formas superiores, en empresas estatales agrícolas. Ha sido fruto del trabajo abnegado de cientos de miles de nuestros obreros agrícolas, tan generosos, que han estado siempre prestos a todo; también, en parte, de nuestros obreros industriales, que se separaban de sus familiares meses enteros para hacer la zafra, para ayudar en cualquier cultivo, en cualquier actividad; y fruto también del esfuerzo de cientos de miles de nuestros estudiantes, en esa maravillosa fórmula marxista y martiana de la combinación del estudio y del trabajo; nuestros estudiantes de secundaria, de preuniversitario, de los tecnológicos, asistiendo al campo, recogiendo vegetales, cítricos, tabaco, etcétera, porque nuestro país conoció formas superiores y formas muy justas de producción.” (FC, 17.05.87) <http://www.cuba.cu/gobierno/discursos/1987/esp/f170587e.html>

“En nuestro país —como ustedes saben— una parte importante de la tierra, el 80% de la tierra, está en empresas estatales. Se ha luchado durante muchos años por buscar la eficiencia de esas empresas estatales, y algunas están dando notables ejemplos de trabajo técnico avanzado, de alta productividad. Todavía las empresas estatales son también víctimas, por una serie de razones, de las consecuencias de concepciones erróneas —como yo decía aquí—: de plantillas infladas, de estructuras erróneas, de oficinas llenas de gente, de todo ese tipo de cosas; pero estamos estudiando todo eso, y no pararemos hasta que nosotros liberemos a las empresas agrícolas estatales de todos esos vicios.” (FC, 18.05.86) <http://www.cuba.cu/gobierno/discursos/1986/esp/f180586e.html>

In Chapter 6

Period 1989-1991

“Vivimos un momento especial dentro del movimiento revolucionario mundial. No vamos a andar con melindres, tenemos que llamar las cosas por su nombre. Hay dificultades en el movimiento revolucionario mundial; hay dificultades en el movimiento socialista. Ni siquiera podemos decir con seguridad que los suministros del campo socialista, que con la puntualidad de un reloj han estado llegando a nuestro país durante casi 30 años, sigan llegando con esa seguridad y con esa puntualidad de reloj. Si el país ha estado haciendo más que nunca con menos que nunca —y estos hechos lo demuestran—, con menos divisas que nunca, es posible que en el futuro tengamos que seguir trabajando y esforzándonos, ¡y haciendo milagros!, con problemas también en los suministros provenientes del área socialista.” (FC, 26.07.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f260789e.html>

“... ya que estamos hablando claro, vamos a hablar bien claro de una vez: hay algunos cacharros de esos que nada más que nosotros los compramos, y, sin embargo, hasta los hacemos producir, porque esa es ya nuestra especialidad en tantos años: agarrar baratijas y tratar de sacar algo útil de ellas. Sí,

porque les voy a poner un ejemplo: los montacargas búlgaros esos nada más que nosotros los compramos en el mundo; son tan porquería y tienen tantos problemas que nada más que nosotros los compramos en este comercio que se estableció, con un nivel de comprensión. Cuántos cientos y miles, incluso, de esos montacargas están parados ahí en los almacenes. (...) No sé dónde lo [los búlgaros] van a vender ahora, porque hacían otras cosas: a veces exportaban a capitalista y les ponían mejores cosas, compraban algunas cosillas; pero el que nos mandaban a nosotros no era ese, téngase en cuenta.

Los ómnibus húngaros hacen seis kilómetros por galón, llenan de humo la ciudad, envenenan a todo el mundo. Pudiéramos hacer las estadísticas de cuánta gente matan los ómnibus húngaros, porque les ponen una bomba de inyección pésima a los que exportan, y vienen, además, con una caja de velocidad automática de Checoslovaquia, se lo digo. Esa caja solo tiene dos velocidades. Hace gastar al ómnibus un 30% más de combustible. Me alegra poder hablar con esta libertad, se acabaron los escrúpulos... Como hemos tenido que tragar bilis, yo diría, durante muchos años, pues nos vamos a librar de todo eso, porque el motor nuestro es mucho mejor, el ómnibus que estamos haciendo es mucho mejor; porque, bueno, el pueblo nuestro será más curioso para hacer las cosas o está más decidido a vencer, ¡es más revolucionario y se acabó, pero las cosas que estamos haciendo, las hacemos bien! (FC, 07.03.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f070390e.html>

“La situación es tensa con el combustible, ¡muy tensa!, y ese es un producto esencial; lo estamos recibiendo en cantidades inferiores a las acordadas, a las contratadas. Es tensa la situación con muchas materias primas que no voy a enumerar, pero que resultan esenciales, tan esenciales como fertilizantes, metales, madera, etcétera, etcétera, etcétera, en nuestras producciones industriales y nuestras producciones agrícolas.

El comercio con unos cuantos países de la antigua comunidad socialista, prácticamente ha desaparecido; se mantiene con otros. Y no nos quejamos de los soviéticos, lo digo con toda honestidad y con toda franqueza, no nos quejamos. Y, ¿por qué no nos quejamos, a pesar de que las entregas de algunos productos se han reducido hasta un 50%?, porque nos consta que el gobierno soviético hace todo lo posible por cumplir los compromisos, ¡hace todos los esfuerzos por cumplir los compromisos! (APLAUSOS) Solo que sus propias dificultades y sus actuales problemas objetivos van más allá de la buena voluntad de hacer el máximo para cumplir con las entregas acordadas, y para continuar con su tradicional nivel de colaboración económica con Cuba.” (FC, 26.07.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f260790e.html>

“Por ello nosotros no hemos vacilado en impedir la circulación de ciertas publicaciones soviéticas que están cargadas de veneno contra la propia URSS y el socialismo. Se percibe que detrás de ellas está la mano del imperialismo, la reacción y la contrarrevolución. Ya algunas de esas publicaciones han comenzado a demandar el cese del tipo de relaciones comerciales equitativas y justas que se han creado entre la URSS y Cuba en el transcurso del proceso revolucionario cubano. En dos palabras: que la URSS comience a practicar con Cuba el intercambio desigual, vendiendo cada vez más caro y comprando cada vez más barato nuestros productos agrícolas y materias primas, lo mismo que Estados Unidos hace con los países del Tercer Mundo o, en último término, que la URSS se sume al bloqueo yanqui contra Cuba.” (FC, 07.12.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f071289e.html>

“Hay dificultades y son crecientes las tensiones y los conflictos entre las nacionalidades de la URSS; son evidentes igualmente las tensiones internas dentro de la URSS, y hemos sido testigos de la huelga de cientos de miles de mineros del carbón en Siberia, en Donestsk y en otros lugares. Esas noticias llenan de felicidad a la reacción mundial, esas noticias llenan de felicidad al imperio [el gobierno de los Estados Unidos]. (...) Tenemos que ser más realistas que nunca. Pero tenemos que hablar, tenemos que advertir al imperialismo que no se haga tantas ilusiones con relación a nuestra Revolución y con relación a la idea de que nuestra Revolución no pudiera resistir si hay una debacle en la comunidad socialista; porque si mañana o cualquier día nos despertáramos con la noticia de que se ha creado una gran contienda civil en la URSS, o, incluso, que nos despertáramos con la noticia de que la URSS se desintegró, cosa que esperamos que no ocurra jamás, ¡aun en esas circunstancias Cuba y la Revolución Cubana seguirían luchando y seguirían resistiendo!” (FC, 26.07.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f260789e.html>

“Se ha proclamado que el socialismo debía perfeccionarse. Nadie puede oponerse a este principio que es inherente y de constante aplicación a toda obra humana. ¿Pero es acaso abandonando los más elementales principios del marxismo-leninismo que puede perfeccionarse el socialismo? ¿Por qué las llamadas reformas tienen que marchar en un sentido capitalista? Si tales ideas tuviesen un carácter revolucionario, como algunos pretenden, ¿por qué reciben el apoyo unánime y exaltado de los dirigentes del imperialismo? (...) En Cuba llevamos a cabo nuestro proceso de rectificación. Sin un partido fuerte, disciplinado y respetado, es imposible desarrollar una revolución o una rectificación verdaderamente socialista. No es posible llevar a cabo semejante proceso calumniando al socialismo, destruyendo sus valores, desprestigiando al Partido, desmoralizando la vanguardia, renunciando a su papel dirigente, liquidando la disciplina social, sembrando el caos y la anarquía en todas partes. Así se puede promover una contrarrevolución, pero no cambios revolucionarios.” (FC, 07.12.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f071289e.html>

“Aquí el factor fundamental que nos afecta en esta batalla no es que se derrumbaran los otros; si los precios del azúcar y el combustible tuvieran la misma relación que tenían en 1959, 1960 y 1961, no habría ni que estar discutiendo aquí sobre lo que estamos discutiendo.” (FC, 22.11.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f221191e.html>

“Nosotros sabemos cuáles son los puntos estratégicos en que tenemos que seguir trabajando. Digamos que los programas alimentarios no se pueden detener, son estratégicos. Los que estamos haciendo en la voluntad hidráulica, nuevas fuentes de agua, sistemas de canales y de riego, no se deben parar en ninguna circunstancia. Si tenemos 3 millones o 5 millones de toneladas de petróleo, hay que mantener esos programas, de una forma o de otra. Primero habría que parar cualquier otra cosa, antes que esos programas. Los programas de desarrollo de la industria farmacéutica, de la biotecnología y otros en esa rama que tienen grandes perspectivas en este país, no podemos ni debemos pararlos; los programas para el desarrollo de determinados recursos en moneda externa, como los programas que estamos haciendo en la esfera del turismo, no debemos pararlos. Es decir que, en cualquier restricción, por grande que sea, que tenga que hacer el país en una situación de período especial en tiempo de paz, o en una situación muy difícil en la paz, derivada de estos problemas, en ninguna de esas situaciones debemos parar programas que son estratégicos para la alimentación del país o para el desarrollo. Llevaría más tiempo, nos sometería a una prueba muy fuerte, pero tendríamos que mantener el principio no solo de sobrevivir, sino también de desarrollarnos.” (FC, 28.01.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f280190e.html>

“El principio general —y no voy a dar más ideas— quiero que ustedes sepan que sería, cuando menos, que lo que tengamos lo repartimos entre todos. Ni en período especial habrá pordioseros aquí (APLAUSOS), porque no habrá nadie que le falte el alimento, lo que haya sería repartido: la electricidad repartida, todo repartido. Pueden sobrnos brazos, pero no habrá nadie en la calle. A lo mejor les damos libros para que lean, estudien, se cultiven; un tiempito para la televisión, la radio, hasta todo eso. Quizás disponga el ciudadano de mucho más tiempo, ¡maravilloso!, unas vacaciones en período especial, porque pueden llegar a sobrnos brazos en algunas esferas y tener que reducir las jornadas de trabajo.” (FC, 07.03.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f070390e.html>

“Ya hemos tenido que tomar las primeras medidas con el consumo eléctrico, hemos tomado otras medidas, y ya veníamos tomando otras desde hace meses, aunque con la esperanza de que pudieran resolverse los déficits. Veníamos reduciendo el consumo del combustible hasta un punto en que era imposible dejar de tomar medidas más radicales, como las que se han tomado en la industria, en el transporte, las que se han tomado con la electricidad, etcétera. Ahora se han tomado nuevas medidas relacionadas con la distribución de productos. Es inevitable que se vayan presentado situaciones en este momento imposibles de prever, así, ¡es imposible prever cuál será la situación en el año 1991! ¿Qué vendrá? ¿Con qué materias primas contaremos? ¿Con cuánto combustible? ¿En qué condiciones? No se puede dar una cifra.” (FC, 28.09.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f280990e.html>

“En las últimas 48 horas, he estado 17 horas con los hombres de campo, reunido con trabajadores o administradores de la agricultura. El día 15 tuvimos una reunión nacional de ganadería que duró 11 horas. Allí estaban todos los administradores de empresas ganaderas del país productoras de leche,

fundamentalmente, y de carne, ya que en esto el Estado tiene un peso muy grande. Estaban también el compañero Lugo y los representantes de la ANAP y analizábamos los problemas: qué hacer en circunstancias en que disponemos de la tercera parte de los fertilizantes —si acaso— de los que normalmente disponíamos; qué hacer cuando no disponemos de pienso para el ganado, no disponemos de granos; qué hacer cuando recibimos el equivalente a 400 millones de litros de leche menos al año, que recibíamos a través de la RDA, con la que teníamos convenios de intercambio de torula por leche en polvo, en virtud de inversiones que hicimos allí; qué hacer cuando nos faltan cantidades importantes de leche también, que venían en forma de leche condensada o de leche en polvo o de mantequilla de la URSS —de ese país recibíamos anualmente 16 000 toneladas de mantequilla que ya no se reciben—, y qué hacer para resolver los problemas, cuando, precisamente, tenemos menos fertilizantes que nunca y menos granos que nunca para los piensos; cuando los recursos para adquirir esos productos en otras áreas son muy escasos. No deja de ser un problema complicado y difícil, pero aquí nadie se desanima por las complicaciones o por las dificultades, y allí analizamos, discutimos y adoptamos una serie de medidas, y no medidas en el aire, sino medidas a partir de la experiencia, medidas a partir de los experimentos realizados en nuestros centros de investigación y en nuestros campos.” (FC, 17.05.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f170591e.html>

“Este esfuerzo en el programa alimentario tiene por objetivo esencial satisfacer necesidades del país, no tiene el propósito de la exportación. Se exportará fundamentalmente azúcar —como es lógico—, derivados de la caña de azúcar; y parte de la producción de caña se dedicará a la alimentación animal. Se exportarán cítricos —desde luego—, se trata de un programa creciente, que ya nos acerca al millón de toneladas de producción anual; pero el programa alimentario tiene por objetivo fundamental satisfacer las necesidades de la población.” (FC, 26.07.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f260790e.html>

“Eso es lo que nos estamos proponiendo, esa es la decisión que hemos tomado, esa es la batalla en que estamos enfrascados, y digo que no se trata de una batalla solamente de orden económico y de orden social, es una batalla de orden político y de orden ideológico. Tenemos que demostrar y queremos demostrar que el socialismo puede resolver estos problemas; tenemos que demostrar y queremos demostrar que el socialismo va a resolver este problema de las viandas y los vegetales. (...) ... la producción de viandas y vegetales es lo más noble de lo que podemos hacer.” (FC, 03.02.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f030291e.html>

“Desde luego, no se trabaja hoy solo en el desarrollo de la producción de leche, se trabaja intensamente en la aplicación de la técnica y en el desarrollo de la producción cañera, a partir de nuevas experiencias, a partir de los resultados experimentales obtenidos con la aplicación del drenaje parcelario y del riego en la caña. Tenemos que aplicar esta técnica en 60 000 caballerías de tierra y nos proponemos hacerlo en unos pocos años; no llegarán a 10, es posible que no lleguen a ocho, es posible que no pasen de siete. Estamos ahora organizando las brigadas, ya tenemos 47, dispondremos de 121 a finales de año, dispondremos de 200 el próximo, y trataremos de alcanzar 300 en el segundo semestre de 1991; más o menos, estará en esas cifras aproximadamente. Cuando tengamos ese número de brigadas, constituidas por equipos construidos fundamentalmente en Cuba, en seis años más, a partir de 1991, las 60 000 caballerías tendrán ya su drenaje parcelario, lo que, unido al riego en una parte de ellas, permitirá incrementar la producción de azúcar en más de 2 millones de toneladas, solo por esa vía del drenaje parcelario y el riego en esas áreas.” (FC, 26.05.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f260589e.html>

“Ya desde épocas recientes se han logrado importantes avances en la utilización de la caña para la alimentación animal. Cada hectárea de tierra nuestra dedicada a caña puede dar un 50% más; con riego, fertilización y drenaje parcelario, puede llegar a dar el doble, y una buena parte de ese incremento dedicarlo a la producción de carne y leche, dedicarlo a la producción de calorías y proteínas para el ganado, creando una sólida base alimenticia con recursos propios.” (FC, 08.01.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f080189e.html>

“Nuestro país, con los mismos recursos, puede hacer más, y estos tiempos lo están demostrando. En la agricultura estamos aplicando técnicas nuevas en la caña, en el arroz, en los sistemas de riego, y todo eso puede hacer que nuestros campos den mucho más. Estamos construyendo presas a un ritmo

como el que nunca se había alcanzado, después que fue reconstruida la voluntad hidráulica; no quedará un río aquí represable que no se represe, siempre que pueda ser útil a la agricultura. Y se está trabajando con un ritmo intensísimo en ese campo, para regar, para obtener muchos más productos de nuestra agricultura, para alimentar al pueblo, porque ese es el objetivo fundamental, o para exportar excedentes.” (FC, 01.10.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f011089e.html>

“¿Errores? Olvido del campo, desatención en el campo; cierto período en que prevalecieron conceptos erróneos, en que se paralizaron los planes de desarrollo social en el campo, en que se dejó de construir comunidades agrícolas, en que los obreros agrícolas fueron olvidados. Se hicieron cosas buenas, como el movimiento de cooperativas, y a las cooperativas se les dieron recursos, facilidades, toda una serie de cosas. A los campesinos se les aseguraron los precios, buenos ingresos; mientras, realmente, el obrero agrícola en aquellas famosas reformas salariales constituía la última carta de la baraja.” (FC, 03.02.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f030291e.html>

“¿Cuál es la tragedia de la agricultura en La Habana? La falta de fuerza de trabajo, y, en consecuencia, las malas hierbas. Esta situación la han venido salvando las escuelas en el campo, que prestan un servicio inapreciable, y las escuelas al campo. Pero, realmente, poco a poco las empresas de cultivos varios se han ido quedando sin trabajadores directos, es la realidad; 1 700 caballerías estatales para viandas y vegetales con solo 1 900 trabajadores agrícolas directos...” (FC, 28.09.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f280990e.html>

“Hace dos días tuve la noticia de que los estudiantes universitarios iban a participar también, escuelas enteras 15 días. Dije: ¡Qué maravillosa cosa que esas decenas de miles de estudiantes universitarios participen también en estas movilizaciones! Eso los ayuda, los ayuda a educarse mejor, los ayuda a formarse más políticamente. No se sabe lo que vale este fortalecimiento ideológico en las condiciones actuales que vive el mundo, este fortalecimiento ideológico en instantes de crisis del socialismo, ¡que nosotros podamos demostrar aquí lo que puede el socialismo, que podamos demostrar aquí la fuerza de nuestras ideas! Y no solo como idea política, no solo para fortalecer los músculos políticos de la gente y el cerebro político de la gente, sino para hacer cosas importantes, decisivas, en momentos de período especial, que es él que estamos viviendo, y para demostrar que le damos un vuelco a todo. (...), nunca se había hecho lo que se está haciendo ahora, nunca esos cultivos habían recibido la atención que están recibiendo ahora, nunca se habían sembrado tan puntualmente en la fecha óptima. Es agradable escuchar eso, es agradable escuchar que los cultivos están limpios como nunca, a pesar del clima, de los calores.” (FC, 03.02.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f030291e.html>

“Al principio se concibieron las movilizaciones quincenales, hasta que un día el compañero Palmero propuso crear una brigada como contingente en la agricultura, y la idea me pareció excelente. Dije enseguida: ¿Pero a dónde enviamos una brigada del contingente "Blas Roca"? Al plátano con microjet aéreo, porque un contingente necesita un trabajo todo el año, continuo, tal como concebimos los contingentes. Al principio se concibe una sola brigada, pero después que surge la primera vimos que hacían falta más brigadas, puesto que las caballerías de plátano con microjet iban a ser alrededor de 500, incluidas las 100 de plátano burro; y dijimos: Es mejor que dondequiera que haya una plantación de estas haya un contingente, porque se presta más para la disciplina del contingente.” (FC, 03.02.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f030291e.html>

“Claro que hoy el dinero no es la clave. Como ustedes saben, hoy hay más dinero que cosas que comprar, hoy el patriotismo vale mucho más que el dinero; pero llegará el día en que tengamos más cosas que comprar con el dinero y entonces tendrá más importancia el método de pago, desde luego. Sé que lo que hacen los de los contingentes no lo harían por ningún dinero; lo vi en los contingentes de la construcción, lo que esos hombres hacían por ningún dinero se hace; las horas que trabajaban, solo por querer ayudar a su patria, por tener una conciencia elevada se hacían. Lo que pasa es que la remuneración es parte de la consideración social que ese hombre merece, y si no establecemos el principio de que el obrero agrícola debe ser el mejor retribuido, pues todo el mundo querrá ser qué, ¿ingeniero, catedrático, filósofo?” (FC, 22.11.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f221191e.html>

“Nos proponemos construir no menos de mil vaquerías en los próximos seis años. ¿Y quién puede hacer eso? Solo el socialismo puede hacer eso, elaborar planes de esa naturaleza. Porque no se planifica construir simplemente vaquerías, sino desarrollar programas integrales: las vaquerías, las crías de terneros, de novillas; la red eléctrica de todo el plan para el ordeño mecanizado; los caminos y carreteras, las comunidades donde van a vivir los trabajadores con pueblo y el pueblo con calles, acueducto, alcantarillado, círculos infantiles, escuelas, comercios, médico de la familia, etcétera. Planes integrales con todas las micropresas que quepan en esas regiones, presas, sistemas de riego y algunas innovaciones, como es el desarrollo de la lombricultura en esas áreas, a partir de estiércol del ganado, de modo que puedan producir harina proteica de origen animal y puedan producir humus para los campos agrícolas.” (FC, 26.05.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f260589e.html>

“Hay que buscar soluciones definitivas. Calculamos cuántas comunidades, ..., y las ubicamos. Yo discutí con los compañeros directores de las ocho empresas, con mapas en la mano, la ubicación de todas las comunidades, discutí con ellos cuando querían poner alguna en un pedregal y digo: El pedregal está lejos, debe buscarse una tierra cerca. Porque si tenemos 22 000 hectáreas en el Estado, ¿no valdrá la pena gastar 100, 200 hectáreas para que las otras 21 800 estén bien cultivadas y produzcan, ...? Lo que lleva una comunidad son unas cuantas hectáreas y nos garantiza la fuerza de trabajo para 1 000 hectáreas. Qué importa que usted utilice cuatro, cinco o seis, si va a poder atender bien, como se deben atender, 994, 995, 990 hectáreas; es lógico, y que la gente vaya a pie al trabajo, no tenga que usar carretas ni ómnibus, en algunos casos una bicicleta, porque le quede a un kilómetro o kilómetro y medio y pueda ir a almorzar a su casa. Ese es el criterio que hemos seguido en el desarrollo de la concepción de las comunidades agrícolas, ¡y que sea una comunidad agrícola, no una mezcla heterogénea de todo tipo de actividades!” (FC, 03.02.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f030291e.html>

“Ahora, ¿qué milagro se pide de nosotros? ¿Qué milagro se exige de nosotros, del Partido, de los comunistas, del Estado, del pueblo, de los campesinos, de los cooperativistas, de los obreros agrícolas? Un verdadero milagro que no nos queda más remedio que realizar. Se nos pide que produzcamos más leche y más carne sin pienso y sin fertilizantes, y tenemos que hacerlo, sencillamente. Se nos pide que produzcamos más arroz, más caña, más viandas y más vegetales sin fertilizantes, muchas veces sin herbicidas, y tenemos que arreglárnoslas. Por eso estamos acudiendo a la ciencia...” (FC, 10.10.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f101091e.html>

“Las biofábricas están trabajando, porque quiero decirles que este programa alimentario va apoyado por todo un arsenal de instituciones científicas, de centros de investigación para preservar la salud de los animales, la salud de las plantas, para combatir las malas hierbas. Estamos desarrollando la producción de nuestros propios productos pesticidas, plaguicidas, herbicidas o biológicos para combatir plagas, esa es una de las ramas que vamos a desarrollar fuertemente. Y, casi parejamente con la salud humana, la salud animal, no solo para proteger nuestra población humana y nuestros animales sino, incluso, para exportar producciones para la salud humana y la salud animal, o exportar semillas u otras muchas cosas posibles. (...) Nuestros trabajadores científicos están trabajando cada vez con mayor entusiasmo, podríamos decir que con espíritu de contingente, varios de ellos con el espíritu de los mejores contingentes. Se abre paso esa idea. Precisamente, de un centro de investigación científica surgió la idea de los contingentes. Así que van parejo. Les puedo asegurar que es impresionante el esfuerzo que se está haciendo en el campo de la ciencia y lo mucho que promete para nuestro país ese esfuerzo. (FC, 03.02.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f030291e.html>

“... la prioridad fundamental la tienen el programa alimentario y la aplicación de la ciencia para producir alimentos en condiciones en que tenemos menos pienso que nunca, o no tenemos pienso, en que no tenemos fertilizantes; cómo acudir, a través de las ciencias, a bacterias que produzcan fertilizantes, a microorganismos que ayuden a la asimilación de esos nutrientes que están en el suelo, a variedades nuevas que resistan plagas, que sean más productivas, que resistan calor, que resistan humedad. Toda la ciencia en función de aquello que nos ayude a incrementar la producción de alimentos, porque en el período especial lo número uno es la producción de alimentos, cuando hemos dejado de recibir tantos alimentos que intercambiábamos todos los años con el campo socialista, a precio justo, no a los precios esos que tiene el azúcar en el basurero del mercado mundial, porque hay distintos

precios del azúcar, y uno, el peor, es el del basurero del azúcar, el del llamado precio mundial.” (FC, 09.11.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f091191e.html>

“Estamos en contacto y a cuanto grupo ha aparecido por las facultades de química, por otros lugares en que se han estado haciendo investigaciones, les hemos dado todo el apoyo de inmediato; los buscamos, no esperamos ni que nos busquen a nosotros, andamos averiguando dónde están. Nos proponemos utilizar mucho más el potencial científico de las universidades: de la Universidad de La Habana —la estamos usando, es la que tiene más centros de investigación—, de la Universidad Central de Villa Clara, tanto en las áreas de la química como en la síntesis química, la agricultura y en todos esos campos; la de Ciego de Ávila, también en otros campos similares; la de Camagüey, Santiago de Cuba; es decir, de todas las universidades. Estamos dispuestos a darle un gran impulso al trabajo científico de las universidades. Eso tiene prioridad uno en período especial.” (FC, 20.12.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f201290e.html>

“El fertilizante hay que guardarlo para otros cultivos esenciales —a la caña no podemos dejar de echarle un poco de nitrógeno por lo menos—, pero vamos a aprovechar toda la ceniza de los centros de acopio, y esa ceniza tiene fósforo, potasio, sales minerales, los cuales reintegramos otra vez al suelo. (...) Un poco de fertilizante para la caña, para el arroz, es imprescindible. Estamos estudiando cómo lo utilizamos mejor, si una parte en forma de urea foliar, aunque sea una parte mínima, puesto que el arroz solo admite un porcentaje pequeño, no es como la caña que admite un tanto por ciento mayor de urea foliar; un poco de fósforo y potasio en aquellos suelos más pobres, y el fertilizante disponible para la producción de alimento directo: los platanales, la papa, las viandas y los vegetales. A veces no nos queda más remedio que el poco de que dispongamos utilizarlo allí. Todas estas cosas las hemos estado analizando con mucha profundidad, buscando fórmulas.” (FC, 17.05.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f170591e.html>

“Trabajan los centros de investigación buscando variedades, buscando hongos y bacterias para el control biológico de las plagas, y puede decirse que es posible que nuestro país se desarrolle como un gran productor de estos agentes para el control biológico de plagas. Será una de las ramas de desarrollo del país, es decir, la medicina de las plantas, pero no mediante pesticidas o venenos; hay que usar esos venenos lo menos posible, porque muchas veces con el producto van al hombre aunque se tomen medidas. Por eso es tan importante el trabajo de los científicos buscando controles biológicos de las plagas, igual que ustedes los cañeros usan la famosa mosca lixophaga contra el bórer. Sería imposible andar regando la caña de pesticidas; regar 130 000 caballerías de caña con pesticidas debe ser de un costo fabuloso para luchar contra el bórer. (...) De modo que nuestra ciencia está penetrando en esos terrenos y quién iba a decir hace 32 años, cuando se inició la reforma agraria, que hoy tendríamos decenas de miles de científicos, ingenieros, técnicos de todo tipo, decenas de centros de investigaciones que estuvieran buscando microorganismos para combatir las plagas en vez de pesticidas, buscando microorganismos que aporten nitrógeno o hagan asimilables otros elementos en el suelo en vez de fertilizantes químicos. (FC, 17.05.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f170591e.html>

“Tenemos casi 200 centros en el país que se llaman CREE que ya producen, pero vamos a ir a producciones industriales, rápidamente, de esos elementos biopesticidas, mucho más saludables que los otros; claro, todavía no se pueden sustituir los otros totalmente, que pueden intoxicar, envenenar --quién sabe cuánto veneno el hombre consume junto con los pesticidas, por mucho que lave la fruta--, y estamos aplicando aceleradamente estas fórmulas biológicas, como parte del programa alimentario.” (FC, 10.10.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f101091e.html>

“Antes casi toda la tierra en el país se preparaba con trabajo animal, en que el hombre tenía que esforzarse prácticamente tanto como el buey, y hoy todo ese trabajo se hace con máquinas; el arroz se cosechaba a mano, hoy se prepara la tierra con máquinas, se fertiliza con máquinas, se siembra con avión, y hasta se fertiliza y se fumiga con aviones; los constructores tenían que hacer la mayor parte de su tarea a mano, y hoy el trabajo de la construcción está, prácticamente, mecanizado casi todo y tenemos que mecanizarlo todavía más, no solo con grandes máquinas, sino también con pequeñas máquinas para elevar la productividad. Es decir, el trabajo se ha humanizado; pero de todas formas no nos llueven del cielo los recursos, tenemos que producirlos con nuestros esfuerzos.” (FC, 10.05.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f100590e.html>

“Este es el tipo de cosas que tenemos que hacer en estos tiempos y las estamos haciendo, igual que se están domando 100 000 bueyes, y tan pronto terminemos domaremos otros 100 000 más; en vez de comernos los bueyes hay que convertirlos en animales de trabajo. Siempre procuramos traer otra cosa, aves, buscar alguna forma de sustituir esa carne, pero ahora, por lo menos 200 000 animales aptos para el sacrificio, hay que dedicarlos a hacer el papel de los tractores, si nos vemos con más problemas con el combustible.” (FC, 17.05.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f170591e.html>

“Buscaremos. Tenemos nuestros centrales, tenemos nuestras industrias; estamos domesticando bueyes, estamos haciendo todo lo que haya que hacer, ¿entienden? No nos asusta tener que volver a cualquier época anterior, porque si tenemos que retroceder coyunturalmente es para avanzar después mucho más, para ser después mucho más libres, mucho más independientes, no solo en lo político, sino también en lo económico, y para ser mucho más eficientes.” (FC, 09.11.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f091191e.html>

“Hemos amansado más de 100 000, estamos amansando otros 100 000; son cientos de miles de bueyes, como si hay que amansar 500 000. Pues comeremos una proteína de origen vegetal, pero no nos podemos comer los bueyes, porque tendremos que dedicarlos a cultivar la tierra. En el buey se ha descubierto algo nuevo. Siempre se vio al buey en período especial como algo que ahorra combustible; pero ahora se ha descubierto que el buey es algo que multiplica la productividad del trabajo —los contingentes lo saben—, que hace el trabajo de 10, 12, 15 hombres; cuando no se puede meter el tractor porque ha llovido, porque está húmeda la tierra solo el buey se puede meter con su hierrito. Entonces el buey no solo ahorra combustible, sino que hace tareas que no puede hacer el tractor y eleva la productividad del hombre. Eso es cosa nueva; quiere decir que cuando se acabe el período especial, no se debe acabar totalmente el buey en la agricultura. Ahí tienen ustedes otro ejemplo de que hay respuesta para situaciones críticas.” (FC, 22.11.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f221191e.html>

“La forma en que nuestro país hizo la reforma agraria fue diferente a la forma en que la hicieron todos los demás países socialistas, porque todos los demás dividieron la tierra y nosotros no la dividimos. ¡Ah!, si hubiéramos dividido los grandes latifundios ganaderos, cañeros, en fracciones, en minúsculos minifundios, hoy no seríamos los suministradores de calorías para 40 millones de personas en el mundo. Nosotros exportamos, a través del azúcar, calorías suficientes para 40 millones de personas. Mantuvimos aquellas unidades y las desarrollamos como grandes empresas de producción. Le entregamos la tierra al campesino que la tenía en posesión; al que era aparcerero, colono, precarista, arrendatario, le dijimos: toma, aquí tienes la tierra en propiedad, y después no lo hemos forzado a unirse en cooperativas. Hemos tardado 30 años en el proceso de unir esas parcelas, hemos ido poco a poco, a base de un principio estricto de voluntariedad. No puede haber un solo campesino en Cuba que diga que lo metieron por la fuerza en una cooperativa, ¡no puede haberlo!; sin embargo, ya más de dos tercios de sus tierras están en cooperativas, y están avanzando, están prosperando, y, por otro lado, en nuestro país tenemos el 80% de la tierra en granjas estatales, cuyo autoconsumo incluso es producido colectivamente.” (FC, 26.07.88) <http://www.cuba.cu/gobierno/discursos/1988/esp/f260788e.html>

“Nosotros no tuvimos los problemas de la colectivización forzosa; no ocurrió nada parecido en este país. Todavía nos quedan 650 000 hectáreas en manos de 71 000 propietarios individuales de tierra, a los que la Revolución les dio la tierra, liberándolos de pago de renta, de aparcería, etcétera; y les hemos dicho que pueden estar toda la vida, todo el tiempo que quieran, ¡cien años si quieren!, como propietarios individuales. Cuando hicimos la Segunda Ley de Reforma Agraria, se proclamó eso —de esto hace más de 25 años—, y ese principio se ha cumplido al pie de la letra. Nosotros tenemos tres formas de explotación de la tierra: la primera, y la más importante, es la de las empresas estatales, sobre las cuales recae el peso de las producciones fundamentales en nuestro país, de producciones industriales y de producciones alimenticias. En segundo término, las cooperativas de producción agropecuaria, y, en tercer lugar, los propietarios individuales de la tierra.” (FC, 04.04.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f040489e.html>

“Nosotros no tenemos que inventar el propietario independiente, no tenemos que descubrirlo porque lo conocemos, ya que estaba desde el principio de la Revolución, y está todavía y estará el tiempo que quiera, porque nosotros no vamos a obligar a nadie a cooperativizarse por la fuerza; lo

evitamos, y no hay un solo caso de un individuo obligado a cooperativizarse.” (FC, 04.01.89) <http://www.cuba.cu/gobierno/discursos/1989/esp/f040189e.html>

“Que ni sueñe nadie que nosotros vamos a ir hacia el capitalismo o cosa que se parezca, a la propiedad privada de los medios de producción o cosa que se parezca. Nosotros, además, no tenemos que inventar, por ejemplo, al agricultor independiente, porque en todas las provincias tenemos productores independientes, campesinos individuales. ¿Cuántos quedan? Setenta mil, no son pocos, tienen hasta 65 hectáreas de tierra, y algunos son ricos.” (FC, 20.02.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f200290e.html>

“Sabemos lo que es la propiedad independiente, y sabemos también lo que da y sabemos lo que no da; porque yo pudiera enumerar aquí qué sale de la producción estatal, y diría: esos 2 400 millones de huevos que consume la población los produce el Estado; y qué porcentaje del arroz y de la caña, y qué porcentaje de leche y de la carne de ganado bovino, casi el ciento por ciento; qué porcentaje de carne de ave, qué porcentaje de todos los alimentos fundamentales —de cerdo, por ejemplo, es casi también el ciento por ciento. Tanto que se habló del famosísimo mercado libre campesino y el mercado libre campesino nunca dio más del 2% de los abastecimientos, y muchas veces eran productos que se entregaban anteriormente al Estado; pero a partir de aquel momento los vendieron por la libre a cualquier precio. Cuánta gente, incluso amiga nuestra, nos ha dicho: "¿Y ese mercado libre campesino por qué lo quitaron?" Y hay que hacerle la historia completa de lo que es el mercado libre campesino y de lo que es la producción en gran escala, y cómo no puede haber ningún porvenir en ninguna parte a base de pequeños agricultores independientes. Yo acepto, incluso, la agricultura capitalista en gran escala, usando la técnica, semillas enriquecidas, fertilizantes, máquinas, que es lo que nosotros hacemos en nuestras tierras, que hoy constituyen el 80% del fondo de tierras del país. Si no, ¿cómo se explica que de 350 000 macheteros hayamos reducido esa cifra en casi 300 000?, puesto que los que quedan cortando caña son unos 65 000. ¿Qué es eso sino mecanización? ¿Qué es eso si no productividad? ¿Qué es eso si no aplicación de la técnica?” (FC, 20.02.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f200290e.html>

“Nosotros no podemos privatizar absolutamente nada, al contrario, tenemos que socializar progresivamente, porque no vamos a confiscar a nadie, a ninguno de esos campesinos los vamos a confiscar, a esos que nos han dado tantas lecciones sobre agricultura, a esos campesinos que nos han enseñado lo poco que se puede esperar de la agricultura minifundiaria, aunque son los campesinos más privilegiados del mundo: han recibido créditos de todas clases, se les ha perdonado montones de veces cada vez que ha ocurrido una situación adversa, no pagan virtualmente impuestos; son los únicos campesinos en el mundo que no pagan impuestos. Nosotros queremos a nuestros campesinos, no les echamos en cara que tengan su propiedad privada; los respetamos, porque forman parte de nuestra Revolución, forman parte de nuestra historia y lo que hemos hecho con ellos no lo ha hecho ningún país del mundo... Es decir, lo que ha hecho Cuba por los campesinos no lo ha hecho nadie y lo que han hecho ellos por nosotros tampoco lo ha hecho nadie, porque lucharon junto a nosotros y nos han enseñado que la agricultura debe ser socialista, y que lo que debe existir son las empresas estatales de la agricultura en gran escala, con la aplicación de la ciencia y la técnica, y las cooperativas de producción agropecuaria. Eso nos lo han enseñado los campesinos y estamos muy agradecidos por eso.” (FC; 20.02.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f200290e.html>

“Ahora hay que garantizarle la leche a cada niño y la malanga a cada enfermo que se la recete el médico; hay que garantizarle los alimentos a toda la población. Es por eso que tenemos que hacer este esfuerzo y pedirles a todos un gran esfuerzo, y ayer se lo pedíamos a todos los obreros agrícolas, a los cooperativistas, a los campesinos. El día 23 tendremos una reunión con los campesinos de las cooperativas de créditos y servicios. De manera que vamos coordinando el esfuerzo de las empresas del Estado, de las cooperativas y de los campesinos independientes en esta tarea histórica de abastecer la capital [Habana].” (FC, 17.05.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f170591e.html>

“... nunca quedó olvidado el campesino. Podemos decir que a nuestros campesinos, en general, no les falta nada, dentro de nuestras limitaciones tienen muchas cosas aseguradas, y tienen, sobre todo, la libertad, la dignidad, la participación en la obra de la Revolución, que en este momento se convierte en

una obra de carácter histórico universal, y en la defensa de las ideas más justas, que nos hacen partícipes de todos aquellos sueños por los cuales lucharon nuestros libertadores y en los que tan decisivamente tomaron parte nuestros campesinos, tanto en aquellas guerras de independencia como en las últimas luchas por la liberación nacional.” (FC, 17.05.91)
<http://www.cuba.cu/gobierno/discursos/1991/esp/f170591e.html>

“Es lógico que se siembre bien y se atienda bien si utilizan la técnica de los hermanos Gómez, porque ellos tienen allí su boniato, los he visitado. Ellos producen hasta la semilla, tienen su técnica para que sea una semilla... y le sacan 10 000 quintales de boniato a la caballería. Por eso algunos de estos campesinos muy destacados —no todos son así, desde luego, no todos tienen la misma sabiduría, la misma experiencia, la misma productividad; pero hay unos cuantos muy destacados en distintos cultivos y nosotros tenemos más o menos, la lista— son asesores nuestros, cuando queremos saber qué es lo que se le puede sacar allí a una hectárea, cómo hay que hacerlo, de qué forma, qué tarea, qué trabajo; son muy sabios. Yo diría que cada uno de esos campesinos destacados —y hay algunas decenas en la provincia, como hay cooperativas muy destacadas también— son centros de investigación, son científicos ellos también, del mismo modo que las empresas destacadas hay que desarrollarlas como centros de investigación... Muchas veces les digo a los compañeros de las empresas de cultivos varios: ‘Vean cómo tienen el boniato allí los hermanos Gómez.’” (FC, 17.05.91)
<http://www.cuba.cu/gobierno/discursos/1991/esp/f170591e.html>

“Los incrementos importantes aquí se están produciendo y se tienen que producir en esas tierras estatales, que es donde se ha movilizad el grueso de la fuerza. Los campesinos tienen un límite en sus posibilidades, más o menos, para producir lo que tradicionalmente producían y les hemos pedido mayores esfuerzos todavía y hemos seguido con ellos políticas correctas, a nuestro juicio, políticas inteligentes. Les hemos dicho: ‘Necesitamos tales y más cuales cosas. ¿Qué cultivos ustedes prefieren? ¿Qué les gusta, el ajo? ¿Cuánto ajo quieren sembrar, si el programa es de 150 caballerías?’ ‘¿Lo quieren sembrar todo? Todo. ¿Quieren sembrar 130?, ciento treinta’. El ajo les gusta, porque es un cultivo de mucho rendimiento; de mucho rendimiento no en ajo, sino en dinero. ‘Papa, el programa es tanto. ¿Cuánta quieren sembrar?, digan ustedes. De cebolla el programa es tanto, ¿cuánto quieren sembrar? En ají el programa es tanto; en zanahoria tanto’ —así, en cada uno de los cultivos—, ‘y no se preocupen, lo que ustedes no siembren lo va a sembrar el Estado.’” (FC, 23.12.91)
<http://www.cuba.cu/gobierno/discursos/1991/esp/f231291e.html>

“Concibo al campesino, siempre lo concebí, como participante de la producción en gran escala, en forma de cooperativas como las tenemos nosotros, o en forma de empresas con técnicas modernas que garanticen un estándar de vida alto y las condiciones adecuadas al trabajador agrícola. (...) ... a partir de la premisa de que en gran escala se obtiene mucha más productividad y se emplean las máquinas y la población se puede agrupar, le hemos dado impulso al movimiento cooperativo, en que las condiciones de vida y de trabajo de aquellos campesinos que tenían parcelas se han elevado considerablemente, ¡considerablemente!, y nuestras cooperativas, sin duda, han constituido un gran avance para el desarrollo de la agricultura.” (FC, 18.03.90)
<http://www.cuba.cu/gobierno/discursos/1990/esp/f180390e.html>

“Ya ustedes verán, en esas 65 caballerías [caballerías entregadas al contingente Blas Roca], que eso solo se puede hacer en una agricultura socialista. Todos estos planes de presas, de grandes canales, drenaje parcelario en la caña, sistema ingeniero en el arroz, grandes extensiones de plátano o cítrico con microjet [sistema de irrigación], eso no se puede hacer más que en una agricultura socialista. Si usted divide el plan de La Habana en 7 000 finquitas de una hectárea de plátano, ya se imaginarán llevar el agua a 7 000 lugares diferentes; ya se imaginarán cómo sería el beneficio de ese plátano, ... Solo es posible esas productividades y solo es posible un trabajo de esa naturaleza tan productivo, con una agricultura socialista. Lo mismo se puede decir de la caña, del arroz, de la inmensa mayoría de los cultivos. Solo una agricultura socialista permite hacer un sistema de presas, de canales y de riego como los que está haciendo el país. Claro, todavía tenemos agricultores independientes y los respetamos, los ayudamos y cuando les podemos llevar el agua se la llevamos, cuando puede aplicarse la técnica se aplica; pero es que esta técnica solo puede aplicarse en grandes extensiones, solo puede aplicarse en

empresas estatales y en cooperativas, es imposible aplicarla en el minifundio o en las pequeñas parcelas.” (FC, 01.10.90) <http://www.cuba.cu/gobierno/discursos/1990/esp/f011090e.html>

Period 1992-1997

“Claro está que el país desarrolla grandes esfuerzos para producir alimentos en los planes nacionales; pero el que siembre el huerto, el pedacito de tierra que está en el patio de su casa, está ayudando al país en período especial, está ahorrando transporte, combustible, algo está haciendo; está ayudando todo el que siembre algo, todo el que haga algo.” (FC, 22.12.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f221291e.html>

“De la URSS venía todo el algodón que nuestro país consumía, de la URSS venía una gran parte del fertilizante, a través de la URSS venía una gran parte de los alimentos importados que nosotros consumíamos, de cereales y granos para consumo humano, y de cereales y granos para consumo animal. El país lo perdió todo, el país prácticamente se quedó sin combustibles, ¿Son o no son hechos reales? Nos dejaron sin combustible, nos dejaron sin fertilizante, nos dejaron sin pienso para el ganado, nos dejaron sin alimentos.” (FC, 04.04.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f040492e.html>

“... voy a decir en número lo que significó para la economía la desaparición del socialismo en Europa... Cuánto hemos perdido en nuestra capacidad de importaciones en millones de dólares a precios actuales del mercado, pérdida en precio de exportaciones —es decir, la diferencia entre los precios que recibíamos convenidos con la URSS y otros países, y los precios del que llamamos basurero del mercado mundial, porque ahí va a parar a ese basurero el azúcar que sobra—: por pérdida de precio con la URSS hemos perdido en azúcar 2 469 millones de dólares; con Europa del Este, 270 millones 500 000 dólares; en níquel hemos perdido 30 millones; en otros productos, 14,4. Por disminución de los créditos que recibíamos —...—, 1 463 millones —estoy hablando de cifra anual—; con los países de Europa del Este, 162 millones. Por crédito que recibíamos del Banco Internacional de Inversiones Soviéticas, 13 millones. Por encarecimiento de las importaciones estamos perdiendo, además, 80 millones. Por dificultades para ubicar productos —cítricos, por ejemplo—, estamos perdiendo 144,6 millones; en otros, 55 millones. En total, por este concepto estamos perdiendo por año 4 701 millones de dólares, y no son las únicas pérdidas; se trata de pérdidas directas de lo que recibíamos por nuestras exportaciones. Pérdidas indirectas como consecuencia de la desestabilización de los suministros, afectación a producciones de exportación y pérdidas de determinadas facilidades financieras, otros 1 000 millones de dólares, lo cual suma 5 700 millones aproximadamente comparando 1992 con 1989. Esta comparación indica que la capacidad de compra del país en 1989 fue de 8 139 millones contra la capacidad de compra de 1992, según estimado, de 2 200 millones de dólares... Luego, nuestro país ha perdido con ese desastre un 70% de su capacidad de compra. Veán qué terrible golpe a la economía. No se lo cuento a ustedes para que se desalienten, porque yo sé que ustedes son incapaces de desalentarse, se lo cuento para que tengan una idea, una medida del daño que en lo económico nos produjo todo eso, y qué proezas tenemos que realizar para resolver con 2 200 millones lo que antes resolvíamos con más de 8 000 millones de importaciones. ¿Es o no una prueba dura? ¿Es o no una proeza grande lo que se exige de nosotros?” (FC, 05.09.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f050992e.html>

“Quiero que ustedes sepan que durante muchos años no había más que enviar un telegrama para decir que el fuel oil se estaba acabando, que la gasolina no era suficiente, que el diesel no alcanzaba y automáticamente venían barcos con diesel, o fuel oil, o gasolina, ... Incluso nosotros llegamos a convertirnos en exportadores de combustible... Permítanme decirles que en un momento lo que reexportábamos de petróleo era el más importante ingreso en divisa convertible que tenía el país... Todo aquello enseñó a malgastar. Este país tenía 80 000 tractores; todo el mundo iba para la pelota, para los paseos para las fiestas, para ver a la novia, en tractores. Se pudieron haber hecho más acueductos; hoy todavía se gasta muchísimo combustible llevando el agua en tractores a los pueblos de los trabajadores. Es decir que aquel tipo de relación, a nosotros nos pervirtió de cierta forma.” (FC, 24.12.93) <http://www.cuba.cu/gobierno/discursos/1993/esp/f241293e.html>

“... antes vivíamos en una urna de cristal; era la pureza plena en una atmósfera pura, la ideología fuerte y victoriosa del socialismo, antes de que este cayera en los errores, las circunstancias, las traiciones, las blandenguerías y las incapacidades que dieron lugar a los desastres. Eran las condiciones ideales internacionales para hacer todo lo que hicimos. Recursos había, créditos, combustible, maquinarias; podíamos toparnos de vez en cuando con una máquina que era de la época de Maricastaña, ¿no?, pero había muchas máquinas, muchos equipos y muchos recursos de gran utilidad, con los cuales hicimos infinidad de cosas. Había alimentos, materias primas, fertilizantes, aceros, préstamos, colaboración en todos los sentidos, que la Revolución utilizó bien.” (FC, 04.04.97) <http://www.cuba.cu/gobierno/discursos/1997/esp/f040497e.htm>

“Hoy dependemos de la caña y es heroico lo que hacemos, porque, realmente, cuando se corta una caña que no tiene riego, que no tiene fertilizante, que no dispone ya de decenas de millones de dólares en herbicida —porque nos acostumbramos al herbicida; la posibilidad de disponer de unos 40 millones de dólares todos los años para herbicida hizo que la gente se olvidara de la guataca, y todo se perdió: herbicida, fertilizante, regadío, brigada de drenaje y de riego parcelario, mercados, precios preferenciales para el azúcar, todo eso. Pero aun hoy, al precio llamado mundial, necesitamos del azúcar—, esa caña que le falta todo lo que mencionaba es una caña fina en la que el machetero rinde mucho menos.” (FC, 16.12.94) <http://www.cuba.cu/gobierno/discursos/1994/esp/f161294e.html>

“Se está desarrollando un programa de siembra de 500 caballerías de plátano fruta con microjet en la provincia de La Habana, ¿se podía hacer eso en las 10 000 hectáreas de los pequeños agricultores para resolver los abastecimientos de la capital? Los abastecimientos de la capital estaban en el esfuerzo de las empresas del Estado que tenían un gran potencial y donde se puede aplicar la técnica, y en las cooperativas que tienen también un buen potencial y donde se puede aplicar la técnica. Claro, hay que ayudar a las cooperativas, aquí se demostró, y en la reunión de la comisión se demostró; quedó claro que algunas cooperativas —y creo que fue aquí cuando se habló de la movilización diaria—, han recibido hasta 700 trabajadores en un día. Tiene lógica que traten de que la norma sea elevada. Las cooperativas son buenas, resuelven, pero muchas requieren la ayuda de movilizados o estudiantes de las escuelas en el campo o al campo, porque del campo se fue bastante gente, no hay fuerza de trabajo suficiente.” (FC, 04.04.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f040492e.html>

“Hay que ver de esto [decrecimiento en la producción de campesinos privados] cuánto fue efecto del mal tiempo y las plagas, y cuánto del desvío de recursos para el trapicheo; desde luego, conozco a muchos campesinos muy buenos, excelentes, que envían toda su producción al consumo de la población, pero desgraciadamente todos no son iguales y siempre está en algunos la tentación del carrito que llega a trapichear, buscando y ofreciendo cualquier precio. No podría decirse con exactitud en esa disminución cuánto se debió a recursos desviados de acopio para el mercado negro y cuánto resultado de las plagas” (FC, 04.04.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f040492e.html>

“Nosotros lo que tenemos que procurar en nuestros programas —...— es que haya proteínas y calorías para la población. Nada nos garantiza que podamos mantener los mismos tipos de alimentos, nada nos lo garantiza en período especial, pero sí tenemos que procurar a toda costa que nuestra población tenga suficientes calorías y proteínas, y aún más, si es posible, ¡aún más!; pero puede ser que tenga que variar, y seguramente tendrá que variar, la proporción entre proteína de origen vegetal y proteína de origen animal durante un período de tiempo, por la sencilla razón de ¿qué hacemos con los toros? ¿Los matamos, en las condiciones en que estamos?; ¿o los convertimos en instrumentos de trabajo para producir alimentos, cuando puede faltarnos el combustible necesario, incluso, para roturar la tierra? No podemos ponernos a importar carne de toro, ¡vaya usted a saber, además, de dónde, ...!” (FC, 22.11.91) <http://www.cuba.cu/gobierno/discursos/1991/esp/f221191e.html>

“Hoy la vida, la realidad, la dramática situación que está viviendo el mundo, este mundo unipolar, nos obliga a hacer lo que de otra forma no habríamos hecho nunca si hubiésemos tenido capital y si hubiésemos tenido tecnología para hacerlo.” (FC, 26.07.93) <http://www.cuba.cu/gobierno/discursos/1993/esp/f260793e.html>

“He discutido con dirigentes de estas cooperativas, y debo decir aquí que tengo muy buena opinión de las cooperativas de producción agropecuaria y de los cooperativistas; me parece una excelente

institución, no es perfecta, creo que es más perfecta y más justa la empresa estatal propiedad de todo el pueblo, no tengo ninguna duda de eso. Atiende a los trabajadores todo el año, se preocupa por la familia, se preocupa o debiera preocuparse por la vivienda y por todas esas cosas, digo debiera porque no siempre se preocuparon debidamente, no las empresas, el Estado socialista no se ocupó todo lo que debía haberse ocupado de las viviendas agrícolas, una de las cosas que estábamos resolviendo en el proceso de rectificación. La cooperativa es una buena organización de la producción. Ojalá todas las tierras que no son estatales estuvieran organizadas en cooperativas de producción agropecuaria. ¡Ojalá! Sería la forma ideal, porque se trabaja mucho más fácil, se acopia mucho más fácil. En general, las cooperativas no andan especulando con sus producciones, entregan sus producciones a acopio [agencia estatal de acopio].” (FC, 04.04.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f040492e.html>

“... No hay duda de que la gran empresa agrícola es en el mundo el sistema más eficiente de producción, porque permite la aplicación de la técnica en gran escala, las combinadas de caña no podrían usarse si no es en campos de caña de una extensión determinada, donde las máquinas no tengan que estar doblando cada 20 metros o cada 30 metros. Es imposible aplicar la combinada de caña en un minifundio cañero, es imposible emplear las combinadas de arroz en un minifundio arrocerero, es imposible emplear el avión para sembrar o para fumigar en un minifundio o en pequeñas extensiones. Yo diría que la granja estatal ha realizado proezas en nuestro país que no se habrían podido aplicar bajo ningún otro procedimiento: plantaciones de decenas de miles de hectáreas de cítricos... otras habrían sido imposibles sin las empresas estatales; el desarrollo de planes ganaderos... habría sido imposible sin las empresas estatales, sin ellas no se habrían alcanzado hasta un millón de litros de leche diariamente en la provincia de La Habana; el desarrollo de los planes arroceros que se hicieron en el país, con su sistema de riego, presas y todo eso, habría sido imposible sin las empresas estatales, realmente, ni siquiera a través de CPA habría sido posible aproximarse a eso; sembrar en menos de tres años 500 caballerías de plátano con microjet en la provincia de La Habana habría sido imposible sin el esfuerzo de las empresas estatales, eso es incuestionable.” (FC, 07.11.93) <http://www.cuba.cu/gobierno/discursos/1993/esp/f071193e.html>

“Es que a las empresas agrícolas estatales ..., les ocurrió lo mismo que a todo: las plantillas infladas, la tendencia al exceso de personal, el paternalismo, la falta de exigencia, nuestra supergenerosísima legislación laboral y todos los vicios que la Revolución creó, digámoslo con franqueza, y no con malas intenciones, no por falta de amor al pueblo y a los trabajadores, sino por exceso de amor al pueblo y a los trabajadores... ¿Qué otra explicación o justificación tienen los ausentismos, la rebaja de la jornada laboral, trabajar cuatro o cinco horas cuando había que trabajar, por lo menos, ocho, y todo eso se toleraba? Se crearon todas las oportunidades habidas y por haber en el mundo para que cada uno se decidiera por lo que más le gustaba; oportunidades para todos los adultos, para todos los jóvenes, para todos los niños.

Se humanizó el trabajo. ¿Cuántos cortadores de caña ahorraron las combinadas cañeras? ... ¿Cuántos cortadores de arroz? ¿Cuántos chapeadores de maleza en los campos que se ahorraron con los productos químicos y el herbicida? ¿Cuántos ordeñadores manuales para ser sustituidos por máquinas eléctricas? ¿Cuánto trabajo duro ahorró la Revolución? ¿Cuánto no humanizó la vida de la gente? Pero al lado de ello, los vicios que he mencionado: la negligencia, la falta de exigencia, el acomodamiento, etcétera, etcétera, etcétera. Las empresas agrícolas padecieron los mismos problemas; pero, aparte de eso, las empresas estatales suministraban el 80% de la caña, las empresas estatales suministraban casi el ciento por ciento del arroz, las empresas estatales suministraban casi el ciento por ciento de la carne de cerdo, prácticamente el ciento por ciento de los 2 500 millones de huevos que se consumían anualmente, casi el ciento por ciento de la leche y la carne de res.” (FC, 07.11.93) <http://www.cuba.cu/gobierno/discursos/1993/esp/f071193e.html>

“... la nueva forma, las Unidades Básicas de Producción Cooperativa... Es un paso que hay que dar, porque lo consideramos el más adecuado y el más conveniente en estas circunstancias, pero no es un paso que se pueda dar con carácter reversible, no es un paso que se pueda dar hoy para decir: No, mañana daremos otro. Mañana qué harán las unidades básicas de producción será cosa de ellas, en parte, y cosas del país, cosas del Partido. Si mañana resultaran demasiado pequeñas y fuera tal vez más conveniente unir algunas después, hacerlas más grandes y en vez de 25 o 30 caballerías fueran 50 o 60

y las de caña más, eso sería posible; en definitiva, hoy se trata de la explotación de esos recursos, se trata de un paso que estamos dando con carácter definitivo, esperando que funcionen y que sean eficientes.

Eso es mucho más eficiente que la creación de minifundios, porque hoy por hoy una gran empresa de esas prácticamente no se puede dirigir con una gran escasez de gasolina, con una gran escasez de combustible, con una gran escasez de transporte. Hay que hacerlas más pequeñas, más manejables; pero, además, hay que buscar ahorro de recursos. Antes podía haber un gasto mayor de combustible. Claro, donde no hay suficiente exigencia y orden, se gasta más combustible; donde no hay suficiente exigencia y orden, se gasta más herbicida; donde no hay suficiente exigencia y orden, pueden emplearse mejor o peor los fertilizantes; donde no hay suficiente exigencia y orden, puede prepararse mejor o peor la tierra.

Hoy tenemos que buscar el máximo de eficiencia con el mínimo de combustible, con el mínimo de fertilizante, con el mínimo de herbicida, y habíamos observado que las mejores cooperativas de producción agropecuaria tenían índices más bajos de consumo de combustible, de consumo de herbicida, de consumo de algunos productos, que es lo que necesitamos hoy en toda la agricultura, porque, claro, en la cooperativa de producción agropecuaria había un interés más directo del trabajador con los resultados de la producción. En las empresas exigían las normas; pero, como el administrador tenía miedo de que se le fuera el trabajador, era tolerante con las normas flojas. Entonces, para pagar más dinero, cada administrador se convertía en un ministerio del trabajo, fijaba casi el salario, ponía una norma baja para que le hicieran dos o tres normas y ganara más dinero. No pasaba lo mismo en la cooperativa de producción agropecuaria. El autoconsumo estaba mejor atendido en las cooperativas de producción agropecuaria, ... En la cooperativa estaba el autoconsumo, no solo para el trabajador directamente, sino también para la familia porque vivía por allí. Se sentía más identificado el trabajador con los resultados de la producción.” (FC, 07.11.93)
<http://www.cuba.cu/gobierno/discursos/1993/esp/f071193e.html>

“Hemos tomado muchas otras medidas: cuanto pedacito de tierra hay por ahí se lo hemos ofrecido a la gente para que lo cultive; se han hecho huertos, se han hecho organopónicos en las ciudades, se ha hecho todo lo posible.” (FC, 15.07.94)
<http://www.cuba.cu/gobierno/discursos/1994/esp/f150794e.html>

“En este mercado agropecuario participan campesinos independientes, participan cooperativas de producción agropecuaria, participan las UBPC, participa el Estado en aquellas producciones agrícolas que este mantiene todavía y en las que cuenta, entre otras fuerzas, con el Ejército Juvenil del Trabajo; algo recauda el Estado, pero es en esencia una transferencia de fondos entre individuos particulares, indiscutiblemente. Algunos adquieren más, y adquieren ingresos verdaderamente altos que no tienen comparación con el ingreso de un trabajador.” (FC, 03.03.95)
<http://www.cuba.cu/gobierno/discursos/1995/esp/f030395e.html>

“Lugo [presidente de la ANAP] mencionó a los intermediarios. Desgraciadamente, en cualquier cosa, ..., puede surgir ese tipo de persona que no sea un real productor, sino un individuo que quiera ganar en un día dos veces o tres veces lo que gana un médico en un mes; sin embargo, es un hombre que va al médico gratuitamente, y allí lo atienden y le salvan la vida cueste lo que cueste, y le educan a sus hijos en las escuelas y van también a las universidades y tienen todas las posibilidades. Hay algunas personas que son indiscutiblemente egoístas, que esas no perturben nuestro trabajo...” (FC, 17.05.96)
<http://www.cuba.cu/gobierno/discursos/1996/esp/f170596e.html>

“Se adoptaron otras medidas como el mercado agropecuario para impulsar la producción de alimentos, para buscar posibilidades de que se pudieran comprar algunas cosas, que, en medio de la situación que teníamos, no era posible, ..., cuando podíamos repartir el cerdo, el pollo, el huevo, la leche y todo eso, a precios mínimos eran mejores. Tampoco teníamos recursos para establecer mercados paralelos que recaudaran para el Estado. Había que buscar, sin embargo, la manera de hacer circular un poco ese dinero, recoger un poco de dinero, y, además, porque había mucha gente absolutamente convencida de que el mercado agropecuario resolvía y porque quien tenía mucho dinero en el bolsillo y no tenía nada que hacer con él, decía: "Es mejor que haya alguien que pueda suministrarme algo a

cualquier precio." Por eso del mercado se quejan, pero, según tengo entendido, muchos de los que se quejan del mercado lo defienden. Para mí no es, ni mucho menos, fórmula ideal, pero era un camino, era un camino, una medida que había que tomar, con sus ventajas y sus inconvenientes: Surgía el intermediario inevitablemente, y está ahí porque ese es un personaje asociado al libre mercado. Muchos dicen: Hay que bajar el precio. Desde el momento en que te pongas a regular el precio allí hay que ver cómo son las cosas, es como regular la bolsa negra, o se establece esa medida y los precios son libres, o no se establece. Efectivamente, mucha gente empezó a recoger mango, guayaba, productos y cosas que no se recogían, para venderlos en el mercado agropecuario." (FC, 30.04.96) <http://www.cuba.cu/gobierno/discursos/1996/esp/f300496e.html>

"Debo decirles que el resultado se ve... apeló [el presidente de la ANAP] al espíritu patriótico de nuestros campesinos, a trabajar, a luchar, para elevar la oferta en esos mercados para hacer más accesible el valor adquisitivo del peso que se gana un trabajador, o un médico, o un maestro. ¿Qué haríamos sin el trabajo de ellos? ¿Qué haríamos sin el trabajo de los obreros de las fábricas? ¿Qué haríamos sin los millones de obreros y empleados que tiene el país? Piensen en ellos también, es generoso, ellos lucharon junto a ustedes [campesinos]. Esta fue la Revolución de los obreros y los campesinos, a la que se unieron los demás trabajadores. Esta Revolución es hija, es fruto de la alianza obrero-campesina que debe ser siempre preservada como algo sagrado. Y es que, en algunas de estas instituciones, como en las mismas UBPC, obreros y campesinos son prácticamente la misma cosa, se unen en la misma cosa, porque no hay diferencias esenciales entre una UBPC y una CPA, entre el servicio que prestan a la nación los agricultores independientes y el que prestan ellos." (FC, 17.05.96) <http://www.cuba.cu/gobierno/discursos/1996/esp/f170596e.html>

"Qué esfuerzo tan grande vienen realizando nuestros investigadores y nuestros científicos para buscar formas de fertilizar los cultivos y controlar las plagas por medios biológicos; qué esfuerzo para buscar nuevas variedades más resistentes. Qué esfuerzo para buscar la forma de alimentar el ganado que se quedó sin cereales y sin pienso, lo cual afecta considerablemente algunas producciones como la de leche, porque los rebaños se vieron abruptamente privados de esos alimentos, y exige un enorme esfuerzo en la aplicación de técnicas y soluciones nuevas, pastoreo racional, siembra de caña para producir saccharina, siembra de leguminosas, una serie de medidas nuevas que se han estado y se están haciendo, que ya en algunas provincias empiezan a dar frutos, pero que no podían compensar en breve tiempo lo que significó la supresión total de pienso en el ganado vacuno." (FC, 05.09.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f050992e.html>

"Para comprar medicinas y algunas materias primas dependemos de los ingresos que obtenemos vendiendo un poco de níquel; o para conseguir fertilizante, del que necesariamente necesitamos a pesar de la aplicación de los biofertilizantes. Porque con biofertilizantes no se puede resolver todo; ojalá se pudiera, creo que lo resolveríamos rápidamente, porque son métodos más sencillos que lo que requieren es empleo de inteligencia y equipos que no son muy costosos. También hay elementos que estamos utilizando para multiplicar las raíces de las plantas, de modo que puedan captar hasta las trazas de minerales que estén en el suelo." (FC, 04.04.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f040492e.html>

"A casi todo el arroz se le aplicó azotobacter. Claro, el azotobacter no suple todas las necesidades de nitrógeno del arroz, pero sí una parte importante, y a miles de caballerías se le aplicó el azotobacter." (FC, 16.12.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f161292e.html>

"En estos tiempos cualquier resultado hay que aplicarlo inmediatamente, tenemos que tener sentido del momento, de la necesidad, de las circunstancias; y hay que generalizar, generalizar es eso. Claro que la generalización no depende solo de las comisiones, ni mucho menos de los inventores, o de los racionalizadores, o de los científicos, la generalización depende de todo el mundo, depende de los organismos, depende de la dirección del Estado, depende de la dirección del Partido, todo el mundo tiene que trabajar en eso que se llama la generalización, o lo que pudiéramos llamar la rápida aplicación de cualquier resultado de las investigaciones." (FC, 16.12.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f161292e.html>

“Tengo que decir que nos vemos obligados a producir alimento sin fertilizantes, sin pesticidas, sin herbicidas, sin combustible muchas veces, acudiendo a la tracción animal, viéndonos en la necesidad de alimentar al 80% de la población que vive en las zonas urbanas...” (FC, 25.11.94) <http://www.cuba.cu/gobierno/discursos/1994/esp/f251194e.html>

“Es imposible descentralizar las máquinas pesadas de preparación de tierra. Hay que descentralizar todo lo que se pueda en materia de maquinarias y equipos, los adecuados. El compromiso de usar el buey es un compromiso viejo de antes del período especial. Cuando se concibieron los planes para el período especial en caso de guerra, de bloqueo total del país, ya se hablaba del buey, y realmente qué trabajo ha costado, en realidad, regresar en todo lo que era necesario regresar al buey, y en todo lo que era posible regresar al buey; qué trabajo ha costado volver a la cultura del buey, en cierto grado. Y sacrificio hemos tenido que hacer, porque todos los bueyes para trabajar fueron bueyes que se redujeron de la alimentación de la población; porque todos aquellos animales tenían un destino, el sacrificio para el consumo de la población, y hubo que destinar cientos de miles de animales a la agricultura cañera y a la otra agricultura, y muchos de ellos tenían accidentes y tenían problemas.” (FC, 16.12.94) <http://www.cuba.cu/gobierno/discursos/1994/esp/f161294e.html>

“... como han logrado la proeza de poner los vegetales por la libre prácticamente en toda la ciudad con las producciones que se hacen allí, en todos esos espacios que estaban vacíos, ... Son cosas nuevas, fruto de esta época de sacrificios, que han ejercido una tremenda influencia sobre las personas. Como todo esto, eso demuestra, en primer lugar, la conciencia creciente que va adquiriendo nuestro pueblo y la capacidad de movilización del Partido y de las organizaciones de masa. Cómo en estos tiempos difíciles precisamente se crece la gente y son capaces de hacer cosas que no habíamos visto nunca a lo largo de la historia de la Revolución y que no veíamos cuando abundaban mucho los recursos en este país, cuando teníamos el doble de combustible, el triple de fertilizantes, millones de toneladas de pienso para producir alimentos. Ha sido un objetivo que se ha trazado con una seriedad enorme.” (FC, 30.09.96) <http://www.cuba.cu/gobierno/discursos/1996/esp/f300996e.html>

“Ahora tenemos la lucha contra esta plaga del Thrips Palmi, y ahí esperando, tomando todas las medidas. En estos casos hemos tomado siempre que ha sido posible medidas biológicas. Y una de las cosas que ha hecho la agricultura es buscar elementos biológicos, y hay más de 200 centros que producen algunos de estos elementos para combatir distintas plagas, que afectan a las viandas, los vegetales y otras cosas.” (FC, 08.10.97) <http://www.cuba.cu/gobierno/discursos/1997/esp/f081097e.htm>

“Creo que una de las mejores cosas que se ha hecho en período especial son esas hortalizas urbanas que tanto ayudan a que la población pueda ir a buscar vegetales frescos, comprarlos directamente, sin intermediarios. Tengo entendido que el Ministerio de la Agricultura va a hacer un esfuerzo mayor para incrementar la productividad por metro cuadrado, y, además, para crear nuevas áreas. Es una buena lección del período especial.” (FC, 29.12.97) <http://www.cuba.cu/gobierno/discursos/1997/esp/f291297e.htm>

“Tenemos ingresos por el níquel, el níquel también ha bajado de precio; tenemos ingresos por las exportaciones pesqueras, fundamentalmente langostas y camarones; tenemos exportaciones de tabaco, café, licores, productos de la biotecnología y la industria farmacéutica, equipos médicos, servicios; tenemos ingresos por el turismo, son los que más crecen, están creciendo rápidamente pero están muy lejos de ser suficientes, tienen que pasar años antes de que los ingresos por el turismo empiecen a competir con los ingresos por la caña, antes de que los ingresos por la biotecnología, la industria farmacéutica y de equipos médicos compitan con la caña, se necesita tiempo. Tenemos programas importantes en desarrollo que deben incrementar los ingresos del país, pero se necesita tiempo.” (FC, 23.11.92) <http://www.cuba.cu/gobierno/discursos/1992/esp/f231192e.html>

“¡Ah!, pero puede llegar un día en que el peso de la caña en la economía sea mucho menor, ese día tiene que llegar, y eso tiene que salir de la ciencia y de la técnica. Aunque seamos un país desarrollado en el futuro, no tenemos por qué renunciar a la caña, igual que, digamos, los australianos no renuncian a ella a pesar de sus ingresos y su desarrollo; entonces tendremos que tenerla bien mecanizada y tendremos que crear de nuevo y echar a andar todas esas brigadas de riego y drenaje parcelario, y buscar

rendimiento, reducción de costos y máxima eficiencia.” (FC, 16.12.94)
<http://www.cuba.cu/gobierno/discursos/1994/esp/f161294e.html>

“Nosotros siempre estamos diciendo: ¿No habrá una máquina para sembrar tabaco? ¿Cómo se puede mecanizar? Tener una máquina para sembrar tabaco no se sabe lo que vale para nosotros; buscar fórmulas que se adapten a la máquina, cómo rodear la semilla de una materia que permita sembrarla como se siembra la col, por ejemplo, o el tomate que se siembra con máquinas, tiene un tipo de semilla noble para utilizar la maquinaria.” (FC, 15.01.97)
<http://www.cuba.cu/gobierno/discursos/1997/esp/f150197e.html>

“Treinta y cinco años construyendo presas, canales, carreteras, caminos, instalaciones agrícolas de todo tipo, lecherías, granjas de aves ponedoras, granjas de aves para carne, granjas de ceiba para cerdos; 35 años creando granjas agrícolas, cooperativas de producción agropecuaria, de crédito y servicios. Treinta y cinco años mecanizando el país, para que toda aquella caña que cortaban cientos de miles de hambrientos obreros se cortara con máquinas; 35 años mecanizando la agricultura, para que el trabajo se pudiera hacer en forma mucho más humana; 35 años mecanizando las construcciones, mecanizando los puertos, construyendo terminales de azúcar a granel y muelles con grúas modernas, para utilizar los más modernos sistemas de carga y descarga en los puertos; 35 años mecanizando los cultivos como el arroz, cuya cosecha se hacía toda a mano.” (FC, 01.01.94)
<http://www.cuba.cu/gobierno/discursos/1994/esp/f010194e.html>

“Pero la Revolución humanizó el trabajo, ya nadie hace carreteras con pico, pala y mandarina, nadie carga el azúcar con un saco de 325 libras en el hombro; hoy nadie ara la tierra a mano o con bueyes, no alcanzan los bueyes; hoy no se corta el arroz con una hoz; hoy no se transportan las mercancías con el tiro animal, aunque debemos usarlo hasta el máximo, porque estamos en las condiciones en que hay que hacer un esfuerzo tremendo. Hoy no nos queda más remedio que gastar una cantidad elevada de combustible, con precios que crecen. Mientras perforamos e incrementamos nuestra producción de petróleo, mientras buscamos tecnologías que sean más eficientes en el ahorro de la energía, mientras hacemos todo eso, hay que luchar con más eficiencia y trabajar con más eficiencia para alcanzar todo eso, y algún día lo alcanzaremos, y más.” (FC, 28.05.96)
<http://www.cuba.cu/gobierno/discursos/1996/esp/c280596e.html>

“En el pasado trajeron [colonialistas españoles] hombres y los esclavizaron, como muchos de ustedes saben, para cortar la caña. Hoy nuestra caña es más honesta, es más digna, es más dulce, porque lo sostenemos con el esfuerzo y el sudor de los cubanos, no tiene nadie que venir a cortarla. Vendrán los voluntarios, y vendrán especialmente las máquinas que, como les decía, serán cada vez mejores y más eficientes; cada vez perderán menos tiempo, cada vez tendremos un poco más de medios de transporte...” (FC, 28.05.96) <http://www.cuba.cu/gobierno/discursos/1996/esp/c280596e.html>

“Yo estoy seguro de que por el camino que íbamos llegaríamos a producciones cañeras suficientes para producir 10, 11, 12 y 13 millones de toneladas de azúcar, porque el potencial de nuestro país lo daba y porque teníamos un mercado enorme a nuestra disposición.” (FC, 16.12.94)
<http://www.cuba.cu/gobierno/discursos/1994/esp/f161294e.html>

“Más que a alimentos, debo referirme a los alimentos que ahora podemos producir; no podríamos pedir que en las granjas estatales produjeran la cantidad de aves, o la cantidad de cerdos, o la cantidad de leche que podíamos producir en otros momentos en que teníamos todo el pienso suficiente para hacerlo con materias primas importadas. Se trabaja en la producción de alimentos en condiciones difíciles, faltando muchos productos, y muchas veces los fertilizantes; pero se ve en los campos el esfuerzo, se ven en los campos las siembras, y no tengo duda de que ellos podrán cumplir pronto ese objetivo de producir más viandas y más vegetales que las cifras históricas.” (FC, 30.09.96)
<http://www.cuba.cu/gobierno/discursos/1996/esp/f300996e.html>

In Chapter 7

Period 1998-2007

“La revolución socialista ha creado más propietarios que los que había creado el capitalismo en Cuba a lo largo de siglos. Cientos de miles de familias campesinas son hoy propietarias de sus tierras, por las cuales no pagan siquiera impuestos. Otros cientos de miles las poseen en usufructo gratuito y las explotan de forma individual o cooperativa, y son propietarios de la maquinaria, los talleres, el ganado y otros bienes. Lo más importante: la Revolución convirtió al pueblo cubano en propietario de su propio país. Lo que erradicó fue la propiedad de los medios fundamentales de producción, de las instituciones financieras y otros servicios vitales en manos de saqueadores y explotadores del pueblo, que se enriquecían a costa del sudor de los trabajadores, o eran para uso exclusivo de privilegiados y ricos, donde pobres y negros estaban excluidos. La nostalgia sobre la propiedad que pueda sufrir el jefe de un gobierno imperial podría saciarse al ver que, además de los campesinos, millones de familias en las ciudades son ahora dueñas de las viviendas que ocupan, por las que tampoco pagan siquiera impuestos.” (FC, 01.06.02) <http://www.cuba.cu/gobierno/discursos/2002/esp/f010602e.html>

“Ya no era negocio la producción azucarera bajo ningún concepto, estos precios del azúcar son coyunturales, porque se acabaron todos los acuerdos que protegían los precios del azúcar, y lo que hay hoy es un caos en la producción azucarera, como en otras muchas ramas de la economía mundial. Nosotros aprovechamos la coyuntura favorable y el hecho de que el alcohol acompañante de la gasolina alcance un precio tan alto como esta.” (FC, 01.05.06) <http://www.cuba.cu/gobierno/discursos/2006/esp/f010506e.html>

“La vida ha demostrado que los campesinos eran más aptos para unir tierras y explotarlas con elevada eficiencia; han demostrado su capacidad de reducir costos y obtener eficiencia los campesinos individuales cuando se agrupan, y, sin duda, ese fue un gran paso de avance. Son más aptos que los obreros agrícolas cuando se convierten en propietarios de la producción, de los medios y administradores de su propia producción; tienen más tendencia al ahorro los campesinos, por tradición. Los otros se acostumbraron a los grandes gastos de las administraciones y a otra forma de administración, y algunos de aquellos vicios los transfirieron a las UBPC, no obstante las ventajas que significaba para ellos, en muchos sentidos, ser realmente los propietarios de aquellas producciones, digamos; y algunos colectivos recibieron tremendas plantaciones estatales, como plantaciones arroceras que habían sido adaptadas ya, estaba bien desarrollado el sistema ingeniero u otros métodos de productividad.” (FC, 17.05.99) <http://www.cuba.cu/gobierno/discursos/1999/esp/f170599e.html>

“Esas son las Unidades Básicas de Producción Cooperativa. Ellos las administran, son los dueños de la producción, y algunas de ellas obtienen, incluso, hasta algunas máquinas grandes, como una combinada cañera; porque en estas circunstancias siempre procuramos, en la agricultura, preservar los equipos de gran peso como, por ejemplo, equipos de buldoceo u otros similares, cuyas capacidades sobrarían para una de estas cooperativas, mantenerlos en empresas centralizadas y que las Cooperativas de Producción Agropecuaria o las UBPC reciban el servicio de esas grandes máquinas. Todos los vehículos, tractores, aperos de labranza, todo eso es de ellos, lo tienen ellos. Ahora, si es una gran combinada cañera, carísima, con motores de gran potencia y mucha más productividad, no la podrían tener porque les sobraría máquina allí. Además, dentro de una programación de zafra hay que cortar caña en esta zona, en la otra; esas están más bien a nivel de central azucarero, aunque hay cooperativas, CPA y otras que tienen algunas de las primeras máquinas que hicimos, que las trabajan y las explotan bien. Las más modernas, las más grandes, son muy costosas y se necesita maniobrar con ellas. A veces llueve aquí y hay que moverse hacia otra zona, de acuerdo con la maduración de la caña, la humedad del suelo, etcétera. Por eso algunos equipos se mantienen concentrados.” (FC, 17.05.99) <http://www.cuba.cu/gobierno/discursos/1999/esp/f170599e.html>

“Esta reunión es fruto de dos años de trabajo en un proceso de fortalecimiento de las cooperativas de créditos y servicios, una de las más difíciles, más complicadas instituciones, porque están repartidas en muchos lugares diferentes; siempre se hace mucho más difícil el trabajo, incluso el empleo de los recursos. Tienen, además, relativamente pocos recursos, como hemos visto, pero llevan dos años en un movimiento, yo diría que muy sabio, con toda la sabiduría campesina, lo han hecho poco a poco; ahora

pueden ir algo más rápido...” (FC, 03.06.98)
<http://www.cuba.cu/gobierno/discursos/1998/esp/f030698e.html>

“Nos [oficial de la ANAP] habló también de cómo rebasa ya de 600 el número de Cooperativas de Créditos y Servicios con carácter, como les llaman, de cooperativas fortalecidas. Consiste en una serie de medidas tomadas para hacer más eficiente el trabajo de esas Cooperativas de Créditos y Servicios, que están constituidas por campesinos individuales, pero que comparadas con las Cooperativas de Producción Agropecuaria en que las tierras se unieron, estas disponen de tractores, camiones, combinadas, todos los equipamientos que no puede tener un pequeño campesino. En estas Cooperativas de Crédito y Servicios, donde están agrupados los productores individuales, ellos necesitaban, por ejemplo, un tractor y han buscado un tractor que presta servicios a muchos de los campesinos; o un camión, u otros vehículos, u otros medios que ayudan al trabajo. ... antes el esfuerzo ellos [ANAP] lo consagraron a la unificación, y se veía como la solución ideal, y sin duda lo es, la unión de las tierras, a los efectos de poder crear mejores condiciones de trabajo y de vida para los campesinos, porque en cada una de esas cooperativas, las CPA hicieron el pueblo, la escuela está al lado de aquel pueblo, y junto a esto, otras muchas ventajas (...) son cooperativas [CPAs] que se crearon a lo largo de muchos años con la reunificación de las tierras de los campesinos..., CCS, eran cooperativas para apoyar a los campesinos individuales, cada uno trabajando en su tierra. Claro, hacían muchas gestiones de créditos y de cuestiones que estaban relacionadas con los intereses de los campesinos, ..., pero no disponían de otras ventajas. El productor individual, con 6 hectáreas, 10 hectáreas, 12 hectáreas, 20 hectáreas, no podría disponer de grandes combinadas y grandes tractores. Estarían subutilizados. En especial, después que surge el período especial, en que ya no existían las condiciones mínimas, realmente, para continuar avanzando en un proceso de unificación de las tierras [colectivización], ..., a fin de crear unidades agrícolas de mayor tamaño donde se podía obtener una utilización mucho mejor de las máquinas, de las combinadas, etcétera, imagínense ustedes, una combinada cañera no puede trabajar en 5 hectáreas aquí, 10 hectáreas allá; se haría absolutamente incoesteable el corte mecanizado, se hace imposible, la falta de recursos hizo inevitable cambiar de política y reducir el tamaño de las unidades agrícolas..” (FC, 17.05.99) <http://www.cuba.cu/gobierno/discursos/1999/esp/f170599e.html>

“Las circunstancias actuales hicieron imprescindible nuevas cosas, nuevas ideas, nuevas fórmulas. También las circunstancias actuales nos ayudaron a descubrir que veníamos de una época de vacas gordas, muy gordas, de abundancia, de mucha abundancia de recursos, a una época de escasez muy grande, de vacas flacas, muy flacas, y nos ayudaron a descubrir la forma en que se utilizaban los recursos o se dilapidaban incluso muchos recursos.” (FC, 03.06.98)
<http://www.cuba.cu/gobierno/discursos/1998/esp/f030698e.html>

“Es decir, la agricultura tuvo muchas fallas, pero había recursos y se avanzaba. La desaparición prácticamente repentina de todos esos recursos fue lo que obligó a tomar una conciencia plena de cómo había que usar de forma óptima los recursos y superar tendencias negativas, cómo debíamos adaptar todo nuestro trabajo en la agricultura a las condiciones que tenemos hoy y buscar nuevas fórmulas que son duraderas, no transitorias o coyunturales.” (FC, 03.06.98)
<http://www.cuba.cu/gobierno/discursos/1998/esp/f030698e.html>

“La nueva situación nos obligó a reanalizar, reelaborar y acelerar el desarrollo de nuevas ideas. Como yo les decía hoy, las soluciones de los problemas en las duras condiciones en que lucha actualmente nuestro país, con el bloqueo endurecido de la potencia hegemónica, no están escritas en ningún libro, porque no ha pasado nunca en ninguna parte; sencillamente, nuestro país se ha convertido —como dije— en creador de fórmulas para enfrentar resueltamente nuestras actuales dificultades.” (FC, 03.06.98) <http://www.cuba.cu/gobierno/discursos/1998/esp/f030698e.html>

“A todo el que tuvo confianza en el banco y guardó su dinero allí —unos un poquito, otros más y otros muchísimo; algunos, incluso, con su cuenta repartida, por si acaso, a partir de experiencias anteriores—, se le respetó su dinero. Quedaron con su dinero, incluso esos que acumulan bastante. Claro que hay entre ellos gente honrada y seria; conozco campesinos muy trabajadores, muy serios, que sin mercado agropecuario ni nada parecido acumulan 300 000, 400 000 o 500 000 pesos, por los precios de la papa y otros productos, porque tenían rendimientos muy altos; bueno, 10 000 quintales de papa

son 40 000 o 50 000 pesos al año, y los guardaban. Hay quienes tienen su dinero ganado ahí. Otros lo ganaron, como ustedes saben, o vendiendo muy caro, o por hache o por be.” (FC, 28.09.98) <http://www.cuba.cu/gobierno/discursos/1998/esp/f280998e.html>

“... una de las ramas económicas del país que más recursos produce: la producción tabacalera, esa que queremos seguir ampliando, ... hemos estado haciendo pruebas en toda la isla, y en toda la isla se da bien el tabaco y buen tabaco, en todas las provincias... ¿Cuánto tabaco vamos a producir? Hay que llegar a producir 300, 400, 500 millones, es ilimitado el mercado del tabaco; y el prestigio de Cuba con el tabaco, en cuanto a la calidad de su tabaco y las preferencias que demuestra el mundo, es enorme también, realmente..., una fuente de divisas importante para el país. Si producimos 300 o 400 millones de tabacos, ¿cuánto ingreso le produciría al país y cuántas cosas no podríamos hacer por el país, por la agricultura y por las cooperativas de créditos y servicios?... Pero nosotros podemos alcanzar cientos de millones de dólares al año solo con la producción tabacalera, en exportación de productos elaborados, no estamos pensando en materias primas, hay que pensar en el producto elaborado...” (FC, 03.06.98) <http://www.cuba.cu/gobierno/discursos/1998/esp/f030698e.html>

“Los incrementos de importaciones de alimentos procedentes de Estados Unidos se han realizado sobre la base de cálculos precisos en torno a las ventajas comparativas de orden económico relacionadas con las pérdidas o ganancias en divisas convertibles de cada producción que se realiza en nuestro país, o en los incrementos imprescindibles y crecientes de nuestras importaciones. Ningún trabajador cubano ha sido ni será afectado, en virtud de circunstancias especiales que nos permiten mantener intactos sus ingresos y a la vez ofrecerles la oportunidad de realizar estudios de nivel medio o superior que elevarán extraordinariamente su autoestima y reconocimiento social. El país dispondrá de más ingresos para su desarrollo económico y social.” (FC, 28.09.02) <http://www.cuba.cu/gobierno/discursos/2002/esp/f280902e.html>

“En resumen, están los campesinos individuales, que integran las Cooperativas de Créditos y Servicios; los campesinos que se han cooperativizado constituyen las CPA; las tierras estatales de las grandes empresas que se entregaron a los trabajadores son las UBPC, y, aparte de eso, pequeñas parcelas de tierra que tienen muchos ciudadanos para autoconsumo y para algunas producciones que van al mercado. Además, está la agricultura urbana, que son los organopónicos que se han creado después del período especial en las ciudades, que algunos pertenecen al municipio y otros pertenecen a un pequeño grupo de agricultores o de ciudadanos de la ciudad que se ocupan de la producción y la comercialización.” (FC, 17.05.99) <http://www.cuba.cu/gobierno/discursos/1999/esp/f170599e.html>

“Tengo la convicción de que estamos en condiciones de lograr esos avances, y tenemos que tener presente que eso será lo que más agradecerá el pueblo, el impulso a estas actividades, desde el huertecito urbano, que produce kilogramos de vegetales por metro cuadrado, que se está impulsando en todo el país; todo, no debemos desechar ninguna posibilidad y buscar las fórmulas más prácticas, más inteligentes de cómo comercializar, cómo distribuir.” (FC, 03.06.98) <http://www.cuba.cu/gobierno/discursos/1998/esp/f030698e.html>

“Esos 30 millones de quintales de vegetales que hoy se producen en los huertos de las ciudades no se producían antes del período especial, había extensiones de tierra cultivadas con tomates y con otros cultivos de vegetales, pero solo en campos agrícolas, no en las propias ciudades; esto es parte del esfuerzo que se ha hecho, de una forma o de otra, tratando de garantizar los autoabastecimientos y procurando que no faltaran los más esenciales, especialmente para los niños.” (FC, 28.09.00) <http://www.cuba.cu/gobierno/discursos/2000/esp/f280900e.html>

“Nuestro país, bloqueado durante más de cuatro décadas, al derrumbarse el campo socialista y verse obligado a enfrentar una situación sumamente difícil, pudo producir y está produciendo, en espacios disponibles dentro de las ciudades, más de 3 millones de toneladas de vegetales al año en cultivos organopónicos, con empleo de pajas y desechos agrícolas, utilizando riego por goteo o microjet, un gasto mínimo de agua, dando empleo adicionalmente a casi 300 mil ciudadanos y sin emitir un kilogramo de dióxido de carbono a la atmósfera.” (FC, 01.09.03) <http://www.cuba.cu/gobierno/discursos/1999/esp/f170599e.html>

“En el programa de cultivos de vegetales protegidos en tierras del Ministerio del Azúcar, han concluido 462 de un plan de 2800 organopónicos, otros 1 647 están en proceso, y no han comenzado 691, esperamos que lo más rápidamente y tan pronto termine esta zafra, cuyos esfuerzos señalé, se acelere la construcción o la terminación. Es muy importante la producción de los vegetales y sobre todo en estos centros que son costosos y producen artículos de gran calidad, gran número de especias, estoy seguro de que frijoles y otros muchos productos que van a consumir, podrán condimentarlos mucho mejor. Nos falta cultura sobre eso, a pesar de que los organopónicos nos han enseñado mucho. En huertos intensivos —otra categoría— se han terminado 369, de 376 planificados, y en casas de cultivos se concluyeron las 112 proyectadas; de ellas, 108 ya fueron sembradas.” (FC, 01.05.06) <http://www.cuba.cu/gobierno/discursos/2006/esp/f010506e.html>

Period 2008-2015

“El escenario desfavorable de la economía mundial y nuestras propias dificultades, exigen optimizar las posibilidades que nos brindan las relaciones económicas mutuamente ventajosas, que venimos desarrollando con naciones amigas de todos los continentes, en especial con la hermana República Bolivariana de Venezuela, ... Nuestro elemental deber es ajustar los gastos en divisas a los volúmenes que estamos en condiciones de ingresar. Es una batalla en que la victoria depende del incremento paulatino de las producciones destinadas a la exportación o que sustituyen importaciones con eficiencia y ahorro, y de garantizar una mayor y mejor oferta de servicios a personas de otros países, que como el turismo y la salud aportan considerables ingresos.” (RC, 27.12.08) <http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r271208e.html>

“En alimentos, por ejemplo, este año el país tuvo que pagar 907 millones de dólares más que en el 2007, de esa cifra, cerca de 840 millones por incrementos de precios. Han bajado en las últimas semanas, pero lo han hecho aún más los de nuestros principales renglones exportables. El precio promedio del níquel en el 2008 ha sido un 41% inferior al del 2007, y 80% menor que el récord que alcanzó en ese año. También han disminuido los del azúcar y los productos del mar, entre otros que Cuba exporta.” (RC, 27.12.08) <http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r271208e.html>

“Ahora se impone como nunca invertir con racionalidad nuestros limitados recursos, esencialmente en la obtención de utilidades que permitan costear los ya elevados gastos sociales del país. La producción de alimentos, la sustitución de importaciones y el incremento de las exportaciones, continúan siendo líneas fundamentales. Además, el ahorro, que como ha orientado el compañero Fidel, es hoy nuestra fuente de recursos más inmediata y factible.” (RC, 11.07.08) <http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r110708e.html>

“... su éxito [del proceso de actualización] dependerá la preservación y el desarrollo del socialismo en Cuba, un socialismo próspero y sostenible, que a la vez que ratifica la propiedad social —...— sobre los medios fundamentales de producción, reconoce el papel de otras formas de gestión no estatales; reafirma a la planificación como instrumento indispensable en la dirección de la economía, sin negar la existencia del mercado.” (RC, 07.07.13) <http://www.cuba.cu/gobierno/rauldiscursos/2013/esp/r070713e.html>

“La armonía en la planificación y la organización es esencial en el socialismo. Su ausencia puede conducir a un caos más peligroso que el característico del capitalismo, donde las leyes del mercado terminan por establecer cierto orden y equilibrio, aunque sea a costa del sacrificio de miles de millones de seres humanos a escala mundial.” (RC, 11.07.08) <http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r110708e.html>

“Como era de esperar, ... no han faltado las críticas y exhortaciones de quienes, confundiendo sus más íntimas aspiraciones con la realidad, se ilusionaron con que la Conferencia consagraría el inicio del desmontaje del sistema político y social conquistado por la Revolución, a lo largo de más de medio siglo, con el apoyo de la mayoría de los cubanos. En este sentido, no fue nada casual que el primer objetivo del mismo exprese: ‘El Partido Comunista de Cuba, fuerza dirigente superior de la sociedad y del Estado, es fruto legítimo de la Revolución, al propio tiempo su vanguardia organizada y quien garantiza, junto al pueblo, su continuidad histórica’. ... Nuestros adversarios y hasta algunos que

simpatizan con nosotros, abstrayéndose de la historia de permanente agresión, bloqueo económico, injerencia y el cerco mediático, expresado en las incesantes campañas de la prensa supuestamente libre, subordinada en su mayoría a los intereses imperiales predominantes, todo lo cual ha debido enfrentar la Revolución Cubana, nos exigen, como si se tratara de un país en condiciones normales y no una plaza sitiada, la reinstauración del modelo multipartidista que existió en Cuba bajo el dominio neocolonial de los Estados Unidos. Renunciar al principio de un solo partido equivaldría, sencillamente, a legalizar al partido o los partidos del imperialismo en suelo patrio y sacrificar el arma estratégica de la unidad de los cubanos, que ha hecho realidad los sueños de independencia y justicia social por los que han luchado tantas generaciones de patriotas...” (RC, 29.01.12)
<http://www.cuba.cu/gobierno/rauldiscursos/2013/esp/r070713e.html>

“... también está la tendencia a aplicar la misma receta en todas partes. Como resultado de ello y quizás su peor consecuencia, muchos piensan que cada problema exige medidas de alcance nacional para resolverse. La iniciativa local es efectiva y viable en muchas cuestiones, así lo ha demostrado la distribución directa de la leche... Ya la experiencia abarca a 64 municipios de 13 provincias del país, 40 de ellos totalmente cubiertos... Además de garantizar con puntualidad y calidad este esencial producto, ... este programa permitió ahorrar más de 6 mil toneladas de leche en polvo cuya adquisición hubiera excedido los 30 millones de dólares, considerando el precio promedio en el período de 5 mil cincuenta dólares la tonelada. Adicionalmente se redujeron gastos en divisas por un valor de 2,6 millones, incluidos en esta cifra unos 600 mil litros de combustible.” (RC, 24.02.08)
<http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r240208e.html>

“En julio del 2007, el costo de importar una tonelada de arroz ya se había elevado hasta 435 dólares, hoy exige erogar 1 110 por tonelada..., entre los que más han crecido están los precios de los fertilizantes, esenciales para que los rendimientos sean mayores. Uno de los más importantes, la fórmula completa de cultivos varios, elevó su precio de 303 dólares la tonelada en julio de 2007, a 688 en este momento. Otro fertilizante muy empleado, la urea, la tonelada costaba unos 400 dólares hace un año, ahora hay que pagar casi 700. ¡Parece obra del diablo!” (RC, 11.07.08)
<http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r110708e.html>

“Tenemos que revertir definitivamente la tendencia al decrecimiento del área de tierra cultivada, que entre 1998 y 2007, en sólo 9 años, disminuyó en un 33% —...—, en lo que influyeron de manera considerable las limitaciones impuestas por el período especial. Dicho en pocas palabras: ¡hay que virarse para la tierra! ¡Hay que hacerla producir! ..., no puede quedar una hectárea apta sin sembrar, en primer lugar, en la periferia inmediata de cada poblado y ciudad. Es mucho más económico aprovechar óptimamente esas tierras cercanas que el incosteable traslado de trabajadores o estudiantes a grandes distancias, ... Así evitamos pérdidas y baja productividad.” (RC, 11.07.08)
<http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r110708e.html>

“En estas circunstancias se privilegiará el fomento de aquellas actividades que aseguran ingresos y sustituyen importaciones, así como la producción de alimentos, con el objetivo de reducir paulatinamente la dependencia existente del mercado exterior en esta materia. Ya hemos dicho que el desarrollo de nuestra agricultura constituye un asunto de seguridad nacional.” (RC, 20.12.09)
<http://www.cuba.cu/gobierno/rauldiscursos/2009/esp/r201209e.html>

“Sin una agricultura fuerte y eficiente que podemos desarrollar con los recursos de que disponemos, sin soñar con las grandes asignaciones de otros tiempos, no podemos aspirar a sostener y elevar la alimentación de la población, que tanto depende todavía de importar productos que pueden cultivarse en Cuba.” (RC, 04.04.10)
<http://www.cuba.cu/gobierno/rauldiscursos/2010/esp/r030410e.html>

“En el socialismo es indispensable que en los planes económicos la asignación de recursos se ajuste estrictamente a los ingresos disponibles. No podemos aspirar a que 2 y 2 son 5; 2 y 2 son 4; más bien a veces en el socialismo 2 y 2 da 3.” (RC, 11.07.08)
<http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r110708e.html>

“¡La tierra está ahí, aquí están los cubanos, veremos si trabajamos o no, si producimos o no, si cumplimos nuestra palabra o no! No es cuestión de gritar Patria o Muerte, abajo el imperialismo (Aplausos), el bloqueo nos golpea y la tierra ahí, esperando por nuestro sudor. A pesar de que los calores son cada vez mayores, no queda más remedio que hacerla producir. Creo que estamos de acuerdo (Exclamaciones de: "¡Sí!" y aplausos)” (RC, 26.07.09) <http://www.cuba.cu/gobierno/rauldiscursos/2009/esp/r260709e.html>

“... hay notables experiencias de productores que alcanzan buenos resultados combinando la ciencia con el buey, el abono orgánico, otros medios tradicionales y sobre todo mucho y eficiente trabajo. Admiro la gran empresa estatal socialista, incluidas las agropecuarias, y no renunciaremos a ellas. Conozco varias que producen con eficiencia. Lo anterior no niega en absoluto el papel de la cooperativa en sus diversas modalidades y del pequeño agricultor, de los que también puedo poner ejemplos muy destacados. Todas son formas de propiedad y producción que pueden coexistir armónicamente, pues ninguna es antagónica con el socialismo. (...) la tierra, los recursos y todo el apoyo necesario estarán cada vez más a disposición de quienes produzcan con eficiencia, independientemente de que sea una gran empresa, una cooperativa o un campesino individual. (...) Por eso soy un admirador y firme defensor de la gran empresa estatal socialista industrial, agropecuaria o de lo que sea, pero no subestimo ni a las cooperativas ni a los campesinos, como dijimos.” (RC, 11.07.08) <http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r110708e.html>

“Llamamos en ese momento [26.07.07] a generalizar con la mayor celeridad posible y sin improvisaciones cada experiencia de los productores destacados del sector estatal y campesino, y estimular la dura labor que realizan, así como solucionar definitivamente los dañinos impagos por el Estado en el sector.” (RC, 26.07.09) <http://www.cuba.cu/gobierno/rauldiscursos/2009/esp/r260709e.html>

“Respecto a uno de los temas más abordados en las reuniones: la producción de alimentos y sus altos precios, el país trabaja con la urgencia que ese vital asunto requiere, por su impacto directo y cotidiano en la vida de la población, sobre todo de las personas de menores ingresos. Se ha avanzado en los estudios y continuará actuándose con toda la rapidez que permitan las circunstancias, para que la tierra y los recursos estén en manos de quienes sean capaces de producir con eficiencia, se sientan apoyados, reconocidos socialmente y reciban la retribución material que merecen.” (RC, 28.12.07) <https://elinformador.wordpress.com/2007/12/29/raul-castro-nadie-dude-de-la-firme-conviccion-demostrada-por-nuestro-pueblo-de-que-solo-el-socialismo-es-capaz-de-vencer-las-dificultades/>

“Avanza a ritmo satisfactorio la entrega de tierras en usufructo, aunque persisten insuficiencias, en unos municipios más que en otros. De las más de 110 mil solicitudes realizadas, se han aprobado hasta el momento cerca de 82 mil, que abarcan unas 690 mil hectáreas, o sea, el 39 por ciento del área ociosa.” (RC, 26.07.09) <http://www.cuba.cu/gobierno/rauldiscursos/2009/esp/r260709e.html>

“Se han entregado alrededor de 920 mil hectáreas a más de 100 mil beneficiarios, lo que representa el 54% del total del área ociosa.” (RC, 20.12.09) <http://www.cuba.cu/gobierno/rauldiscursos/2009/esp/r201209e.html>

“Uno de los asuntos que requiere mayor respuesta a estos esfuerzos productivos es solucionar la distribución de modo que los productos lleguen sin demoras a la población. No se trata sólo de la asignación de recursos, sino también de formas organizativas y otras medidas que lo faciliten, entre otras, que, tras cumplir con las entregas pactadas con el Estado, los productores puedan vender directamente en el mercado los excedentes, bajo las reglas de la oferta y la demanda.” (RC, 20.12.09) <http://www.cuba.cu/gobierno/rauldiscursos/2009/esp/r201209e.html>

“Primero dijimos [los militares] que los frijoles eran tan importantes como los cañones, y cuando la situación se agravó, llegamos a afirmar que los frijoles eran más importantes que los cañones... No hubo lamentos ni justificaciones. Las tropas marcharon a los campos agrícolas y en un plazo relativamente breve produjeron sus alimentos, salvo los que no resultaba lógico o posible, no vamos [los militares] a producir sal o azúcar, o trigo, que no se puede dar en Cuba. De forma simultánea se fueron organizando las estructuras empresariales que asumieron gradualmente esas producciones, y los

combatientes regresaron a sus actividades habituales. Se creó la Unión Agropecuaria Militar, cuyas siglas dicen UAM... Las FAR [Fuerzas Armadas Revolucionarias, Ministerio] siguen produciendo alimentos y ya abastecen el 79% de sus necesidades, ahora mediante 24 grandes empresas agropecuarias militares donde laboran miles de trabajadores civiles. La mayoría funcionan, además, con eficiencia y generan utilidades.” (RC, 11.07.08) <http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r110708e.html>

“Ahí están los magníficos resultados de la agricultura urbana, que sin recurrir a movilizaciones ni a grandes gastos realiza una notable producción de vegetales y ha contribuido al hábito de consumir ese importante alimento y además proporciona empleo a más de 300 mil personas, incluidas unas 67 mil mujeres y alrededor de 40 mil jubilados. Son propuestas realistas para un país cuyos recursos no siempre permiten acudir a las modernas tecnologías, muy productivas, pero caras y que además consumen combustible. Las emplearemos cuando se justifique económicamente, como se viene haciendo con la maquinaria e implementos agrícolas, los productos químicos, los sistemas de riego y los cultivos protegidos, con resultados alentadores, aunque todavía incipientes.” (RC, 11.07.08) <http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r110708e.html>

“Son ideas acerca de cómo debe ser la agricultura y la ganadería en Cuba en el momento actual, en que alrededor del 75% de la población es urbana, lo que no quiere decir que el 25% restante trabaje en el campo. Por lo tanto, no puede quedar una hectárea apta sin sembrar, en primer lugar, en la periferia inmediata de cada poblado y ciudad. Es mucho más económico aprovechar óptimamente esas tierras cercanas que el incosteable traslado de trabajadores o estudiantes a grandes distancias, a veces para laborar media jornada. Así evitamos pérdidas y baja productividad.” (RC, 11.07.08) <http://www.cuba.cu/gobierno/rauldiscursos/2008/esp/r110708e.html>

“Volando, sobre todo en helicóptero, a lo largo y ancho del país, a veces ordeno al piloto desviarse y darle una vuelta a cualquier poblado, ciudad, etcétera... en la mayoría de todos, sobra tierra y de buena calidad, pegada a nuestros patios, que no se cultiva; y por ahí es por donde se está haciendo un plan para avanzar, con cultivos intensivos, poniéndoles riego donde sea posible que exista agua y que existan los recursos para ponerlo. Si un día faltara el combustible en este mundo tan cambiante y alocado, que la comida la tengamos cerca, que la podamos traer en un carretón con caballos, con un buey o empujándola por nosotros mismos... No podemos sentirnos tranquilos mientras exista una sola hectárea de tierra sin un empleo útil y alguien dispuesto a hacerla producir esperando por respuesta [de aquellos a cargo de la distribución de tierras].” (RC, 26.07.09) <http://www.cuba.cu/gobierno/rauldiscursos/2009/esp/r260709e.html>

“En esta dirección el programa de la Agricultura suburbana está llamado a desempeñar un papel decisivo bajo modelos de gestión que involucren tanto a la empresa estatal como a las cooperativas, campesinos individuales, usufructuarios de la tierra y otras formas de producción. Se impone liberar en esta esfera, como en todas las demás, a las fuerzas productivas de restricciones para su desarrollo.” (RC, 20.12.09) <http://www.cuba.cu/gobierno/rauldiscursos/2009/esp/r201209e.html>

Annex 3. Spanish terms

Acopio	State marketing agency or State collection agency
Caballería	13.42 hectares
Cachaza	Sugarcane waste
Campesino	Peasant, traditional, small-scale, mostly independent farmers
Combinada	Mechanical cane harvester
Conuquero	
Cultivos varios	Roots and tubers, vegetables
Latifundio	Large landed estate
Lineamientos	Guidelines of the Economic and Social Policy of the Party and the Revolution (Lineamientos de la Política Económica y Social del Partido y la Revolución)
Mercado Libre Campesino	Free peasants' market
Machetero	Harvest canecutter (with machete)
Minifundio	Smallholding
Organopónico	Community gardens, intensive urban agriculture unit, with raised-bed
Parcelero	
Poder Popular	“People’s Power” is the Cuban elected government apparatus with administrative duties. Functions at municipal, provincial and national level
Proceso de Rectificación de Errores	
Quintal	100 pounds
Usufructo	Use rights
Viandas	General term that refers to any sort of tuber (sweet potatoes, yucca, cassava, taro and plantains)
Zafra	Annual sugar harvest

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Annex 5. Quantitative analysis

The following section shows the results of a quantitative descriptive analysis of Fidel and Raúl Castro's public discourses from 1984 to 2015. In total 589 individual discourses were analyzed from PDFs that had been downloaded from: www.cuba.cu/gobierno/discursos for Fidel's, and <http://www.cuba.cu/gobierno/rauldiscursos/index2.html> for Raúl's. The discourses were collected in a literature corpus and analyzed with the text mining framework TM in the R statistical programming environment (Feinerer & Hornik, 2020)²⁵⁷. To preprocess the data different routines were applied such as to remove punctuation, remove (Spanish) stop words, remove numbers, strip whitespaces and reduce the words to their word stems. After that, the data was collected in a so-called term-document matrix which contains all documents (as columns) and utilized terms (as rows). Based on this data-structure different quantitative techniques may be applied ranging from simple descriptive analysis to more sophisticated statistical feature extraction techniques such as text mining or machine learning (Feinerer, Hornik & Meyer, 2008)²⁵⁸.

This section, nevertheless, looks at the discourses with simple descriptive statistics. Figure 1 shows us the total wordcount of the discourses over the years. Some interesting interpretations can be already drawn from this graph. At first, we see that the total length of annual public discourse appearances fluctuates significantly for Fidel between 25,000 words (being more less equal to 200 minutes of speech) up to almost 150,000 words in his record year (with about 1,200 minutes, or a full 24 hour-day of the maximo-leader discourse). His brother Raul on the contrary is much less talkative with his best year not even reaching Fidel's worst annual performance. For Fidel there are two periods where he had an increased need to talk: the yeas around the Fall of Communism in the late 1980s/early 1990s as well as the period that is known as the Battle of Ideas from 1997 to 2007.

²⁵⁷ Feinerer I, Hornik K (2020). tm: Text Mining Package. R package version 0.7-8, <https://CRAN.R-project.org/package=tm>.

²⁵⁸ Feinerer I, Hornik K, Meyer D (2008). "Text Mining Infrastructure in R." *Journal of Statistical Software*, 25(5), 1–54. <https://www.jstatsoft.org/v25/i05/>.

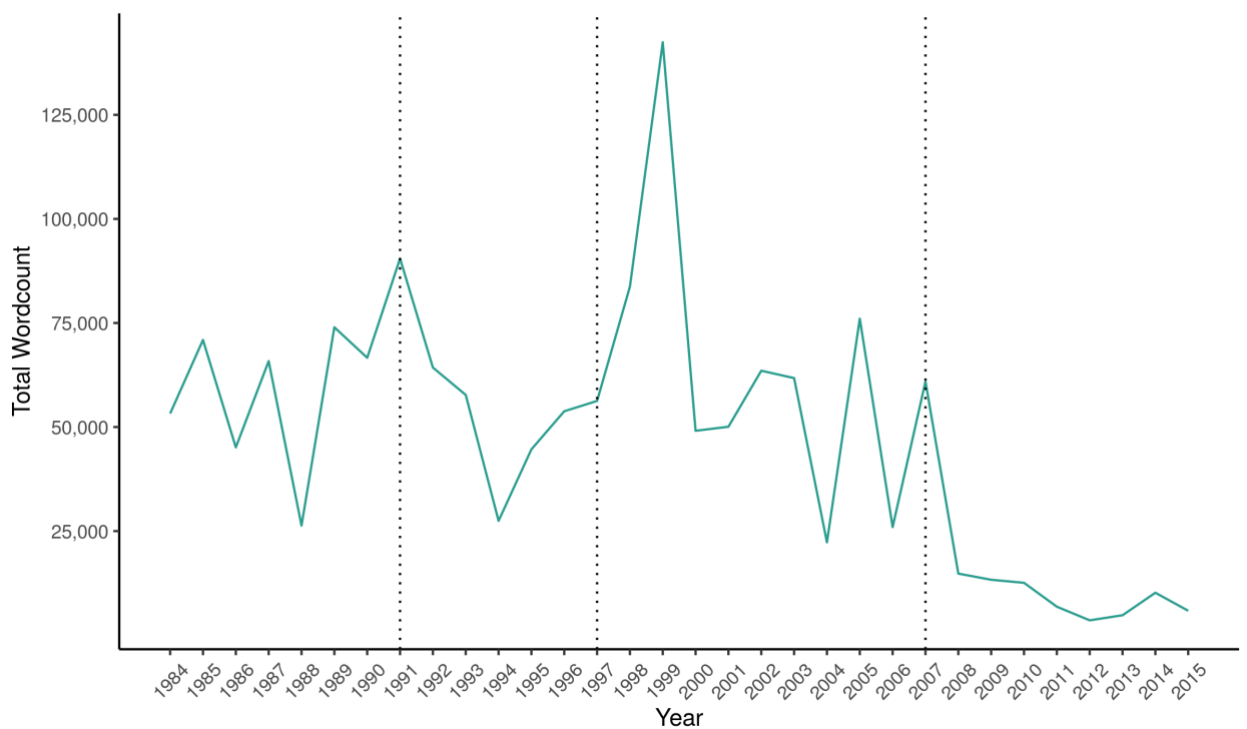


Figure 1: Total wordcount of all discourses of Fidel and Raul Castro aggregated by year. Elaborated by the author

By simply looking at the most common words within the speeches we can also see a bit of the rhetorical style and focus points of Fidel Castro and (not so much) of his brother Raúl. The following list shows the 15 most commonly found terms in the whole word corpus:

1. “país” (engl. country), n = 9.643
2. “mundo” (engl. world), n = 7.400
3. “Cuba” (engl. Cuba), n = 6.762
4. “años” (engl. years), n = 6.383
5. “pueblo” (engl. nation), n = 6.055
6. “hoy” (engl. today), n = 5.374
7. “aplausos” (engl. applause), n = 5.274 -> as a reaction of the audience
8. “países” (engl. countries), n = 5.089
9. “solo” (engl. only), n = 5.006
10. “puede” (engl. can), n = 4.997
11. “revolución” (engl. revolution), n = 4.935
12. “ser” (engl. to be), n = 4.846
13. “cada” (engl. every), n = 4.772
14. “unidos” (engl. united), n = 4,730
15. “milliones” (engl. millions), n = 4,721

From the list above we can already depict some common pattern in the discourses e.g., that the leader frequently talked about “Cuba” as a country (“país”) and its role in the world (“mundo”), comparing it to other countries (“países”) and the rivaling capitalist systems. The comparison of the situation today (“hoy”) with the past and the evolution of socialism over the years (“años”) is also apparent. In general, it seems that a lot of room was given to explain the revolution (“revolución”) in all of its facets and to call for people to stay united (“unidos”). It is remarkable in this context that these terms score even higher than very commonly used

Spanish terms such as “mucho” (engl. a lot) with n = 2.972 or “creo” (engl. I think) with n = 2.196.

More relevant to this thesis, of course, is the analysis of specific terms related to agriculture, agricultural production techniques and terms that describe the overall political and economic situation that constraint the political decisions. The first plot looks at the relevance of agriculture and the discourses as a whole. It shows the total wordcount of different word stems as stacked bars. The word-stems comprise:

- agricol* for agricola, agricolas (engl. “agricultural”)
- agricultor* for agricultor and agricultores (engl “farmer”)
- agricultur* for agricultura, agriculturas (engl. “agriculture”)
- agropecuari* for agropecuario, agropecuarios, agropecuaria, agropecuarias (engl. “agriculture and livestock”)
- campesin* for campesino, campesina, campesinos, campesinas (engl. “peasant”)
- cooperativ* for cooperativa, cooperativas, cooperativismo (engl. “coopeartives”)
- minifundi* for minifundio, minifundios, minfundista, minifundistas (engl. “smallholding/smallholders”)
- zafr* for zafra and zafras (engl “harvest”)

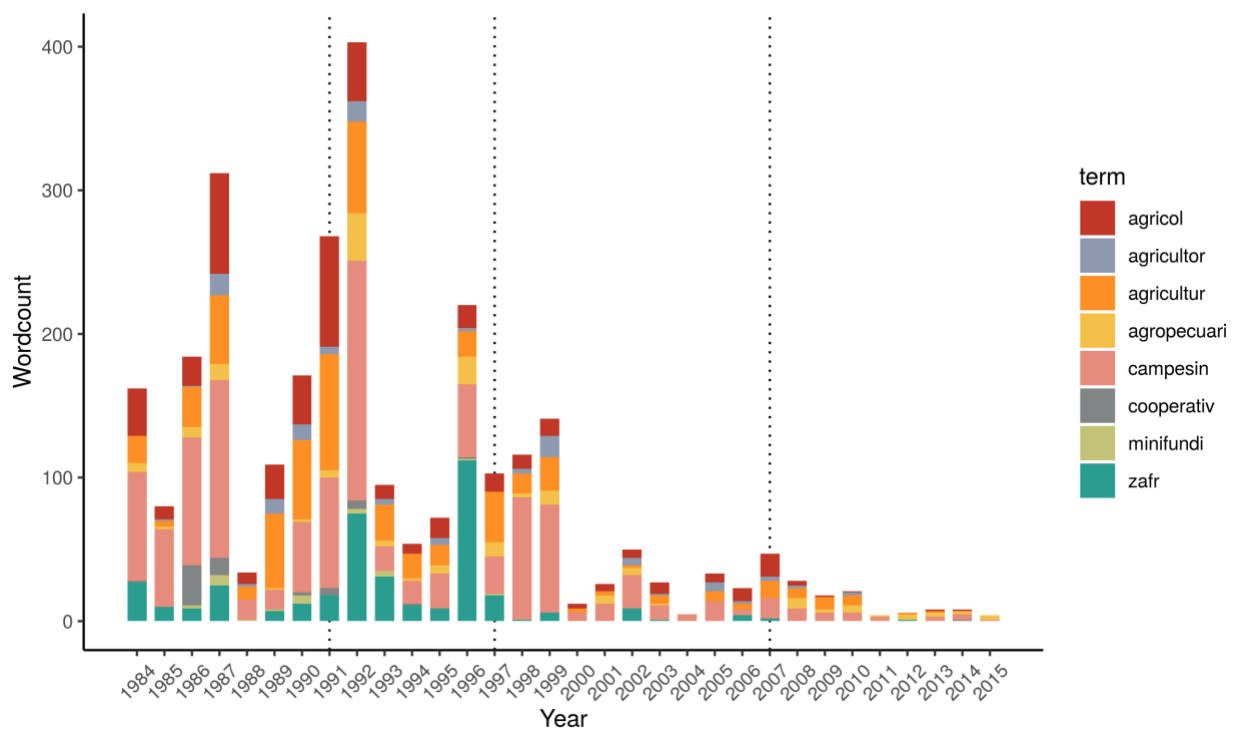


Figure 2: Total wordcount of words related to agricultural terms in all discourses of Fidel and Raul Castro aggregated by year. Elaborated by the author.

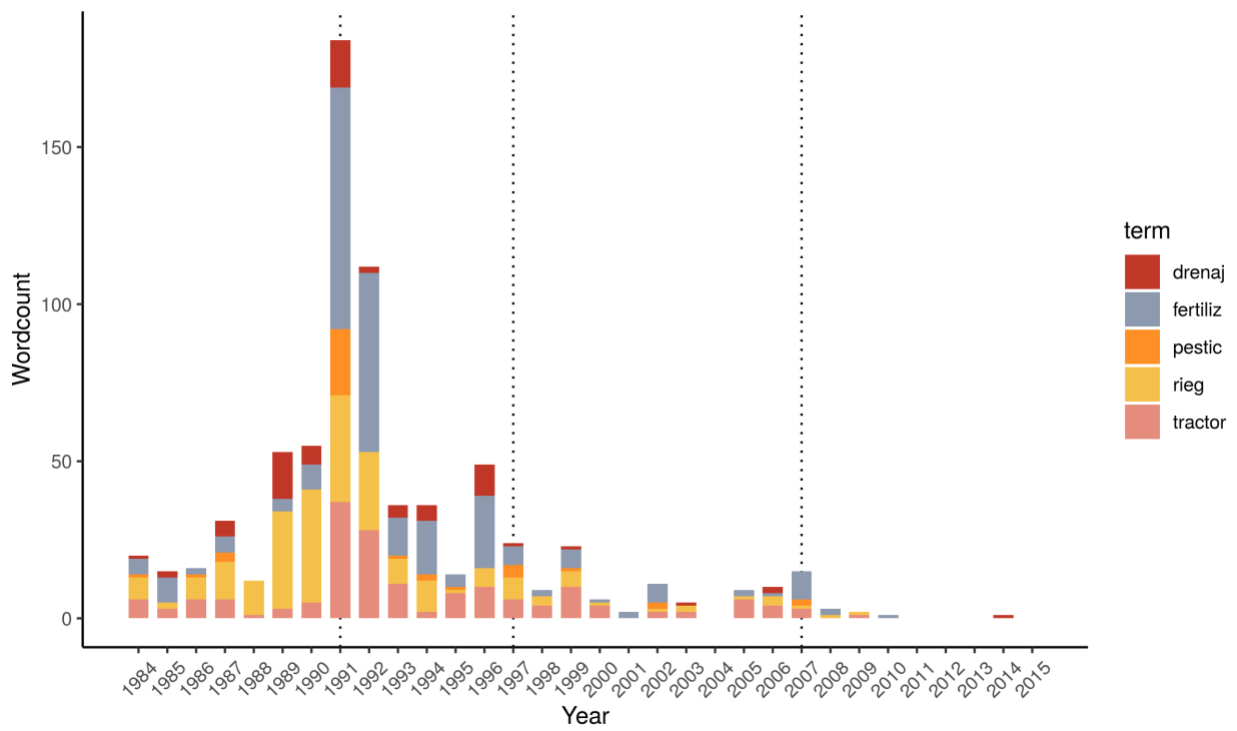


Figure 3: Total wordcount of words related to agricultural inputs in all discourses of Fidel and Raul Castro aggregated by year. Elaborated by the author.

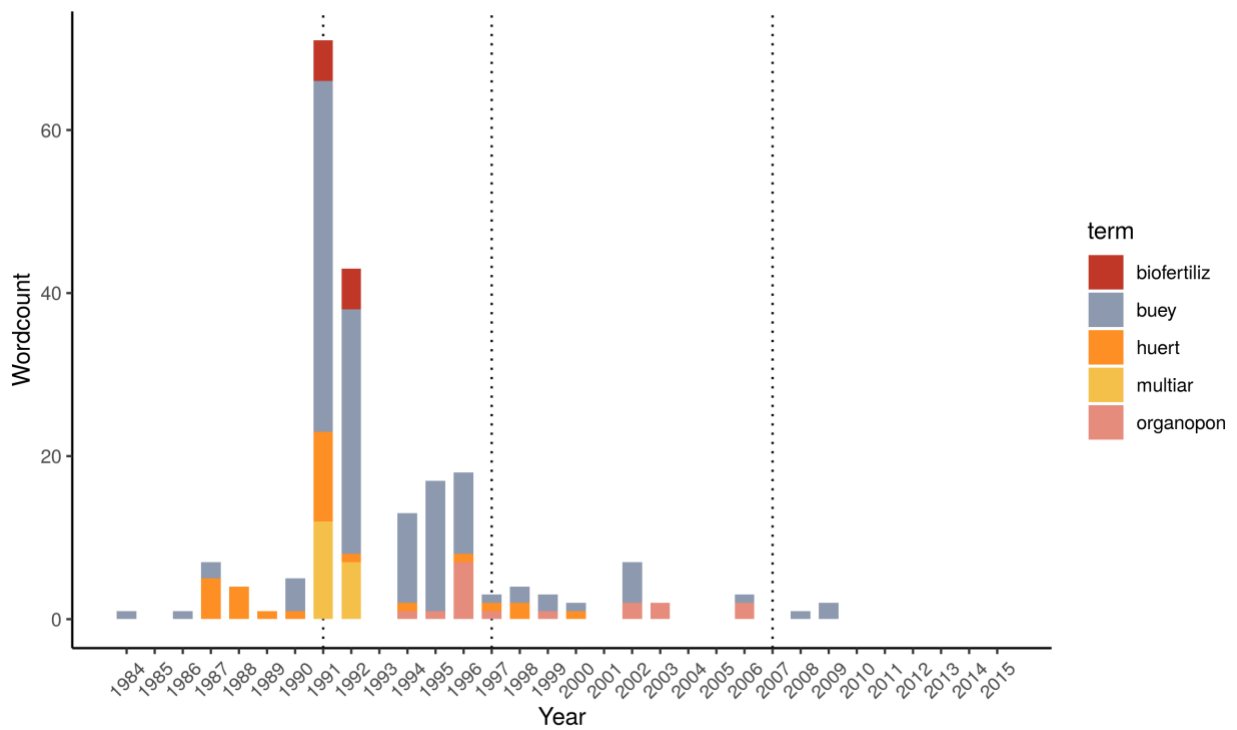


Figure 4: Total wordcount of words related to alternative inputs a and low-input production techniques in all discourses of Fidel and Raul Castro aggregated by year. Elaborated by the author.

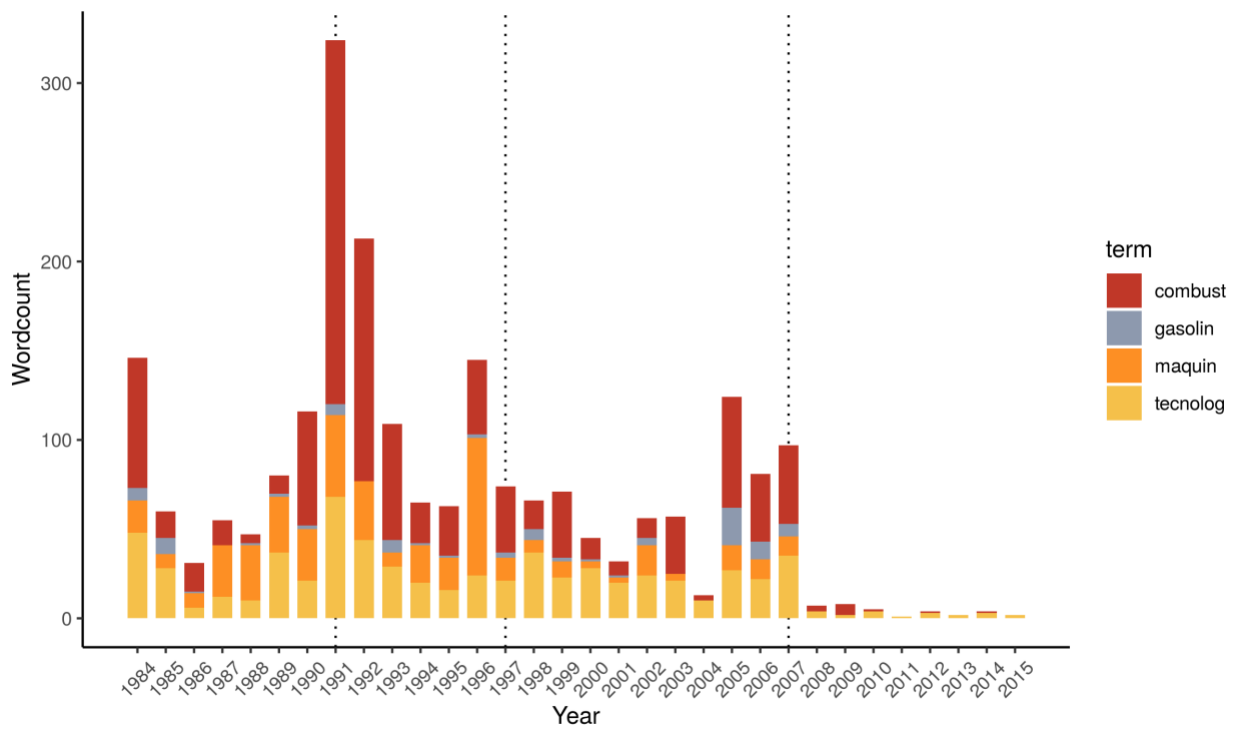


Figure 5 Total wordcount of words related to important economic terms in all discourses of Fidel and Raul Castro aggregated by year. Elaborated by the author.

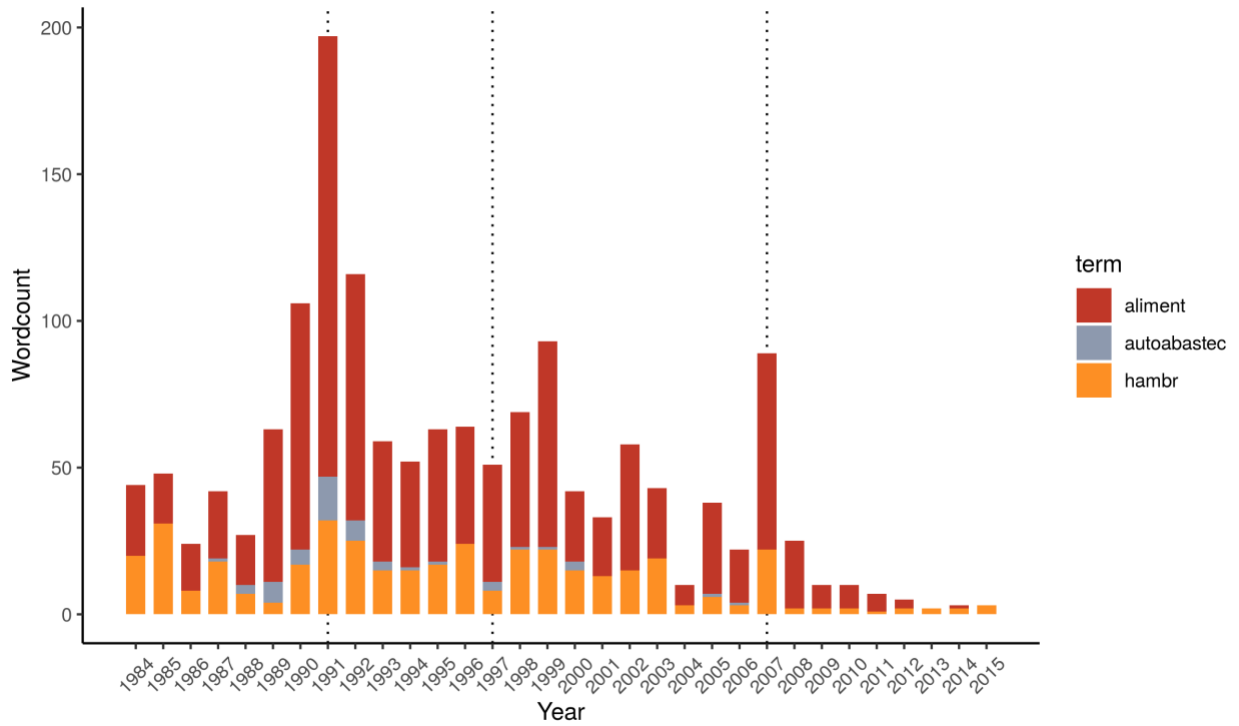


Figure 6: Total wordcount of words related to nutritional security terms in all discourses of Fidel and Raul Castro aggregated by year. Elaborated by the author

Annex 6. In-deph interviews. List of topics

With agroecological farmers

1. History of the use of agroecological practices on the farm

PAST

- When did you begin with agroecology? Why at that time? (description of the situation of the period, not only at a personal and family level, but also socially if possible)
- Which were the first practices incorporated? Which practices followed?
- Who was involved in this process (family, neighboring farmers, institutions such as ANAP or others, scientific institutions, international cooperation organizations, policies of the Ministry of Agriculture?)
- From whom or what institutions or organizations did you receive support? From which not?
- What limitations/challenges did you face and how?

INTERMEDIATE

- What has it been like after the start? Have you had ups and downs with agroecology? Why? When have you?
- Can you distinguish better moments or periods and then others that were not so good?

TODAY

- If you compare your farm with the past, what would you say?
- Have recent policies benefited you? Have they not benefited you?
- How do you think the new changes (Raúl Castro's government agricultural policies) will affect you?
- Which institutions and organizations are important for the development of agroecology today? Which institutions do you think should play another role? Or that they should be more supportive?

2. Factors motivating to continue practicing agroecology

- Why do you continue with agroecology today?

Here, surely economic, technological, environmental and ethical, social, political (supported by institutions) or other issues such as personal satisfaction or others of a more psychological nature could emerge.

* It would be interesting to explore whether practicing an agroecological agriculture makes the farmer more or less dependent on the State.

** It is important to note which factors are more relevant, in a way that a hierarchy could be established.

3. Perceived costs and benefits of agroecology

- If you had to make a balance, what would be the main costs and benefits of agroecology?
- What problems do you face in carrying out your production? (limitations of all kinds)
- What are the greatest benefits of doing this type of agriculture?
- In comparison with conventional agriculture? What are the advantages of agroecological agriculture? And the disadvantages? Are there economic benefits as well? Why?

4. Vision of the future

- How do you see the future of your farm?

With key actors (pro-agroecology NGO members and academics)

1. History of the use of agroecological practices in the country

PAST

- When agroecological practices began to be implemented in Cuba? Why at that time? (description of the situation of the period)
- How was in the beginnings? Which were the first practices incorporated? Which agroecological practices followed?
- Who was involved in this process (farmers, institutions such as ANAP or others, scientific institutions, international cooperation organizations, policies of the Ministry of Agriculture, etc.?)
- Which institutions or organizations supported the movement? which not?
- What limitations did the movement face? How did the movement confront them?

INTERMEDIATE

- After the first impulse of the 90s, do you consider that the agroecological movement had ups and downs? When and why?
- Can you distinguish better moments or periods and then others that were not so good?

TODAY

- If you compare the agroecological movement today with the past, what would you say?
- Have recent policies benefited the agroecological movement? Have they not benefited it?
- How do you think the agroecological movement will be affected by the new changes (Raúl Castro's government agricultural policies?)
- Which institutions or organizations are important for the development of agroecology today? Which institutions do you think should play another role? Or that they should be more supportive?

2. Factors motivating producers to continue using agroecology

- What factors do you consider to be the ones that motivate producers to use agroecology today?

Here, surely economic, technological, environmental and ethical, social, political (supported by institutions) or other issues such as personal satisfaction or others of a more psychological nature could emerge.

3. Perceived costs and benefits of agroecology

- If you had to make a balance, what would be the main costs and benefits of agroecology? At national level? At the farm level?

- What problems/challenges do you see facing agroecological production today? (limitations of all kinds)
- What are the greatest benefits of this type of agriculture?
- In comparison with conventional agriculture? What are the advantages of this type of agriculture? And the disadvantages? Are there economic benefits as well? Why?

4. Vision of the future

- How do you see the future of agroecology in Cuba?

Annex 7. Structured interviews. Questionnaire

ENCUESTA

No. _____ Fecha: _____ Hora: _____

Esta encuesta forma parte de una investigación sobre la agricultura cubana de la Universidad de La Habana y la Facultad de Agronomía de la Universidad Agraria. La investigación tiene el interés de brindar una caracterización general de las prácticas agrícolas en la zona de San José. Las informaciones que se obtengan serán tratadas de manera confidencial. Le pedimos su sincera colaboración.

1. Sexo _____ 2. Edad _____ 3. Estado Civil _____

4. Nivel educacional _____

5. ¿Desde qué año se dedica a la agricultura? _____

6. Antes de ser agricultor ¿a qué se dedicaba? _____

7. ¿Trabajó además fuera de la finca en 2017? Sí _____ No _____

8. ¿Cuántas personas viven con usted? _____

9. Cuántos son: menores de 15 años _____ mayores de 60 _____

10. ¿Cuántas hectáreas tiene su finca? _____

11. ¿Desde qué año tiene la tierra? _____

12. Forma de tenencia (marque con una cruz las opciones necesarias):

Propiedad _____ Usufructo _____ Administración _____ Renta _____

13. Pertenece a una: CCS _____ UBPC _____ CPA _____ Granja Estatal _____ o es Campesino independiente _____

14. ¿Qué importancia le da a estos elementos en su trabajo diario? Ordene atendiendo a la prioridad de estos elementos en su trabajo diario siendo 1 lo más importante y 8 lo menos importante.

	Número
Fertilidad del suelo	
Beneficios económicos	
Producciones saludables	
Cumplimiento de los compromisos productivos	
Independencia de insumos externos	
Contaminación de las aguas y el suelo	
Degradación medio ambiental	
Costos de los insumos	

15. ¿Qué se produjo en su finca en el año 2017? (Introduzca solo los datos referidos al año 2017)

Producto	Producción total <i>cantidad/unidad</i>	Compromiso productivo con la empresa agropecuaria <i>cantidad/unidad</i>	¿Le fueron asignados insumos para la producción? (Si/No)
	/	/	
	/	/	
	/	/	
	/	/	
	/	/	
	/	/	
	/	/	
	/	/	
	/	/	
	/	/	
	/	/	
	/	/	

16. ¿La producción no contratada y el sobrecumplimiento de la contratada la vende a:

ACOPIO ____, es destinada a Autoconsumo ____ la lleva al Mercado ____?

¿Qué tipo de mercado? _____,

Otros fines ¿Cuáles? _____

17. ¿Se encuentran estas prácticas en su finca?

Prácticas	Marque con una cruz	¿En qué productos las aplica?	¿Desde cuándo? (año)
Uso de fertilizantes químicos			
Uso de biofertilizantes o bioestimulantes			
Uso de Abonos orgánicos (compost, humus de lombriz)			
Uso de plaguicidas y herbicidas			
Uso de bioplaguicidas y agentes de control biológico			
Laboreo intensivo			
Laboreo mínimo			
Barreras vivas			
Asociación de cultivos			
Uso de residuos de cosecha			
Uso de residuos animales			
Rotación de cultivos			
Tracción animal			
Abono verde/ uso de leguminosas			
Abono mineral (Ecofer)			
Coberturas vivas/muertas			
Conservación y mejoramiento de semillas			
Siembra en contorno			
Cercas vivas			
Cercas de pelo de alambre o concreto			
Cría de abejas			

Siembra de árboles con objetivos ambientales			
Producción y conservación de semillas			
Producción de abonos orgánicos			
Producción de alimento animal			
Producción de biofertilizantes y/o bioestimulantes			
Producción de bioplaguicidas			
Producción de pie de cría			
Producción de biogás			

18. ¿Utiliza estos medios de producción en su finca? (marque con una cruz indicando su procedencia)

Lista de medios	Mío propio	De mi cooperativa	Otras fuentes
Tractor			
Maquinaria de riego* (registrar qué tipo)			
Cultivador			
Cosechadora			
Mochila			
Fumigadora			
Abonadora			
Arado de pértiga			
Arado vertedera			
Multiarado			
Bueyes			
Molino de viento			
Máquina forrajera			
Carretón			
Biodigestor			

19. ¿Cómo afectan estos factores a su producción? Ordene siendo 1 lo que más lo afecta y 8 lo que menos lo afecta.

	Número
Plagas	
Falta de insumos o irregularidades en la entrega	
Exceso de lluvia	
Falta de mano de obra	
Caída de precios de los productos	
Sequía	
Ciclones y/o huracanes	
Atrasos en los pagos por la producción	

20. En el 2017 ¿participó en algunas de estas actividades?

	Marque con una cruz	¿Cuál(es)?
Programa priorizado o programa de la agricultura		
Proyecto de la ANAP		
Proyectos internacionales		

Actividades organizadas por las instituciones científicas de la zona		
Capacitación (cursos, talleres, seminarios, encuentros técnicos, intercambio de experiencias, etc.)		
Capacitación agroecológica (cursos, talleres, seminarios, encuentros técnicos, intercambio de experiencias, etc.)		
Asistencia técnica		

21. ¿Pertenece a algunas de estas organizaciones? (marcar con una cruz en todos los casos necesarios)

ANAP _____

ACPA _____

ATAC _____

ACTAF _____

FANJ _____

STAFT _____

22. Evalúe las siguientes afirmaciones a partir de su opinión personal:

Estoy... % de acuerdo	100%	75%	50%	25%	0%
Mis compañeros valoran positivamente mi trabajo					
Conozco el trabajo de mis vecinos y compañeros					
Intervengo cuando se discute sobre decisiones de trabajo					
Conozco las normas que regulan el trabajo que realizo					
Me es muy importante que los demás reconozcan mi trabajo					

23. ¿Qué le parecen las siguientes afirmaciones?

	Me gusta mucho	Me gusta	Me da igual	Me disgusta
Trabajar en colectivo				
Destacar por mis resultados				
Cumplir las normas				
Hacer el bien				
Desarrollar mis ideas propias				
Ser admirado por los demás				
Seguir la corriente				

24. ¿Cómo cree que lo consideran en su cooperativa? Como alguien:

- ___ Muy exitoso
- ___ Por encima de la media
- ___ Igual a la mayoría
- ___ Que no logra estar al nivel de la mayoría

¿A qué cree que se debe? _____

25. ¿Quisiera agregar algo más?

Muchas gracias por su participación.