Institut für Agrarpolitik, Marktforschung und Wirtschaftssoziologie
Abteilung Welternährungswirtschaft

Role of Agricultural Cooperatives in Agricultural Development – The Case of Menoufiya Governorate, Egypt

I n a u g u r a l - D i s s e r t a t i o n

zur

Erlangung des Grades

Doktor der Agrarwissenschaftlichen
(Dr.agr.)

der

Hohen Landwirtschaftlichen Fakultät

der

Rheinischen Friedrich-Wilhelms-Universität

zu Bonn

Vorgelegt am

17. November 2004

von

Farahat Abdel-Seed Mohamed

aus Menoufiya , Ägypten

Referent:	Prof. Dr. Dr. h.c. W. Schug
Korreferent:	Prof. Dr. A. Skowronek
Tag der mündlichen Prüfung:	22. Dezember 2004
Gedruckt bei	.....…

Acknowledgments

To the Almighty God "**ALLAH**" Who have granted me all these graces to fulfil this work and Who supported me in all my life. To Him I extend my heartfelt thanks.

It is a pleasure to express my sincere and deepest heartfelt gratitude to my "Doktorvater" **Prof. Dr. Dr. h.c. Walter Schug** for his kind supervision, continuous encouragement, valuable enthusiastic discussion and unfailing advice throughout the present work, as well as financial support during my latest period of study in Germany. He assisted in all matters, provided solutions to different problems. **Prof. Dr. Dr. h.c. W. Schug** supported and helped me during my learning period in Germany and writing this thesis. I am very lucky being one of his students.

I would like to express my deep thanks to **Prof. Dr. A. Skowronek** for his kind acceptance as a co-referent for my thesis

I would like to express my thanks to **Prof. Dr. Abdel Rahman Taryal** for his interest in this work and for his kindness to read and correct this thesis. Many thanks also for his continuous encouragement.

I am extremely grateful for my wife **Naglaa El-Bana**, her love, encouragement, support and comfortable atmosphere during the long hard work of this thesis. To my pretty daughters **Shorouk, Sherin** and **Shahd**, for their lovely smiles that can relieve any kinds of tiredness.

I am also extremely grateful to my father and mother, who did all the best to help me in my education, my brothers (Saber, Adel, Elsayed, Mohamed and Naser), my father-, mother- and brothers-in-law (Elsayed and Mohamed) for their love, support and continuous encouragements.

My special thanks to my friend Dr. Basam Saloum and his wife (Frau Sylvia Saloum) and my friend Dr. Adel Elgendy for their valuable help; I will never forget them and their support during my stay in Germany.

I would like to express my deep thanks to my colleague Frau Cornelia Behle (Conny) for her kind help to read and correct this thesis and her kindness help to translate the summary from English into German. Thank you very much.

I would like to extend my sincere thanks to Frau von Wehrs for her friendly help and support during my stay in Germany.

I would like to thank all staff members and my colleagues in the Institute for Agricultural Policy, Market Research and Economic Sociology, Bonn University, especially the group of house Nr. 3, my brother Wayah Wiroto, my friend Juan Carlos, Frau Marion Schopp, Frau Andrea Kuehn, Frau Séraphine Muragijemariya and Herr Erich Held for nice, friendly talking, valuable discussions and for their computer help.

I am deeply thankful to all staff members and my colleagues of the Agricultural Extension and Rural Sociology Department and Agricultural Economics Department, Faculty of Agriculture, Menoufiya University, Egypt as well as for all staff members and my colleagues of the same faculty for their kind help and continuous encouragements

Special thanks to my friend Alaa Hayallah for his kindness to read and correct the research proposal and questionnaire of this thesis.

I cannot forget to thank Dr. Hesham El-Helbawy (Faculty of Agriculture, Alexandria University, Egypt) for providing me the references about social organizations in Egypt and my friend Reda Dawod for his kind help.

My Special thanks to my Master thesis supervisors, Prof. Dr. **Mohamed F. Elshazly** , Prof. Dr. **Fauad Salama,** Prof. Dr. **Samir Osman**, , Prof. Dr. **Adly Abo-Thoon**, my Department director Prof. Dr. **Ahmed E. Radwan** and Prof. Dr. **Ibrahim Seddik** (Vice President of Menoufiya University for Community and Environmental development) for their recommendations, motivations, kind advices and continuous encouragements

I would like to thank the Egyptian Ministry of Higher Education, the Egyptian Government, Faculty of Agriculture, Menoufiya University, Egypt and Institute for Agricultural Policy, Market Research, and Economic Sociology, Bonn University, Germany for the financial support during my studies in Germany.

Finally, I would like to thank all my Egyptian friends in Bonn and in Germany for the nice time and family atmosphere on weekends.

To all of you, Thank you very much.

Farahat Abdel-Seed Mohamed
Bonn, November 2004

Role of Agricultural Cooperatives in Agricultural Development –The Case of Menoufiya Governorate, Egypt

Abstract

The main objectives of the study are to identify the current status of agricultural cooperatives in Menoufiya Governorate in Egypt and determine the following items as well as the variables affecting them: (1) Agricultural cooperatives ability to mobilize resources for achieving its activities. (2) Agricultural cooperatives ability to employ the available resources. (3) Contribution of the agricultural cooperatives in agricultural development, (4) Organizational effectiveness of the agricultural cooperatives in agricultural development, (5) Benefit extent for farmers from the agricultural cooperatives activities, and thus (6) Farmers' attitudes towards agricultural cooperatives. For realizing the research objectives, two questionnaires were designed and data were collected through personal interviews with 66 managers and 291 members of agricultural cooperatives. The research was carried out in two districts in Menoufiya Governorate. The Pearson simple correlation coefficient and step-wise multiple correlation and regression analysis were used to analyze the collected data. Results show, that 73 % of agricultural cooperatives were found to have insufficient budgets for achieving their activities, 71,2% of them have a low capability of mobilizing resources, 48,5% of them have a low capability of employing resources and 87,9% of them have only limited contribution to agricultural development. In general, 69,7% of the agricultural cooperatives show a low organizational effectiveness in agricultural development. Additionally, the results of the study refer to a low benefit degree for farmers from agricultural cooperatives activities, a low farmers' satisfaction degree related to the agricultural cooperatives activities, and a low percentage of farmers, who have positive attitudes towards the agricultural cooperatives.
The step-wise multiple regression analysis reveals that:

- Only two independent variables were found to have a significant and a positive effect on the agricultural cooperatives ability to mobilize the resources. These independent variables are the population number in the village with an agricultural cooperative and cultivated area in the villages, which are benefiting from agricultural cooperative activities. These variables could explain about 58% of the variance in the agricultural cooperatives ability to mobilize resources.

- The cultivated area in the villages, which are benefiting from the agricultural cooperatives activities and the extent of agricultural cooperative building's suitability for achieving their activities and functions could explain 14 % of variance in the agricultural cooperatives ability to employ the available resources.

- There is a positive and a significant effect of cooperation level between agricultural cooperatives and governmental organizations, and the number of governmental organizations in the village on the level of agricultural cooperatives contribution in the agricultural development. The percentage of participation of these variables in explaining the total variance in the level of agricultural cooperatives contribution in the agricultural development reaches 39 %.

- There are two independent variables that affect the organizational effectiveness of the agricultural cooperatives in the agricultural development. These variables are the number of population in the villages with an agricultural cooperatives and the total number of N.G.Os membership of managers. Both independent variables could explain together about 57% of the variance in the organizational effectiveness of the agricultural cooperatives.

- The most independent variables affecting the benefit for farmers from agricultural cooperatives activities are the farmers' attitudes towards agricultural cooperative, the informal social participation level of farmers, the total number of N.G.Os membership of the farmer, the type of voluntary participation of the farmer in developmental projects, and the main profession of the farmer. These independent variables could explain 78.3% of the variance in the extent of benefit for farmers from agricultural cooperatives activities.

- There are four independent variables that affect the farmers' attitudes towards agricultural cooperatives. These variables are the extent of benefit for farmers from agricultural cooperatives activities, the distance between farmers' residence and agricultural cooperatives' location, the type of voluntary participation of the farmers in developmental projects and type of N.G.Os-membership of the farmer. These variables could explain 65.3 % of the variance in farmers' attitudes towards agricultural cooperatives.

In conclusion, the study reveals, that most of the agricultural cooperatives in Menoufiya Governorate –Egypt are not playing their role in the agricultural development in the desired effectiveness. This fact makes it necessary, that these small cooperatives need to be modified in order to form more efficient, self-dependent economical bodies, which are capable to run themselves administrationally and financially. It is recommended also, that these cooperatives be given more economical and organizational freedoms to make them less dependent on the central cooperatives, especially in obtaining and distributing the production inputs. During planning of agricultural development, the government should activate the coordination and cooperation among the roles of both agricultural cooperatives and other organizations in the villages, in order to enhance their abilities and the organizational effectiveness in the agricultural and rural development**.** The agricultural cooperatives should be developed in order to provide activities and services which are adapted to farmers' needs.

Die Rolle von Genossenschaften in der landwirtschaftlichen Entwicklung – Der Fall Menoufiya Gouvernements in Ägypten

Kurzfassung

Die Hauptziele dieser Studie sind:

- Den derzeitigen gesellschaftlichen und wirtschaftlichen Status der Genossenschaften zu ermitteln
- Die folgenden Merkmale und die sie beeinflussenden Variablen zu bestimmen.
    1. Die Fähigkeit von Genossenschaften, ihre Betriebsmittel für das Erzielen ihrer Tätigkeiten zu mobilisieren
    2. Die Fähigkeit von Genossenschaften, ihre vorhandenen Betriebsmittel einzusetzen
    3. Der Beitrag von Genossenschaften zur landwirtschaftlichen Entwicklung
    4. Organisatorische Effektivität von Genossenschaften in der landwirtschaftlichen Entwicklung
    5. Der Nutzenumfang für Landwirte aus den Tätigkeiten der Genossenschaften
    6. Die Einstellung der Landwirte zu den Genossenschaften.

Um die Forschungsziele zu erreichen, wurden 2 verschieden Fragebögen entwickelt. Zur Datenerhebung wurden im Juli und August 2002 66 persönliche Interviews mit Managern und 291 Interviews mit Mitgliedern landwirtschaftlicher Genossenschaften in zwei Bezirken des *Menoufiya* Gouvernements durchgeführt.

Die Datenanalyse fand mittels des einfachen Korrelationskoeffizienten nach *Pearson* sowie einer schrittweisen Mehrfach-Korrelations- und Regressions-Analyse statt.

Die Ergebnisse zeigen, dass

- 73 % aller Genossenschaft über ein unzureichendes Budget zur Verwirklichung ihrer Aufgaben verfügen.
- 71,2 % der Genossenschaften haben eine geringe Fähigkeit, ihre Betriebsmittel zu mobilisieren.
- 48,5 % haben eine geringe Fähigkeit, ihre Betriebsmittel einzusetzen.
- 87,9 % leisten einen beschränkten Beitrag zur ländlichen Entwicklung.

Allgemein ist festzustellen, dass 69,7 % der Genossenschaften eine niedrige organisatorische Effektivität in der ländlichen Entwicklung haben.

Zusätzlich zeigen die Ergebnisse der Studie,

- dass die Landwirte einen geringen Nutzen aus den Genossenschafts-aktivitäten ziehen,
- einen geringen Zufriedenheitsgrad der Landwirte mit den Genossenschafts- aktivitäten,
- einen niedrigen Prozentsatz an Landwirten, die eine positive Einstellung zu den Genossenschaften haben.

Die schrittweise Mehrfach-Korrelations-Analyse deckt Folgendes auf:

- Es konnten nur zwei unabhängige Variablen gefunden werden, welche einen signifikanten und positiven Einfluss auf die Fähigkeit der Genossenschaften haben, ihre Betriebsmittel zu mobilisieren. Dieses sind:
    a) Einwohnerzahl der Dörfer mit landwirtschaftlichen Genossenschaften und
    b) Die landwirtschaftliche Nutzfläche in den Dörfern, welche von den Genossenschaftsaktivitäten profitieren.

  Diese beiden Variablen können 58 % der Varianz der Fähigkeit von Genossenschaften, ihre Betriebsmittel zu mobilisieren, erklären.

- Die Variablen:
    a) Landwirtschaftliche Nutzfläche in Dörfern, welche von Genossenschaftsaktivitäten profitieren und

b) Das Ausmaß der genossenschaftlichen Gebäudeeignung

können 14 % der Varianz der Fähigkeit von Genossenschaften, ihre Betriebsmittel einzusetzen, erklären.

- Es gibt einen positiven und signifikanten Einfluss
  a) des Kooperationsgrades zwischen landwirtschaftlichen Genossenschaften und Regierungsorganisationen und
  b) der Anzahl von Regierungsorganisationen im Dorf

  auf den Beitrag der Genossenschaften zur ländlichen Entwicklung. Diese beiden Variablen können 39 % der Varianz des Ausmaßes des genossenschaftlichen Beitrags zur ländlichen Entwicklung erklären.

- Es gibt zwei unabhängige Variablen, welche die organisatorische Effektivität von Genossenschaften beeinflussen. Diese sind:
  a) Die Einwohnerzahl in den Dörfern mit landwirtschaftlichen Genossenschaften und
  b) Die Anzahl der Mitgliedschaften von Managern in NGOs.

  Beide Variablen zusammen können 57 % der Varianz der organisatorischen Effektivität von Genossenschaften erklären.

- Unabhängigen Variablen, welche einen Einfluss auf den Nutzen haben, den die Landwirte aus den genossenschaftlichen Aktivitäten ziehen sind:
  a) Die Einstellung der Landwirte zu den Genossenschaften
  b) Das informelle soziale Engagement der Landwirte
  c) Die Anzahl der Mitgliedschaften von Landwirten in NGOs
  d) Die Art der freiwilligen Teilnahme von Landwirten an Entwicklungsprojekten und
  e) Der Hauptberuf des Landwirts.

  Diese unabhängigen Variablen können 78,3 % der Varianz im Nutzenumfang der genossenschaftlichen Aktivitäten für die Landwirte erklären.

- Es gibt vier unabhängige Variablen, welche die Einstellung des Landwirts zu den Genossenschaften beeinflussen. Diese Variablen sind:
  a) Der Nutzenumfang für Landwirte aus genossenschaftlichen Aktivitäten
  b) Die Distanz zwischen der Wohnung der Landwirte und der Lage der Genossenschaften
  c) Die Art der freiwilligen Teilnahme der Landwirte an Entwicklungsprojekten und
  d) Die Art von NGO-Mitgliedschaften der Landwirte.

  Diese Variablen können 65,3 % der Varianz der Einstellung der Landwirte zu den Genossenschaften erklären.

Die Studie hat zusammenfassend gezeigt, dass die meisten landwirtschaftlichen Genossenschaften im Gouvernement *Menoufiya* ihre zugeschriebene Funktion nicht mit der gewünschten Effektivität ausüben. Aus diesem Grund erscheint es sinnvoll, diese kleinen Genossenschaften zu modifizieren, so dass aus ihnen unabhängige ökonomische Einheiten werden, die in der Lage sind, sich selbst zu verwalten und zu finanzieren. Es wird zudem empfohlen, diesen Genossenschaften mehr ökonomische und organisatorische Freiheit zu gewähren, damit sie unabhängiger von den zentralen Genossenschaften werden. Dies gilt insbesondere für die Beschaffung und Verteilung des Produktionsinputs. Während der Planungsphase der ländlichen Entwicklung sollte die Regierung die Koordination und Kooperation zwischen Genossenschaften und anderen Organisationen in den Dörfern aktivieren, um ihre Fähigkeiten und ihre organisatorische Effektivität in der ländlichen Entwicklung zu stärken. Die landwirtschaftlichen Genossenschaften sollten weiterentwickelt werden, um Tätigkeiten und Dienstleistungen anzubieten, welche den Bedürfnissen der Landwirte entsprechen.

Contents

List of Figures

List of Tables

List of Abbreviations

ACACA	Agricultural Cooperatives in Agricultural Credit Areas
App.	Appendix
B.Sc.	Bachelor of Science in Agriculture Science
CAPMAS	Central Agency for Public Mobilization and Statistics
etc.	and so forth
Fig.	Figure
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
IDSS	Information and Decision Support Centre
i.e	in especial
km	Kilometer
km^2	Square kilometer
m^2	Square meter
N.G.Os	Non-governmental Organizations
No	Number
PBDAC	Principle Bank for Development and Agricultural Credit
U.S.A	United States of America
UN	United Nations
W.C.	Water Closet

Chapter 1: Introduction

1.1. Preface

Development is one of the main goals that all communities try to achieve in order to improve the living standards for individuals in those communities. In addition, the rural development, as a planned social change, aims at enhancing the living standards of the population of the rural areas through the optimal use of the natural and human resources.

The Egyptian rural population that reaches now more than half of Egypt's population[*], has experienced several developmental attempts in order to promote the rural life from the view of social, economic and cultural aspects. These attempts actually brought some changes that reflect obvious improvement in the rural population living standard.

The success of the developmental programs and projects depends on the extent of their interest to population not only through fulfilling their basic needs, but also through their participation in planning and implementation of development programs. The absence of the popular participation is the main cause for the failure of development projects and making no use of the great efforts and money devoted for these projects (*EL-Helbawy, 1998, p.2*). There fore, it is clear that the popular participation is considered as one of the basic pillars for the development process. *(El-Masry, 1983; EL-Hanafy, 1992, p. 3; ELezaby, 1997, pp. 1-31).*

Economic and social analysts referred that non-governmental organizations are the effective way to gather and contain the popular participation as well as to support the development process. In addition, they are the alternative element for the lack of the state capability to provide the main services. Moreover, non-governmental organizations are considered the way to face the negative effects of the economic reform policies and freeing the market powers as well as the privatization (*Qandeel, 1995, pp. 47 – 67).* In addition, non-governmental organizations have the ability to play a positive role in the process of development with the increasing popular participation in achieving the goals of the public and local communities.

[*] *Central Agency for Public Mobilization and Statistics "CAPMAS", The Annual Statistical Book, Cairo, June 1997, p. 19.*

The work system within N.G.Os is more flexible and can be changed and modified from time to time according to peoples' needs and requirements of development process. *(Fahmy 1985 pp. 167-168 ; Zaki, 1995, p. 130 ; Wahdan et al., 1996; Ibrahim, 1998, p. 2)*. Generally, it could be said that unified popular efforts of the local population through the non governmental organizations and their participation in the developmental programs increase the ability and effectiveness of local communities as social systems in facing their problems and meeting their needs. (*ELezaby, 1985)*.

The World Population Conference *(United Nations 1994)* indicated that non-governmental organizations have supported the process of development in general and the rural development in particular in the most countries. This is due to the relative advantage of theses organizations, compared with the governmental organizations, presented in their creativity, flexibility and quick response in designing and implementing the developmental programs and meeting the local needs in the different fields of development.

During the recent years, calls have increased internationally, regionally and locally to utilize the cooperation and integration of roles and tasks among non-governmental organizations and the governmental ones, regarding the strategies of the agricultural and rural development. The calls were not confined only to this kind of cooperation and integration but also exceeded to make the non-governmental organizations responsible for more roles and tasks, such as the agricultural cooperatives especially in local communities due to their ability to access to the poor in the rural society, support the public participation at the level of the local community, disseminate technology at low costs and solve problems at best ways and low costs *(United Nations 1990: Abo Mandoor, 1994, pp. 114 – 121 ; Serag Eldin, 1995, p. 3)*

1.2. Research problem

As for considering the market economics and achieving the economic liberalization in Egypt, the agricultural cooperatives have become absolute necessity to achieve the agricultural development. Economical and social studies emphasized that the agricultural cooperatives are considered to be the most suitable authority to implement the plans of the agricultural development. The current Egyptian rural society with its future problems and hopes emphasizes the fact that the cooperatives are the proper tool for the public participation and mobilizing self efforts in order to implement the plans of the development process. Moreover,

they are the optimal solution to increase and develop the agricultural production and to make balance between exports and imports. It could be done through increasing the agricultural exports and promoting manual industries as well as participating in providing all main services and achieving the social justice and elevating the living standard of those members. As a result and after eliminating the obstacles, which the cooperative organizations face, they will be one of the important solutions for the problem of unemployment among youth through increasing the agricultural production and establishing the small productive service projects as well as establishing the projects of land reclamation.*(Rashad, 1992, pp. 175 – 450 ; Rashad, 1998, p. 15).*

According to the Egyptian cooperative's law number 122 / 1980, the agricultural cooperatives are considered to be economic and social units that aim at the agricultural development. They also contribute to elevate the economic and social level of their members in the framework of the national policy.

Gad El-Rab (1989, p. 1) said that, although the cooperatives are economic organizations in the first place, they also have social aims in addition to the economic ones they seek. They aim at developing the agricultural processes with its various fields as well as participating in achieving the rural development in villages. The role of the cooperative is not only confined to provide the production requirements including fertilizers, seeds , chemical materials , etc , but also include holding the instructional symposiums for the farmers to acquire necessary knowledge and skills on the agricultural new technology that aims at increasing production and , therefore, promoting the rural community . The cooperatives also seek to urge members to participate in the social activities. *(El-Sharkawi 1993, p. 18).*

One of the most important tasks of the agricultural cooperatives is to plan and implement the productive local projects according to their economic abilities including the projects of the agricultural manufacturing, animal production, poultry and bee husbandry. *(Hamad, 1994, p. 63).*

There are 6675 agricultural cooperatives in Egypt according to law 122 /1980. Although there are several advantages of the agricultural cooperatives, as non-governmental organizations, their contribution to the agricultural development has become weak. In addition, the activities and projects they execute, although being various, don't cope with the ambitions and needs of

farmers. These facts bring some importance to this study as it seeks identifying the organizational effectiveness of the agricultural cooperatives in implementing their developmental tasks and the degree of the benefit and satisfaction of farmers for the activities and projects that the agricultural cooperatives execute in the research area.

1.3. Research objectives

This research aims to achieve the following objectives:

1. **Identifying and description of the current social and economical status of the Egyptian agricultural cooperatives[*] through the following issues :**
   - Mangers' characteristics and qualifications
   - Elements of organizational structure of agricultural cooperatives.
   - Type and number of villages, which are benefiting from the agricultural cooperatives activities
   - Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities.
   - Number of population in the village with an agricultural cooperative.
   - Development level of village with an agricultural cooperative.
   - Age of agricultural cooperatives (work duration of agriculture cooperatives).
   - Area of the agricultural cooperatives' building.
   - The extent of agricultural cooperatives building's suitability for achieving their activities and functions.
   - Budget and financial resources of the agricultural cooperatives.
   - Agricultural cooperatives relationship with the governmental and non-governmental organizations.
   - Relationship between the agricultural cooperatives and supervision authorities.
   - Problems and obstacles (barriers) that the agricultural cooperatives face.

[*] *The cooperatives in this study are the local multi- purposes agricultural cooperatives, located in villages in the areas of the agricultural credit in Menoufia Governorate, controlled by the Egyptian law for the agricultural cooperation No 122 /1980, supervised by the Ministry of Agriculture*

- Managers and farmers' suggestions to develop and improve the agricultural cooperative's performance.

2. **Identifying the agricultural cooperatives' ability to mobilize resources for achieving its activities concerning the following issues:**
   - Classification of agricultural cooperatives according to their ability to mobilize necessary resources.
   - Correlation analysis between the independent research variables and the agricultural cooperatives ability to mobilize the resources.
   - Determining the variables affecting the agricultural cooperatives' ability for resources mobilization.

3. **Identifying the agricultural cooperatives' ability to employ the available resources through the following issues:**
   - Classification of agricultural cooperatives according to their ability to employ the available resources.
   - Correlation analysis between the independent research variables and the agricultural cooperatives ability to employ the available resources.
   - Determining the variables affecting the agricultural cooperatives ability to employ the available resources.

4. **Identifying the contribution of the agricultural cooperatives in agricultural development through the following issues:**
   - Identifying the achieved activities by the agricultural cooperatives.
   - Identifying the ratio of the beneficiaries from the achieved activities.
   - Classification of agricultural cooperatives according to their contribution in agricultural development.
   - Correlation analysis between the independent research variables and the contribution level of the agricultural cooperatives to the agricultural development.
   - Determining the variables affecting the agricultural cooperatives contribution level in the agricultural development.

5. **Identifying the organizational effectiveness of the agricultural cooperatives in agricultural development through the following issues:**
   - Classification of cooperatives according to their organizational effectiveness
   - Correlation analysis between the independent research variables and the organizational effectiveness of the agricultural cooperatives.
   - Determining the variables affecting the organizational effectiveness of the agricultural cooperatives in agricultural development.

6. **Identifying the extent of benefit for farmers from agricultural cooperatives activities through the following issues:**
   - Identifying the main characteristics of the farmers.
   - Identifying the number of beneficiaries from agricultural cooperatives activities.
   - Farmers classification according to the number of activities from which they got benefits.
   - Farmers classification according to their satisfaction degree about the agricultural cooperatives activities.
   - Farmers classification according to their benefit extent from agricultural cooperatives activities.
   - Correlation analysis between the independent research variables and the extent of benefit for farmers from agricultural cooperatives activities
   - Determining the variables affecting the extent of benefit for farmers from agricultural cooperatives activities.

7. **Identifying the farmers' attitudes towards agricultural cooperatives through the following issues:**
   - Farmers classification according to their attitudes towards agricultural cooperatives.
   - Correlation analysis between the independent research variables and the farmers' attitudes towards agricultural cooperatives.
   - Determining the variables affecting the farmers' attitudes towards agricultural cooperatives.

Chapter 2: Social Organizations

2.1. Definition of the social organization

Literature survey indicates that there are many different points of view for the definition of an organization. These differences in definition are probably related to nature, structure and goals of these social organizations from a society to another and the economic and political system. According to these points of views, the definition of the organization could be classified into four different directions:

The first direction:

According to this direction, the organization was defined as a special social unit. *(Etzioni, l961, p .xi; 1975, p. xi)*

The second direction:

Definition of the organization in this direction includes two constituents, one of them is that it is a social unit and the other is the achievement of goals. In this direction, the definition is slightly different from one author to another. For example, on one hand organization is defined as social units oriented towards the pursuit of specific goals *(Etzioni, 1965, p. 143*) or general goals *(Page, 1973, p. 304)* , on the other hand organization is defined as a group of people organized to pursue a specific objective (*Chitambar,1973, p. 182*).
In another point of view, Organizations are defined as social units (or human groups) deliberately constructed, reconstructed and devoted primarily to the attainment of specific goals. *(Parsons, 1960, p. 17; Gohar, 1973, p. 59; Light and Keller, 1979, p. 204; Hassan, 1989, p. 27)*. This definition indicates that the objective of an organization is usually renewed according to member requirements and social changes.

The third direction:

Definition of the organization in this direction includes three constituents. One of them is that it is a social unit, the second is the achievement of goals and the third constituent is the process, which the organization uses in achieving its goals.
Under this direction the organization was defined as a social system that has been deliberately established for achieving certain predetermined goals. It is characterized by prescribed roles, an authority structure, and a formally established organization of rules and regulations to

govern the behavior of its members, *(Rogers and Shoemaker, 1971, pp. 303-304 ; Gamie, 1973, p. 209 ; Rogers, 1983, p.348)*. These organizations have a system of authority that governs the determination of policy, establishes criteria for selection and advancement of individuals, and gives expression to organizational goals. *(Marcson, 1961, p. 183; Blau and Scott, 1963, pp. 259-268).*

Although these restricted rules and the authority that controls the work in these organizations, there is some flexibility according to Anderson's definition of organizations. He defines organization as those classes of human relationship structures wherein people purposefully associate in systematically arranged units to promote and achieve some common purposes or interests that are not specifically expressed in the institution. Each member has a formal status and role. *(Anderson, 1964, p. 252).*

The fourth direction:

In this direction the organization was defined as a social unit that achieves restricted goals through a restricted process in natural, social, and technological environment. "Organizations are as social units that pursue specific goals which they are structured to serve, obviously under some social circumstances". *(Etzioni , 1964 , p.4)* .

Bakke (1967, p. 37) defined the social organizations as " a continuing system of differentiated and coordinated human activities utilizing, transforming, and welding together a specific set of human, material, capital, ideational and natural resources into a unique problem-solving whole engaged in satisfying particular human needs in interaction with other systems of human activities and resources in its environment".

Khatir (1984 pp. 27 - 29) emphasizes the interchangeable relation between the organization and the surrounding environment . He considers the organization as a structure inside another larger one, that is, the society. It is no way to separate the organization from the surrounding environment as for the interchangeable relation between them. The organization is considered as a part of the environment. From another hand, the organization is considered a miniature for this environment as the organization carries the characteristics and features of the environment. The more interacting and dealing with the environment, the more growing the organization is, through using the available knowledge and technology in order to achieve the objective.

Gheath (1979, p. 447) refers to the importance of the society culture for the organization as it is a group of individuals who interact with each other in an environmental situation to achieve the highest possible satisfaction. The relation among individuals is determined through a pattern of common symbols that are determined culturally.

El-Helbawy (1998, p. 13) indicates that the organization achieves its goals through a group of connected activities set by bills and society laws. This means that bills and rules that govern the behavior and interaction of individuals within an organization should not contradict the public bills and community laws.

As a result of the previous review of the organization definition and its various points of view, it could be said, that the organization means the continuous and planned cooperation respectively connection as well as interaction among a group of individuals in order to a achieve general or common goals. These goals must be achieved through the optimal use of human-, material-, capital-, ideational and natural resources that the surrounding environment provides. It is worth noting, that there are a group of bills, rules and laws that govern the interaction and behavior of individuals within an organization as well as the interaction between this organization and the others in a society. These rules must not contradict with the community rules, standards and laws.

2.2 Organization's importance

Although there are great differences between the developing and developed countries as to the natural, economic, political and social circumstances, the most important of theses differences is the participation of rural population in managing their affairs through organizations of different kinds that is a result of the difference in the local experience, works to be done and policies followed in the community. *(Esman and Uphoff, 1984, pp. 15 – 16).*

A main way to judge the civilization of a community is the number and variation of the organizations included in this community. There is a difference between the primitive communities that only include a very limited number of organizations and the urban communities that include a large number of these organizations (Abo *Tahoon, 1992, p. 3*).

The modern community is an organizational community, as its members are born, educated and treated in organizations. They work and spend much of their leisure time,

paying, playing and praying in organizations, and when the time comes for burial, the largest organization of all - the State - must grant official permission.(Etzioni*, 1964, p. 1*). This, in turn, emphasizes, that satisfying the main needs of individuals depends on their participation in the different organizations of community.

The importance of organizations are related to the most sufficient human groups and to their abilities, to satisfy the humanitarian, emotional, spiritual, mental and economic needs depending on their ability to gather and mobilize resources necessary to achieve their goals.(*Sadik,1991, p.187; Abo Tahoon ,1992 , p. 3; El-Helbawy , 1998 , p. 9*)

As for the role of the organizations in the process of development, the organizational approach is considered to be the most important developmental approach that achieves success in many communities and most important developmental approaches that achieve success in many societies and countries especially the developing world. This approach concentrates on establishing the different organizations that provide social and economic services as the tool through which certain changes and common activity in the community can be brought about *(Abo Tahoon, 1995, pp. 1-2)*.

In Egypt, the government realized the importance of the rural development. It established several projects in a serious attempt to bring about some social and economic changes that are meaningful, planned and determined and therefore achieve the comprehensive rural development of the Egyptian village. In order to reach this end, the government has established several developmental organizations aiming at paying attention to the main element in the rural society that is the rural population who represent a large sector of the Egyptian society and organize their efforts within these organizations.

The result of the field studies refer at the importance of rural organizations in the process of developing the Egyptian village. If the rural organizations could get the possibilities and the necessary resources to achieve their goals and improve their performance in work, they could be able to promote the process of development. The attention should be given to raise the quality of the rural organizations and eliminate obstacles that lessen their effectiveness in achieving their developmental goals. *(Gamie et al., 1987 C, p. 39).*

2.3. Organization's characteristics

Organizations have several essential characteristics as described below:

1. Clearly defined limits. Each organization seeks new certain interesting goals, to justify their existence and continuation over a long period.
2. Formal membership status and role. There are several aspects of membership in an organization:
   - Membership is voluntary and motivated by specialized individual interest. Organizations can rarely be formed as spontaneous expressions of the interests of people in society,
   - Membership may involve restrictive qualifications and certain minimum requirements. These restrictions may be based on sex, talents, interest, occupation, etc,
   - Membership grants certain rights, privileges and benefits, but also requires the performance of duties and the adherence to stipulated rules and regulations.
3. Self-contained administrative structure. Each organization has its own administrative structure with roles and functions clearly defined and prescribed.
4. Operative principle, procedures and goals. Normally all organizations have a carefully stated constitution and by-laws, some-times required by law, embodying objectives, rules, regulations and operational procedures.
5. Provision for control of authority and decision-making. The rules and regulations of an organization define authority, procedure for decision-making and measures for maintaining conduct and behavior of members.
6. Other functions: Organizations serve two and possibly three additional important functions as described below:
   - An outlet for individual interests: An organization enables a group of persons sharing a common interest in society to associate with one another, working together toward realization of there interest.
   - A channel for purposeful action: In fulfilling its goal. an organization may influence social decisions and effect or stimulate social change.
   - As a testing ground for new programs: Because of their modest size and flexibility, organizations can test new programs and projects for possible advantages.
7. Creation stimulated by dissatisfaction and period of crises. Individuals recognizing luck of outlets to express interests, tend to join others who have similar interests. Often,

individuals are excluded by restrictive requirements from participation in certain organizations and organize a club of their own. *(Chitambar, 1973, pp. 183- 185)* .

The characters illustrated above are confirmed by *Devid (1971, pp. 174 -175), Gamie (1973, pp. 241-250); and Kishk (1985, pp. 11-12)* in the following items:

1. Purposes: Organizations are devoted to the achievement a group of certain goals.
2. Division of labor: In the organization, each member has a definite role in the aimed activities
3. Coordination: The coordination and rationalization between roles of members and coworkers is very essential for attainment of organization goals.
4. Order: This means that the work in the organization should be characterized by rationalization maintenance and continuity.
5. Hierarchy or authority: Organizations are characterized by pyramidal authority system for maintenance of regulations.
6. System of rules: There are regulations and authorities restrict the duties, social roles and their expectations. There are special rules regulate the work and control of it.
7. Replace ability: Social organization consists of changeable members because the social roles seen as roles regardless who make them.
8. Compensation: Social organization characterized by compensation character where it restricts salaries for each worker for his work.
9. Impersonality: Organizations arc characterized by secondary common human relations and this represented in choosing the workers. The fealty of workers for organization not for certain peoples is an essential character.

From the above explanation of organization characters, we can say that the lack of one of these characters lead to inability of the organization to perform their planned functions or goals.

2.4. Organization's structure

Literature survey indicates that there are many different points of views for the organization structure. These differences are probably related to concept, nature, definition and goals of these social organizations from one society to another or from one economic and political system to another.

Bakke (1967, pp. 36 – 75) defined the social organization as described in chapter 2.1. He has explained that the social organization contains the following main elements: the organization charter, the basic resources, the system of activity or processes, and the bonds of organization (see Fig. 2 – 1). A brief discussion of the main elements of organization could be summarized as follow:

2.4.1. Organization charter

In many relationships of participants and outsiders to a social organization, it is essential that those involved have an adequate image of the uniqueness and wholeness of the organization. It is essential that the organization as a whole mean something definite, that the name of organization calls to mind unique, identifying features. This image and its content label the organization charter. The organization charter facilitates the relation of people and other organizations to a specific organization. In the same way, the concept of personality or character facilitates the relation of individual people to each other. The organization charter contains at least the following identifying features of the organization:

- The name of organization.
- The functions of organization in relation to its environment and its participants.
- The major goals of organization.
- The major policies relate to the fulfilling of this functions and the achievement of these major goals.
- The major characteristics of reciprocal rights and obligations of the organization and its participants with respect to each other.
- The major characteristics of reciprocal rights and obligations with respect to each other of the organization, and people and organization in the environment.
- The significance of the organization for the self-realization of people and organization inside and outside the organization in question.
- The value premises legitimizing the function, goals, policies, rights, obligations, and significance for people inside and outside the organization.
- The symbols used to clarify, focus attention upon, and reinforce the above, and to gain acceptance from people inside and outside the organization.

2.4.2. Basic resources

The basic resources, which are essential to the operation of an organization, are human work, material, capital, ideology and nature, which are employed in the organization's activities. The following description discusses briefly each of these basic resources:

1. Human resources or simply people

   The people who are participants in the organization and their biological equipment, their abilities (thinking, doing, feeling), their predisposition's (attitudes, habits, sentiments), and their self-conceptions are the most prominent of the organization's basic resources. If one thinks of people as a resource, whose attributes determine and are determined by organizational behavior, then the following classes of people must be considered.

   - People presently interacting with each other as agents or members of the organization.
   - People potentially available as agents or members of the organization.
   - People, who are not agents or members of the organization who are presently interacting in essential ways with agents or members in carrying on operations of the organization, or who are potentially available for doing so.

2. Material resources or simply materials

   The material resources are those of raw materials, equipment, and plant presently owned by the organization and employed in operations of the organization, or those, which are potentially available for ownership or employment. These are distinguished from natural resources by the fact that they have been processed through human activity.

3. Capital resources or simply capital

   Capital resources are the wealth or symbols of wealth owned and utilized or available for ownership and utilization in acquiring, transforming, and welding together the other resources of the organization.

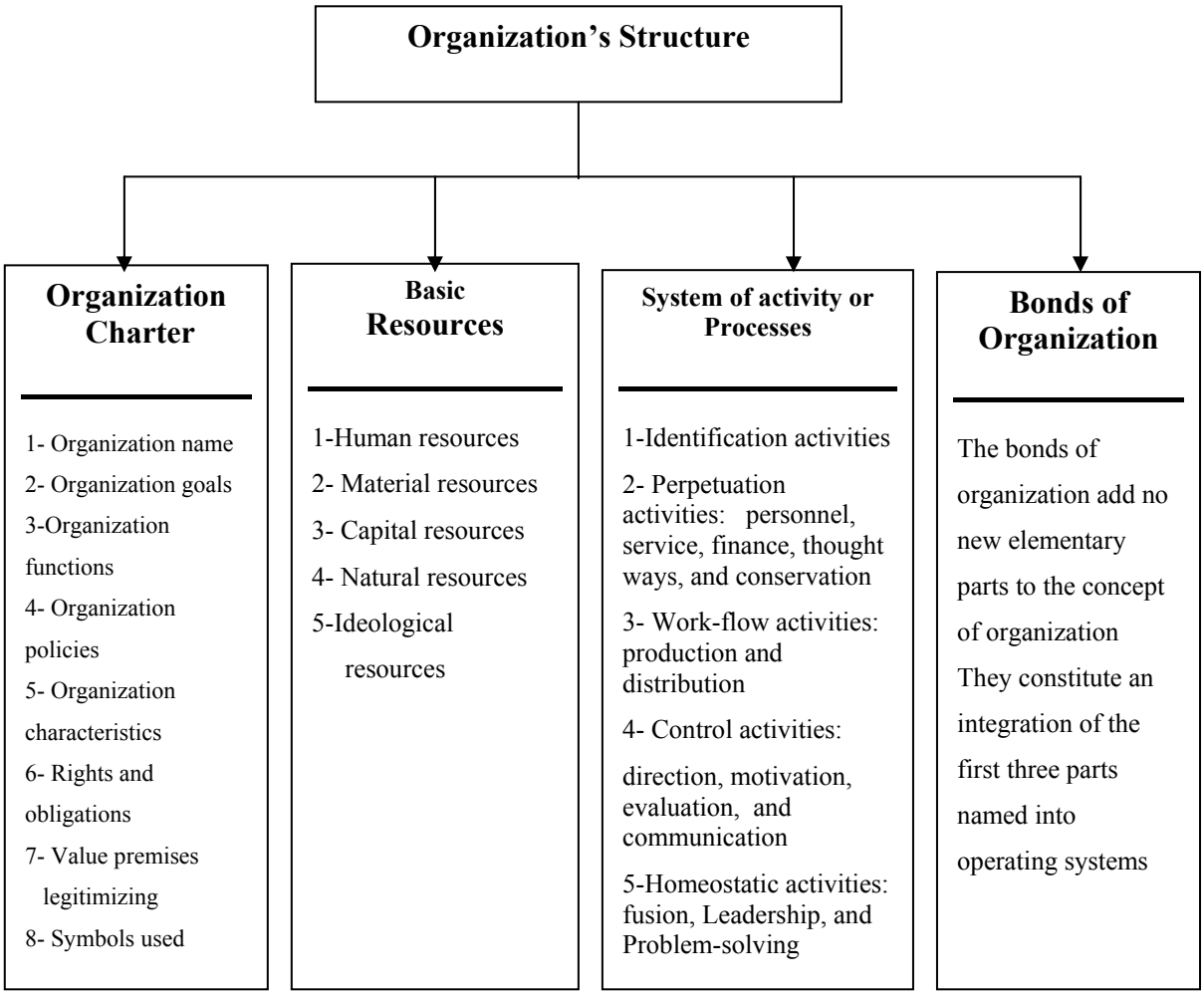
4. Natural resources or simply nature

   Natural resources are the products of nature (not processed through human activity), owned and/or utilized, or available for ownership and/or utilization by the organization. Note that what may be called material, organic, animal, and spiritual kingdoms of nature are included.

5. Ideological resources or simply ideas and language

   The ideological resources are the ideas used or available for use by agents or members of the organization, and by those outside the organization, whose behavior affects the operations of the organization, and the Language in which these are expressed and communicated.

Figure 2 – 1: Main elements of the social organization



Source: Own modification from Bakke, 1967, pp. 36 -75

2.4.3. System of activity or processes

The activity processes are essential to the acquisition, maintenance, and utilization of basic resources for the performance of the organization's function. The activities or processes give the social organization its dynamic character, and the social organization „lives" by means of the activities which:

- Develop and legitimize its organizational charter,

- Acquire, maintain, transform, and utilize its basic resources in achieving its objectives,
- Preserve its unique wholeness in the face of internal and external problems and change.

Now a brief discussion of the essential organization's activities or processes follows:

1. **Identification activities**

   Activities to define, make clear, legitimize, and symbolize the image of the unique wholeness of the organization including its function and the main features that distinguish it from other organizations.

2. **Perpetuation activities**

   Activities to acquire, maintain, transform, develop, and renew the basic resources utilized by agents of the organization in the performance of their work for the organization. Sub-classes of activities of this sort are:

   - Personnel activities perpetuate people and their qualities.
   - Service activities perpetuate materials, equipment, and plant.
   - Finance activities perpetuate capital.
   - Ideologies perpetuate the way of thinking and acting. This involves, for example: Research and planning, the development of alternative strategies, the development of policies, methods, rules, and standards.
   - Conservation activities perpetuate natural resources and access to them, and adapt them to the requirements of other activities.

3. **Workflow activities**

   Activities to create or produce an output, i.e., the product or service satisfying the human need, which is the organization's function to supply, and to distribute the output advantageously to the continued operation of the organization. The major sub-classes of activities of this sort are:

   - Production activities which create or make the output, i.e., the service or product.
   - Distribution activities, which distribute the product or service to its consumers, often in exchange for that which the organization can employ as an input.

4. **Control activities**

   These assure and control the performance, coordination, and the focusing on the organizational function of all activities carried out by agents and equipment of the organization. Sub-classes of activities of this sort perform the following functions:

   (a) Directive activities are those, which initiate action and the type and direction of

action for people and machines.

(b) Motivation activities reward and penalize, or promise rewards or penalties, for behavior in the interest of making it conform to the type desired by the person or persons administering the rewards and penalties.

(c) Evaluation activities. Important among these activities are the following:

- Supervise performance.
- Review, appraise, and rate performance, performers, and results according to standards established.
- Assign people (as well as other resources) to positions on scales pertaining to a number of dimensions (such as prestige, importance, power, ability, acceptability, etc.).
- Assess the significance of other people, groups, and organizations, and events for die self-realization of the people, groups, or organizations doing the rating.
- Compare the relative advantages and costs of alternative courses of action.
- Predict probable consequences of alternative courses of action.
- Assess the impact of changes in one part of the organization on other parts and the whole.
- Assess periodically the state of the whole organization internally and in relation to its environment.

(d) Communication activities, these activities are those which supply participants with the premises and data they need in order to perform other activities.

5. Homeostatic activities

Activities, which serve to stabilize and vitalize the organization as a whole in an evolving state of dynamic equilibrium. There are at least three synergic processes, which can be observed to function in a social organization to fulfill this need:

- The fusion process,
- The problem-solving process, and
- The leadership process,

These processes add no new elementary activities to the concept, but utilize, organize, and focus the organizational charter, the resources, and the other processes upon the basic problem of internal adjustment and external adaptation of the organization in such a way that its unique wholeness, its integrity, is maintained in an evolving state of dynamic equilibrium.

2.4.4. Bonds of organization

The concept of bonds of organization is another way of indicating the nature of the interdependence among all the elements. The bonds of organization add no new elementary parts to the concept of organization. They constitute an integration of the first three parts named into operating systems:

1. Each of the activity processes,
2. The objective provided for it by the organizational charter, and
3. The contribution to its operation of elements of the basic resources and the other essential processes.

Both *Fahmi (1987, pp. 26 – 27), Sadiq (1991, pp. 192 – 194)* and *Kasim (1993, pp. 48 – 54)* agree, that the common elements that form organizations are:

1. The substantial or central element

   Individuals are considered to be the substantial or central element of an organization .An organization failure or success depends on the kind of the individual's interaction. The substantial element, the individuals, is affected by the other helping elements.
2. Elements help in working

   These elements are the resources which are available for the organization to achieve its aims for example: Human-, material-, capital- and intellectual resources.
3. Management

   Management is considered to be the brain according to which activities are implemented with in an organization, issue decisions, set plans , govern individuals relations , direct energy and abilities towards achieving the organization aims , reviewing work course and results evaluation .
4. Communication

   Communication is one of the organization's most important elements. It means the process during which information, decisions and directives move between the organization's members and its department and units.
5. Discipline

   It is the way to control and govern individual's behavior within an organization. During this process be aware of work customs and principles within an organization. Therefore, the organization can achieve its goals effectively.

6. Tools and technology

   It means the technical methods of a work as well as tools and machines used by the organization to achieve its goals.

From the review above for the organization elements, one can say that all of these elements produce in the internal structure of an organization that distinguishes it form the other organizations. In addition to the importance of the elements interaction with each other is responsible, that the organization be able to achieve its goals.

2.5. Organization's goals

One of the most important characteristics of social organization is its own goals, which are considered corner stone on which the structure of organization is based for facing other organizations and its external relations with the environment circumstances. They give organization a limited shape idea to face future changes of what the organization seeks to achieve. Goals are considered one of the organization legislative components, that identify its activity as well as being measures of judging on the success or failure of an organization (*El-Houseiny,1975, pp. 196 –197 ; Youssef, 1980, pp. 250 – 260; Ragab, 1983, pp. 49 –51).*

2.5.1. Definition of the organization's goals

A goal is an image of a future state, which may or may not be brought about *(Parsons, 1937, p. 44)*. However, the organizational goal is the desired state or future state of affairs, which the organization attempts to realize.(*Etzioni, 1961, p. 71; Etzioni, 1964, p. 6 ; Etzioni, 1975, p. 103)*.The organization may or may not be able to bring about this desired image of the future . However, if the goal is reached, it ceases to be a guiding image for the organization and is assimilated to the organization or its environment. *(Etzioni, 1964, p. 6)*

2.5.2. Functions of the organization's goals

The goals of organizations serve many functions:

1. They provide orientation by depicting a future state of affairs, which the organization strives to realize, thus they set down guidelines for organizational activities.
2. Goals also constitute a source of legitimacy, which justifies the activities of an organization and, indeed, its very existence.

3. Moreover goals serve as standards by which members of an organization and outsiders can assess the success of the organization-i.e., its effectiveness and efficiency.
4. Goals also serve in a similar fashion as measuring rods for the student of organizations who tries determining how well the organization is doing.
5. The goals of an organization can be determined in the same way other sociological characteristics of organizations are established.
6. The goals of an organization can also be determined by an examination of organizational processes, such as the flow of work in a factory, and attributes of its structure, such as priorities in the allocation of means (reflected in a balance sheet or budget) or the assignment of personnel. (Etzioni*, 1961: 72; Etzioni, 1964, p. 5; Etzioni, 1975, p. 104).*

2.5.3. Organization's goals classification

2.5.3.1. Perrow's model of the organization's goals classification

Perrow (1968, p. 1013) classified the organization goals as follow:

1. Societal goals or goals related to society

   As a part of the society, the organization is a way to achieve society goals and satisfy individual needs whether socially or economically. On this way, organization can secure the material support from the environment surrounding and society on the basis that community believes that this organization provides him with the main needs.

2. Output goals or goals related to clients or participants

   These goals are related to the organization's customers or the public who receive the organization's service. These goals should be satisfied for the mass needs. They also are subject to the process of "change "as a result of changing the needs and ambitions of the public. Thus individuals join any organization, if they find that organization goals will satisfy their needs. This means that the relation between the public and the organization depends on the clearness of its goals.

3. System goals

   These goals are related to achieving balance, stability for the organization to ensure the performance of its functions and its growth in the society, from through: resources mobilization, to employ the available resources, also to control, coordinate and integrate the structural units of the organization.

4. Product goals

   They are goals related to the type and nature of goods, services which are presented by the organization, such as, the quality, quantity, availability, shape and date of production.

5. Derived goals or sub-goals

   These goals are related to the organization performance of the previous main goals, which will be achieved after completing the original goals, for example, developing the employees' powers

2.5.3.2. Etzioni's model of the organization's goals classification

Etzioni (1961, pp. 72 – 73; 1975, pp. 104 - 105) classified the organization goals by the examination of the relationship between compliance and goals. From this viewpoint, three types of organizational goals can be distinguished. They are order, economic, and cultural goals.

1. Order goals

   Organizations with order goals attempt to control actors who are deviants in the eyes of some social unit. The organization is serving (frequently society) by segregating them from society and by blocking them from further deviant activities. This is a negative goal in the sense that such an organization attempts to prevent the occurrence of certain events rather than producing an object or a service. Order-centered organizations differ according to the techniques and means they use to attain their goals. Some merely segregate deviants; others segregate and punish; and still others eliminate deviants altogether, but all are predominantly order-oriented.

2. Economic goals

   Organization with economic goals produces commodities and services supplied to outsiders. These include not only the manufacturing industries but also various service organizations, from the post office and insurance companies to movie theaters, laundries, banks and brokerage firms.

3. Cultural goals

   Organizations that have cultural goals institutionalize conditions needed for the creation and preservation of symbolic objects, their application, and the creation or reinforcement of commitments to such objects. Most culture-oriented organizations specialize in the service of one or two culture goals. Research organizations, for example, specialize in the creation of new culture (science is sub-system of culture)

2.5.3.3. Gamie and Solaiman's model of the organization's goals classification

Gamie, et al.(1987 b , pp. 172 - 179) and Solaiman (1978, p. 5) classified the goals of social organizations to two types:

1. General goals

   They are the general purposes of organization, which are set previously before establishing the organization. They are included in the organization's charter.

2. Practical goals

   Those refer to final objectives of organization. They are translation and implementation for general purposes and they are correlative with the organization's charter and its policies.

From the previous review of the definitions, importance, characteristics and goals of the social organization, it could be noted, that they were established to serve individual and groups and to satisfy their needs as well as to achieve some society goals in general. However, these goals participate in the existence of the organization for a long time. They also help in achieving large portion of development and social and economic prosperity for individuals, groups and communities. In any society, one can find a large number of organizations specialized in several certain jobs and goals. Therefore, specialists are interested in classifying social organizations to several kinds as following.

2.6. Classifications of the social organizations

As a result of the numerous differences among these organizations and the scientists' various opinions on the bases that may be used in the process of classification there are several classifications and patterns for social organizations.

As following, a review for the most prominent models used in classifying the social organizations:

2.6.1. Etzioni's model for organizations classification.

Etzioni (1964) classified the organizations into three kinds according to pressure practiced by the organization over persons to join it, these are:

1. Voluntary associations

   Persons join this kind of organizations on their own desire voluntarily to achieve personal interest or for emotional reason. They have all freedom whether to join these

organizations .These organizations are such as political parties, cultural and sport clubs, local societies and religious ones.

2. Coercive organizations

   Those enforce persons to join them such as prisons, psychic hospitals, compulsory camps and army.

3. Utilitarian organizations

   They represent the link between the previous two kinds, where individuals join it to achieve an interest such as the economic organizations in which people work as factories. However, persons are not obliged to join this kind of organizations, but they have to work to acquire their livelihood. So, one can say that this kind of organizations is not completely compulsory or voluntary.

2.6.2. Blau and Scott's model for organizations classification

Both *Blau and Scott (1962)* classified organizations according to the interest and profits made out of the organization's activities. In their classification they revolve around a simple question, that is, who is the beneficent from achieving the organization's goals?. According to the answer of this question, organizations are classified into four kinds:

1. Mutual – benefit organizations

   That are formed from members who exchange benefit each other such as parties, and workers unions.

2. Business organizations

   Those include organizations with the basic goal to achieve the benefit for the owner and employees such as banks, companies and factories.

3. Service organizations

   That aim continuously at providing certain services (public services) to specific persons such as schools, hospitals and social care institutions.

4. Commonweal organizations

   That aim at providing services to a certain local society or for the society as whole such as governmental organizations, ministries, army and police units.

2.6.3. Katz and Khan's model for organizations classification

Champion (1975, pp. 73 – 74) said that both Katz and Khan have classified social organizations according to the relation between the function of these organizations and the

society. He also added that organizations limit their goals as being a sub pattern of the community so; there are four kinds of organizations:

1. Productive or economic organizations, such as factories, communication enterprises and export units.
2. Maintenance organizations, such as schools and hospitals.
3. Adaptive organizations, such as research institutions and universities.
4. Managerial – political organizations, such as the government, local administration and workers unions.

2.6.4. Hicks's model for organizations classification

Hicks (1972, p. 12) explained, that each organization is set up in order to achieve a set of objectives which meet its members needs. So, the organizations could be classified according to their members' goals into several kinds:

1. Service organizations. They aim at helping individuals with no money for these services such as public schools.
2. Economic organizations, which aim at providing goods and services for individuals to get profits such as economic companies.
3. Religious organizations. They aim at providing their members with spiritual needs such as worship places.
4. Protection organizations: That aim at protecting individuals from harms such as police stations.
5. Governmental organizations. Those meet individuals' needs for the continuous existence of order such as courts.
6. Social organizations. That aim at achieving individual's social needs as for communication with others such as social clubs.

2.6.5. Khalifa's model for organizations classification

Based on the organizations volume and subjectivity, *Khalifah (1990, pp. 321 – 328)* classified organizations into:

1. Classification according to the organizations subjectivity:
    - Governmental organizations. Those are affiliated to the government and are run by governmental officers such as the governmental various bodies.
    - Non-governmental organizations. They are voluntary organizations to which individuals join on their will. These members run these organizations.

2. Classification according to the organization size:
    - Large organizations. Those are characterized by their large size, complicated structure and many individuals.
    - Small organizations. Their small size, simple organizational structure and few members characterize them.

2.6.6. Hamodah's model for organizations classification

Hamodah (1995, pp. 126 – 127) classified organizations according to a different set of classification principles as following:

1. Classification according to the organization's goals:
    - Production organizations, which have productive goals of material products.
    - Service organizations. Those provide specific services for specific customers.
2. Classification according to the benefits from the organization activities:
    - Organizations, which bring interest for their members only such as, associations and labor unions.
    - Organizations, which bring interest for people such as schools and public hospitals.

3. Classification according to the value that directs the activity and policy within an organization:
    - Social service organizations: They are based on the principles of social services.
    - Commercial and industrial organizations. Those are based on the values and standards of profits.

2.6.7. Organizations classification in the Egyptian rural communities

Nassrat (1963, p. 48), *Abdel-Wahab (1985, p. 83)* and *Omar (1980, pp. 368 – 369)* refereed, that rural organizations in Egypt can be classified according to their contribution to the rural development as following:

1. Agricultural and economic organizations. They provide economic services for their members such as the agricultural cooperatives and village banks.
2. Social organizations, which include all kinds of organizations, that aim at supporting peasants to perform social services for improving their society such as development society cooperative, rural clubs and children gardens.

3. Educational organizations. That aim at educating and training peasants on the modern methods of agriculture as well as educating peasants' sons. They include all kinds of schools.
4. Health organizations, which include all organizations, that provides health services for their members such as rural health units.

From the previous review of organizations classification, it may be noted, that every one of the researcher classified the organizations according to an indicator or basis that agrees with his vision for organization. As a result, organization classifications depend on characteristics, goals and functions for which these organizations are established and also, according to human needs which the organizations provide.

Summarized, one can say that an agricultural cooperative is an economic and social organization as providing several economic and agricultural services for their members such as the provision of production requirements, and marketing of the agricultural products. In addition, it is considering social services for its members. The cooperatives have an important role in enriching peasants through conferences and seminars. So , it may be viewed as an organization that has an educational role as it brings peasants new agricultural skills related to the modern methods of agriculture in addition to the participation of agricultural cooperatives in the projects of illiteracy prevention and educating peasants and their sons how to read and write.

2.7. Organizational effectiveness

The concept of organizational effectiveness is highly complicated, ambiguous and general. There is no specific indication to measure the organizational effectiveness, since there are several indicators through which one can measure and determine the degree of organizational effectiveness. The most critical problems which the researchers face in the field of the organizational effectiveness is that an organization may be described as effective according to a number of indicators , and meanwhile it may be described as ineffective for other indicators *(Miles, 1980, p. 356)* .

Choosing a certain measurement for measuring the organizational effectiveness is based on the organization's nature, the goals of evaluation and the environment surrounding. *(Champion, 1975; Miles, 1980)*.

2.7.1. Definitions of organizational effectiveness

Researchers have set different definitions for the organizational effectiveness as a result of the different approaches used in studying and measuring the organization effectiveness, as following:

1. Definition according to the goal approach
   Organizational effectiveness is defined as the organization's ability to achieve its goals.
2. Definition according to the system resources approach
   It is defined as the organization's ability to mobilize and acquire resources necessary for achieving its goals (approaches).
3. Definition according to the process approach
   It is defined as those organizations the internal processes of them are characterized by specific organizational features including lack of tension within the organization and the degree of achieving integration of individual's goals and the organization's goals.
4. Definition according to the constituency approach.
   It is defined as the organization's degree of meeting constituency dealing with it such as workers in the organization, providers, and customers ... etc.

The following description presents a brief review for the approaches of studying the organizational effectiveness.

2.7.2. Measurements approaches of the organizational effectiveness

The analysis of the previous studies in the field of the organizational effectiveness refers, that there are four main approaches for studying and measuring the organizational effectiveness. The following is a brief review for these approaches.

2.7.2.1. Goal approach

The measurement of the organization's achievement for its goals is considered as the commonest indicators for measuring the organizational effectiveness. According to this approach, an organization is assessed upon ends and not methods, as the organization is a structure that is designed to achieve specific and agreed goals. (*Champion, 1975, p. 95; Price, 1972, p. 100)*.

For this approach *Etzioni (1975) Miller (1977) Price (1972) Georgepoulos and Mann (1962) and Gamie (1973)* have agreed on defining the organizational effectiveness as the organization's ability to achieve its goals.

The approach of goals faced some critics such as:

1. The difficulty of determining and choosing goals upon which the organizational effectiveness can be measured because of the different view of the society, customers, workers and managers for the organizational goals *(Yuchtman and Seashore , 1967 ; Miles ,1980, p. 362 , Warren et al., 1975 B)* .
2. Lack of general measurements for the organizational effectiveness that may be used for measuring the organizational effectiveness of several kinds of organizations, because the measurements provided through this approach is specialized and applied to specific kinds of organizations. This is due to the organizations different goals compared to other organizations *(Price, 1972)*.
3. The contradictory among the organization internal units goals, as it seeks to achieve more than one goal at the same time, the importance of goals differ as units within the organization differ. *(Miles, 1980, p. 363).*
4. The difficulty of evaluating the importance of goals because some times, an organization may have more than one goal at the same level of importance but one of these goals is achieved at the long run while the other is achieved at the short run.
5. Concentrating the goal approach on official goals and neglecting implicit undeclared goals or unofficial goals. Sometimes the official goals contradict with the operative ones *(Miles, 1980, p. 363)*. So, it is necessary for measuring the organizational effectiveness to consider the operative goals of an organization. *(Price, 1972)*.
6. The approach of goals consider the ends or objectives when measuring the organizational effectiveness, but it neglected the methods that the organization can follow for achieving its goals *(Khalil , 1986, p. 21)* .
7. The approach of goals neglected the influence of the environment and its influence on the organization and their impacts on forming and achieving its goals *(Kirchhoff, 1977, Khalil ,1986, p. 21)* .

2.7.2.2. Process approach

It revolves around the organization internal organizational processes as being specific features or measurements for the organizational effectiveness. According to this approach, several organizational features characterize the effective organizations as (for example):

- Rarity of tension within the organization,

- The integration of individuals and organization's goals,
- Making use of the individuals and groups powers,
- Flooding of information vertically and horizontally within the organization and
- Simplicity of performing the internal functions as well as providing the environment that helps in the organization growth *(Khalil , 1986, p. 21)* .

This approach faced several critics as the followings:

1. The difficulty of subjecting the organization's internal organizational processes to discipline study and control. *(Khalil, 1986, p. 25)*.
2. This approach neglected the relation between organizations and the environment that is, neglecting the impacts of the environmental factors on the organization. *(Mohamed, 1985).*
3. This approach only concentrates on one element in the organization, that is, processes, and neglected two important elements, inputs and outputs. *(Khalil, 1986, p. 25)*.

So, both *Goodman and Pennings (1977)* and *Cameron (1978)* suggested a comprehensive and wide perspective for the organizational effectiveness that includes the three elements together, inputs, processes and outputs.

2.7.2.3. **Constituency approach**

This approach measures the organizational effectiveness through the organization's degree of meeting the needs and expectations of constituency. It deals with such groups that affect and are affected by the organization: Workers, customers and providers. So, this approach is called the model of the participating party. *(Keeley, 1978)*.

Also, there are some critics for this approach as the followings:

1. The contradiction and discrepancy of the needs of the constituency the organization deals with.
2. The difficulty of meeting the needs of the constituency. That meeting of the needs of one party may affect the meeting of another parties' needs.
3. This approach doesn't consider the relative importance of each party of the organization constituency and the degree of influence of each party on the organization's performance. *(Khalil, 1986, p. 26)*.

2.7.2.4. System approach

This approach revolves around that the effectiveness of an organization is determined according to its relation with the surrounding environment. This approach includes two main

directions. **The first direction** concentrates on the partial relation between the environment and an organization. It is called **system resources approach** proposed by both *Yuchtman and Seashore (1967)*. According to this approach, the organizational effectiveness is defined as, the organization's ability to make use of available opportunities in its environment to acquire resources. It means that the effectiveness of an organization is related only to its ability to get resources (inputs). As a result some critics for this approach arise as for example:

- Neglecting the importance of changing the inputs (resources) into outputs to meet the customers' needs,
- Neglecting the processes used in changing the inputs into outputs.

The second direction concentrates on the whole relation between the organization and the environment, which is called **the open system approach**. According to the open system approach, the organizational effectiveness is defined as the organization's ability to get required resources from the surrounding environment and changing them into outputs that are necessary for the environment to keep the continuity of the organization. *(Katz and Kahn , 1966 ; Davis , 1973)*. The open system approach is considered as the most important approach for measuring the organizational effectiveness, as it includes the first three approaches within. Moreover, it includes all elements to be used in measuring the organizational effectiveness. It concentrates on the organization's goal, that is, its outputs and the processes used by the organization to change inputs into outputs as well as the constituency the organization deals with representing in customers satisfaction to outputs provided.

The following models are based on the open system approach in measuring the organizational effectiveness:

1. **Katz and Kahn's model**

   Katz and Kahn (1966) set a model for the organizational effectiveness based on the main principles of the open system , related to the organization importing of energy and resources from the environment and changing them into outputs , then exporting these outputs to the environment again , and importing new resources from the environment , and soon in the circular way.

2. **Warren's model**

   Warren et al. (1975 A) used a measurement to effectiveness that is formed of the following four components:

   - Flexibility: That is the organization's ability to change fast and easily in order to face and meet changes in demand and customers' needs.

- Satisfaction: It means the satisfaction level of workers in the organization, which encourage them to work.
- Efficiency: That is the ability to get the maximum returns from the available resources.
- Productivity: It means the ability to achieve the highest level of business activities.

3. Gibson and Donnelly's model

Gibson and Donnelly (1979) showed that the organizational effectiveness components should reflect input – process – output cycle to reflect the internal relations between the organization and the external environment for this organization. They, also, set a measurement to the organizational effectiveness of five elements as following:

- Production: It means the organization's ability to produce outputs required for the environment.
- Efficiency: It means the proportion between the inputs and outputs.
- Satisfaction: It reflects the workers satisfaction to the organization.
- Adaptation: It means the organization's ability to respond to internal changes.
- Organizational development: It means the organization ability to perform investment processes that increase its ability to exist for the long term.

As for the comprehension of the open system approach and its inclusion to all elements, inputs – processes – outputs, the current study will be based on this approach for measuring the effectiveness of the agricultural cooperatives.

2.7.3. Suggested theoretical model for the effectiveness of agricultural cooperatives

As seen from the previous theoretical framework and reference review the open social system approach supposes, that the agricultural cooperative is considered as a social organization. It is an auxiliary system of the society. It is established to achieve society goals according to the surrounding environment. It imports the necessary human and materials resources for achieving its activities from the environment through the administrative and technical processes that participate in changing these inputs into outputs (services and commodities). These services and commodities are exported again to the environment to meet the needs of the society's individuals and then importing new resources to start the activities again. Through this circular and continuous way, the cooperative keeps existences and continuity in the society.

In the framework of the previous analysis, there are three main issues for the effectiveness of the agricultural cooperatives as follows:

1. **Agricultural cooperatives' ability to mobilize resources for achieving their activities**

   It could be measured through the following parameters:

   - Number of the agricultural cooperative members.
   - Percentage of female' members.
   - Area of the agricultural cooperative buildings (m^2) .
   - Value of budget.
   - Number of the financial sources of agricultural cooperative.
   - Percentage of financing sufficiency for agricultural cooperative activities .It means the percentage of available financing from requested financing.

2. **Agricultural cooperatives' ability to employ the available resources**

   This is to be judged through identifying the characteristics and order of the cooperative internal administrative processes, such as:

   - Percentage of the agricultural cooperative members' presentation in general assembly meetings.
   - Selection method of agricultural cooperatives board' members. (election or recommendation)
   - Percentage of the cooperatives board' members' presentation in board' meeting. (% from the total number of cooperatives board' members).
   - Number of hours of the board' members meeting annually (per year).

3. **Contribution of the agricultural cooperatives to agricultural development**

   It could be measured through the following parameters:

   - The number of achieved activities by agricultural cooperatives.
   - The beneficiaries' percentages from the agricultural cooperatives activities.

2.8. Conclusion

From the pervious review of the social organization, it is shown that:

- The social organizations play an important role in the devolvement of the countries as they increase popular participation in achieving the goals of the public and local communities.
- The organizations contain many elements and the success in achieving their goals depend on the abundance of these elements and interaction with each other.
- The organizations could be classified according to characteristics, goals and functions for which these organizations are established and also, according to human needs, which the organizations provide. There are many types of organizations such as service, economic, religious, social, governmental, non- governmental organizations.
- There are many approaches for measuring the effectiveness of the organization such as the goal, process, constituency and system approach. The system approach has two main directions: the first is called system resources approach and the second is called open system approach. It is found, that the open system approach is the best approach for measuring the effectiveness of the agricultural cooperative as it includes all the required elements (input- process-output).
- According to the open system approach, a model for the effectiveness of agricultural cooperatives has been suggested. This model has three main issues:
  1. Agricultural cooperatives' ability to mobilize resources for achieving their activities
  2. Agricultural cooperatives' ability to employ the available resources
  3. Contribution of the agricultural cooperatives to agricultural development

Due to the importance of the social organization in the devolvement, the following chapter will be devoted to deal with the analysis of the developmental organization in the Egyptian villages.

Chapter 3: Developmental Organizations in the Egyptian Villages

3.1. Importance of the developmental organizations in the Egyptian villages

The Egyptian rural areas contain about 56 % of the total population in Egypt. The rural society represents the economic structure on which the urban society and the Egyptian economics depend. *(Gamie et al., 1987 A, p. 15)*. In addition, the rural society plays an important role in the national agricultural economics. Rural persons play the main role in this economics as they affect greatly the up and down of the national economic level, that depends on the services provided to that person through various organizations, that enable him to support his role in developing the rural society, in which he lives *(Hamodah , 1982, p. 1)*.

Moreover, *Gamie et al. (1987 A, p. 15)* emphasizes, that village development and progress is the main and effective way to develop the Egyptian society. The Egyptian government realized the importance of village development socially to achieve a comprehensive and integrated rural development through bringing about planned changes whether economically or socially to promote the rural society and, therefore, the Egyptian society at whole. As the positive results of developing the rural sector will be reflected on the urban community , several developmental organization were established in various fields, economically , socially , educationally , health , agriculturally and recreationally , to provide their services to the countryside people.

3.2. Classifications of developmental organizations in the Egyptian villages

Developmental organizations in the villages are classified according to their participation in the rural development into the following classifications:

1. Economic agricultural organizations:

   These organizations provide their members with economic services, such as the agricultural cooperatives and village banks.
2. Social organizations:

   These organizations provide their members with social services in order to help the people to enhance their way of living and develop their society, such as the rural social units, rural society development association, rural local units, rural nursery school, rural clubs and rural youth center.
3. Educational organizations:

These organizations include all organizations that aim at educating farmers and their children. The most important of them may be schools with their various stages (primary – preparatory – secondary) that assume the responsibility of the official education.

4. Health organizations:

   These organizations include all organizations that provide health services whether preventive or curative, including rural health sanitarium comprehensive rural units. The most important of them are health units as being widespread all over the Egyptian countryside. *(Omar, 1980, pp. 368 – 370; El-Akhws, 1985, pp. 40 – 63).*

3.3. Roles and objectives of the rural developmental organizations

A review of the most important developmental organizations in the Egyptian countryside with concentrating on their goals and roles in the rural development follows:

3.3.1. Rural social unit

It is defined as the main unit in establishing the governmental social work. It aims mainly at developing the local community and bringing about social changes in the light of the public concepts and principles. In addition, it provides the services and activities approved and determined by various social legislations such as social security law .The rural social unit implements the developmental programs set by the Ministry of Social Affair.*(Gamie et al , 1987 B , p. 753 ; Fouad , 1966 , pp. 270 – 275)*.

It has several and various objectives that aim at promoting and developing the countryside economically and socially, that are*:*

1. Studying the environment from the points of view of developing, identifying its social and economical needs and its resources.
2. Stimulating awareness among the countryside people and encouraging public participation in the projects of rural development in villages.
3. Disseminating the principles of democracy among the countryside people.
4. Identifying local leaders and training them to monitor and supervise the implementing of developmental projects.
5. Exerting efforts to increase family income through spreading, supporting, providing and developing the environmental and domestic industries.
6. Providing the various services of the Ministry of Social Affairs such as pension, social security, aids and professional rehabilitation.

7. Caring for childhood in the countryside and establishing nursery houses.
8. A warning of methods of family planning. *(El-Batrik and Shedid, 1969, p. 288 ; Ahmed, 1976, p. 303)*.

This unit has several and various activities and services that may be divided into:

- Direct services, which are provided by the social unit directly to the citizens such as social insurance, pension, aid for families of militants, aid for emigrants, producing families, public service for university graduates, and social researches that tackle the community critical problems.
- Indirect services, which are provided by the cooperatives of social care and social development, which are located in the local environment. These social services include children care activities, professional training centers, women clubs and illiteracy-protecting classes. In addition, the social units provide its services to the other authorities located in the local environment in order to help to achieve their activities in the field of learning, education, health and agriculture. *(Gamie et al., 1987 B, p. 766; Ministry of Social Affairs, 1982, p. 81)*.

3.3.2. Rural community development association

According to law No. 32 / 1964, it is identified, as it is each group, that is organized and last for certain or uncertain period of time. It consists of normal citizens' not less than ten persons aiming at a purpose rather than acquiring monetary profit. It is also a non - governmental voluntary association. Each association has an elected board from the local community leaders. This association is to express the individuals desire to participate in the development of community. In addition, it is considered the most important part of the citizens' public activity, as they determine its goals because of their feeling of the environment need to the services presented by the society. The Ministry of Social Affairs encourages establishing the rural community development associations and helps them technically and financially. Individuals could participate in the activities of the rural community development associations whether through opinion or thought, work or material participation. *(Ministry of Social Affairs, 1964)*.

It is known, that the succession of the rural development programs in any local community can be achieved if the individuals in this community feel their needs and problems and exert efforts provide these needs and solve theses problems through the complete use of all

available human and material resources. It is worth noting, that the societies of local community development have an effective and prominent role in this context, where these kind of societies pay attention to studying the environment and determining their needs and resources as well as identifying problems and their causes and encouraging individuals to participate in solving these problems *(Said-Ahmed , 1985, p. 358)*.

The rural community development associations seek to achieve several goals that participate positively in developing the Egyptian rural areas. These goals are as following:

1. Studying the village problems and its culture, social and economic needs.
2. Organizing public efforts as well as posing self-solutions for the problems that the village faces through making use of the available capacities and resources in the village.
3. Improving public status in the village such as utility maintenance, providing it with potable water, keeping it clean and tree planting.
4. Establishing recreational institutions.
5. Providing the necessary social care programs.
6. Participating in putting an end to the problem of illiteracy through opening classes for illiteracy protecting.
7. Increasing rural family income through agricultural projects and exploiting the animal wealth and the projects of the producing families.
8. Enlightening farmers and assuring they are aware of the patriotic, national and international issues and events.
9. Caring for childhood and motherhood through setting up nursery houses. *(Hamodah, 1982, pp. 96 – 97 ; Barakat et al., 1993, pp. 4 – 5)*.

Rihan et al. (1993, pp. 2 – 21) indicated that the most effective variables in the performance degree of the rural community development association in planning and implementation of rural development programs are:

1. The distance between manager's residence and the association location,
2. The education level, experience level, and training level of the association' manager,
3. The extent of the horizontal coordination between the rural community development association and other organizations in the village, and
4. The extent of the social services existing.

Rihan et al. (1993) concluded, that these variables explained 34% of the variance in the performance degree of the rural community development association. In order to enhance this performance , the study suggests, to train the managers of rural community development association to improve their professional skills and experience through training programs, that

are not only confined to the technical sides but also include improving communication skills and human relations . It also suggested, to pay attention to stimulate the efforts of the local community individuals through various media and local leaders as well as encouraging them to participate in planning and implementing the developmental programs.

3.3.3. Village local unit

The first article of the local law No. 43/1979, conditioned by law No.145 /1988, stipulates that the village local unit is an administrative unit at the village level. It is also a governmental organization charged for brining about vital changes in the functions and structures of the village social systems. However, a coordinating organization links and coordinates the various efforts and the governmental and non-governmental economic, social and political activities in the Egyptian countryside. The local unit is to assume establishing and managing all public infrastructures located in its geographic area. *(Ministry of Local Rule, 1979, 1988 ; El-Sharkawi , 1993 , pp. 19 – 20 ; Khamis , 1989, p. 123 – 124 El-Gebaly, 1994, pp. 26).*

The village local unit practices its specification through the Village Local Public Council and executive administrative authority. The article 66 of law No. 43 / 1979 and the law of local rule conditioned No 50 / 1981 and law 145 / 1988 stipulates that each unit should have a local public council consists of 20 members to be elected from the village public leaders served by the local unit . This council has the following specification:

1. Suggesting the plan of economic, social and rural development of the village.
2. Suggesting the projects of public balance and approving the final statement.
3. Suggesting the methods for the public participation with efforts and self - capabilities.
4. Suggesting establishing public infrastructure in the villages.
5. Spread the agricultural awareness that achieves the improvement of diversification of the agricultural production.
6. Exerting efforts to put an end to illiteracy and to family plan, care for youth and deepen the religious and moral values. *(Ministry of Local Rule, 1979, 1981, 1988)*

The executive council of villages is formed from the heads of each village's local units and all the heads of the executive authorities within a village. They represent the ministries of Interior, Education, Social Affairs, Health, Agriculture, Housing and the village bank. This executive council of villages takes the responsibility of the following tasks:

1. Supporting the head of the village local unit in setting the administrative and financial

plans related to the village affairs.

2. Implementing the decisions and recommendations of the local public council.
3. Monitoring and collecting the financial resources including taxes on farmlands, and all returns from the different activities that are managed by the village local unit.
4. Supporting other local authorities in solving the problems that it faces.
5. Discussing the village needs of infrastructures, services and the necessary projects for the economic, social and rural development.*(Ministry of Local Rule, 1979, 1981, 1988 ; El-Sharkawi, 1993, pp. 21 – 22)*

In addition, the local units have some more tasks related to the agricultural activity and production such as:

- Planning and organizing the agricultural and veterinary services.
- Executing the programs of the anti-blights and pest control.
- Providing the agricultural cooperatives with the agricultural devices.
- Establishing the agricultural extension and coordination with the technical departments in the ministry of agriculture (regarding agricultural extension).
- Collecting the statistical data of the animal and agricultural activities.
- Implementing and supervising the projects of animal and poultry projects. *(Law of the local management* system *and its executive bill, 1989, pp.138 – 139)*.

The results of *Ahmed's field study (1992)* referred that the most important services provided by the local unit for people under investigation are:

- Establishing the infrastructures projects in the village that include delivering potable water , electricity , sewage and road pavement,
- Project of transportation within the village,
- Establishing schools, farmers' houses, veterinary units, post and telephone offices, and
- Establishing small agricultural projects such as honey rearing and poultry.

In *Mansour's filed study (1988)* about the services provided by the local unit to the farmers, it was shown that farmers made little use of the following services:

- Animal production projects,
- Enlightening rural women in the field of household economics,
- Enlightening rural youths culturally and socially,
- Solving problems among the farmers, and
- Services of developing rural houses.

However, farmers greatly made use of projects of infrastructures such as delivering potable water, electricity, sewage, road pavement, establishing schools and farmers' houses in addition to enriching farmers in the field of agriculture.

3.3.4. Rural youth center (Rural club)

A rural youth center is considered as an educational organization within a village that aims at creating athletic generation of healthy and mentally farmers who are characterized by social thoughts that urge them to build and promote their society and helping youths to exploit the space time healthy and socially.*(Solaiman, 1959, pp. 32 – 35).*

The rural youth center has several goals aiming at improving the level of youth culturally, socially and economically, that are:

1. Preparing regular plans and programs of the physical, spiritual, cultural, social and political preparation,
2. Training youth to assume responsibility and cooperation, group work and democratic spirit,
3. Organizing and investing youths' spare-time through the programs that develop them and exploiting their powers,
4. Training youths, providing them with necessary skills, and developing leading abilities,
5. Setting and executing programs related to sport , religious , cultural , and social competition as wall as participating in national ceremonies ,
6. Arranging youth participation in the projects of environment service especially illiteracy combat, family planning, addicting combat, developing health awareness, village cleansing and protecting the environment from pollution,
7. Developing youth innovative abilities and practical experience on scientific basis, and
8. Developing the spirit of independence and income earning through financing youth centers. (*The Supreme Council for Youth and Sport , 1992, p. 2 ; Mohamed , 1981, pp. 310 – 311) (Abdel-Bary, 1980, pp. 117 – 118).*

The results of *Mansour's field study (1980)* on the rural organizations and their role in the agricultural extension indicated that 73 % of farmers were completely aware of the activities provided by the rural youth centers and they utilized them. The study referred, that these centers provide the rural society with developmental guiding services such as developing and cleaning villages, exploiting youths' spare time in public services such as illiteracy combat,

village planting. In addition, the study referred, that the trends of studied farmers towards youth centers were highly positive.

3.3.5. Children nursery school (Kindergarten)

It is considered as a social institute to care for children while their mothers are working in fields or factories until they reach the age of 6 years. Children Nursery School aims at:

1. Preparing the suitable environment for child rearing,
2. Developing the abilities and skills of children,
3. Improving children healthy, psychic and mental level, and
4. Preparing children to the first educational stage, therefore mothers be able to perform work in village comfortably that, in turn, leads to increase productivity. *(El-Akhws, 1985, p. 58)*.

3.3.6. Rural healthy care unit

The rural healthy care unit aims at improving the community health level through disease and infection combat and making individuals accustomed to cleansing and proper health habits. This unit is considered the basis for all health projects within a village such as projects of Tuberculosis, Bilharzias and Malaria combat and family planning, etc. *(El-Sherbeny, 1975, p. 175; El-Gebaly, 1994, pp. 28 – 29)*

Both *Hassan (1985, p. 198)* and *Mansour (1988, p. 20)* agree, that a rural health unit has several goals for farmers and improving their health status that affects positively an increasing of production in the Egyptian rural society. They are in particular:

- Therapeutic service through out clinics and pharmacies as well as preparing health files of peasants to be aware of epidemic diseases and proceeding in treatment.
- Protection from infectious diseases and providing anti-infectious disease vaccine in addition to the other protection means.
- Providing services for motherhood and childhood care and healthy care schools.
- Extension and health enlightenment as well as assuming a leading role in the field of health education for peasants.

The results of the field studies indicate that the most important services provided by the rural healthy care unit are:

1. Combating epidemic diseases (Bilharzias and Malaria).

2. National campaigns against Titans, Cerebrospinal Meningitis, Paralyze and vaccinating students.
3. Improving the quality of potable water through analyzing water samples continually.
4. Campaign for health awareness such as family planning and public cleansing
5. Health monitoring of local environment.
6. Registering newborns and mortality.
7. Medical scanning and conducting surgical operations.
8. Arranging and implementing first aid training programs for youth.
9. Periodical medical scan on students. *(Mansour, 1988 ; Ahmed, 1992).*

3.3.7. Rural school

Developing human resources is considered one of the most important pillars for a comprehensive and integrated development, as it requires a human element that is aware of its goals in addition to his ability to plan, execute and follow the various developmental projects. *(Sabir, 1962, p. 602)*. So, Countries interested in achieving the goals of development should firstly pay attention to education and then the technological and economical progress. (*El-Kholy, 1985, p. 334 – 335).*

Although critics against education in the Egyptian rural society such as lack of high quality levels , educational services for girls, technical experience of teachers, and the growing rate of illiteracy *(Hussein ,1977, pp. 286 – 290)* , the rural school is considered as the important educational organization in the rural society. This is because of the concerning of this school with the children education and helping in children social rearing as well as their various awareness, abilities and skills.

Motawea (1980 A, p. 74) identified the rural school as the social organization, which is established by the community to rear up the new generations to be correct community' members. *Bedear (1983, p. 43)* identified it as the organization that aims at educating farmers and their children as well as assuming the responsibility of the official education in villages .

Both *Motawea and Hassan (1980 B, pp. 111– 113)* agree with *Gamie et al. (1987 B, p. 653 – 654)* that rural school has the following various goals:

1. Detecting students' tendencies, abilities and their innate readiness as well as directing them to the benefit of student and group.

2. Developing students' freely integrated personality as well as being freely in thinking.
3. Rearing children mentally on a proper democratic basis in addition to exert effort to grow them up socially and morally.
4. Making students aware of values and tradition of the society through actual practice for these values inside school.
5. Paying attention to reading students at all aspects mentally, physically, morally and socially through the scientific, cultural, moral and social education, respectively sports.
6. Caring for talented students as well as the disabled physically and mentally as a human and productive necessity in order to change them into producing powers.
7. Preparing students to understand past and present life, being ready to face the future, and accepting social changes through linking school activities to real and daily life.

The results of *Ahmed's study (1992)* referred that the most important services provided by rural school to people under research were as the followings:

1. Educational, religious, cultural and sport activities.
2. Environmental projects such as public cleansing, tree planting, and building mosques.
3. Projects of adult education and illiteracy combat.
4. Organizing awareness symposiums for rural population.
5. Holding summer camps and organizing recreational parties for village children.
6. Participating in the agricultural processes such as cotton cultivating and compacting insects manually.

3.3.8. Village's bank

A village bank is one of the important economic organizations that serve the agricultural activities and farmers. Financing and loaning are the pivot points for the village bank functions. Village banks play an important role in developing of the Egyptian village through introducing modern methods to the agricultural processes, providing loans for farmers to mechanize the processes of agriculture, improving soil and financing new developmental projects such as the projects of animal wealth, projects of preparing, canning, packaging, freezing and marketing vegetables and fruits. *(El-Gohary, 1981, p. 85 – 86; El-Gebaly, 1994, pp. 22)*

Village bank is defined as the financial unit, which stemmed from the Principle Bank for Development and Agricultural Credit (PBDAC) in order to serve financing services flexibly and independently through equipping it with all assets of the financial work and its material

and technical to perform activity required well.*(El-Abbasy, 1980, p. 33)*. Village bank has several goals aiming at improving the economic and social level of farmers in particular and of the Egyptian community in general. Law No. 117/1976 in the Article 4 defines these goals, as following:

1. Providing loans to the agricultural cooperatives in order to achieve the productive purposes and activities, which they assume.
2. Providing loans to the projects, which participate in the agricultural development.
3. Providing loans to the farmers including the members of the agricultural cooperatives.
4. Conducting financial activities that serve the purposes of the cooperatives and their members.
5. Accepting deposits and savings from farmers and the members of the agricultural cooperatives in order to invest it in the different development projects.
6. Participating in marketing of the agricultural products for the sake of farmers that help them economically and socially.
7. Creating and spreading the local saving awareness for the local development.*(PBDAC, Egypt, 1976, pp. 15 – 16)*

3.3.9. Agricultural cooperative

An agricultural cooperative is considered as one of the important economical and social organizations in the Egyptian rural society. It plays an important role in the agricultural development through providing the farmers with production inputs, such as fertilizers, seeds and chemical substances, etc. In addition, it holds guide symposiums for the farmers to acquire them with the necessary knowledge and skills about the agricultural new methods that aim at increasing the agricultural production and, therefore, promoting the rural society. Moreover, the cooperatives urge its members "farmers" to participate in the social and environmental activities that lead to developing the rural society.

3.4. Conclusion

From the pervious review of the developmental organizations in the Egyptian villages, it is shown that:

- The developmental organizations play an important role in the rural devolvement according to their activities and services, which are provided to the countryside people.

- There are many different roles of developmental organizations. These differences in developmental roles are probably related to nature, goals, activities and services of these organizations.

In this chapter the activities and services, which are provided by each rural developmental organization have been presented. Also, the objectives and pervious studies of these organizations have been shown. The activities, objectives and pervious studies for agricultural cooperatives have not been offered in this chapter. Due to the importance of the agricultural cooperatives as the most important economical and social organization in the agricultural development and the rural development, the analysis of their performance is the main part of this study. So the following chapter will be devoted to deal with the agricultural cooperatives including the following issues:

1. The historical development of the cooperative movement in Egypt and the different laws of the agricultural cooperation,
2. The agricultural cooperatives structure in Egypt,
3. Main problems of the agricultural cooperatives in Egypt,
4. Presentation and classification of the previous studies agricultural cooperatives

Chapter 4: Egyptian Agricultural Cooperatives

4.1. Preface

Cooperation is an original popular interaction. The Egyptian cooperatives play a large and vital role in the light of the continuous economic and market mechanism in the current and next period *(Sedky , 1992 ; Al-Ganzory,1998).* *Rashad (1998 , p. 14)* referred, that the cooperation is an economic, social and democratic system that aims at boosting the community through organizing individual efforts to the benefit of the groups .The Egyptian cooperative sector provides and meets a vital part of the increasing individual service, consumptive and productive needs and in addition it participates in increasing exports. *(Rashad, 1992, p. 15)*.

Because of the important role of cooperation in the economic and social development in developing countries, the UN General Assembly issued a decree in December **1978** that includes the following issues *(Report 1984, p. 101; Rashad, 1998, p. 149)*:

- The General Assembly should consider that establishing and developing cooperatives is one of the most important tool of the economic, social and cultural development of all society members,
- The General Assembly should realize the importance of training and education programs for different levels with the aim of developing, diversion and increasing the cooperative activities.
- The General Assembly asserts the role of the cooperatives in helping and improving the poor classes of society (socially and economically) especially in the developing countries.
- The General Assembly indicates that the cooperatives are vital methods to increase woman opportunity for work as activists who participate in the process of development.
- The General Assembly asserts the social importance of cooperation as for the public participation in planning and decision-making.

Therefore, the issue of developing the agricultural cooperation is the most prominent goal of the activities in the current stage in Egypt regarding its importance in the society's economic, social and cultural development. The constitution emphasizes the government's responsibility to support and develop the agricultural cooperation through caring for the cooperative facilities as well as supporting the agricultural cooperatives according to the scientific bases as is included in the article (28) of the Egyptian Constitution. (*Rashad, 1998, p. 120*)

4.2. The historical development of the Egyptian agricultural cooperation

The Egyptian agricultural cooperative movement has experienced several stages searching for a way to protect farmers from any kind of exploitation as well as developing the agricultural production and the Egyptian village. Each stage has its own characteristics. Some rules and legislations were enacted in each stage to organize the cooperative activity. The following descriptions are the review for these stages including the rules and legislations of the agricultural cooperation in Egypt in each stage.

4.2.1. The first stage (1908 – 1923)

The history of the cooperative movement in Egypt can be traced to 1908 when Omar Lofty called to establish the cooperatives. The call was supported by the Egyptian National party as a part of the national movement efforts against the British occupation in order to free production resources and country management from the British occupation. In addition, these support aimed to promote the rural society that is greatly neglected until problems increased and farmers' economic and social circumstances got worse because of borrowing. In **1910**, the first agricultural cooperative was established by self-efforts of farmers without any support from the government in the Egyptian village of Shubra El-Namlah(Al-Gharbeya Governorate) with a capital amount of (250) Egyptian Pound.

In **1914,** the number of the household cooperatives in Egypt reached 17 cooperatives. Also, there were many attempts to issue a law for the cooperatives but the British occupation blocked this law fearing that the cooperatives may be changed into organizations that work against the interest of the British occupation and to get them out of Egypt (*Refaat, 1982, P. 252 ; El-Haydary, 1983, pp. 21 – 22 ; Nasr, 1995, P. 14 ; Rashad, 1998, P. 108)* . As a result, cooperation became an option with out any organizing legislation or law. Because of the absence of the direction and rules that govern work in the cooperatives, many agricultural cooperatives did not succeed in this period.

Till **1923** the cooperative movement showed signs of deterioration for several reasons, the most important of them are:

1. The State neglecting for the cooperative movement, did not issue a law that regulates, encourages and pays attention to cooperation movement.
2. Feudalists' fear that farmers may gather in cooperatives that may make call for their rights or avoid them some of the exploitation methods.

3. Lack of banks that finance the cooperatives' activities.
4. Lack of governmental authorities, which encourage, monitor, and supervise the cooperatives. *(Rashad , 1998 , p.108).*

4.2.2. The second stage (1923 – 1952)

In **1923**, the government issued law number 27 as the first cooperative legislation, which had several deficits; the most important of them were the followings:

1. The law described the cooperative as "a company" and considering it a capitalist structure aimed at achieving profit
2. The law neglected the social aspect of cooperation because it did not determine part of the company profits "the agricultural cooperative's profits" to perform the social and educational services for the members.
3. The law did not allow the agricultural cooperatives to accept any deposits from individuals who are not members in the cooperative that lessen the opportunity to maximize its capital and discourage other people to deal will its activities.
4. The law was only confined to the agricultural cooperatives rather than the other cooperative sectors.

According to this law, the number of the agricultural cooperatives reached 135 cooperatives in **1925**. *(Abo Al- Khear 1984 . p. 427 ; Nasr , 1995 , p. 15 ; Rashad , 1998, pp. 108 – 109)*

In **1927**, the second cooperation law No. 23/1927 was issued to avoid the shortcomings of law No. 27/1923. So, this law included different kinds of cooperatives .The law has stipulated establishing cooperatives consortiums to spread cooperative education and training. Upon this law, number of cooperatives increased up to 297 in **1930**. Moreover, lending the cooperatives was organized where the government opened a special account in the Egypt Bank in order to provide loans to the cooperatives estimates at 350000 Egyptian Pound. *(Nasr, 1995, p. 15; Rashad, 1998, p. 109).*

In **1931**, the Egyptian Agricultural Credit Bank was set up by the government and it was entitled the responsibility of lending the agricultural cooperatives and farmers. The government did not put a maximum amount of loans provided by the bank to the agricultural cooperatives or farmers. *(Rashad, 1998, p. 109)*.

In **1944**, farmers were in great need to authorities that could help them in the fields of the productive and consumptive life, especially after the economic crisis during the Second World War. As a result, a new law for cooperation, that is, law No. 58/1944, was issued. This law allowed the installing of the share for the cooperative's member to provide the opportunity for poor to get the membership of the cooperatives. In addition, this law gave the cooperatives some advantages such as duties and taxes exemption in addition to providing them with material and abstract aids. This law also paid attention to the social functions of the cooperatives. Upon this law, the government started in monitoring the cooperatives as it gave the Cooperation Department of the Ministry of Social Affairs the authority to control, check and audit account and minutes of the cooperative boards. Under these conditions, the way for public cooperative movement was paved through gathering the cooperatives efforts in cooperative unions and public associations to serve this movement .In addition, the supreme cooperative and consultative council were established in the governorates. *(Nasr 1995, p. 16; Rashad, 1998, p. 110)*.

In **1948**, the number of the agricultural cooperatives became 1664 cooperatives. Landholders, feudal lords and features of authority and influence only exploited the agricultural cooperative services. *(Rashad, 1998, p. 110).*

In **1949**, the Agricultural Credit Bank, which was established in 1931, that aimed at only financing the agricultural cooperatives and farmers for agricultural purposes, was developed to be the agricultural and cooperative credit bank with its shares only owned by the government and the cooperatives with their different kinds. In addition, its activity included financing all kinds of the cooperatives with their different purposes. *(Abo Al-Khear 1984*, *p. 436*; *Rashad, 1998, p. 110)*

4.2.3. The third stage: After the Egyptian Military Revolution of July 23, 1952

The Revolution took the cooperation as a slogan, so, there were great needs to issue new cooperatives legislations .On 9 September1952; the government issued the law of the agricultural reform No. 178/1952. Upon this law, farming lands were distributed to little tenants to put an end to the ascendancy of top landlords, as putting a maximum to the agricultural property. The agricultural reform cooperatives were established, to help the agricultural producers through providing them with all agricultural production requirements and marketing their products as well as achieving other different agricultural and social

services. One of the most items of this law may be the necessity of joining all farmers who got the agricultural lands, into a cooperative and agricultural organization (*El-Haydary, 1983, pp. 26 – 27 ; Report on cooperative marketing ,1986, p. 9 ; Rady , 1987 , p. 273 ; Nasr , 1995 , p. 16 ; Rashad, 1998, p. 110*).

Article (19) of the agricultural reform law No. 178/1952 determined the activities of the agricultural cooperative as the following:

1. Crediting the cooperative's member's according to the needs of land possessed.
2. Providing the cooperative's member's with all agricultural requirements including seeds, fertilizers and agricultural mechanisms and marketing facilities.
3. Helping the cooperative's members to organize their land implanting and exploiting through seed selection, crops classification and digging canals and drainage ditches.
4. Marketing main crops for the cooperative's members.
5. Performing all the required agricultural services for the cooperative's members as well as social services.

The law stipulated that the cooperatives practice their activities under the supervision of an agricultural supervisor appointed by the Ministry of Agriculture, which is the specialist administrative authority. *(Rashad, 1998, p. 112).*

In **1956**, the law No. 317 was issued. According to this law, all kinds of cooperatives were subjected to the government supervision to put an end to the reasons of the cooperative movement inefficiency as before the Revolution of 23 July 1952. The government issued this rule to overcome the following problems:

- Lack of official monitoring on the cooperatives ,
- Foreclosing the riches, merchants and landlords in villages with their influence to direct the policy of the agricultural cooperatives to meet only their personal interest,
- Insufficiency of financing in spite of establishing the Agricultural and Cooperative Credit Bank ,
- Insufficiency of mass media, cooperative extension to meet the framer's needs, combating merchants and undertakers against the processes of the cooperative marketing. *(Rashad, 1998, p. 110*).

The most prominent positives of law No. 317/1956 were the followings:

- Flexibility of establishing cooperatives without complexes ,
- Encouraging persons to join the membership of the cooperatives through putting a minimum value for shares in addition to ease in paying and the possibility of returning the share value any time,
- Putting necessary legal principles for the cooperative credit in order that a large number of members may make use of it through setting up a cooperative box supervised and supported by the government,
- The law also targeted the democratic election principles of the board of directors according to signs that assure the honesty of members and sound choice as putting a maximum extent to the board membership period. (*Nasr , 1995, pp. 16 – 17*).

Under the shadow of this law, an agricultural and cooperative credit system executing was established (during **1957 –1961**) aiming at vertical increasing production through expanding in provision of the necessary agricultural credits and machine services. In addition, the agricultural and cooperative credit system aimed at the agricultural horizontal expanding through expanding in providing loans for land reclamation, marketing the agricultural crops cooperatively, increasing animal production and industrializing agricultural products. It aimed also at achieving social projects to enhance the farmers' standard of living and improving the environment. Because of establishing the agricultural and cooperatives credit system, the agricultural cooperatives have covered all villages in Egypt. *(Rashad, 1998, pp. 110 – 111)*.

The multi-purposed agricultural cooperatives practiced their activities through the agricultural and cooperative credit system, which aimed at the followings:

1. Dealing with the Agricultural and Cooperative Credit Bank on credits is only confined to the agricultural cooperatives that provide all credit services to their members.
2. Developing the activities of the agricultural cooperatives towards the integration of the economic services, which start by preparing farming lands in a suitable time , importing selected seeds, agriculture services, confronting the problems of irrigation and agricultural sewage , combating insects , and end by cooperative marketing for crops. In addition, this developing aims at establishing the economic projects, which are developed to increase the income of members and their families, as well as supporting the necessary social projects in the domain of the cooperative. (*Rashad , 1998, pp. 112 – 113*).

In **1960**, a law of public cooperative institutions was issued. A public agricultural cooperative institution was established on the Republican decree No. 2137/1960, that paid attention and determined the main features of the public agricultural cooperative sector policy. This law aimed at developing the agricultural cooperative sector through providing technical and financial facilities for the cooperatives and directing their activities and monitoring in order to increase the agricultural production, raise the economic and social standard of farmers, and increase the national income. (*Rashad, 1998, p. 113*).

However, during (**1961–1967**) the cooperative movement was deteriorated greatly, to that all farmers made compliance of cooperatives as a result of increasing managerial problems within the cooperatives in addition to bad provided services. (*Gad El-Rab, 1989, p. 10)*. Several specialized committees were established to conduct field studies for the agricultural cooperatives in Egypt to identify problems and inefficiency as well as reasons of the cooperatives members' mistrust. As a result of these studies, law No. 51/ 1969 was issued (*Nasr ,1995, p. 17*) .

In **1969**, the Independent Agricultural Cooperation Law No. 51/1969 was launched as an indication to a new movement in the history of the agricultural cooperative movement in Egypt. The most important items of this law were the followings:

- The law referred to the agricultural cooperation as the most important kind of cooperation.
- The law provided all main rights and specialization to the agricultural cooperatives members, that are considered as the legal owners represented in the General Assembly, who choose the cooperative boards.
- The agricultural cooperative practices its work upon the State's policy and plan.
- The law provided many rewards and bonus to board members and cooperative's staff in order to encourage them to achieve the success of the cooperative.
- The law paid attention to the role of the popular and governmental control over the agricultural cooperatives.
- The law considered the central agricultural cooperative union as the top of the agricultural cooperative structure. *(Rashad, 1995, p. 115)*.

According to the articles No. 57, 65 of the law No. 51/1969, the most important functions of the central agricultural cooperative union are as following:

- Establishing a specialized system to audit and credit the cooperative accounting.

- Participating in implementing the governmental strategy of the agricultural sector.
- Representing the Egyptian agricultural cooperative system inside and outside.
- Spreading and supporting the cooperative movement in Egypt.
- Providing assistance in preparing the agricultural cooperative legislations and reconsidering them before being issued.
- Providing assistance to the agricultural cooperatives in achieving their purposes especially crediting, exporting and marketing.
- Exchanging the cooperative experience at the international level and encouraging high studies in the field of cooperation.
- Achieving specialized researches and studies in the field of cooperation as well as spreading their results and recommendations.
- Linking the agricultural cooperative sector to the other cooperative structures. (*Rashad, 1995, p: 115)*.

In **1976**, the law No. 117/1976 was issued. It relates to establishing the Principle Bank for Development and Agricultural Credit (PBDAC). This law gave the PBDAC some of the tasks, so that the agricultural cooperatives lost their properties and warehouses. Because of this law, the agricultural cooperatives were deprived from providing members production requirements that resulted in loosing an important source of the cooperative financial resources that weakened its financial position (*Hamad , 1994 , p : 143*) . In the same year the Republican decree No. 824 / 1976 was issued to cancel the central agricultural cooperative union that had many tasks and specializations according to law 51 / 1969 , mentioned previously . Therefore, the cooperative movement could not work without the central agricultural cooperative union, which was considered as the top of the agricultural cooperative structure. *(Hamad ,1994, 12 – 13)*. Then another Republican decree No. 825/1976, canceled the public authority for the agricultural cooperation. (*Abo Al-Khear, 1984, p. 445)*.

In **1980**, there was a need to only one law for all kinds of agricultural cooperation in Egypt. Therefore, the law No. 122 / 1980 for the agricultural cooperation was issued. According to this law, the agricultural cooperatives are formed where it was necessary and according to the nature of their activities in the fields of plant production, animal production, fish production and land reclamation. Each of these fields should have its own independent cooperative structure to serve its activities with a general assembly at the top. The central agricultural cooperative union was considered as the top of these sub structures. (*The Egyptian law for the*

agricultural cooperation, No. 122 /1980, the second chapter, article No. 3). The most important judgments of this law could be summarized as the following:

- The cooperation is a democratic public movement sponsored by the state with the cooperation participating in implementing the State public plan for the agricultural sector.
- The local multi-purposed cooperatives practice their work in the field of services, production, marketing and rural development required by the members at the area of their work.
- The cooperative has the right to possess , hire , reclaim and run the agricultural lands on the way that achieves its purposes and according to rules issued by the minister concerned
- The cooperative could provide its services to persons who are not members within the framework stipulated by the executive bill and the inner discipline.
- The cooperatives can establish a cooperative bank shared by the cooperative with their legal characteristic as well as their members in order to provide loans and establish the projects necessary for the cooperatives at their different levels and kinds.
- Surplus are distributed as the following:
    - 5 % for humanitarian and social services ,
    - 5% for public services and spreading the cooperative and cultural awareness among the cooperative members ,
    - 5 % for the cooperative training and the different training programs ,
    - 5% for caring farmers and workers in the agricultural cooperatives,
    - 10% as a maximum are paid to the board members as production rewards
    - At least, 20% of the surplus mentioned for the legal reserve ,
    - 3% for supporting the cooperatives weak financial centers and to repay due debts of the liquidated cooperatives ,
    - The rest of the surplus is distributed to the cooperative members as a return for them according to their dealing with the cooperative.
- The member of the cooperative is the person who works in the field of agriculture and has land to plant whether as an owner or a renter. Also, the person who works in the field of plant- and animal-production or land reclamation.
- The General Assembly is considered to be the supreme authority.
- Each member has only one vote whatever the number of shares he owns.

- A cooperative subjected to this law is exempted from taxes, duties of registration, establishment, publication, authentication improvement and duties of hallmark and costumes.
- The cooperatives , subjected to this law , enjoy the following advantages :
  - 25 % reduction from the fees of transporting their imports and exports.
  - 50 % reduction from analysis duties in the governmental and public sector chemical laboratories.
  - At least a 5 % reduction of the prices of production requirements as seeds, fertilizers and insecticides, which are provided by the government, public, authorities, public sector companies or by the PBDAC.
- The ministry of agriculture supervises, directs and verifies the application of laws, bills and financial and administrative instructions of the cooperatives.
- The State provides the technical and financial aids for the cooperative through the concerned administrative authority.

The disadvantages of law No. 122 / 1980, which are considered as obstacles that prevent the agricultural cooperatives to meet with the new economic changes, could be summarized in the followings:

1. The law prevented establishing companies or participate in them to establish agricultural projects.
2. Reduction of the prescribed ratio, which is distributed as a return to members.
3. Set limits to the board rewards and the fees of the officers mandated to work in the cooperatives that create a feeling of frustration and discourage exerting more efforts to develop the cooperatives.
4. Membership is an obligation that creates a feeling of indifference towards the importance and usefulness of joining an agricultural cooperative. (*Hamad, 1994 , p. 155).*

In **1984**, the law No. 28 was issued in order to establish the Public Union of the Cooperatives. In **1986**, the law No. 186 was agreed, which aimed at canceling some exemptions and concessions stipulated in the previous cooperation laws.*(Hamad,1994, p. 21).*

4.3. The agricultural cooperatives structure in Egypt

Agricultural cooperative societies are considered socio-economic units aiming at the development of the different agriculture aspects, as well as the welfare of rural areas within their jurisdictions. The overall objectives of agricultural cooperative societies are to advance the economical and social levels of their members within the framework of the state's overall plan. *(Taryal, 1999, p. 20).*

4.3.1. General structure of agricultural cooperatives

Agricultural cooperation law No. 122 of 1980 delineated the scope of work for agricultural cooperation. Cooperative structure shall be made up of the agricultural societies and the central agricultural cooperative union. Agricultural cooperation has three compasses or arms. For each compass, there is a sub-cooperative structure on its top. The **three** structures are:

1. **Land reform cooperatives**

   These cooperatives were established according to law No. 178 of 1952. Egypt has 778 cooperatives, of which Menoufiya Governorate has 27 cooperative societies for land reform. *(Table, 4 – 1), (Table, 5 – 3).*

2. **Land reclamation and reclaimed lands cooperatives**

   These cooperatives were founded in the new lands according to law No. 100 of 1964 and No. 143 of 1981. Egypt has 676 cooperatives for land reclamation and reclaimed lands. (*Rashad, 1998; Taryal, 1999, pp. 20 – 21).* Menoufyia Governorate has not any cooperatives for land reclamation and reclaimed lands.

3. **Agricultural credit cooperatives**

   They are considered as the most important cooperatives in Egypt. Its scope of work covers the old lands, which have the infrastructure and services almost completed. Egypt has 5221 agricultural credit cooperatives including (802) specific agricultural cooperatives with only one purpose, (4419) multi – purposed agricultural cooperatives of which there are (4263) local agricultural cooperatives that are located in the villages. Table 4 – 2 shows the type and number of the agricultural credit cooperatives in Egypt.

Table 4 – 1: Type and number of the land reform cooperatives in Egypt

Type of agricultural cooperative societies	Agricultural cooperatives for multi-purposes				
	Local cooperative societies These societies are located at the Village level	Joint cooperative societies These societies are located at the District level	Central cooperative society These societies are located at the Governorate level	General cooperative society This society is located at the National level	Total
Number of agricultural cooperative societies	689	70	18	1	778

Source: Own modification from Rashad (1998, pp. 374 – 375)

Table 4 – 2: Type and number of the agricultural credit cooperatives in Egypt

Type of agricultural cooperatives	Agricultural cooperatives for multi-purposes				Specific agricultural cooperatives with only one purpose		Total
	Local agricultural cooperatives These societies are located in the Villages	Joint agricultural cooperatives These societies are located in the Districts	Central agricultural cooperatives These societies are located in the Governorates	General agricultural cooperative This society is located at the national level	Cooperative societies at the village level	Cooperative societies at the Governorate level	
Number of agricultural credit cooperative societies in Egypt	4263	133	22	1	732	70	5221

Source: Own modification from ACACA *(1999, pp. 21 – 22).*

4.3.2. Structure and main objectives of the agricultural credit cooperatives

The agricultural credit cooperatives societies structure consists of **two** main types they are:

1. **Specific agricultural cooperatives with only one purpose**

The specific agricultural cooperatives societies structure consists of **two** levels, they are:

(a) Cooperative societies at the village level

These societies are located in the villages. Egypt has 732 cooperatives, of which Menoufiya Governorate has 23 cooperative societies at the village level.*(Table, 4 – 2), (Table, 5 – 4).*

(b) Cooperative societies at the Governorate level

Egypt has 70 cooperatives, of which Menoufiya Governorate has 2 cooperative societies at the Governorate level. *(Table, 4 – 2), (Table, 5 – 4).*

2. Agricultural credit cooperatives for multi-purposes

The structure of agricultural credit cooperative societies for multi purposes consists of **four** levels, they are:

(a) The local cooperative societies

These societies are located at the village level. Egypt has 4263 societies, of which Menoufiya Governorate has 283 cooperative societies at the village level.*(Table, 4 – 2), (Table 5 – 4).*

(b) The joint cooperative societies, they are located at the district level. Egypt has 133 societies, and Menoufiya Governorate has 8 cooperative societies at the district level. *(Table, 4 – 2), (Table, 5 – 4).*

(c) The central societies: They operate at the governorate level. These are 22 societies in Egypt, and one society in Menoufiya Governorate. *(Table, 4 – 2), (Table, 5 – 4).*

(d) The general society for agricultural credit at the national level. *(Table, 4 – 2).*

4.3.2.1. The local cooperative societies

4.3.2.1.1. Functional structure

The functional structure of the local cooperatives consists of the following **two** elements:

1. Labor:

It consists of:

- Permanent labor, which consists of agricultural supervisor and accounting clerk.
- Seasonal temporary labor, which consists of security guards or wardens and daily workers.

2. Board of Director

It consists of:

- Chair of the Board.
- Secretary of Board.
- Members of the Board.

4.3.2.1.2. Main objectives and services

The main objectives and services of the local cooperative societies could be summarized in the followings:

- The provision of production inputs for members (fertilizers, pesticides, seeds and machinery).
- Guaranteeing members' loan application at the banks.
- Marketing members' production at best prices possible either through delegating the general meeting or contracting out with different marketing agencies.
- Setting up of collective or communal projects aiming at enhancing the economical and social level of the members such as dairy processing projects (small units), oil extracting mills, building of schools, distribution of chicks, rabbit batteries, beehives, bakeries, and iron-smith workshops.
- The provision of agricultural machinery, through either renting out or selling at lower costs.
- Participation in solving problems pertaining to irrigation and drainage for members.

4.3.2.2. The joint cooperative societies

The joint cooperative society includes in its membership between 6 to 8 local cooperative at district level.

4.3.2.2.1. The functional structure

The functional structure of joint cooperative societies consists of a Board of Directors and includes the following:

1. A chair of joint cooperative society.
2. A secretary of joint cooperative society.
3. A treasurer.
4. Members of joint cooperative society are the heads of local cooperative societies.

4.3.2.2.2. Main objectives and services

The joint society shall – with the assistance of its constituting societies in all fields – discharge its duties and create projects as may be of service to the local societies affiliated to it, and more particularly:

- Set up fixed or mobile workshops for the repair, maintenance and overhauling of all kinds of machinery, implements and equipment owned by the societies and their

members to ensure the best Operation of the implements; oversees the management and operation of these tools, and inspects them.

- Create agricultural-industrial projects, cottage industries; manage and operate them for the benefit of the affiliated societies.
- Create warehouses or refrigerators where production requisites shall be stored and crops preserved.
- Own operate means of conveyance and transportation to serve its members.
- Participate in the cooperative marketing operations of the crops of its members.

4.3.2.3. The central cooperatives

4.3.2.3.1. The functional structure

The functional structure of the central cooperatives consists of the following:

1. The head of the central cooperative,
2. The Secretary of the central cooperative,
3. The treasurer,
4. Members representing local societies

4.3.2.3.2. Main objectives and services

The central societies support its constituent societies and help them in performing their functions, especially the following:

- Set up of a technical unit to control, supervise and inspect the administrative, financial, warehouse, bookkeeping works of the governorates societies. Moreover, the unit is responsible for suggesting optimum systems to run the financial, accounting and administrative systems.
- Set up a training center at the central level that would be responsible for cooperative, technical and administrative training for the members of cooperatives and their personnel.
- Set up of food processing projects, rural industries and their management for the benefit of their members.
- Disseminating cooperation awareness at the governorate level with all available means.
- Provision of spare parts needed for machinery owned by societies and their members. Set up of central workshops for repairs that couldn‘t be done at joint co-operative societies’ workshops.

4.3.2.4. The general cooperative society

This society is located at the national level. It is the top of the agricultural credit cooperatives structure in Egypt.

4.3.2.4.1. The Structure of the general cooperative society

It includes in its structure the following:

- 4263 local societies at the village level
- 133 joint societies at the district level.
- 22 central societies at the governorate level.

4.3.2.4.2. Main objectives and services

The main objectives and services of the general cooperative society could be summarized as the followings:

- Provision of machinery, spare parts, input supplies for local cooperative societies
- Cooperative marketing of local societies and their members' production
- Exporting production for local societies and their members
- Setting up projects on cooperation principles
- Providing services in the field of training, research, statistics and extension for affiliated units
- Following-up of cooperative activities for cooperative structural units, setting up cooperative policies and the implementation programs for these policies
- Coordinating relations between cooperative structural units.
- Setting up funds needed to support cooperative economic activities in the field of the agricultural credit.

4.4. Main problems of agricultural cooperatives in Egypt

The agricultural cooperatives in Egypt face several difficulties and problems that hinder them from performing their roles and functions. Several studies and researches were conducted to identify the most critical obstacles and problems.

The results of the study conducted by *Halol and El-Kholy (1960)* referred to the most critical social and economic factors that lead to the failure of the agriculture cooperatives in achieving their goals and performing roles destined . These factors could be summarized as the followings:

1. Weak awareness of the farmers' urgent economic need for the cooperatives.
2. The economic and social differences among the members of the agricultural cooperatives.
3. Low levels of administrative efficiency of the agricultural cooperatives.
4. Shortage of cooperative financing and the shortage of the financial position of the agricultural cooperatives
5. Cooperatives shortage in providing and achieving the social activities.

Another results of a study conducted by *Moharam et al.(1983)* referred to another group of problems and difficulties that the cooperatives face ,which are:

1. Members weak loyalty to the agricultural cooperatives
2. Lack of cooperation among the agricultural cooperatives as for the lack of awareness of the importance of integration among the units of the cooperative structure
3. Shortage in the agricultural cooperatives role in marketing crops and agricultural products.
4. The cooperatives disability to provide fertilizers in appropriate amounts in a reasonable time.
5. Farmer's satisfaction to the quantity and date of fertilizers distributed by the cooperatives
6. Shortage of agricultural machines in the agricultural cooperatives
7. Shortage of the social role played by the agricultural cooperatives
8. Inappropriate internal equipments and utilities in the buildings of the agricultural cooperatives

El-Yamany, El-Danasoury et al. (1988) referred to another group of problems which are :

1. The lack of the productive projects in the areas served by the agricultural cooperatives
2. The problems related to irrigation, agricultural drainage including impurity of ditches and canals – inappropriate amounts of irrigation water in suitable time.
3. The lack of competent agricultural guides in the agricultural cooperatives.
4. The low education and training level of workers in the agricultural cooperatives.
5. High rate of illiteracy among farmers that reached 97% of the farmers' total number in addition to the cooperatives disability to organize education and enlightening programs for combating farmers' illiteracy.
6. Farmer' low cooperative awareness.

The results of the study conducted by *the Institute of Blanket for the cooperative studies (1989)* referred to the most critical obstacles and problems that hinder the development of cooperatives in Egypt. These results could be summarized as the followings:

1. The Egyptian government undeclared fear of the cooperatives being exploited by the opposition parties, so, it set several limits that led to the deterioration of the cooperatives.
2. Disallowing farmers to carry but one cooperative membership.
3. The lack of financing required for cooperatives.
4. The government hegemony over exports and imports in addition to disallowing the cooperatives to export the agricultural products abroad as well as disallowing exporting of machines and production requirements necessary from abroad .
5. The Egyptian government links supporting the cooperatives with running them through appointing governmental officers who assume the responsibility of running these cooperatives that changed them into semi- governmental organizations .

Hamad (1994) has classified the problems and obstacles that affect negatively on the economic efficiency of the agricultural cooperatives into:

Firstly: Problems related to financing, which are:

1. Shortage of the agricultural cooperatives' capital,
2. Loans high rate of interest provided from banks to the cooperatives.

Secondly: Problems related to the cooperative marketing of crops and agricultural products, which are:

1. Shortage of financing necessary for marketing the agricultural crops,
2. Shortage of marketing information on local or international markets,
3. Shortage of stations for sorting the agricultural products, packing, drying and preserving,
4. Shortage of stores suitable for storing the requirements of the agricultural crops.

Thirdly: Legislative 'legal' obstacles, which are:

1. Disallowing the agricultural cooperatives to set up agricultural firms or participating in establishing great agricultural productive projects but after getting the approval of the authority Ministry of Agriculture supervises.
2. Disallowing the agricultural cooperatives to buy the production requirements directly from agricultural factories or the private companies,

3. Low rate of interests to dealings expected to be distributed,
4. Enforcing farmers to have the agricultural cooperatives membership,
5. Disallowing members to carry but one agricultural cooperative membership,
6. The several numbers of the administrative bodies that supervise and monitor the agricultural cooperatives.

4.5. Previous studies on the Egyptian agricultural cooperatives

4.5.1. Presentation of previous studies

This part includes a review of some available studies that aimed at identifying the role of the agricultural cooperatives in the rural development in general and the agricultural development in particular. These studies will be viewed hierarchal in order to identify the development of the scientific interest in studying the agricultural cooperatives and their role in the processes of development.

A study conducted by *Halol and El-Kholy (1960)* identified the social and economic factors, that lead to the failure of the agricultural cooperatives in Al-Behira Governorate. This study pointed to the most important factors as the followings:

1. The farmer's weak awareness of the urgent economic need for the cooperatives services,
2. The economic and social differences among the members of the agricultural cooperatives,
3. The low Level of the administrative efficiency of the agricultural cooperatives,
4. The low level of the agricultural cooperatives financial position,
5. The agricultural cooperatives shortage in providing and achieving the social activities.

A descriptive study conducted by *Asphahani (1972)* identified the factors, which affect the farmers' behavior and their opinions towards the agricultural cooperative in Assiut Governorate. The results of this study showed that:

- 71% of the agricultural cooperatives members agreed that the agricultural cooperative is owned by the government,
- 90% of members expressed their satisfaction to the way of providing monetary and material credits by the agricultural cooperatives.
- 80% of members expressed their unsatisfaction to the quantity of fertilizers provided by the cooperative.

- 53.5 % of members expressed their unsatisfaction to insufficient number of tractors, 70% of members were not satisfied with the cooperative provision of irrigation machines.
- 84.5% of the members were not satisfied with the participation and the role of the cooperatives in the programs of family-planning.
- 75% of members were did not accept the information services provided by the agricultural cooperatives.
- 60% of members have claimed persistently stay in their societies
- 77% of members were satisfied regarding the services provided by the committee of the agricultural dispute settlement and conciliation among farmers.

The results of the study conducted by *Khalil et al. (1981)* to assess the agricultural cooperatives through identifying the role of these cooperatives, importance and extent of success in achieving their economic and social goals, referred that:

1. 98 % of farmers emphasize the importance of the services provided by the agricultural cooperatives and their effective impacts to the agricultural activity.
2. The agricultural cooperatives could provide peasants with seeds, but they could not provide the other requirements of production.
3. The cooperatives established a number of the projects of poultry, beehive and animal rearing.
4. As for the agricultural cooperatives social activity, the cooperatives provided the social and material support for the needy farmers as well as participating in building and reconstruction mosques and supporting the consumptive cooperatives.
5. The agricultural cooperatives has a shortage in providing monetary credits for farmers
6. The agricultural cooperatives shows deficits in marketing products and agricultural crops.

In a study conducted by *Moharam et al. (1983)* aimed at identifying the most critical problems that the cooperatives face. As following, the most important results are:

1. Low level of members' loyalty for the agricultural cooperatives.
2. Lack of cooperation among the agricultural cooperatives as for lacking awareness of the importance of the integration among the units of the cooperative structure.
3. The insufficient role of the agricultural cooperatives in marketing the agricultural crops and products.

4. The agricultural cooperatives are considered the most easiest source for farmers to get monetary credits.
5. Farmers' satisfaction to the role of the cooperatives in providing seeds in suitable quantity and time.
6. Farmers' unsatisfaction to the quantity and time of fertilizers distribution provided by the agricultural cooperatives.
7. Inappropriate number and kinds of agricultural machines provided by the cooperatives for its members.
8. Shortage in the social role played by the agricultural cooperatives.
9. 66% of the agricultural cooperatives have buildings suitable for performing their functions.
10. Inappropriate internal equipments and utilities in the building of the agricultural cooperatives.

A study conducted by *Al-Adly (1984)* on 137 cooperatives in the Egyptian governorate of Kafr El-Sheikh to identify the factors related to the efficiency of the agricultural cooperatives , set four pillars of efficiencies which are the goals: achievement, adaptation, economic efficiency and satisfaction to work within the agricultural cooperative . Moreover, the study, concentrated on the following independent variables:

- The organization size (number of employees , number of members , total area , and total capital),
- External and internal communication,
- Organizational complexity (number of professional sections , number of job classes),
- Technology , job position ,and
- Comprehension and expertise.

The most important result of this study was that the independent variables could explain the following ratios of differences in the dependent variables:

1. Twenty eight percent of difference in the degree of the agricultural cooperatives adaptation,
2. Sixty two percent of difference in goal achievement,
3. Sixty four percent of differences in economic efficiency,
4. Fifty four percent of difference in satisfaction to work within the agricultural cooperative.

The results of *Elsayed's* study *(1985)* aimed at identifying the agricultural cooperatives' roles in improving levels of nutrition for their members and people of local community ,referred that:

1. The agricultural cooperatives have no role in improving the levels of nutrition for members, although the country nutritious problem is well known.
2. In future, the agricultural cooperatives can participate in solving the country nutritious problem at least through spreading the nutritious information as a part of their activities.

Another study conducted by *Gamie et al.(1987 B)* aimed at identifying the factors that affect on the efficiency of the performance of the agricultural cooperatives in the process of rural development . This study was carried out on a random sample of 228 agricultural cooperatives, which were chosen from four governorates, that are, Al-Gharbia, Kafr El-Sheikh, Alminya and El Giza. The study showed the following results:

1. There is a positive correlation between the efficiency of the cooperative performance (the subordinate variable) and the number of employees in the agricultural cooperative , provision of the agricultural machines in the cooperative and the coordination between the agricultural cooperatives and the other organizations in the village ,
2. There is a negative correlation between the extent of providing ways, transportation in village and the competent performance of the agricultural cooperatives.
3. The independent variables explained 43.5% of differences in the efficiency of the agricultural cooperatives.

A study conducted by *El-Yamany et al. (1987 A)* which was carried out to identify personal features and the social and economic positions of the agricultural cooperatives members and the problems they face in their local community, referred the following results:

1. Because of the low education level of the cooperatives members and high rates of illiteracy among them, several informal programs of education, training should be provided.
2. The agricultural cooperatives have no role in solving the problems that the farmers face such as the lack of providing agricultural machines and irrigation water and the problem of marketing the agricultural products.
3. Most farmers "members" do not attend the meetings of the general assembly and other meetings of the cooperative as for their negative attitudes towards the agricultural cooperative. Therefore, the study recommended the agricultural cooperatives to exert necessary efforts to encourage farmers to attend the cooperatives meetings and

expressing their views and attitudes towards the cooperative policies. The best way for doing that is that the cooperative policies should provide more activities and services that those farmers need, which affects positively their attitudes and views towards the agricultural cooperative.

4. Most farmers do not have enough information about the principles of the agricultural cooperation and are not aware of the cooperatives board's activities as well as the tasks of the agricultural cooperatives managers.
5. The decreasing number of farmers who participated in the agricultural training courses referred that guiding and training services are not available for all farmers. The study referred at the necessity of organizing training courses for farmers in various agricultural fields.

El-Yamany et al. (1987 B) conducted another study that aimed at identifying the economic and human resources of the agricultural cooperatives as well as studying the organizational effectiveness of these cooperatives that was measured through three pillars : achieving the social and economic goals , the cooperative investment effectiveness and the extent of self-dependence on providing the requirements of the agricultural production. The dependent variables of this study were represented in the provision of capital, economic surplus, membership size, reserve capital and the size of monetary assets. The study referred at the following results:

1. There is no correlation between the organizational effectiveness and both economic surplus and reserve capital.
2. There is a positive correlation between the organizational effectiveness and the size of the monetary assets.
3. The study's result of such a negative relation is due to that the agricultural cooperatives kept the monetary assets for long time without investing them economically that reduced its ability to provide its services, activities and achieving its economic and social goals.

El-Yamany et al. (1987 C) conducted a study about the human and training resources of the agricultural cooperatives. It was conducted on 61 cooperative managers who were chosen to be studied .The study showed the following results:

1. The majority of the cooperative managers are agricultural secondary graduates and, in turn, their administrative experiences are limited that refers to their need to extensive training courses aiming at raising the level of their administrative abilities.

2. The cooperative managers face some problems represented in the difficulty of moving between their residence and the place of the agricultural cooperative because of shortage in transport facilities.
3. As for the ability of the cooperative managers to solve the problems that members face , the study referred that most managers succeeded in solving the problems that the members face as well as helping them in making the appropriate decision and setting solutions according to the members' suggestions.

The social and economic study conducted by *El-Yamany, El-Danasoury et al. (1988)* about the agricultural cooperatives referred at the following results:

1. A lack of productive projects in the areas served by the agricultural cooperatives.
2. Inadequate agricultural machines.
3. There are several problems related to irrigation and agricultural drainage, including the impurity of ditches and canals - the inadequate quantity of irrigation water.
4. A lack of cooperative marketing for agricultural crops.
5. A low education level of the agricultural cooperatives personnel.
6. A lack of agricultural extension in the agricultural cooperatives.
7. High rate of illiteracy among farmers that reached 97% of the total number of peasants in the research sample.
8. The cooperatives disability to provide farmers with fertilizers in suitable quantities and time.
9. The farmers' low level of cooperative awareness.

Mansour conducted a study *(1988)* on rural organizations and their roles in the agricultural guidance. The study was conducted in the Egyptian villages of Seedy Salim District, which related to Kafr El-Sheikh Government. Four rural organizations were chosen to identify their roles in the agricultural guidance. They are agricultural cooperative, local unit, health unit and the rural youth club. The results showed that the most important activities provided by the agricultural cooperatives are:

- Spreading information on the ways of using the requirements of the agricultural production (seeds- fertilizers- pesticides).
- Making farmers aware of and guiding them to the appropriate, such as: methods of agriculture, dates of harvest and ways of combating pests.

- Distributing the magazine of agricultural extension and agricultural publications, those include several recommendations, holding guiding symposiums and meetings and the provision of guiding fields.
- Preparing programs for the rural woman awareness in the fields of domestic economy and family.
- Training rural leaders.
- Participating in village developmental projects.

Results indicate that 95% of farmers made use of the activities provided by the agricultural cooperatives with their positive opinions towards the agricultural cooperatives.

Gad El-Rab conducted a study *(1989)* to identify factors that affect the cooperatives` organizational effectiveness. A sample of 129 cooperatives was chosen to be studied including 67 in Al-Gharbia Governorate, and 62 in Kafr El-Sheikh Governorate. The dependent variable (the organizational effectiveness) is formed of six pillars, which are the cooperative proficiency, the extent of providing machines and tools within the cooperative, change average of agricultural crops production, average of profitability per Feddan[*], the investment efficiency of the agricultural cooperatives and the cooperative guide efficiency.
The results of this study indicated that:

- There is a positive correlation between the organizational effectiveness and each of the independent variables, which are cultivated areas in the villages which are benefiting from the cooperative activities, the kind of soil, the rate of smuggling from rotation of crops and the extent of peasants seeking agricultural information and technologies.
- The independent variables explained 20% of the variance in the effectiveness of the agricultural cooperatives.

A study conducted by *the Institute of Blanket for Cooperative Studies (1989)* aimed at creating a suitable environment and conditions for the cooperative development in Egypt and identifying the most important obstacles that hinder the development and growing of cooperatives in Egypt. The study's results referred to the following obstacles:

1. The government fears undeclaredly that the opposition parties may exploit the cooperatives, so it set many obstacles that led the cooperatives not to be developed and promoted.

[*] One Feddan = 4200.8335 m^2 – One Hectar = 10 000 m^2 – (One Feddan = 0.42 Hectar)

2. Disallowing a peasant to carry the membership of more than one cooperative.
3. The lack of an adequate financing for cooperatives.
4. The government hegemony over exports, imports, and disallowing cooperatives to export and import goods, tools and products.
5. The Egyptian government's links supporting the cooperatives by running them through appointing governmental staff who assume the responsibility of running these cooperatives, so they turned them into semi- governmental organizations.

The study recommended that the Egyptian government should bring about necessary several changes for providing suitable environment and conditions for the development and growth of cooperatives, which are:

1. The cooperatives being independent from the government that allows it to be developed as independent organizations.
2. Reviewing the current legislations to eliminate the obstacles against the development of cooperatives.
3. Allowing the cooperatives to export and import goods and necessary tools for achieving their goals.
4. Spreading the concept and principles of the cooperative work and organizing specialized training courses for staff and board members.
5. Facilitating the establishment of a cooperative bank to provide financial needs necessary for the cooperatives.
6. The government should not consider the cooperatives as a means for getting food to the urban areas, but as a means to provide nutrition production for which farmers earn attractive prices.

A study conducted by *the International Organization for the Development of the Agricultural Cooperation* in *U.S.A (1990)* aimed at evaluating the Egyptian agricultural cooperation with the aim of providing the American aid agency with information about the Egyptian agricultural cooperation as an introduction for providing the necessary aids for developing it. The following were the most important results of this study:

- The agricultural cooperatives can play a main role in marketing the agricultural production requirements that needs to bring about legal and organizational changes.
- The majority of the multi-purposed cooperatives don't have the direct purchasing freedom for fertilizers and other productive inputs from the factories of production.

- Many farmers and cooperation pioneers believe that cotton and sugarcane prices should be changed as well as the conditions of importing rice that preserves the peasant income especially after annulling the support for the agricultural inputs.

The study referred at the most important recommendations to develop the Egyptian agricultural cooperation by:

1. Issuing a new law for cooperation that considers the followings:
2. The cooperatives independence from the government ,
3. The membership should be voluntary and open ,
4. Allowing the agricultural cooperatives to combine with each other and form joint companies as well as expanding in the various agricultural work fields.
5. Allow the cooperatives to buy the production requirements such as seeds, fertilizers and pesticides as well as importing the production requirements from abroad.
6. Planning and implementing the training programs for managers, board members and personnel.
7. Providing modern ways for packing and transporting fruits and vegetables to the local or outdoor markets not to let them turn into sour.
8. Providing a portion of the agricultural cooperatives profits for members every year.
9. Annulling the enforcing determination of the prices of the agricultural cooperatives as well as annulling the enforcing importing for the agricultural crops.
10. Providing farmers with marketing information.
11. The agricultural cooperative should participate in planning and executing the policies related to agriculture and market, especially those related to determining the prices of the agricultural products.
12. Providing the cooperatives with necessary capital through establishing a cooperative credit fund in an already existing bank as a preliminary step towards establishing a cooperative bank in future.

Hamad's study (1990) identified the most important features of the cooperation movement in Egypt as the following:

1. The wide spread of the agricultural cooperatives comparing to other cooperatives.
2. The geographical and administrative spread of cooperatives.
3. There are several authorities supervising the cooperatives.
4. Instability of legislations or laws that organize the cooperative work in Egypt.
5. The government hegemony over the majority of cooperatives.

6. The cooperatives are considered a tool to implement some governmental policies and plans.
7. Weak trend towards specialization and division of labor in the cooperatives.
8. Weak cooperative awareness of the community individuals.

The Egyptian Shoura Assembly (1992) discussed and approved an important report on agriculture credit prepared by the committee of the agricultural production and irrigation in Shoura Assembly. The report stressed the importance of the agricultural credit as being a substantial element for achieving the agricultural development, and developing the rural community either through increasing farmer's income or developing the rural environment. Also, the report stressed the necessity of executing the recommendations made by the Egyptian People's Assembly and Shoura Assembly. The most important ones are:

1. Providing the cooperative sector with the opportunity to establish the companies of agricultural production.
2. Supporting the cooperative's movement and providing it with the material and technical support.
3. Providing the agricultural cooperatives on different levels with the opportunity to provide and distribute the requirements of the agricultural production on suitable ways, as well as providing the material and technical capabilities necessary as it is the case in the private sector.
4. Providing farmers with the agricultural production requirements at suitable prices and exempting them from taxes that help the cooperatives to assume their roles.
5. Developing the structure of the agricultural credit with its different shapes to cope with the economic situations.

In a sociological study conducted by *Ahmed (1992)* about the coordination among organizations in some Egyptian rural areas, the basic objective of this study was to describe coordination dimensions among seven rural organizations. The district of Menia El-Kamh was selected as a purposive area sample to represent Sharkia Governorate. The total sample included 234 rural organizations classified as 96 elementary school, 11 social units, 20 community development associations, 27 health units , 10 village banks , 61 agricultural cooperatives and 9 local units. The study results, related to the agricultural cooperatives, referred to:

- There are exchanging aids and information between the agricultural cooperative and both village bank and local unit only. In addition, there are no other relations between

the agricultural cooperative and other organizations in the village or nearby. This, in turn, refers to the lack of coordination among the agricultural cooperatives each other from one hand and with other organizations in the village from the other hand.

- The most important activities provided by the agricultural cooperatives are:
  1. Implementing the agricultural policy,
  2. Protecting the cultivated area from building houses that leads it to be fallow,
  3. Organizing the rotation of crops,
  4. Organizing the activities of protection and combating pests,
  5. Providing farmers with the production requirements and agricultural machines ,
  6. Spreading cooperative awareness among peasants ,
  7. Providing farmers with agricultural extension (guiding) services, and
  8. Marketing some kind's of agricultural products.

Hamad's study (1994) ,which was conducted to identify the most critical problems and obstacles that the agricultural cooperatives face and affect negatively the economic efficiency of agricultural cooperatives, classified problems and obstacles into the following:

- Problems related to financing which mean :
  1. The shortage in the agricultural cooperatives capital,
  2. High rate of interest on loans that the cooperatives get from banks.
- Problems related to the cooperative marketing of agricultural products ,which mean :
  1. The lack of necessary financing for marketing the agricultural crops.
  2. The agricultural cooperatives role is only confined to collect crops from farmers and selling them again for commission.
  3. The lack of marketing information either on the local or international market
  4. The lack of stations for sorting the agricultural products, packing, drying and preserving
  5. The lack of the suitable warehouses for storing the agricultural production requirements as well as storing the agricultural crops.
- Legislative and legal obstacles, which include:
  1. Disallowing the agricultural cooperatives from establishing great agricultural productive projects but after getting the approval of the authority Ministry of Agriculture supervises.
  2. Low rate of interests to dealings expected to be distributed.
  3. Enforcing peasants to join the agricultural cooperatives as members.

4. The multiplicity of the administrative authorities that supervise the agricultural cooperatives.

Nasr (*1995*) conducted a study about the role of the agricultural cooperatives in new lands in rural development in Alexandria and Al-Behira Governorates. The main objectives of this study are to determine the organizational effectiveness of agricultural cooperatives in new lands, and variables, which affected its role in rural development, determine their members' satisfaction about its services, and variables affecting. The study's sample included 30 agricultural cooperatives and 168 cooperatives members. This study has adopted the concept of agricultural cooperatives effectiveness as a multi–dimensional concept, which includes four dimensions, which are goal attainment, organizational productivity, economic efficiency, and organizational adaptation. By the discriminate analysis of the research data, the study's results indicated that:

1. There are significant positive relationships between the organizational effectiveness and the manager attitude towards the collective work, external communication and the cooperative capital and found some significant negative relationships between the organizational effectiveness and the cooperative size, resp. vertical communication,
2. Effectiveness levels (high- medium- low) were measured as a dependent variable. The discriminated analysis technique was used to compare between three levels of effectiveness considering 14 discriminated variables. The results indicated, that there were differences between the three levels of effectiveness regarding five discriminated variables: External communication, the manager attitude towards the collective work, formality, cooperative size and the manager's experience. The discriminated variables explained about 52% of discrimination between the levels of effectiveness.
3. The classification results of the studied cooperatives revealed that three categories of effectiveness according to the discrediting variables, there were 10 low effective agricultural cooperatives, 16 medium and 4 high effective agricultural cooperatives.
4. There are also significant positive relationships between satisfaction of members toward the services and activities which were achieved by the cooperatives – as a dependent variable- and member's attitude towards the cooperation, member attachment to his society, and found negative significant relationships between the dependent variable and the members' knowledge of new agricultural applications, resp. the member economic status.
5. Satisfaction levels were measured as a dependent variable. The discriminate analysis was used to compare between three levels of satisfaction considering 6 discriminate

variables. The results indicated that there were not differences between the three levels of satisfaction. The discriminated variables explained about 28 % of discrimination between the levels of satisfaction. On the other hand, the satisfaction scale as a dependent variable has 76 of non-satisfied members, 46 satisfied with limited degree, and 6 satisfied members.

The Branch of Agricultural and Irrigation in the National Council for Production and Economical Affairs (1998) conducted a study that dealt with the importance and functions of the cooperatives in the agricultural development. The study stressed that the agricultural cooperation is an economic and social system that aims at raising the agriculture workers living standard and improving the levels of their production and performing important social roles. The study resulted in some recommendations for promoting and developing the agricultural cooperative structure .The most important ones are:

1. The cooperative structure independence from the government and the role played by the administrative body is only confined to supervising and directing without intervening in the activity or administration of the cooperatives.
2. The agricultural cooperatives should play an effective role in the field of providing the productive inputs and the requirements of the agricultural production for peasants (seeds-fertilizers-pesticides-and agricultural machines) at suitable prices and time, and in good specifications.
3. Allowing the cooperatives to import the requirements of the agricultural production from abroad.
4. Allowing the cooperatives to contract and buy directly the requirements of production from factories or traders.
5. Directing the agricultural cooperatives towards new fields of development of productive and investment activities such as establishing units for the agricultural industrialization, projects of manufacturing the agricultural small machines, manufacturing fertilizers and pesticides as well as animal and poultry projects,
6. Setting a cooperative legislation, a new law for cooperation, that includes the necessary principles for integration and coordination among the units of the cooperative structure, as well as the cooperation and coordination with other social organizations in the village.
7. Providing financing necessary for the agricultural cooperatives,
8. Paying attention for holding the general assemblies on time as it is determined by law,
9. The membership of the agricultural cooperatives should be voluntary and not enforcing to secure the loyalty of members,

10. Distributing the rest of surplus to the cooperative members as a return for them according to their dealing with the cooperative.
11. Training leaders, board members, employees and managers of the cooperatives.

4.5.2. Classification of previous studies

The studies and researches conducted previously on the agricultural cooperatives could be classified into the followings:

1. Five studies aimed at identifying and determining the obstacles and problems that the agricultural cooperatives face.
2. Two studies aimed at identifying the peasants' trends towards the agricultural cooperatives and the degree of satisfaction to the activities and services provided by the agricultural activities and services provided by the agricultural cooperatives.
3. Five studies aimed at evaluating and identifying how they are successful in achieving their activities and functions.
4. Two studies aimed at identifying the personal features and the social and economic positions of the members of the agricultural cooperatives.
5. Four studies aimed at identifying the importance, roles and functions of the agricultural cooperatives.
6. One study aimed at identifying the degree of coordination among the agricultural cooperatives and the village other social organizations as well as the coordination among the cooperatives each other in the nearing villages.
7. Some studies aimed at identifying and determining the factors related to and affect on the efficiency of the agricultural cooperatives in performing functions and roles.

4.5.3. Conclusion

From the review and classification of the studies and researches conducted previously on the agricultural cooperatives, it is shown that:

1. Most previous studies and researches were descriptive ones.
2. A shortage of studies and researches conducted that were applied to the Egyptian governorate of Menoufiya, although it is considered one of the most important governorates in which the agricultural activity plays an important role with all kinds of agricultural cooperatives spread every where

So, the current study is considered to be an attempt to concentrate on the agricultural cooperatives in Menoufiya Governorate and to study the majority of goals and sides that the previous studies and researches concentrate on, including:

- Identifying the current status of the agricultural cooperatives, the most important problems they face and characteristics of the cooperatives managers
- Identifying the agricultural cooperatives ability to mobilize and employ resources for achieving its activities and factors affect,
- Identifying the contribution of the agricultural cooperatives in agricultural development
- Identifying the organizational effectiveness of the agricultural cooperatives in agricultural development and determining the related and affecting factors.
- Identifying and determining the affecting factors on the benefit extent for farmers from agricultural cooperatives activities and services.
- Identifying the farmers' attitudes towards agricultural cooperatives and determining the related and affecting factors.
- Identifying the degree of farmers' satisfaction to services and activities provided by the agricultural cooperatives.
- Identifying the suggestions of managers and farmers to develop and improve the agricultural cooperatives performance.

Chapter 5: Empirical Study on the Role of Agricultural Cooperatives in Agricultural Development of Menoufiya Governorate, Egypt

5.1. Research area

This study was conducted in Menoufiya Governorate – Egypt, one of the governorates of Lower Egypt. It is located between the Nile branches, Rasheed and Domiyat. Menoufiya Governorate consists of 9 administrative districts , there are : Shebin El-Kom, Ashmoun, Tala, El-Bagour, El-Shohadaa, Berkat El-Sabaa, Quesna, Menouf and El-Sadat, with 312 villages (see Fig. 5 – 1 & Fig. 5 – 2).

The total area of Menoufiya Governorate is 2543,82 Km^2, about 69,7% (1773 km^2) of which are rural areas.The total population is 2,9 Million inhabitants – on 1/1/1999 - about 80 % of them live in rural areas. Table 5 – 1 shows the area and number of habitants in the rural and urban areas in Menoufiya Governorate.

Agriculture is considered to be the main activity in Menoufiya Governorate as for fertile lands it has totaled 326260 Feddans, that is, about 137.056,39 Hectare[1]. (*IDSS, 1999)*

Most important crops grown in Menoufiya Governorate are Cotton and Wheat but also Vegetables where a large part of the production such as Potatoes being exported to other countries. Table 5 – 2 shows the cultivated area, quantity of the production and the average production per feddan for the most important crops in Menoufiya Governorate

Table 5 – 1: Area and number of the habitants in the rural and urban areas in Menoufiya Governorate

Statement	Urban areas	Rural areas	Total area of Menoufiya Governorate
1-Area (Km^2)	770,82	1773,00	2543,82
2-Population number (persons)	581.760	2.342.270	2.924.030

Sources : Own modification from IDSS (1999)

[1] One Feddan = 4200.8335 m^2 – One Hectare = 10 000 m^2 – (One Feddan = 0.42 Hectare)

Figure 5 – 1: Map of Egypt

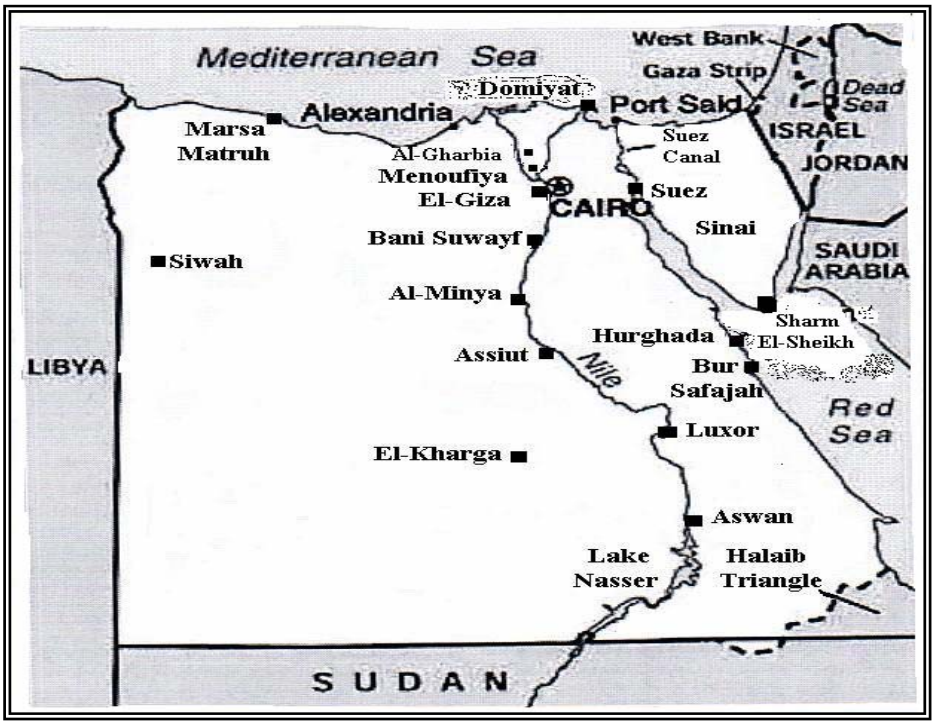
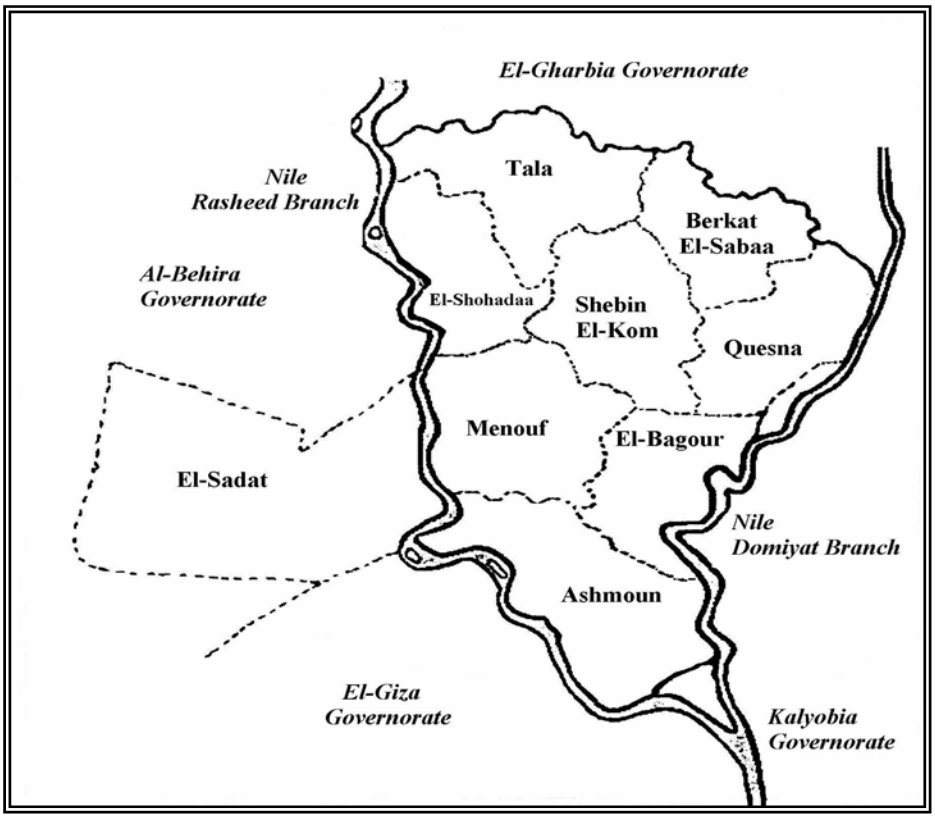


Figure 5 – 2: Map of Menoufiya Governorate and location of the empirical study



.

Table 5 – 2: Cultivated area, quantity of the production and the average production per feddan for the most important crops in Menoufiya Governorate

Crop	Cultivated area in Feddan	Quantity of the production	The average production per feddan [1]	
			Menoufiya governorate	Egypt
Cotton	36907	251383 Kantars[2]	6.81 Kantars[2]	6.56 Kantars[2]
Wheat	97871	1647630 Ardeb[3]	16.83 Ardeb[3]	16.78 Ardeb[3]
Potatoes	26418	200431 Ton	7.59 Ton	8.9 Ton

[1] One Feddan = 4200.8335 m^2 – One Hectare = 10 000 m^2.

[2] One Kentare of cotton – 157.5 kg .

[3] One Ardeb of wheat = 150 kg .

Sources: Own modification from IDSS (1999)

Moreover, in Menoufia Governorate there are 27 land reform cooperatives, 317 agricultural credit cooperatives including 25 specific agricultural cooperatives with only one purpose, 292 multi–purposed agricultural cooperatives of which there are 283 local agricultural cooperatives that are located in villages. Table 5 –3 shows the type and number of the land reform cooperatives, while table 5 – 4 shows the type and number of the agricultural credit cooperatives in Menoufiya Governorate. Menoufyia Governorate has not any cooperatives for land reclamation and reclaimed lands

Table 5 – 3: Type and number of the land reform cooperatives in Menoufiya Governorate

Type of agricultural cooperative societies	Agricultural cooperatives for multi-purposes			
	Local cooperative societies These societies are located in the Village	Joint cooperative societies These societies are located in the Districts	Central cooperative society This society is located at the Governorate level	Total
Number of agricultural cooperative societies	24	2	1	27

Source: Own modification from IDSS (2002 A)

Table 5 – 4: Type and number of the agricultural credit cooperatives in Menoufiya Governorate

Type of Agricultural Cooperatives	Agricultural cooperatives for multi-purposes			Specific agricultural cooperatives with only one purpose				Total
	Local agricultural cooperatives These cooperatives are located in the Villages	Joint cooperatives These cooperatives are located in the Districts	Central cooperative These cooperative is located at the Governorate Level	Cooperative societies at the village level		Cooperative societies at the Governorate level		
				Animal and poultry wealth or Animal and poultry improvement	Agricultural mechanization	Fruits and vegetables	Field crops	
Number of agricultural cooperatives	283	8	1	22	1	1	1	317

Source: Own modification from ACACA *(1999, pp. 209 – 212).*

5.2. Nature and size of the research samples

For achieving the study objectives, it requires two samples to be chosen, the first sample represents the agricultural cooperatives and the second sample represents the members of the agricultural cooperatives.

5.2.1. Agricultural cooperatives sample

This study will deal with the multi- purposed agricultural credit cooperatives as for their importance, numerous numbers and widespread in the villages of Menoufiya Governorate in order to compare them with other agricultural cooperatives whether as specific agricultural cooperatives or land reform cooperatives.

So, the study includes the local agricultural credit cooperatives in Menoufiya Governorate. A random sample of 66 agricultural cooperatives was chosen, which represent 23% of 283 agricultural cooperatives of the total number in Menoufia Governorate. The choice of this sample was based on the records of the multi-purposed agricultural cooperatives in the areas of the agricultural credit in the department of the agricultural cooperation in Menoufiya Governorate.

5.2.2. Cooperatives member's (farmer's) sample

For choosing the cooperatives member's sample, the next steps were included:

1. Two agricultural cooperatives were chosen simply and randomly. It was put into consideration to be a clear difference between these two cooperatives in achieving the activities and providing services for their members, which were taken from the records related in the department of agriculture in Menoufiya Governorate.

2. The first agricultural cooperative located in the village of Meleeg, Shebin El-Kom District was chosen to represent a more actively agricultural cooperative in achieving the activities and providing services for its members.
3. The second agricultural cooperative located in the village of Manshyat Sultan, Menouf District was chosen to represent a less actively agricultural cooperative in achieving the activities and providing services for its members.
4. The following equation was used to estimate the size of sample in villages:

   Size of sample = N / (N – 1) B^2 + 1

   N = the number of population, B^2 = Estimator error = 0.01
5. On applying this equation and using the total number of members according to the records of membership (including the size of cultivated area by each member) in both cooperatives, the size of the sample in the village of Meleeg reached 98 members that increased to be 167 members. In the village of Manshyat Sultan the sample size reached 96 members that increased to be 124 members. So, the total size of the members (farmers) sample is 291 members. Table 5 – 5 shows the estimated and actual size of the sample of the agricultural cooperatives members.

Table 5 – 5: Estimated and actual size of the sample of the agricultural cooperatives members

The agricultural cooperative in :	The number of members enrolled *	The size of the estimated sample of members	The size of the actual sample of members
1-Meleeg	4200	98	167
2-Manshat Sultan	2282	96	124
Total	**6482**	**194**	**291**

** Source: The records of membership in both agricultural cooperatives (Village of Meleeg , and Manshyat Sultan), July 2002 .*

5.3. Data collection

This study is based on two kinds of data, secondary and primary data.

5.3.1. Secondary data

Secondary data were collected from the official sources such as Ministry of Agriculture in Cairo and its departments in Menoufiya Governorate, the Central Administration for Agricultural Cooperation and Rural Development, the Central Agency for Public Mobilization and Statistics "CAPMAS" in Cairo, the Ministry of Social Affairs in Cairo and

its departments in Menoufiya Governorate, the Information and Decision Support Centre" IDSS", the Department of Agricultural Cooperation, the Department of Education , the Department of Youth and Sport, and the Administration of Societies related to social affairs department in Menoufiya Governorate.

5.3.2. Primary date

This kind of data was collected through personal interviews based on questionnaires. Two questionnaires were designed in order to achieve the study goals:

A) Questionnaire related to the agricultural cooperatives, (see App. 1), that included a group of questions about:

- Characteristics and qualifications of agricultural cooperatives managers.
- Activity field of the agricultural cooperatives.
- Work duration of the agricultural cooperatives.
- Agricultural areas which are served by the agricultural cooperatives.
- Agricultural cooperatives building suitability for achieving its activities
- Cooperation level between agricultural cooperatives and other organizations in the villages.
- Agricultural cooperatives ability to mobilize and employ the resources for achieving its activities.
- The number of activities achieved by agricultural cooperatives.
- The ratio of the beneficiaries from the achieved activities
- Contribution and organizational effectiveness of the agricultural cooperatives in agricultural development
- Problems and obstacles (barriers) that the agricultural cooperatives face.
- Managers' suggestions to develop and improve the agricultural cooperative performance.

B) Questionnaire related to farmers, the members of the agricultural cooperatives, who make benefit of the agricultural cooperatives (see App. 2). It included a group of questions about:

- Main characteristics of the farmers.
- Farmers' membership duration in agricultural cooperatives.
- Farmers' attitudes towards agricultural cooperatives and voluntary work in the villages.
- The number of the agricultural cooperatives activities from which farmers got benefits.

- Farmers' satisfaction degree about the agricultural cooperatives activities.
- Farmers' suggestions to develop and improve the agricultural cooperative performance.

After setting the questionnaire in two forms, they were pre-tested, modified and formulated in their final shape.

Data were collected through personal meetings made by the researcher himself with the managers of the agricultural cooperatives. Meanwhile, the researcher was supported by further six researchers to fill in questionnaires related to farmers; it took two months from July to August 2002 to collect the required data.

5.4. Data analysis

A number of various statistical methods and measurements were used to analyze data in order to achieve the study goals.

T-Scores [(1)] were used to measure and form some compound variables as for the different units of measurements used in measuring the simple variables that form the compound variables. Pearson Product Moment Correlation Coefficient (r) was used to express the correlative relations between the dependent and independent variables included in this study. Also, multiple correlation and regression (step-wise) analysis was used to show the influence of independent variables on dependent variables. In addition R^2, and adjusted R^2 were used to determine the rate of variance in the dependent variables that can be explained by the affecting independent variables. Additionally, the methods of the statistical description such as, Mean, Standard deviation, Percentage and Range were used.

5.5. Definition and measurement of the research variables

This part includes a definition and measurement of the research variables related to:

Organizational effectiveness of the agricultural cooperatives, the extent of benefit for farmers from agricultural cooperative activities, and their attitudes towards agricultural cooperatives.

[(1)] *T-Score = 10 Z + 50*

Z (Standard Score) = (X – Mean) / Standard deviation (Allam, 1985, pp. 197 – 213).

5.5.1. Definition and measurement of the research variables, which are related to organizational effectiveness of the agricultural cooperatives

Firstly, the dependent variables

This part includes four dependent variables:

A) Agricultural cooperatives' ability to mobilize resources for achieving its activities .It means the cooperative ability to get the necessary resources and materials for achieving its activities from the surrounding environment.

This variable is formed from the total value of T-Scores of the following variable:

1. Numbers of agricultural cooperative members (absolute number)
2. Percentage of the female members (percentage from the total members number)
3. Area of the agricultural cooperative building (in square meter)
4. Value of budget (in Egyptian pound)
5. Number of financial sources (absolute number), and thus
6. Percentage of financing sufficiency for agricultural cooperative activities (percentage of available financing from requested financing)

B) Agricultural cooperatives' ability to employ the available resources for achieving its activities. It means, to which extent a cooperative follows the administrative rules that help in achieving goals and performing functions required .This variable is formed from the total value of T- Scores of the following variables: -

1. Percentage of the agricultural cooperative members' presentation in the General Assembly meetings.
2. Selection method of the agricultural cooperative board' members. (election = 2, Honorable records 'recommendation' =1)
3. Percentage of the cooperatives board members' presentation in board' meeting. (Percentage from the total number of board' members).
4. Number of hours of the board' members meetings annually.

C) Contribution level of the agricultural cooperatives to agricultural development. It means an agricultural cooperative to transfer and change resources and inputs into projects and services. This variable was measured through the total value of T- Scores of the two following variables:

1. The number of activities achieved by the agricultural cooperatives (absolute number). The word 'activities 'means the activities and services provided by an agricultural cooperative for farmers, such as:
    - Activities of agricultural innovations diffusion
    - Activities of agricultural innovations supply
    - Activities of farmers training in agricultural innovations
    - Activities of marketing knowledge diffusion
    - Activities of agricultural products' local marketing.
    - Activities of agricultural products' export.
    - Activities of agricultural small projects supply and support.
2. The beneficiaries' percentage from agricultural cooperative activities. This variable was measured through evaluating the beneficiaries' percentage from each activity individually. Finally, the general average of beneficiaries' percentages from agricultural cooperative activities was measured.

D) Organizational effectiveness of the agricultural cooperatives in agricultural development. It means the cooperative ability to mobilize and employ resources and materials necessary for achieving its activities and performing functions as well as providing peasants with necessary needs and , there fore , participating in the agricultural development. The previous three dependent variables were used as indicators for measuring these variables, which are:

1. Agricultural cooperatives ability to mobilize resources for achieving its activities.
2. Agricultural cooperatives ability to employ the available resources.
3. Contribution of the agricultural cooperative in agricultural development

Secondly, the independent variables

1. **Manager's age**. It means the manager age in years at the moment of collecting data. The mean of this variable reached 49.7 years, while the standard deviation reached 4.84 years and the range reached 48 years.
2. **Manager's education level.** It means the number of years of the official education (absolute number). The value of the mean of this variable reached 13.21 years, while the standard deviation reached 1.85 years and the range reached 4 years.
3. **Manager's experience level.** It means the number of years of the manager's work in agricultural cooperatives. The mean of this variable reached 26.12 years, while the standard deviation reached 6.23 years and the range reached 30 years.

4. **Manager's training level.** It means the number of training courses in the field of the agricultural cooperatives activities. The mean reached 5.24 training courses, while the standard deviation reached 5.84 training courses and the range reached 30 training courses.
5. **Distance between manger's residence and agricultural cooperative location** .It means how far or near the manager place of residence is from the place of the agricultural cooperative. It was measured by the number of kilometers between the manager's residence and the place of the agricultural cooperative. The arithmetic mean of this variable reached 2.5 Km, while the standard deviation reached 2.27 Km and the range reached 9.9 Km.
6. **Total number of non-governmental organizations (N.G.Os) membership of the manager**. It was measured by the number of N.G.Os in which the manager participates and has a membership. The mean of this variable reached 0.9 N.G.Os, while the standard deviation reached 1.5 N.G.Os and the range reached 6 N.G.Os.
7. **Type of N.G.Os membership of the manager.** It means the type of the leading role a manager assumes in the N.G.Os as a manager is given one mark if to be an ordinary member, two marks if to be a board member and three marks if to be N.G.O board head.
8. **Informal social participation level of the manager**. It means the extent of manager's participation in social and informal activities with both agricultural cooperative members (farmers) , agricultural cooperative employees, and board members .This variable was measured through 6 indicators , they are :
    1. Visits exchange,
    2. Patient visit,
    3. Wedding ceremonies,
    4. Mourning ceremonies,
    5. Lending and crediting others persons , and
    6. Helping others in solving social problems.

    Certain marks were given for each indicator individually according to its repeat as following:

    Generally = 3 , Sometimes = 2, and rarely = 1

    Participation mark was measured through counting marks that a manager got from these six indicators. The mean for this measurement reached 42.25 marks, while the standard deviation reached 6.4 marks and the range reached 30 marks.

9. **Strength of the relations within the agricultural cooperative**. The strength of relations within a cooperative was measured through seven indicators that reflect the relations within a cooperative , they are :
   - The relation among the board members.
   - The relation between the board members and farmers.
   - The relation between the board members and employees.
   - The relation among the employees.
   - The relation between employees and farmers
   - The relation among farmers
   - The relation between village leaders and agricultural cooperative.

   Each indicator was given certain marks that vary according to the manager's various evaluations. The following marks were given:

   Excellent = 4, Good = 3, Mediate = 2, and weak = 1

   The marks of the seven indicators were collected to refer to the strength of relations within a cooperative. The mean of this measurement reached 24 marks, while the standard deviation reached 3.06 marks and the range reached 36 marks.
10. **Age of agricultural cooperative or work duration (years).** It means the number of years since a cooperative started its activity till 2002 (The year in which data collected) It was measured by the number of years since establishing the agricultural cooperative. The mean reached 40 years while the standard deviation reached 6 years and the range reached 36 years.
11. **Number of villages, which are benefiting from the agricultural cooperative activities.** It means the number of villages within the frame work of a cooperative activity. It was measured through the number of villages in which farmers make benefit from the activities and services provided by an agricultural cooperative .The minimum number reached one village , while the maximum reached 3 villages.
12. **Number of population in the village with an agricultural cooperative.** The number of population in the villages with agricultural cooperatives was taken from the Menoufiya population statistics in 1999. The average number of the population in villages reached 8896 persons, while the standard deviation reached 6652 persons. The minimum number of persons in the villages reached 1919 while the maximum number reached 39243 persons.
13. **Cultivated area in the villages, which are benefiting from the agricultural cooperative activities.** It means the area of cultivated land in Feddans that farmers

possess and is served by an agricultural cooperative. The area average of the cultivated land reached 1004.8 Feddans, the standard deviation reached 666.87 Feddans and the range reached 3133 Feddans.

14. **The extent of agricultural cooperative building's suitability for achieving their activities and functions.** This variable was measured through an agricultural cooperative manager answer to four questions that reflect the cooperative building suitability , They are :
    1. Is the building area of agricultural cooperative suitable for its employees' number?
    2. Is the building area of agricultural cooperative suitable for achieving its activities and functions?
    3. Is the building of the agricultural cooperative provided with facilities and instruments which are necessary for the agricultural cooperative work?
    4. Is the location of agricultural cooperative suitable for achieving its activities and functions?

    The following marks were given for the answers to these questions:

    Suitable = 3 , Fairly suitable = 2, and Non suitable = 1.

    The number of marks an agricultural cooperative achieves as a result of the manager response to the previous four questions expresses how an agricultural cooperative building is suitable. The value of the mean for this measurement reached 9.03 marks, while the standard deviation reached 2.73 marks and the range reached 6 marks.
15. **Village development level with an agricultural cooperative.** It means the development level in a village in which there is an agricultural cooperative. This variable was measured through the total value of T-Scores for the following indicators :
    1. Education percentage in the village ,
    2. Females education percentage in the village , and
    3. Workers percentage in the village.

    The results were taken from the secondary data included in the 1996 statistics [1]
16. **Number of governmental employees in the agricultural cooperative**. This variable was measured through the number of employees in an agricultural cooperative who are paid by the government. The value of the mean for this variable reached 59 employees, while the standard deviation reached 38.17 employees and the range reached 184 employees.

[1] *CAPMAS (1996 C, D, E , pp. 27-307)*

17. **Number of activity fields of the agricultural cooperative.** This variable was measured through asking the manager of a cooperative about the fields of activities made by the agricultural cooperative. The maximum number of the fields of activities reached 7 fields while the minimum number reached one field. The mean reached 2.9 fields and the standard deviation reached 1.65 fields.

18. **Number of governmental organizations in the village.** This variable was measured through the number of the governmental organizations in a village such as: mosques, hospitals, schools, police unit, village bank, social unit, village local unit and veterinary clinic. The mean for this variable reached 5.5 organizations, while the standard deviation reached 4.87 organizations and the range reached 25 organizations.

19. **Cooperation level between agricultural cooperative and governmental organizations in the village.** Two indicators were used for measuring this variable, they are :
    1. The number of joint activities that an agricultural cooperative performed with the governmental bodies (organizations) in a village referred to in the previous variable.
    2. The level of cooperation that each organization expressed in implementing common projects. The following marks were given according to each level of cooperation:
       High = 3 , Middle = 2 , Small = 1 and Neglected = 0

    The result of multiplying each activity made by an agricultural cooperative with any governmental organization by the level of cooperation between them in achieving this activity expresses the level of cooperation between the cooperative and this governmental organization individually. These marks are added to express the level of cooperation between a cooperative and the governmental organizations in a village. The value of the mean for this measurement reached 0.91 marks, while the standard deviation reached 2.58 marks and the range reached 12 marks.

20. **Number of non-governmental organizations in the village.** This variable was expressed through the number of Non-governmental organizations in a village. The value of the mean for this variable reached 2.33 organizations, while the standard deviation reached 1.34 organizations and the range reached 6 organizations.

21. **Cooperation level between agricultural cooperative and N.G.Os in the village**. It means the number of joint activities made by a cooperative with non-governmental organizations in a village (N.G.Os) , and the level of cooperation between them for each activity.

However, this variable was cancelled as there are no joint projects or activities between the agricultural cooperatives and non-governmental organizations.

22. **Number of the members serving in the agricultural cooperative board of directors.** This variable was measured through the absolute number of board members. The value of the mean reached 5.24 members, while the standard deviation reached 0.75 members and the range reached 4 members.

3.5.2. Definition and measurement of the research variables related to the benefit extent for farmers from agricultural cooperative activities, and their attitudes towards agricultural cooperatives.

Firstly, the dependent variables:

This part includes two dependent variables, they are:

A) **The extent of benefit for farmers from agricultural cooperative activities.** This variable was measured through T-scores of the two following independent variables:

1. Total number of the agricultural cooperative activities from which the farmers got benefits.
2. Average of farmers' satisfaction degree about all the agricultural cooperative activities. That was measured through evaluating the average of farmers' satisfaction degree about each activity individually from which they got benefits. Satisfied = 3 , Fairly satisfied=2 and Not satisfied=1

B) **Farmers' attitudes towards agricultural cooperative.** This variable was measured through eight statements related to the agricultural cooperative, its services and the extent of benefit for farmers, considering that statements (1 – 4) are considered positive ones towards the agricultural cooperatives, statements (5 – 8) are considered negative towards agricultural cooperative:

1. The most farmers in village are in a good relation with agricultural cooperative (manager, employees and board members).
2. The agricultural cooperative supplies its activities for all farmers in village.
3. The agricultural cooperative supplies agricultural innovations and agricultural production requirements in suitable prices for farmers.

4. The agricultural cooperative supplies agricultural information, agricultural innovations and agricultural production requirements in a suitable time for farmers.
5. Some of the agricultural cooperative activities are exclusively provided to board members, their relatives and friends.
6. Agricultural cooperative can not solve agricultural problems of farmers in a suitable time.
7. The agricultural production requirements provided by private agricultural companies and traders are better than those provided by the agricultural cooperatives nowadays.
8. Most of agricultural cooperative activities are providing only for big farms (owners of big farm).

Each farmer was asked to express his opinion about each statements according to three responses (agree, fairly agree, and disagree). These responses were given the values 3, 2, 1 respectively in the case of the positive attitudes towards an agricultural cooperative.
As for the negative attitudes towards an agricultural cooperative, they were given the values 1, 2, 3 respectively. Marks achieved by a farmer were added to express his attitude towards an agricultural cooperative. Measurement marks ranged from (8 –24) marks.

Secondly, the independent variables:

1. **Farmer's age.** It means the farmer's age in years at the moment of collecting data. The value of the mean for this variable reached 53.9 years, while the standard deviation reached 12.16 years, and the range reached 73 years.
2. **Main profession of the farmer.** It means the kind of the main economic activity practiced by a farmer. This variable was dealt with as being a dummy variable where agricultural activity had one mark while non- agricultural activity had two marks.
3. **Farmer's education level.** It was measured through the number of years of the official education. The value of the mean for this variable reached 5.64 years, the value of the standard deviation reached 4.7 years and the value of the range reached 22 years.
4. **Agricultural experience level of the farmer.** It means the period in years that a farmer spent in the field of agriculture. The value of the mean for this variable reached 33.25 years, the value of the standard deviation reached 14.7 years and the value of the range reached 66 years
5. **Farmer's membership duration of the agricultural cooperative.** It means the number of years a farmer's membership in a cooperative since being contributed for the first time

till 2oo2 (the year of collecting data). The value of the mean for this variable reached 22.19 years, the value of the standard deviation reached 12.7 years.

6. **Distance between farmer's residence and agricultural cooperative' location.** It means how near or far is a farmer's residence from the location of an agricultural cooperative. It was measured by the number of kilometers between the location of farmer's residence and the location of an agricultural cooperative. The value of the mean for this variable reached 1.6 kilometers, while the value of the standard deviation reached 1.5 kilometers and the value of the range reached 11.9 kilometers.
7. **Size of farmer's family.** It was measured by the number of persons belonging to the same housing unit. The value of the mean for this variable reached 6.5 persons, while the value of standard deviation reached 2.25 persons and the value of range the reached 13 persons.
8. **Size of farmer's farm**. It means the area of cultivated lands in Feddans that are owned, hired, or cultivated by farmers. The value of the mean for this variable reached 1.6 Feddans, the value of the standard deviation reached 11.9 Feddans.
9. **Farmer's attitudes towards voluntary work.** This variable was measured through the marks given for answering two statements, one is negative, that is, village development is a governmental responsibility. The answer for this statement was given the following marks:

   Agree = 1, Fairly agree = 2 and Disagree = 3

   Another statement is a positive one, that is, people must help the government in the developmental projects which serve the village. The answer for this statement was given the following marks:

   Agree = 3, Fairly agree = 2 and Disagree = 1

   Marks acquired by a farmer for answering the previous two statements express his attitude towards the voluntary work .The value of the mean for this measurement reached 4.52 marks, while the value of the standard deviation reached 1.1 marks and the value of the range reached 4 marks.
10. **Total number of the voluntary development projects in which farmers have participated.** The number of projects measured in which farmers participated in the previous year to collect data (from 01.7.2001 till 30.06.2002). The value of the mean for this variable reached 1.6 projects, while the value of the standard deviation reached 0.9 projects and the value of range reached 4 projects.

11. **Type of voluntary participation of the farmer in the developmental projects.** It was measured through given a farmer a mark that cope with the type of his participation in each developmental project as following: Money = 3, Effort = 2 and Point of view = 1

    A mark acquired by a farmer expresses the type of his voluntary participating in the developmental activities. The value of the mean for this measurement reached 4.03 marks, the value of the standard deviation reached 2.4, and the value of the range reached 11 marks.

12. **Total number of NGOs-membership of the farmer.** It was measured by the number of non-government organizations (N.G.Os) in which a farmer has a membership. The value of the mean for this variable reached 1.12 organizations, while the value of the standard deviation for this variable reached 0.95 organization and the value of the range reached 4 organizations.

13. **Type of N.G.Os membership of the farmer**. It means the type of a leading role that a farmer assumes in (N.G.Os) . Farmer was given one mark for ordinary membership, two marks for board membership and three marks board heading. The mean for this measurement reached 1.3 marks, the standard deviation reached 1.2 marks, and the range reached 6 marks.

14. **Informal social participation level of farmer.** It means to which extent a farmer participate in the informal and social activities with board members, agricultural cooperative employees and other farmers. This variable was measured by using (6) indicators , they are :

    1. Visits exchange,
    2. Patient visit,
    3. Wedding ceremonies,
    4. Mourning ceremonies,
    5. Lending and crediting others persons , and
    6. Helping others in solving social problems.

    Certain marks were given for each indicator individually according to its repeat as following: Generally = 3 , Sometimes = 2 and Rarely = 1

    The degree of the informal social participation was measured through adding together marks acquired by a farmer for these six indicators.

    The value of the mean for this measurement reached 35.6 marks, while the value of the standard deviation reached 6 marks, and the value of range reached 30 marks.

Chapter 6: Results of the Empirical Study on the Role of Agricultural Cooperatives in Agricultural Development of Menoufiya Governorate, Egypt

This chapter is formed of seven main parts, of which each chapter deals with the results related to one of the seven goals of the study, as follows:

- The first part is concerned with the results related to description of the current social and economical status of agricultural cooperatives.
- The second part is concerned with the results related to the agricultural cooperatives' ability to mobilize resources for achieving their activities.
- The third part is concerned with the results related to the agricultural cooperatives' ability to employ the available resources for achieving its activity.
- The fourth part is concerned with the results related to the contribution of the agricultural cooperatives to agricultural development.
- The fifth part is concerned with the results related to the organizational effectiveness of agricultural cooperatives in the agricultural development.
- The sixth part is concerned with the results related to the extent of benefit for farmers from agricultural cooperatives activities.
- The seventh part is concerned with the results related to the farmers' attitudes towards agricultural cooperatives.

6.1. The description of the current social and economical status of the agricultural cooperatives

6.1.1. Mangers' characteristics and qualifications

Through classifying the managers of the agricultural cooperatives studied according to their **ages**, it is mentioned from table (6 – 1) that:

- 25.8 % of them are of (39 – 46) years old,
- 53% of them are of (47 – 53) years old ,
- As for the portion of those who are of 54 – 60 years old, more than one fifth of the managers of the agricultural cooperatives exceeds 54 years, which refers to an increasing average of ages, that is 49.7 years.
- It is worth noting here that the managers of the agricultural cooperatives are governmental employees appointed by the government for managing the

agricultural cooperatives after being mandated to work in agricultural cooperatives.

As for the **education level** of the agricultural cooperatives managers, data mentioned in table (6 – 1) refers that:

- about 70% of the managers have a middle degree of education (education degree from agricultural secondary schools),
- about 30% of the managers have university degree (B.Sc.) from a faculty of agriculture or high agricultural institutes.

By classifying the managers of the agricultural cooperatives according to their **level of experience** measured by the number of years working in the agricultural cooperatives, data mentioned in table (6 – 1) refers that:

- 56.1% of the managers have normal experience,
- 36.4% of the managers have great experience as they have worked for the agricultural cooperatives for 28 – 38 years.

These results refer to the increasing of the level of experience of the agricultural cooperatives managers as the average years of work in cooperatives are 26 years, that is a sufficient period for managers to acquire great experience in the field of the agricultural cooperatives and to adopt innovation in the field of agriculture.

By classifying the cooperatives managers according to their **level of training** measured by the number of training courses in the cooperatives work field they joined , date mentioned in table (1– 6) refers that:

- 12.2% of the mangers did not have any training courses since beginning their work for the first time in the agricultural cooperatives till now,
- 24.24% of the mangers achieved very low level of training,
- 44% of the mangers achieved a low level of training with the number of training courses they joined reached 10-19 courses,
- 6 % of the mangers achieved high level of training.

The results, in turn, refer to the low level of manager's training particularly if we consider that arithmetic average of work years in the agricultural cooperatives, which is 26.12 years. The average number of training courses in the work field of the agricultural cooperatives is 5.24 training courses for the managers. While the agricultural technology

and innovations are changing and developing continually, the managers get only one training course for every 5 years, which causes a low level of managers training.

As for the membership of managers in the non-governmental organizations (NGOs), results mentioned in table (6 – 1) refer that:

- 62.1% of the managers do not participate in NGOs ,
- 28.8% of the managers participate in one or two organizations only ,
- the managers who participate in a large number of organizations, that is (5 – 6) NGOs are about 1.5 %.

The previous results refer to a low level of managers' participation in NGOs.

Through classifying managers according to the **level of informal social participation** that refers to their participation in social activities such as wedding ceremonies, mourning ceremonies, patient visit, visits exchange, lending and crediting others as well as helping others in solving social problems whether this participation is with farmers, employees, and board members of the cooperative, results mentioned in table (6 – 1) refer that:

- 15.5% of the managers have a low level of participation,
- 30.3% of the managers have a medium level of participation,
- 54.5% of the managers highly participate.

The previous results refer to the high level of managers' participation in the formal social activities.

As for the **distance** between the managers' residence and the agricultural cooperatives location, results mentioned in table (6 – 1) refer that:

- 69.7% of the managers live near the locations of the agricultural cooperatives,
- 6.1% of the managers live far from the location distance is about (6.8 – 10.0) Km.

It is no doubt, that providing housing unit for a manager near the cooperative location has positive and effective impacts on the managers performance because the work in cooperatives sometimes requires the manager to be in the cooperative for long a period extended sometimes to 12 hours daily, particularly in the agricultural seasons such as farming and harvesting cotton and wheat , during the processes of agriculture service and visiting farmers' fields in these seasons to identify the problems and find urgent solutions for them.

That refers to the importance of this process that in recent years till the end of 1980, a housing unit was specified for the cooperative manager inside the cooperative building or next to it. But unfortunately, neglecting these units made it unsuitable for housing. So, the cooperative managers call now for providing housing units near the agricultural cooperatives to save time that may be used for solving the problems of farmers.

Table 6 – 1: Characteristics and qualifications of the managers

Characteristics and qualifications	N	%
Manager's age		
39 – 46 years	**17**	**25.8**
47 – 53 years	**35**	**53.0**
54 – 60 years	**14**	**21.2**
Manager's education level		
Medium level (12 years)	**46**	**69.7**
High level (16 years)	**20**	**30.3**
Manager's experience level Work duration in agricultural cooperatives of manager		
Low level (8 –17 years)	**5**	**7.6**
Medium level (18 – 27 years)	**37**	**56.1**
High level (28 – 38 years)	**24**	**36.4**
Manager's training level (The number of training courses in cooperatives work filed)		
Neglected level (no any course)	**8**	**12.12**
Very low level (1–2 courses)	**16**	**24.24**
Low level (3 – 9 courses)	**29**	**43.94**
Medium level (10 –19 courses)	**9**	**13.6**
High level (20 –30 courses)	**4**	**6.1**
Total number of N.G.Os-membership of manager		
No participation (no any organization	**41**	**62.1**
Low number (1 – 2 organizations)	**19**	**28.8**
Medium number (3 – 4 organization)	**5**	**7.6**
High number (5 – 6 organization)	**1**	**1.5**
Informal social participation level of managers		
Low level	**10**	**15.2**
Medium level	**20**	**30.3**
High level	**36**	**54.5**
Distance between manager's residence and agricultural cooperative location		
Short distance (0.1 – 3.4 Km)	**46**	**69.7**
Medium distance (3.5 – 6.7 Km)	**16**	**24.2**
Far distance (6.8 – 10.0 Km)	**4**	**6.1**

Source: Own research and calculation

6.1.2. Elements of organizational structure of agricultural cooperatives

Organizational structure of agricultural cooperatives is formed of:

1) General Assembly that includes all members of the agricultural cooperatives

2) Board of directors that manage the affairs of the agricultural cooperative.

3) Staff (governmental employees).

4) Relationships within the agricultural cooperatives.

6.1.2.1. General Assembly

It is considered to be the supreme authority of the agricultural cooperatives. It is formed of all members of the agricultural cooperatives *(Article No. 34 – law No. 122 / 1980)*.

Through classifying the cooperatives studied according to the number of members, results mentioned in table (6 – 2) refer that:

- 77.3% of the agricultural cooperatives have (220 – 1546) members
- 4.5% of the agricultural cooperatives have (2874 – 4200) members

The increasing number of members in cooperatives, as the average number of members reached 1237 members , may be explained as a result to heritage laws that led to the division of land ownership and , consequently, increasing the number of farmers who possess cultivated lands with the distance of the agricultural lands unchanged . In other words, the increasing of members' number will lead to increasing the budget as membership number increases. This is considered as an important part of the agricultural cooperative budget.

As for the number of the General Assembly meeting annually, all managers of the agricultural cooperatives studied said, that the General Assembly holds one meeting annually in which the annual budget of the cooperative is discussed and approved as well as discussing the decisions made by the agricultural cooperative board and the activities and projects made by the activities and projects that should be executed in future by the cooperative. In emergency cases, the General Assembly holds an emergent meeting such as meeting for electing the members of the cooperative board.

Table 6 – 2: Classification of the agricultural cooperatives studied according to the number of members

Members number	Number of the agricultural cooperatives	%
220 –1546	51	77.3
1547 – 2873	12	18.2
2874 – 4200	3	4.5
Total	**66**	**100**

Source: Own research and calculation

Through classifying the agricultural cooperatives studied according to the portion of members attendance of the General Assembly annual meeting, data mentioned in table (6 – 3) refers that:

- 18.2% of the agricultural cooperatives have an attendance rate less than 25% of the member's number,
- 37.9 % of the agricultural cooperatives have an attendance rate more than 50% ,
- about 11% of the total number of the agricultural cooperatives studied have an attendance rate of more than 75% .

The previous results refer to the low level of participation of members in the meeting of the General Assembly, as about 62% of the agricultural cooperatives studied have an attendance rate less than half number of members. Most recent field studies state, that the absence of the majority of members from meetings of the General Assembly is due to their feeling the uselessness of these meetings (*Rashid , 1992 , p. 25*)

Table 6 – 3: Classification of the agricultural cooperatives studied according to the members' attendance rate in the meeting of the General Assembly

Members attendance percentage	**Number of the agricultural cooperatives**	**%**
10 – 25%	12	18.2
26 –50%	29	43.9
51 – 75 %	18	27.3
76 – 97 %	7	10.6
Total	**66**	**100**

Source : Own research and calculation

6.1.2.2. Board of directors

Each cooperative has a board of directors that manage their affairs for five years; it is formed of not less than five members from the members of the General Assembly *(Article 43 – Law 122 / 1980)*. As for the number of the members of the agricultural cooperative board of directors, data mentioned in table (6 – 4) refers, that:

- about 86 % of the agricultural cooperative boards of directors have five members,
- 14% of the agricultural cooperative boards of directors have seven members.

Table 6 – 4: Classification of the agricultural cooperatives studied according to the number of members in their board of directors

Number of board members	Number of the agricultural cooperatives	%
5	57	86.4
7	9	13.6
Total	**66**	**100**

Source: Own research and calculation

As for the way of choosing the board members, data mentioned in table (6 – 5) refers that:

- about 20% of the boards were chosen without free election,
- about 80% of the boards were chosen upon their honorable records.

The previous results refer to the low level of the agricultural cooperatives members' participation whether in the General Assembly meetings, as mentioned previously, or through participating as being nominated for board membership.

Table 6 – 5: Classification of the agricultural cooperatives studied according to the way of choosing the board of directors

Way of Choosing	Number of the agricultural cooperatives	%
Free election	13	19.7
Honorable records	53	80.3
Total	**66**	**100**

Source: Own research and calculation

Through classifying the agricultural cooperatives studied according to the number of their annual boards meetings, data mentioned in table (6 – 6) refer that:

- about 21% of the agricultural cooperatives' board directors hold less than 32 meetings annually,
- 41% of agricultural cooperatives' board directors hold 33 – 48 meetings annually,
- about 38% of the agricultural cooperatives' board directors hold more than 49 meetings annually, that is, at least one meeting weekly.

Data mentioned in table (6 – 7) refers to the time duration of meetings held by cooperatives boards. It was shown that the period average of holding board meeting in

about 44% of cooperatives does not exceed one hour for each meeting , and (1 – 2) hours for 45% of them , while 11% of them hold meetings that last for more than two hours.

Table 6 – 6: Classification of the agricultural cooperatives studied according to the number of the meetings held annually by boards of directors

Number of meetings annually	Number of the agricultural cooperatives	%
Less than (32)	14	21.2
33 – 48	27	40.9
More than (49)	25	37.9
Total	**66**	**100**

Source: Own research and calculation

Table 6 –7: Classification of the agricultural cooperatives studied according to the duration of time for meetings in average

Board convening duration average	Number of the agricultural cooperatives	%
Less than one hour	29	43.9
(1-2) Hours	30	45.5
More than two hours	7	10.6
Total	**66**	**100**

Source: Own research and calculation

6.1.2.3. Official employees (Staff)

The agricultural cooperatives depend in achieving their activities and performing their functions on a set of employees such as agricultural engineers, agricultural supervisors, accountants and other technicians. They are employees in the Ministry of Agriculture but they are mandated to work for the agricultural cooperatives. Through classifying the agricultural cooperatives studied according to the number of official employees, data mentioned in table (6 – 8) refers that:

- about 79% of cooperatives have about 16 – 77 official employees,
- 15% of cooperatives have about 78 – 139 official employees,
- about 6% of cooperatives have more than 139 official employees.

The previous results refer to the increasing number of the official employees in the agricultural cooperatives as the average of employees number reached 59 official employees

that is highly more than what a cooperative needs particularly at present , as it was shown and noted that the majority of agricultural cooperatives studied have an unemployment rate of more than 50% . This is what was mentioned by the majority of the agricultural cooperatives managers studied.

Table 6 – 8: Classification of the agricultural cooperatives studied according to the number of the official employees

Number of official employees	Number of the agricultural cooperatives	%
16 –77	52	78.8
78-139	10	15.2
More than 139	4	6
Total	**66**	**100**

Source: Own research and calculation

6.1.2.4. Relations within the agricultural cooperatives

It is no doubt, that the potential of the relations among the main elements on which the agricultural cooperatives organizational structure is formed (General Assembly members - board members – official employees) on one hand, and among the local leaders in villages on the other one, plays an important and effective role in the ability and effectiveness of the agricultural cooperatives in achieving their goals and performing functions.

Table 6 – 9: Classification of the agricultural cooperatives studied according to the strength of relations within them

Strength of relations within cooperatives	Number of the agricultural cooperatives	%
Weak	2	3.0
Medium	18	27.3
Strong	46	69.7
Total	**66**	**100**

Source: Own research and calculation

Through classifying the agricultural cooperatives studied according to the **strength of relations** within, results mentioned in table (6 – 9) refers that:

- 3% of the agricultural cooperatives have weak relations,
- about 27% have medium relations,

- about 70% of have strong relations.

The results of the study refer to the strength of relations in the great majority of the agricultural cooperatives. These results refer that the interaction among the main elements of the agricultural cooperatives organizational structure works well, which again has a positive impact on the course work in the agricultural cooperatives.

6.1.3. Type and number of villages, which are benefiting from the agricultural cooperatives activities

In the Egyptian Governorate of Menoufiya there are 69 main villages and 312 dependent villages. The main villages are those that have local units of the governmental authorities, which supervise the agricultural cooperatives. In addition, the main villages have several rural organizations such as village bank, social unit and rural health unit as well as the educational organizations that aim at achieving the rural development in main villages and dependent villages through cooperation and coordination among the rural different organizations.

Data mentioned in table (6 –10) refers that about 35% of the agricultural cooperatives are located in main villages while 65% of them are located in dependent villages.

Table 6 – 10: Classification of the agricultural cooperatives studied according to the type of villages in which they are located

Village type	Number of the agricultural cooperatives	%
Main village	23	34.8
Dependent village	43	65..2
Total	**66**	**100**

Source: Own research and calculation

Through classifying the agricultural cooperatives under study according to the number of villages which are benefiting from the agricultural cooperatives activities, data mentioned in table (6 – 11) refer that:

- about 85% of the agricultural cooperatives direct their services and activities for only one village,

- 13.6% of the agricultural cooperatives direct their activities and services for only two villages,
- 1.5% of the agricultural cooperatives provide their services and activities for three villages.

The previous results indicate that the vast majority of the agricultural cooperatives provide their services and activities for one village and only a few of them provide their services and activities for more than one village.

Table 6 – 11: Classification of the agricultural cooperatives studied according to the number of villages benefited from their activities and services

Village type	Number of the agricultural cooperatives	%
One village	56	84.85
Tow villages	9	13.64
Three villages	1	1.51
Total	**66**	**100**

Source: Own research and calculation

6.1.4. Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities

The agricultural cooperatives differ according to the cultivated area to which they should provide activities and services. Data mentioned in table (6 –12) refer that:

- about 83 % of the agricultural cooperatives provide their services and activities for (222 – 1266) Feddans*,
- about 11 % of the agricultural cooperatives provide their services and activities for (1267 – 2310) Feddans,
- 6 % of the agricultural cooperatives provide their services and activities for (2311 – 3355) Feddans.

Results show that the vast majority of the agricultural cooperatives provide their activities and services for small areas while only a few cooperatives provide their activities and services for large cultivated area.

* One Feddan = 4200.8335 m^2 – One Hectare = 10 000 m^2 – (One Feddan = 0.42 Hectare)

Table 6 – 12: Classification of the agricultural cooperatives studied according to the cultivated area in the villages benefiting from their activities and services

Cultivated area (in Feddan *)	Number of the agricultural cooperatives	%
222-1266	55	83.3
1367 – 2310	7	10.6
2311 – 3355	4	6.1
Total	**66**	**100**

Source: Own research and calculation

6.1.5. Number of population in the village with an agricultural cooperative

The average number of population in the villages that have agricultural cooperatives is 8896 persons. Through classifying the agricultural cooperatives studied according to the number of population, data mentioned in table (6 – 13) refer that:

- about 85% of the agricultural cooperatives are located in villages that have 1919 – 14360 persons,
- 12% of them are located in villages that have (14361– 26800) persons,
- 3 % of them are located in villages that have (26801 – 39243) persons.

Results refer that the vast majority of the agricultural cooperatives under study are located in villages that have a relatively small portion of population. In addition, a few agricultural cooperatives are located in villages that have a large portion of population.

Table 6 –13: Classification of the agricultural cooperatives studied according to the number of population in the villages with agricultural cooperatives

Number of population	Number of the agricultural cooperatives	%
1919 – 14360	56	84.8
14361 – 26800	8	12.2
26801 – 39243	2	3.0
Total	**66**	**100**

Sources: Own modification from IDSS (2002 B) and CAPMAS (1996 B, pp.10 – 40)

6.1.6. Development level of village with an agricultural cooperative

Rates of education, female education and employment in villages were used as indicators to measure the development level in villages with an agricultural cooperative.

Results refer that the average education rate[2] in villages with an agricultural cooperative is 67.73% from the total number of population (the age of 10 years and more).

Through classifying the agricultural cooperatives studied according to what is mentioned above, data mentioned in table (6 – 14) refers that:

- about 17 % of the cooperatives are located in villages that have low level of education (50% – 62.4%) ,
- 74% of the cooperatives are located in villages that have medium level of education (62.5% – 74.8 %),
- about 9% of the cooperatives are located in villages that have high level of education as education rate is about (74.9% – 87.2%) .

Results refer that the majority of the agricultural cooperatives are located in villages, that have medium level of education and only a few are located in villages, which have high level of education.

As for the **rate of female education**, results refer that the average educated female in villages that have agricultural cooperatives under study is 55% from the total number of female number (Ages of 10 years more). Through classifying the agricultural cooperatives according to the rate of educated female in villages, data mentioned in table (6 – 15) refer that:

- 44% of the agricultural cooperatives are located in villages that have low level of female education (40.2% - 54%) ,
- 53% of the agricultural cooperatives are located in villages that have medium level of female education (54.1% - 67.8 %),
- 3% of the agricultural cooperatives are located in villages that have high level of female education (67.9% - 81.7 %).

Table 6 – 14: Classification of the agricultural cooperatives studied according to education rate in the villages with agricultural cooperatives

Education level and rate	Number of the agricultural cooperatives	%
Weak (50% - 62.4%)	11	16.7
Medium (62.5 – 74.8 %)	49	74.2
High (74.9% - 87.2%)	6	9.1
Total	**66**	**100**

Sources: Own modification from IDSS (2002 D) and CAPMAS" (1996 C , pp. 232-270)

[2] Here, education rate means, that people are at least able to read and write. All kinds of school level are summarized.

Table 6 – 15: Classification of the agricultural cooperatives studied according to the rate of female education in villages with agricultural cooperatives

Female education level and rate	Number of the agricultural cooperatives	%
Weak (40.2% 54%)	29	43.9
Medium (54.1% - 67.8%)	35	53.0
High (67.9% - 81.7 %)	2	3.0
Total	**66**	**100**

Sources: Own modification from IDSS (2002 D) and CAPMAS (1996 C, pp. 232-270)

The results indicate that the average employment rate in the villages with agricultural cooperatives is 50% of the total population number at the age of work 15 years and more. Data mentioned in table (6 – 16) refer that:

- about 30% of the agricultural cooperatives are located in villages that have a low rate of employment (41.6% - 47.7%) ,
- about 52% of the agricultural cooperatives are located in villages that have medium rate of employment (47.8% - 53.8%),
- about 18% of the agricultural cooperatives are located in villages that have high rate of employment (53.9% - 60%) .

Results indicate that more than half of the agricultural cooperatives under study are located in villages that have a medium rate of employment with the employees rate does not exceed 54% of the total population number at the age of work .

Through standardizing the rates of education, female education and employment in villages through using T Scores*, it was possible to form a measurement for indicating the development level of villages with agricultural cooperatives.

Table 6 – 16: Classification of the agricultural cooperatives studied according to the employment rate in the villages with agricultural cooperatives

Employment rate in Villages	Number of the agricultural cooperatives	%
Low (41.6 % - 47.7%)	20	30.3
Medium (47.8% - 53.8%)	34	51.5
High (53.9% - 60%)	12	18.2
Total	**66**	**100**

Sources: Own modification from IDSS "(2002 E) and CAPMAS" (1996 D, E, pp. 271 – 307)

* T-Score = 10 Z + 50

Z (Standard Score) = (X – Mean) / Standard deviation (Allam, 1985, pp. 197 – 213).

Through classifying the agricultural cooperatives studied according to **the development level of villages** in which they are located, data mentioned in table (6 –17) indicate that:

- about 33% of the agricultural cooperatives are located in villages that have low level of development,
- 59% of the agricultural cooperatives are located in villages that have medium level of development,
- about 8% of the agricultural cooperatives are located in villages that have high level of development.

These results, in turn, refer that the majority of the agricultural cooperatives are located in villages that have medium level of development.

Table 6 – 17: Classification of the agricultural cooperatives studied according to the development level of villages in which they are located

Villages development level	Number of the agricultural cooperatives	%
Low	22	33.3
Medium	39	59.1
High	5	7.6
Total	**66**	**100**

Source: Own research and calculation

6.1.7. Age of agricultural cooperatives (work duration of agriculture cooperatives)

Data mentioned in table (6 –18) indicates that:

- 12.1 % of the agricultural cooperatives studied were established during 1945 –1956 with an average of 0.7 cooperative established per year,
- 77.3% of the agricultural cooperatives were established during 1957 –1988 with an average of 4.6 cooperatives established per year,
- 10.6%of the agricultural cooperatives were established during 1969 –1981 with an average of 0.6 cooperative established per year.

Results refer that the great majority of the agricultural cooperatives, more than three fourth of the studied cooperatives number, were established during (1957- 1968) due to issuing law No. 317 / 1956. According to this law, all cooperatives were put under the State control. In the following the most prominent positive effects of law No. 317/1956 that supported in spreading the cooperatives in all villages of Egypt in this period;

1. Flexibility and easiness of establishing cooperatives.

2. Encouraging farmers to join the membership of cooperatives through delimiting share value in addition to facilities in payment and the possibility to reimburse share value.
3. Establishing a cooperative fund for providing farmers with necessary loans.
4. Stating the principle of democratic election for the cooperatives board members according to the condition of members' honorable records and sound choice.

Upon this law (No. 317 / 1956) an agricultural credit system was established in 1957. So the multi- purposed cooperative spread all over Egypt's villages to which farmers join, who have possessed cultivated lands.

Table 6 – 18: Classification of the agricultural cooperatives studied according to the year of establishment

Establishment period	Number of the agricultural cooperatives	%	Average number of established annually (Co./year)
1945 -1956	8	12.1	0.7
1957 -1968	51	77.3	4.6
1969 – 1981	7	10.7	0.6
Total	**66**	**100**	**1.97**

Source: Own research and calculation

6.1.8. Area of the agricultural cooperatives building

The area of a cooperative is considered one of the most important elements influencing the degree of performance and achievement of activities and functions. Through classifying the agricultural cooperatives studied according to a building area, data mentioned in table (6 – 19) indicate that:

- 48.5% of the agricultural cooperatives have buildings that are less than 250m^2,
- 27.3% of the agricultural cooperatives have buildings that are (250 – 500) m^2,
- 24% of the agricultural cooperatives have buildings with more than 500m^2.

These results, in turn, refer that about half of the number of the agricultural cooperatives studied have buildings with small areas.

Table 6 – 19: Classification of agricultural cooperatives studied according to a building area

Building Area	Number of the agricultural cooperatives	%
Small (less than 250 m^2)	32	48.5
Medium (250- 500 m^2)	18	27.3
Large (more than 500 m^2)	16	24.2
Total	**66**	**100**

Source: Own research and calculation

6.1.9. The extent of the agricultural cooperatives building' suitability for achieving their activities and function

The extent of a cooperative building suitability is considered one of the most important demands necessary for being successful in achieving its activities and functions, it can be judged through:

1. The extent of agricultural cooperative's buildings area suitability for their employees' number.
2. The extent of agricultural cooperative's building area suitability for achieving their activities and functions,
3. The extent of agricultural cooperative's facilities suitability for activities and functions.
4. The extent of agricultural cooperative's geographical location for achieving their activities and function.

As for the extent of agricultural cooperatives building area suitability for their employees' number, data mentioned in table (6 – 20) indicates that:

- 34.8 % of the agricultural cooperatives are built on areas that are not suitable,
- 7.6% of them are built on areas that are fairly suitable
- 57.6% of them are built on areas that are suitable for employees' number.

Table 6 – 20: Classification of the agricultural cooperatives studied according to the extent of the building area's suitability for employees' number

Extent of suitability	Number of the agricultural cooperatives	%
Unsuitable	23	34.8
Fairly suitable	5	7.6
Suitable	38	57.6
Total	**66**	**100**

Source: Own research and calculation

Through classifying the agricultural cooperatives studied according to the extent of building-area's suitability for achieving their activities and functions, data mentioned in table (6 – 21) indicates that:

- 36.4% of the agricultural cooperatives are built on areas that are not suitable,
- 9.1% of them are built on areas that are fairly suitable,
- 54.5 % of them are built on areas that are suitable for activities and functions.

Table 6 – 21: Classification of the agricultural cooperatives studied according to the extent of building area's suitability for achieving their activities and functions

Extent of suitability	Number of the agricultural cooperatives	%
Unsuitable	24	36.4
Fairly suitable	6	9.1
Suitable	36	54.5
Total	**66**	**100**

Source: Own research and calculation.

As for the extent of suitability of main utilities and facilities in agricultural cooperatives for achieving their activities and functions, facilities here means the extent of provision of main utilities such as electricity, potable water , W.C. and sewage in a cooperative building. Data mentioned in table (6 – 22) indicate that:

- 40.9% of the agricultural cooperatives have buildings that are not provided with main utilities ,
- 22.7% of them have buildings that are fairly provided with main utilities,
- 36.4% of them have building that are provided with facilities and main utilities and are suitable for achieving activities and functions.

Table 6 – 22: Classification of the agricultural cooperatives studied according to the extent of provision of the main utilities and facilities in buildings

Extent of facilities provision	Number of the agricultural cooperatives	%
Non provided	27	40.9
Fairly provided	15	22.7
Provided	24	36.4
Total	**66**	**100**

Source: Own research and calculation

Through classifying the agricultural cooperatives studied according to the extent of their geographical location's suitability for achieving their activities and functions, data mentioned in table (6 – 23) indicate that:

- 13.6% of the agricultural cooperatives are built on locations that are not suitable for achieving their activities and functions ,
- 6.1% of the agricultural cooperatives are built on locations that are fairly suitably ,
- 80.3% of the agricultural cooperatives are built on locations that are suitable.

Table 6 – 23: Classification of the agricultural cooperatives studied according to the extent of their geographical locations suitability for achieving their activities and functions

Extent of geographical location suitability	Number of the agricultural cooperatives	%
Unsuitable	9	13.6
Fairly suitable	4	6.1
Suitable	53	80.3
Total	**66**	**100**

Source: Own research and calculation.

These results indicate that the areas of the buildings of most agricultural cooperatives under study are suitable for employees' number as well as for achieving their activities and functions. In addition, their geographical locations are suitable, too. On the contrary, the buildings of most agricultural cooperatives under study are not equipped with main facilities and utilities that may affect negatively the performance and achievement of activities and functions.

6.1.10. Budget and financial resources of the agricultural cooperatives

Financial resources are considered to be the main and necessary resources for the cooperatives as factors, that affect the cooperative's effectiveness in achieving their activities and functions.

6.1.10.1. Budget value (value of total finances)

Through classifying the agricultural cooperatives studied according to their value of budget in 2002 it is shown from data mentioned in table (6 – 24) that:

- 56.1% of the agricultural cooperatives have budgets that are less than 50 000 Egyptian Pounds annually ,
- 22.7% of them have budgets that are (50 000 – 100 000) Egyptian Pounds annually,
- 21.2% of them have budgets that are more than 100 000 Egyptian Pounds annually.

Results above refer that the majority of cooperatives have small budgets that are less than 50 000 Egyptian Pounds, which is not sufficient for buying a tractor for example with its agricultural tools attached.

Table 6 – 24: Classification of the agricultural cooperatives studied according to the value of budgets in (2002) in Egyptian pounds

Budget value in Egyptian Pound	Number of the agricultural cooperatives	%
Less than 50 000	37	56.1
50 000 – 100 000	15	22.7
More than 100 000	14	21.2
Total	**66**	**100**

Sources: Own modification from the budget records, final accountancy for the financial year starts in 01.07.2001 and ends in31.06.2002, the agricultural cooperatives studied, Menoufiya Governorate – Egypt.

6.1.10.2. Financial resources

As for the financial resources of the agricultural cooperatives, data mentioned in table (6 – 25) indicates that:

- all agricultural cooperatives investigated depend mainly on four resources for financing their budgets, that are, members shares (subscription) , profits from buying production requirements such as fertilizers , seeds and pesticides for members , the fees of issuing the agricultural certificates and fees collected from members for providing agricultural services such as purifying canals and drainage canals .
- 31.8% of the cooperatives depend on the profits from trading in house and electrical appliances,
- 12.12% of the cooperatives depend on the revenues of hiring agricultural machines possessed by the cooperative to their members,
- 12.12% of the cooperatives depend on their deposits and savings revenues in commercial or agricultural banks.
- a few of the agricultural cooperatives depend on other financing resources such as hiring trucks, refrigerators for preserving agricultural products , gas station and pharmacy .

The agricultural cooperatives managers indicated that the agricultural cooperatives did not receive any governmental subsidies from the Ministry of agriculture or donations from members' grants or from international or local organizations.

Results refer that the agricultural cooperatives depend in their budgets mainly on traditional financing resources with the lack of nontraditional financing resources such as the lack of large agricultural productive projects the profits of which may be used in financing some activities and small agricultural projects.

6.1.10.3. The extent of finance sufficiency

Through classifying the agricultural cooperatives according to the extent of their budgets sufficiency for achieving activities and functions, it is shown from table (6 – 26) that:

- 9.1% of the agricultural cooperatives have enough financial means for achieving their activities and functions ,
- 18.2% of the agricultural cooperatives have fairly enough budgets,
- 72.7% of the agricultural cooperatives have not enough budgets for achieving activities needed by farmers.

These results refer that the great majority of the agricultural cooperatives suffer from a lack of finance and insufficiency of budget. This , in turn , agrees with the results of the previous studies that assert that the most important obstacles and problems that the agricultural cooperatives face in Egypt is the insufficiency of finance necessary for achieving the necessary activities for farmers and , therefore , necessary for achieving the agricultural development . *(Halol and El-Kholy, 1960 ; Moharam et al. , 1983 ; Hamad, 1994)* .

Table 6 – 25: Classification of the agricultural cooperatives studied according to their financing sources

Financing sources	Number of agricultural cooperatives	%
1. Members shares (subscription)	66	100
2. Profits from buying the requirements of production " seeds – fertilizers – pesticides "	66	100
3. Duties for issuing agricultural certificates and for agricultural services	66	100
4. Profits from trading in house and electrical appliances.	21	31.8
5. Revenues of hiring agricultural machines	8	12.12
6. Revenues of deposits and savings in banks	8	12.12
7. A truck (A lorry); hiring trucks	3	0.05
8. Refrigerator for preserving the agricultural products (potatoes refrigerator)	1	0.02
9. Gas station.	2	0.03
10. Pharmacy	1	0.02
11. Governmental subsidies from the Ministry of Agricultural.	Zero	Zero
12. Grants from local organizations	Zero	Zero
13. Grants from international organizations	Zero	Zero
14. Donations from individuals (or members).	Zero	Zero

Sources: Own modification from budget records, final accountancy for the financial year starts in 01.07.2001 and ends in 31.06.2002 , the agricultural cooperatives studied, Menoufiya Governorate, Egypt

Table 6 – 26: Classification of the agricultural cooperatives studied according to the extent of their annual budget's sufficiency

Budget sufficiency	Number of the agricultural cooperatives	%
Not enough	48	72.7
Fairly enough	12	18.2
Much enough	6	9.1
Total	**66**	**100**

Source: Own research and calculation.

Table 6 – 27: Classification of the agricultural cooperatives studied according to their level of cooperation with governmental organizations

Level of cooperation	Number of the agricultural cooperatives	%
Neglected (there is no common activities)	55	83.4
Low	5	7.6
Medium	3	4.5
High	3	4.5
Total	**66**	**100**

Source: Own research and calculation

6.1.11. Agricultural cooperatives relationship with the governmental and non-governmental organizations

As for the relationship between the agricultural cooperatives and the governmental organizations within the villages or their neighborhood, Table (6 – 27) indicates the classification of the agricultural cooperatives studied according to their level of cooperation with the governmental organizations in achieving and executing the developmental projects and programs in the village. These data refer that:

- 83.4% of the agricultural cooperatives did not cooperate at all with governmental organizations ,
- 7.6% of them cooperated in low level with the governmental organizations,
- 4.5% of them cooperated on a medium level with the governmental organizations ,
- 4.5% of the total number of agricultural cooperatives cooperated in high level with the governmental organizations.

Results refer that the great majority of the agricultural cooperatives did not cooperate at all with any governmental organizations in planning and executing certain developmental programs and projects in villages, that in turn, indicates a great gap between the agricultural

cooperatives and governmental organizations in villages in the field of the agricultural and rural development.

As for the relationship between the agricultural cooperatives and non-governmental organization in villages, and through asking cooperative's managers about the most important projects or common activities between the agricultural cooperatives and non-governmental organizations as well as the level of cooperation among them in implementing these developmental activities, all managers said that there are no common developmental activities or projects. It could be said, that the agricultural cooperatives did not cooperate at all with any non-governmental organization in planning and executing the developmental activities and projects in villages, knowing that all villages studied (66 villages) have non-governmental organizations, at least one organization with a maximum of 7 organizations with average of 2.3 non-governmental organizations.

Results refer that there is no comprehensive developmental plan that considers coordination and cooperation between the agricultural cooperatives and other organizations in planning and implementing the developmental projects and programs in the villages.

6.1.12. Relationship between the agricultural cooperatives and supervision authorities

By asking cooperatives managers about the authorities that supervise cooperatives, the support provided by these authorities and the barriers, which these authorities caused for the cooperatives activities, all managers said that the agricultural cooperatives are supervised by the following authorities:

1. Department of Agriculture, Menoufya governorate.
2. Agricultural Department in administrative districts.
3. Department of the Agricultural Cooperation, Menoufya Governorate.
4. Committees for Monitoring and Inspection from Menoufya Public Council.
5. Village Local Unit.
6. Local Popular Council.

Although the multiplicity and variety of the supervising authorities, cooperatives managers stated the following:

1. All supervising authorities mentioned above don't provide any material support for cooperatives.

2. All supervising authorities following the working progress through reviewing records and files with the exception of the technical committees affiliated to the departments of agriculture and agricultural cooperation, as they provide technical support for solving some problems that the agricultural cooperatives face.
3. These authorities did not block the work of the agricultural cooperatives.

Moreover, Managers said that it is not useful to have various and multiple supervising authorities. They also believe that only one or two authorities are capable to supervise the agricultural cooperatives.

6.1.13. Problems and obstacles (barriers) that the agricultural cooperatives face

Table (6 – 28) refers to the problems that agricultural cooperatives face as managers stated. It was shown that the most important of theses problems are:

- Lack of budget,
- Lack of agricultural production requirements (seeds – pesticides – fertilizers) on time , quantity and prices suitable for farmers ,
- Disallowing cooperatives to contract directly to buy the requirements of production from agricultural companies and factories ,
- Lack of farmers trust in the agricultural cooperatives as a result of the low quality of services provided in addition to increasing the prices of the agricultural production requirements in the agricultural cooperatives.

From table (6 – 28) that explains the problems that the agricultural cooperatives face , it could be said that the two most important problems faced by cooperatives that may bring about other several problems are the lack of budget and financing that lead the agricultural cooperatives to be disable to achieve their functions and activities effectively as well as disability to meet the farmers' main needs such as lack of the agricultural production requirements and marketing for the agricultural production and, therefore, the lack of farmers' trusts in the agricultural cooperatives . In addition, the other main problem is disallowing agricultural cooperatives to contract directly to buy the requirements of the agricultural production from agricultural companies and factories that lead to disability to provide these requirements in quantities, for prices and a suitable time. This, in turn , lead to a lack of farmers' trust in the agricultural cooperatives that direct them towards merchants and private agricultural and commercial shops for buying the requirements of the agricultural

production (seeds – fertilizers – pesticides) that their prices are usually less than prices provided by the agricultural cooperatives .

Table 6 – 28: Classification of the agricultural cooperative studied according to the problems they face from the point of view of their managers (N= 66 Managers)

N.	Problems and obstacles	Number of the agricultural cooperatives	%
1	Insufficiency of budget and finance necessary for the agricultural cooperatives	59	89.4
2	Lack of production requirements (seeds – pesticides – fertilizers) in time, quantity and prices suitable for farmers.	53	80.3
3	Disallowing agricultural cooperatives to contract directly for buying the production requirements (seeds- pesticides – fertilizers) from the agricultural companies and factories.	51	77.3
4	Lack of farmers' trust in the agricultural cooperatives as for the low quality of services provided, in addition to the high prices of production requirements provided for farmer in unsuitable time .	49	74.2
5	High loan prices that cooperatives have to pay to village or commercial banks.	49	74.2
6	Lack of coordination and cooperation between the agricultural cooperatives and other developmental organizations in villages.	49	74.2
7	Cooperatives disability to market the agricultural crops as a result to the lack of necessary finance in addition to assuming this role by village banks.	45	68.2
8	Lack of marketing information on local and international markets.	45	68..2
9	Lack of warehouses suitable for storing the requirements of the production and agricultural crops.	44	66.7
10	Disallowing the agricultural cooperatives to establish agricultural companies or participating in setting up great productive agricultural projects but after the approval of the Ministry of Agriculture.	43	65.2
11	The difficulty that board council faces in decision making and implementing but after consulting the supervising authorities, especially, the department of agriculture and the Ministry of Agriculture.	37	56.1
12	Multiplicity of Supervising Authorities	34	51.5
13	Farmers' low rate of nomination for agricultural cooperatives boards.	29	43.9
14	The agricultural cooperatives buildings are not suitable in addition to the lack of main utilities (electricity – potable water – sewage).	24	36.4
15	Lack of efficiency for most cooperatives boards members.	22	33.3
16	Lack of great productive projects as a result to the lack of financial resources.	19	28.8
17	Lack of irrigation water in quantity and time suitable.	15	22.7
18	Lack of loans necessary for farmers.	15	22.7
19	Cooperatives disability to participate in service projects in villages for the sake of their members as for insufficiency of budget. .	13	19.7
20	Lack of agricultural machines in the agricultural cooperatives	12	18.2
21	Lack of employees training level, especially, technicians in the agricultural cooperatives.	8	12.1
22	Lack of material awards for employees in agricultural cooperatives comparing to other authorities.	8	12.1

Source : Own research and calculation

Through asking farmers, cooperatives members under study about the problems that cooperatives face and affect the efficiency of cooperatives in meeting their basic agricultural needs , table (6 – 29) refers that the most important problems mentioned by farmers are : the lack of the agricultural production requirements (seeds- fertilizers – pesticides) , in time and suitable quantity , the lack of agricultural machines , compulsory importing for certain crops , namely , wheat and cotton in prices less than the market's prices , the need for selling production requirements on long term, and the lack of loans and credits necessary for farmers for establishing certain small projects .

Also, it can be noted that some farmers' points of view on problems faced by the agricultural cooperatives don't vary greatly from the managers' ones especially when they say unanimously that the most important problems are the lack of the agricultural production requirement and machines considering that it is a main function of cooperatives to provide these requirements .

Table 6 – 29: Problems and obstacles faced by the agricultural cooperatives from the point of view of farmers studied (N = 291 Farmers)

N.	Problems and obstacles	Number of farmers	%
1	Lack of the requirements of the agricultural production (seeds – pesticides – fertilizers) in time and prices suitable .	249	85.6
2	Lack of agricultural machines in suitable prices.	233	80.0
3	Compulsory importing for certain crops such as wheat and cotton in prices less than market ones.	215	73.9
4	Cooperatives don't buy production requirement for farmers on long term.	198	68.0
5	Lack of loans and credits.	175	60.1
6	Increasing of duties for issuing agricultural certificates.	145	49.8
7	Lock of training courses for farmers on modern machines and innovations in addition to way of use.	85	29.2
8	Lack of irrigation water on suitable times.	35	12.0

Source: Own research and calculation

6.1.14. Managers and farmers' suggestions to develop and improve the agricultural cooperative's performance

6.1.14.1. Managers' suggestions

As for the suggestions of the agricultural cooperatives managers to develop and improve the performance of the agricultural cooperatives, it was shown from table (6 – 30) that the most important suggestions mentioned are:

1. Establishing a cooperative bank to provide necessary loans for cooperative with suitable interests and consequently overcoming the problem of the agricultural cooperatives budget deficits,
2. Allowing the agricultural cooperatives to contract directly with the agricultural factories that produce the production requirements for farmers in suitable time , quantity and price ,
3. Organizing training courses for board members and farmers , providing modern devices necessary for training farmers on the newest agricultural innovations, and,
4. Increasing the agricultural cooperatives participation in social and service activities in villages.

From what is mentioned above and suggestions mentioned in table (6 – 30), it is clear that most of the managers' suggestions concentrate on:

- Increasing the financial support for the agricultural cooperatives ,
- Providing the production requirements ,which needs issuing a new cooperative legislation that permits to establish a cooperative bank to provide the necessary financial support for cooperatives as well as permitting agricultural cooperatives to contract directly to buy seeds , pesticides and fertilizers from the agricultural producing factories directly without mediation from the central cooperatives,
- Allowing the agricultural cooperatives, to establish agricultural companies or participating in certain agricultural productive projects without referring to supervising authorities and granting cooperatives boards the freedom to take and implement suitable decisions for the sake of farmers, the members of the agricultural cooperatives.

6.1.14.2. Farmers' suggestions

Through asking farmers about their suggestions for developing the cooperatives and improving their performance, table (6 – 31) refers that the most important suggestions are:

- Providing the agricultural production requirements (seeds – pesticides – fertilizers) in suitable price, quantity and time.
- Providing modern agricultural machines at suitable prices,
- Organizing training courses for farmers on agricultural innovations and machines, and,
- Annulling the compulsory importing for crops (Wheat and Cotton).

It is noted that the most important service is to provide the agricultural production requirements and machines. It must be considered, that the two major problems that farmers

face are the lack of production requirements and machine. Without these means the farmers can't develop their agricultural production. This, in turn, agrees with the suggestions of cooperatives managers who also referred to the provision of financial support for the agricultural cooperatives, which is necessary for achieving their different activities and functions.

Table 6 – 30: Classification of the agricultural cooperatives managers studied according to their suggestions for developing and improving the performance of the agricultural cooperatives *(N = 66 Managers)*

N.	Managers' suggestions	Number of managers	%
1	Establishing a cooperative bank for providing necessary loans for the agricultural cooperatives in a suitable interest price and consequently overcoming the problem of budget deficit.	62	93.9
2	Allowing the agricultural cooperatives to contract directly with the agricultural firms and factories that produce production requirements for providing them to farmers in suitable price , quantity and time	60	90.9
3	Providing finance necessary for organizing training courses for board members of the agricultural cooperatives.	45	68.2
4	Training farmers on using the modern agricultural technology.	45	68.2
5	Providing modern devices necessary for training farmers on the newest agricultural innovations such as computer and video.	44	66.7
6	Increasing the participation of the agricultural cooperatives in implementing social activities for farmers and service activities in villages.	42	63.6
7	Increasing cooperation between the agricultural cooperatives and both agriculture colleges and agricultural researches centers ,	40	60.6
8	Developing agricultural cooperatives buildings and providing main utilities such as electricity, and potable water .	38	57.6
9	Allowing the agricultural cooperatives to establish agricultural firms or participating in setting up large agricultural productive projects.	35	53.0
10	Providing marketing information on local and international markets.	33	50.0
11	Providing modern means for transporting and mobilizing agricultural crops for markets.	33	50.0
12	Exempting the agricultural cooperatives from taxes that help in providing the production requirements for farmers in suitable prices.	29	43.9
13	Purifying canals and drainage to provide irrigation water for farmers.	23	34.8
14	Increasing awards for employees in the agricultural cooperatives	21	31.8
15	Coordination and cooperation between the agricultural cooperatives and other organizations in villages.	21	31.8

Source : Own research and calculation

Table 6 – 31: Classification farmers according to suggestions to develop and improve the performance of the agricultural cooperatives (N= 291 Farmers)

N.	Farmers' suggestions	Number of farmers	%
1	Providing production requirements (seeds- fertilizers – pesticides in suitable price, quantity and time.	249	85.6
2	Providing modern agricultural machines in suitable prices.	233	80.0
3	Organizing training courses for farmers to train them on the modern agricultural innovations.	85	29.2
4	Annulling the compulsory importing for crops (Wheat and Cotton).	84	28.9
5	Purifying ditches and drainage canals	35	12.0
6	Providing and establishing warehouses necessary for a cooperative to store production requirements once need it .	33	11.3
7	The cooperatives participation in public activities in villages such as donating to set up schools from the cooperatives profits.	30	10.3
8	Distributing agricultural magazines and brochures on the important marketing information and new seeds.	28	9.6

Source: Own research and calculation

6.1.15. Discussion and conclusion

From previous results on the agricultural cooperatives status queue, a set of facts that may affect directly or indirectly cooperative's effectiveness and ability to achieve agricultural activities necessary for farmers that participate in the agricultural development process, was concluded. The most important of them are:

1. Low levels of cooperatives managers' education, as 70% of them have medium scientific qualification and did not acquire their education in Faculties of Agriculture or High Agricultural Institutes. In addition, low level of training as it was shown that 12% of managers didn't have training courses since working in the agricultural cooperatives, 24.2% of them have very low level of training and about 44% of them have low level of training that is due to insufficiency of financial means necessary for organizing training courses.
2. Most cooperatives managers are not members in non governmental organizations in villages and the lack of their participation in the activities of non-governmental organizations may affect the agricultural cooperatives as the participation and membership of managers help them in identifying activities achieved by non-governmental organizations that farmers need in order to be avoided once applying the activities of the agricultural cooperatives .Also, lack of participation may be one of the most important reasons that hinders cooperation and coordination between the agricultural cooperatives and non-governmental organizations confirming the result of a lack of cooperation between the agricultural cooperatives and non-governmental organizations.

3. The most majority of agricultural cooperatives (84.5% of them) provide their services and activities for farmers of one village, while 83% of them provide agricultural activities and serve small cultivated areas less than 1266 Feddans.
4. 59% of the agricultural cooperatives are located in villages with a medium level of development and 33% of them are located in villages with a low level of development. If the agricultural cooperatives help in achieving village development, this is considered to be an indicator to the decreasing role of cooperatives in the process of development. In other words, if the village with an agricultural cooperative has a low level of development, this, in turn, affects negatively the role of the agricultural cooperatives considering that the relation between them is interconnected.
5. The majority of the agricultural cooperatives (77.3%) were established in 1957 – 1966 , this is due to the issuing of law 317 / 1957, that was characterized by flexibility and easiness of establishing the agricultural cooperatives and encouraged farmers to hold a cooperative's membership as there is no minimum limit for share value ; establishing a cooperative fund for providing necessary loans for all farmers ; and asserting on the principle of democratic election for boards members , upon this law (No. 317 /1956) the system of agricultural credit was established in (1957) and multi – purposed agricultural cooperatives were spread all over villages of Egypt. *(Rashad, 1998, p. 110; Nasr, 1995, pp. 16 – 17).*
6. 48% of the agricultural cooperatives have buildings on areas less than 250 m^2 and 40.9% of them are not equipped with basic facilities and utilities such as electricity, potable water, W.C, sewage, desks and clerical tools necessary for the work of a cooperative. This, in turn, is due to the lack of finance necessary for developing the agricultural cooperatives building and providing basic facilities and utilities.
7. The majority of the agricultural cooperatives (72.7%) has an insufficient budget and 18.2% of them have fairly enough budget for achieving their basic activities .This means that the majority of cooperatives face the problems of financial deficit and insufficiency of budget that result in other several problems which again hinder the work of the agricultural cooperatives and affect their efficiency in the process of development.
8. The insufficiency of finance necessary for the agricultural cooperatives leads to disability to market the farmers' agricultural crops as well as disability to organize training courses for managers and farmers as well as board members and employees.
9. Cooperatives disability to provide modern agricultural machines for farmers and disability to provide loans necessary for farmers to set up small agricultural projects as well as

disability to establish large agricultural productive projects so that most farmers could make use of their profits in establishing small agricultural projects, in addition to their disability to provide basic utilities in buildings, all of these are considered problems faced by cooperatives that are a result of insufficient finance necessary for cooperatives .

10. Disallowing agricultural cooperatives to contract directly to buy the requirements of the agricultural production (seeds – pesticides – fertilizers) from the producing agricultural factories, is considered to be one of the most important problems faced by the agricultural cooperatives that lead to the disability of the majority of them (80.3% of cooperatives) to provide the requirements of the agricultural production .
11. Lack of farmers' trust in the agricultural cooperatives as a result of lack of the agricultural production requirements as 85.6% of farmers assert that cooperatives couldn't provide the agricultural production requirements in suitable price, quantity and time, in addition to their disability to provide the agricultural machines necessary for farmers and lack of periodical training courses for farmers.
12. Lack of farmers' trust in the agricultural cooperatives lead to a decreasing farmers' participation in the General Assembly meetings , as 62% of the agricultural cooperatives have an attendance rate less than half of members , as well as farmers' lack of concern for being nominated for the cooperatives boards upon their honorable records but not election, that also, in turn, brought about 33.3% of cooperatives to have ineffective board members that refers to disability to discuss on cooperatives' policies and taking decisions unsuitable that affect negatively the cooperatives efficiency .
13. Most agricultural cooperatives (83% of them) did not cooperate absolutely with governmental organizations in villages in planning, and implementing developmental activities and projects. Also, all cooperatives under study didn't cooperate at all with non–governmental organizations, that refer to the lack of a comprehensive developmental plan considering coordination and cooperation between the agricultural cooperatives and other organizations in villages. So during planning of agricultural development, the government should activate the coordination and cooperation among the roles of both agricultural cooperatives and other organizations in the villages, in order to enhance their abilities and the organizational effectiveness in the agricultural and rural development.
14. Agricultural cooperatives managers agree with farmers in most basic suggestions for developing and improving the performance of the agricultural cooperatives, as they said that providing the agricultural cooperatives with physical resources makes them more able to achieve their activities, overcoming most problems and meeting farmers' basic needs.

Cooperatives managers suggest establishing a cooperative bank to provide finance necessary for cooperatives.

15. For meeting farmers' basic needs, namely, providing the requirements of the agricultural production, agricultural cooperatives should be allowed to contract directly with the agricultural factories for buying these requirements without mediation from the agricultural cooperation central cooperative.
16. It worth noting that establishing a cooperative bank and allowing cooperatives to contract and buy directly the requirements of production from the agricultural factories, and requires issuing a new law of agricultural cooperation.

6.2. Agricultural cooperatives' ability to mobilize resources for achieving its activities

As was explained previously, the agricultural cooperatives ability to mobilize resources for achieving their activities was measured with a six items measurement (sub variables), that are:

1. Number of agricultural cooperative members,
2. Percentage of female' members,
3. Area of the agricultural cooperative building,
4. Value of budget,
5. Number of financial resources, and thus
6. Percentage of financing sufficiency for agricultural cooperative activities (percentage of available financing from requested financing)

Data mentioned in table (6 – 32) explain the descriptive statistical indicators of the measurement and the sub-variables from which it is formed as following:

- Average number of agricultural cooperatives members is 1237, with a standard deviation of 753 .4 members and range from 220 - 4200 members.
- Average percentage of female members is 20.2%, with a standard deviation of 10.4% and range from 1.2% - 40%.
- The agricultural cooperative equipment with building is 429 m^2 in the average with a standard deviation of 462.8 m^2 and range from 15 – 2600 m^2.
- The annual budget average size is 83.970,8 with a standard deviation of 143.315,6 and range from 800 – 1000 0000 Egyptian pounds.

- The average number of financing resources is 4 with a standard deviation of 1.3 resources and range from 2 – 8 resources.
- The average percentage of the agricultural cooperative's activities with sufficient financing is 52.4% with a standard deviation of 33.3% and range from 2% - 100 %.

The actual range of the compound measurement that measures the agricultural cooperatives ability to mobilize resources is 242.64 – 429.9 standard units, with average of 300 standard units.

Table 6 – 32: Descriptive statistical indicators for measuring the agricultural cooperatives' ability to mobilize resources and its sub-variables

The Variables	Mean	Standard deviation	Minimum	Maximum
Agricultural cooperatives ability to mobilize resources for achieving its activities. This measurement has estimated by the total of T-Score* for the following sub-variables :	300	37,2	242,64	429,9
1. Number of agricultural cooperatives members.	1237	753,4	220	4200
2. Percentage of members' females.	20,2	10,4	1,2	40,0
3. Area of agricultural cooperatives building (m^2)	429	462,8	15	2600
4. Value of budget (Egyptian Pound)	83970,8	143315,6	800	1000000
5. Number of finance sources.	4	1,3	2	8
6. Percentage of financing sufficiency for agricultural cooperatives activities =Percentage of available financing from requested (demanded) financing.	52,4	33,3	2	100
* **T =10 Z + 50** where **Z =** $\frac{X-M}{S}$ **..... M= Mean** **S = Standard deviation** (Allam, 1985, pp. 210 – 214)				

Source: Own research and calculation

6.2.1. Classification of agricultural cooperatives according to their ability to mobilize necessary resources

Through classifying the agricultural cooperatives studied into categories according to their level of mobilizing resources for achieving their activities, results in table (6 –33) showed that:

- 71.2% of the agricultural cooperatives studied were found to have low capability of mobilizing resources,
- 24.3% of them have medium capability,

- 4.5% of them have high capability of mobilizing resources for achieving their activities.

Results indicated that the great majority of the agricultural cooperatives studied have low capability of mobilizing resources for achieving their activities, that may lead to decreasing the ability of most cooperatives to achieve their goals and participate effectively in the process of agricultural development, as the provision of resources is considered a necessary condition for agricultural cooperatives to achieve their main goals.

Table 6 – 33: Classification of the agricultural cooperatives according to their ability to mobilize necessary resources

Levels of ability to mobilize necessary resources	Number of the agricultural cooperatives	%
Low capability	47	71.2
Medium capability	16	24.3
High capability	3	4..5
Total	**66**	**100**

Source: Own research and calculation

6.2.2. Correlation analysis between the independent research variables and the agricultural cooperatives' ability to mobilize the resources

The results of correlation analysis shown in table (6 – 34) indicated that there are positive and significant correlations between the agricultural cooperatives ability to mobilize the resources and the following independent variables:

- Manager's training level,
- Total number of N.G.Os- membership of the manager,
- Number of population in the village with an agricultural cooperative,
- Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities,
- The extent of agricultural cooperative building's suitability for achieving their activities and functions,
- Number of governmental employees in agricultural cooperative,
- Number of activity fields of the agricultural cooperative,
- Number of governmental organizations in the village,
- Number of N.G.Os in the village, and
- Number of the members serving in the agricultural cooperative board of directors.

Table 6 – 34: Correlation coefficients (r), between independent research variables and the agricultural cooperatives' ability to mobilize the necessary resources

N.	The independent research variables	Simple correlation coefficients
1	Manager's age	- 0.042
2	Manager's education level	0.133
3	Manager's experience level	- 0.062
4	Manager's training level	0.297*
5	Distance between manager's residence and agricultural cooperative location.	- 0.165
6	Total number of N.G.Os- membership of the manager.	0.279*
7	Type of N.G.Os membership of the manager.	0.216
8	Informal social participation level of the manager.	0.104
9	Strength of the relations within the agricultural cooperative	- 0.033
10	Age of agricultural cooperative(Work duration)	0.056
11	Number of villages, which are benefiting from the agricultural cooperatives activities	- 0.049
12	Number of population in the village with an agricultural cooperative	0.741**
13	Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities	0.705**
14	The extent of agricultural cooperative building's suitability for achieving their activities and functions	0.325**
15	Village development level with an agricultural cooperative	0.226
16	Number of governmental employees in agricultural cooperative	0.429**
17	Number of activity fields of the agricultural cooperative	0.279*
18	Number of governmental organizations in the village	0.615**
19	Cooperation level between agricultural cooperative and governmental organizations in the village	0.076
20	Number of N.G.Os in the village	0.537**
21	Number of the members serving in the agricultural cooperative board of directors	0.437**

***T test, Correlation coefficient significant, (high significant) P≤ 0, 01*
**T test, Correlation coefficient significant, (significant) P≤ 0, 05*
Source: Own research and calculation

Through using the strength of relations as reflected by the calculated values of the simple correlation coefficient, it is shown that the strongest variables correlated with the agricultural cooperatives ability to mobilize resources respectively, are:

1. Number of population in the village with an agricultural cooperatives (0.741),
2. Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities (0.705),
3. Number of governmental organizations in the village (0.615),
4. Number of N.G.Os in the village (0.537),
5. Number of the members serving in the agricultural cooperative board of directors (0.437),

6. Number of governmental employees in agricultural cooperative (0.429),
7. The extent of agricultural cooperative building's suitability for achieving their activities and functions (0.325),
8. Manger's training level (0.297),
9. Total number of N.G.Os- membership of the manger (0.279), and
10. Number of activity fields of the agricultural cooperative (0.279).

So these variables are good indicators for the ability of agricultural cooperatives to mobilize resources for achieving their activities. Table (6 – 34) summarized the related results.

6.2.3. Determining the variables affecting the agricultural cooperatives' ability for resources mobilization

A Model of the stepwise multiple correlations and regression analysis was used for determining the most important variables that affect the agricultural cooperatives ability to mobilize the resources for achieving their activities. The results shown in table (6 – 35) explain that this model is significant till the second step of the analysis. This means that there are only two independent variables that affect the agricultural cooperatives ability to mobilize the resources for achieving their activities and functions, they are:

1. Number of population in the village with an agricultural cooperative, and
2. Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities.

Also, the value of adjusted R^2 is 0.579 that, in turn, means that the two independent variables explain almost 58 % of the variance in the agricultural cooperatives ability to mobilize the necessary resources for achieving their activities. Considering the percentage of explained variance of the dependent variable, it is shown that the most effective independent variables on the agricultural cooperatives ability to mobilize resources are:

- Number of population in the villages with an agricultural cooperatives, as its percentage of participation in explaining the total variance of the dependent variable was 54 %, and,
- Cultivated area in the villages, which are benefiting from the agricultural cooperative activities, as its percentage of participation in explaining the total variance of the dependent variable was 4 %. Table (6 – 35) shows the results of stepwise multiple correlation and regression analysis for determining the variables affecting the agricultural cooperatives' ability to mobilize the necessary resources.

Table 6 – 35: Stepwise multiple correlation and regression analysis for determining the variables affecting the agricultural cooperatives' ability to mobilize the necessary resources

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F *Value*
Step.1	Number of population in the village with an agricultural cooperative	0.741^{**}	0.55	0.542	0.542	0.003^{**}	78.1^{**}
Step.2	Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities	0.770^{**}	0.592	0.579	0.037	0.018^{**}	45.8^{**}
# **Adjusted** $R^2 = 1 - (1 - R^2) \frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)							
** **high significant** $P \leq 0{,}01$ * **significant** $P \leq 0{,}05$							

Source: Own research and calculation

6.2.4. Discussion and conclusion

The previous results referred to the low capability of the agricultural cooperatives of mobilizing resources for achieving their activities. This result indicates the lack of finance and insufficient budget, which is one of the most critical problems that lead to decreasing their abilities to achieve their activities. This problem, in turn, will result in decreasing the level of their participation in the agricultural development.

The calculated value of adjusted R^2 of step 2 in the Stepwise multiple correlation analysis (0.579) refers that the independent variables in this study can explain about 58% of the variance in the agricultural cooperatives ability to mobilize resources. The remaining percentage of 42% is due to other independent variables, which are not included in this study.

Results of the step-wise multiple regression analysis revealed that only two independent variables were found to have significant and positive effects on the agricultural cooperatives ability to mobilize the resources. These independent variables are:

- Number of population in the village with an agricultural cooperative, and
- Cultivated area in the villages, which are benefiting from the agricultural cooperative activities.

These results may explain that an increasing number of population in villages lead to an increasing of the number of the agricultural cooperative's members that, in turn, leads to increasing their budget size to the extent that cooperatives can achieve their activities. This is clear through the positive and significant correlations among population number, cooperatives members' number and cooperatives budget value. Table (6 – 36) shows the results of correlation coefficients matrix (r), between population number, cultivated area, members' number and budget value of agricultural cooperatives.

Table 6 – 36: Correlation coefficients matrix (r) , between population number , cultivated area , members number and budget value of agricultural cooperatives

The variables	Population number	Cultivated Area	Members number	Budget value
Population number	1	0.775**	0.786**	0.692**
Cultivated area	0.775**	1	0.871**	0.594**
Members number	0.786**	0.871**	1	0.516**
Budget value	0.692**	0.594**	0.516**	1

** *T test, Correlation coefficient significant, (high significant) P≤ 0, 01*
Source: Own research and calculation

Conclusion

According to the previous results, this study recommends to integrate the small agricultural cooperatives that are located in villages with a small number of population, cultivated areas and members, each other in order to form larger agricultural cooperatives with greater economic entities that could provide and mobilize necessary resources for achieving their activities and , therefore, participating in the agricultural development .

6.3. Agricultural cooperatives' ability to employ the available resources

As mentioned above, the ability of agricultural cooperatives to employ the available resources for achieving their activities was measured through 4 sub-variable measurements, which are:

1. Percentage of the agricultural cooperative members' presentation in the General Assembly meetings,
2. Selection method of the agricultural cooperative board' members,
3. Percentage of the cooperatives board' members presentation in board' meeting, and thus
4. Number of hours of the board' members meetings annually.

Data mentioned in table (6 – 37) refers to the descriptive and statistical indicators for the measurement and sub- variables as following:

- The average attendance in the General Assembly was 46.5% of members with a standard deviation of 22.6 % and range of 2% – 96%.
- The average number of the selection method for board elections was 1.2 points with a standard deviation of 0.4 points and range of 1 – 2 points. As explained previously, choosing by election resulted in two points, but choosing through honorable records resulted in one point.
- The average percentage of members who attended board' meetings were 86.5% with a standard deviation of 15.7% and range of 40% – 100%.
- The average duration of board meetings annually was 68 hours with a standard deviation of 36.9 hours and range of 16 – 192 hours.

The actual range for the variable of the agricultural cooperatives ability to employ the available resources for achieving their activities was (156.66 – 280.89) standard units with average of (199.9) standard units and standard deviation of (23.2) standard units. Table (6 – 37) summarized the obtained results

Table 6 – 37: Descriptive and statistical indicators for the variable of the agricultural cooperatives' ability to employ available resources and its sub-variables

The variables	Mean	Standard deviation	Minimum	Maximum
Agricultural cooperatives ability to employ the available resources. This measurement has estimated by the total of T-Score* for the following sub-variables :	199,9	23,2	156,66	280,89
1. Percentage of the agricultural cooperative members presentation in General Assembly meetings	46,5	22,6	2	96
2. Selection method of the agricultural cooperative board' members.(election or honorable "recommendation")	1,2	0,4	1	2
3. Percentage of the cooperatives board' members presentation in board' meeting.	86,5	15,7	40	100
4. Number of hours of the board' members meetings annually.	68	36,9	16	192
* **T =10 Z + 50** where **Z =** $\frac{X-M}{S}$ **..... M= Mean** **S = Standard deviation** (Allam, 1985, pp. 210 – 214)				

Source: Own research and calculation

6.3.1. Classification of agricultural cooperatives according to their ability to employ the available resources

Through classifying the agricultural cooperatives studied into categories according to their ability to employ the available resources for achieving their activities, results showed that:

- 48.5 % of the agricultural cooperatives studied were found to have low capability of employing resources,
- 48.5% of them have medium capability while 3% of them have high capability of employing available resources.

Table (6 – 38) shows the classification of agricultural cooperatives according to their ability to employ the available resources .

Table 6 – 38: Classification of agricultural cooperatives according to their ability to employ the available resources

Levels of ability to employ the available resources	Number of the agricultural cooperatives	%
Low capability	32	48.5
Medium capability	32	48.5
High capability	2	3
Total	**66**	**100**

Source: Own research and calculation

The previous results indicate that a slight number of the agricultural cooperatives studied have a high capability of employing the available resources for achieving their activities. About half of the agricultural cooperatives studied have a low capability of employing the available resources for achieving their activities. These results may give an indicator to the low level of cooperatives effectiveness in achieving their goals and participating effectively in the agricultural development because the optimal employment and usage for available resources is considered to be one of the necessary and basic conditions for judging the agricultural cooperatives effectiveness.

6.3.2. Correlation analysis between the independent research variables and the agricultural cooperatives' ability to employ the available resources.

The results of the correlation analysis in table (6 – 39) indicate that there are significant and positive correlations between the agricultural cooperatives ability to employ the available resources and the following independent variables:

- Number of population in the village with an agricultural cooperative,

- Cultivated areas in the villages, which are benefiting from the agricultural cooperatives activities,
- The extent of agricultural cooperative building's suitability for achieving their activities and functions, and
- Number of governmental organizations in the village.

Table 6 – 39: Correlation coefficients (r), between independent research variables and the agricultural cooperatives' ability to employ the available resources

N.	The independent research variables	Simple correlation coefficients (r)
1	Manager's age	- 0.66
2	Manager's education level	- 0.011
3	Manager's experience level	0.020
4	Manager's training level	0.011
5	Distance between manager's residence and agricultural cooperative location.	- 0.073
6	Total number of N.G.Os- membership of the manager.	0.045
7	Type of N.G.Os membership of the manager.	0.020
8	Informal social participation level of the manager.	- 0.035
9	Strength of the relations within the agricultural cooperative	0.105
10	Age of agricultural cooperative(Work duration)	0.158
11	Number of villages, which are benefiting from the agricultural cooperatives activities	- 0.108
12	Number of population in the village with an agricultural cooperative	0.265*
13	Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities	0.272*
14	The extent of agricultural cooperative building's suitability for achieving their activities and functions.	0.269*
15	Village development level with an agricultural cooperative	0.095
16	Number of governmental employees in agricultural cooperative.	0.190
17	Number of activity fields of the agricultural cooperative.	0.187
18	Number of governmental organizations in the village.	0.248*
19	Cooperation level between agricultural cooperative and governmental organizations in the village.	0.023
20	Number of N.G.Os in the village.	0.063
21	Number of the members serving in the agricultural cooperative board of directors	0.069

****** *T test, Correlation coefficient significant, (high significant) P≤ 0, 01*
***** *T test, Correlation coefficient significant, (significant) P≤ 0, 05*
Source: Own research and calculation

The calculated values of a simple correlation coefficient showed that the strongest correlated variables with the agricultural cooperatives ability to employ the available resources, respectively, are:

1. Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities (0.272),
2. The extent of agricultural cooperative building's suitability for achieving their activities and functions (0.269),
3. Number of population in the village with an agricultural cooperative (0.265), and
4. Number of governmental organizations in the village (0.248).

So, these variables are considered as good indicators for the ability of the agricultural cooperatives to employ the available resources. Table (6 – 39) summarized the related results.

6.3.3. Determining the variables affecting the agricultural cooperatives' ability to employ the available resources

For determining the most important variables affecting the agricultural cooperatives' ability to employ the available resources, the model of stepwise multiple correlation and regression analysis was used. The results shown in table (6 – 40) indicate that this model is significant till the second step of analysis. This means that there are only two independent variables that affect the agricultural cooperatives' ability to employ the available resources for achieving their activities and functions, which are:

1. Cultivated area in the villages, which benefit from the agricultural cooperatives activities, and
2. The extent of agricultural cooperative building's suitability for achieving their activities.

Moreover, the value of adjusted R^2 was 0.138, which in turn means, that the two independent variables together explain about 14% of the variance in the agricultural cooperatives' ability to employ the available resources for achieving their activities and functions.
Considering the percentage of explained variance of the dependent variable, it is shown that the most effective independent variables on the cooperatives' ability to employ the available resources are:

- The extent of agricultural cooperative building's suitability for achieving their activities, as its percentage of participation in explaining the total variance of the dependent variable was 7.8 %, and,

- Cultivated area in the villages, which benefit from the agricultural cooperatives activities, as its percentage of participation in explaining the total variance of the dependent variable was 6 %. Table (6 – 40) summarizes the related results.

Table 6 – 40: Stepwise multiple correlation and regression analysis for determining the variables affecting the agricultural cooperatives' ability to employ the available resources

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F Value
Step.1	Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities	0.272*	0.074	0.060	0.06	0.013*	5.12*
Step.2	The extent of agricultural cooperative building's suitability for achieving their activities and functions	0.406**	0.165	0.138	0.078	2.7*	6.21**
# **Adjusted** $R^2 = 1 - (1 - R^2) \frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)							
** **high significant** $P \leq 0{,}01$			* **significant** $P \leq 0{,}05$				

Source: Own research and calculation

6.3.4. Discussion and conclusion

Previous results indicated the low cooperatives' ability to employ the available resources. That refers, in turn, to their disability to use the available resources either be human or physical in an optimal way. Because of this reason, the cooperatives will be unable to achieve their activities, which lead to a low level of cooperative's participation in the agricultural development.

The value of adjusted R^2 reached to (0 .138) , which means that the independent variables in this study can explain about 14% of variance in the agricultural cooperatives ability to employ the available resources, but for the remaining percentage of 86%, it is due to other independent variables not included in this study, such as, agricultural cooperatives financial

bills, training and education level of employees, agricultural cooperatives board members and farmers, considering that these factors are of the most important factors that may affect the agricultural cooperatives employment for the available resources.

Result of the step-wise multiple regression analysis revealed that only two independent variables were found to have significant and positive effects on the agricultural cooperatives ability to employ the available resources. These independent variables are:

- Cultivated area in the villages, which benefit from the agricultural cooperatives activities, and
- The extent of cooperatives building's suitability for achieving their function and activities.

This results may be explained in the way that the increasing of cultivated area is an indicator to the improvement of the number of agricultural cooperatives members that, in turn, may lead to increasing the percentage of members attendance to the General Assembly meeting that provides the opportunity to discuss decisions related to the optimal use of available resources as well as to determine the most important needs for farmers according to which cooperatives should achieve are determined.

Also, related to the cooperatives building's suitability for achieving their functions and activities the building's suitability for employees' number that enables them to work effectively is most important. In addition, providing warehouses for preserving production requirements and agricultural products are of the most important factors that lead to the optimal usage of the available resources.

Conclusion: This study recommends to:

1. Provide the necessary financial support for developing the buildings of the agricultural cooperatives in order to use the available resources in an optimal way, and to
2. Incorporate the small agricultural cooperatives, which serve only a small cultivated area, with each other to form larger agricultural cooperatives of great economic entities that could mobilize and use resources in an optimal way for achieving the necessary activities and, therefore, the effective participation in the process of the agricultural development.

6.4. Contribution of the agricultural cooperatives to agricultural development

The agricultural cooperatives are considered to be one of the most important organizations that participate in the agricultural development through the agricultural activities and services provided for farmers. The extent of being contributed to the agricultural development depends on the number of activities achieved and the number of farmers benefiting from these activities. So, the variable of the agricultural cooperatives contribution to the agricultural development is measured through two sub-variables, they are:

(1)The number of activities achieved by the agricultural cooperatives, and

(2)The beneficiaries' percentage from the agricultural cooperatives activities. This variable was measured through evaluating the beneficiaries' percentage from each activity individually and measuring the general average of beneficiaries' percentages from agricultural cooperative activities. Table (6 – 41) shows the descriptive and statistical indicators for the variable of the contribution of the agricultural cooperatives in agricultural development and its sub-variables.

Table 6 – 41: Descriptive and statistical indicators for the variable of the contribution of the agricultural cooperatives to agricultural development and its sub-variables

The variables	Mean	Standard deviation	Minimum	Maximum
Contribution of the agricultural cooperative in agricultural development. This measurement has estimated by the total of T-Score* for the following sub-variables :	100	19,15	77,8	192,7
1. The number of achieved activities by agricultural cooperative from 1.07.2001 to 30.06.2002	11	6,18	4	43
2. The general average of the percentage of beneficiaries from agricultural cooperative activities from 01.07.2001 to 30.06.2002	5,4	3,88	,9	21,3
* **T =10 Z + 50** where **Z =** $\frac{X-M}{S}$ **..... M= Mean** **S = Standard deviation** (Allam, 1985, pp. 210 – 214)				

Source: Own research and calculation

Data mentioned in table (6 – 41) indicate that the descriptive indicators for the main variable and sub-variables from which it is formed are as following:

- The average number of activities achieved by the cooperatives reached (11) activities, with a standard deviation of (6.18) and range of (4 – 43) activities,
- Average of beneficiaries' percentages from the agricultural cooperatives activities reached (5.4%) with a standard deviation of (3.88%) and range of (0.9% - 21.3%) of the total number of farmers who are members in the agricultural cooperatives.

Results show a reduction of the number of activities achieved by agricultural cooperatives as well as the percentage of farmers benefiting from these activities, so that ,in turn, this refers to a reduction of their level of contribution in the agricultural development.

In the following a brief review of the number of activities achieved by the cooperatives in the main agricultural fields and the percentage of the beneficiaries from them identifies the factors related and affecting the level of their contribution to the agricultural development.

6.4.1. Identifying the achieved activities by the agricultural cooperatives

The agricultural cooperatives studied are multi-purposed cooperatives, which mean they should achieve agricultural activities in the main agricultural fields. Data mentioned in table (6 – 42) refer to the most important fields of activities. Through classifying the agricultural cooperatives according to the fields of activities achieved during the time period (01.07.2001) to (30.06.2002), it is shown that:

- All agricultural cooperatives studied have diffused agricultural innovations,
- 98.5% of them have provided farmers with the agricultural innovations,
- 50% of them have trained farmers on agricultural innovations,
- 48.5% of them have diffused marketing information among farmers,
- 45.5% of them have marketed the agricultural products locally for the sake of farmers, and
- 39.4% of them have supported and provided small agricultural projects.

Moreover, results indicate, that all agricultural cooperatives did not export the agricultural products to foreign markets.

Table 6 – 42: Classification of the agricultural cooperatives according to the activities achieved in the main agricultural fields

N.	Field of activities	Number of agricultural cooperative	%
1	Agricultural innovations diffusion	66	100
2	Agricultural innovations supply	65	98.5
3	Farmers training on agricultural innovations use	33	50
4	Marketing knowledge diffusion	32	48.5
5	Agricultural products local marketing	30	45.5
6	Agricultural products export	0	0
7	Agricultural small projects supply and support	26	39.4

Source: Own research and calculation

Results indicate that:

1. Although the agricultural cooperatives have diffused and provided agricultural innovations, half of the number of the agricultural cooperatives did not provide farmers with training on the methods of using these innovations. This again may result in negative results to the agricultural production whether the amount or the quality of production.
2. The majority of the agricultural cooperatives did not provide marketing information and knowledge whether about local market prices or international or the optimal dates for marketing.
3. The majority of the agricultural cooperatives did not market the agricultural products locally for the sake of farmers.
4. All agricultural cooperatives did not export the agricultural products for foreign markets that may be due to the insufficiency of the necessary capital resources and the lack of the budget of the agricultural cooperatives.
5. The majority of the agricultural cooperatives did not provide nor support small agricultural projects that are considered of great importance in the process of achieving the agricultural development, such as the projects of drainage (ditch) management, stores building , fertilizers production , producing pesticides , animal feeding, poultry, bee rearing, milk products and the projects of canning, drying and packaging vegetables and fruits, that may be also due to the insufficiency of capital resources and the deficits in the budgets of the agricultural cooperatives.

Data mentioned in table (6 – 43) indicates that:

- 66.7% of the agricultural cooperatives have achieved less than 12 activities a year,
- 28.8% of them have achieved 12 – 14 activities a year,
- 4.5% of them have achieved 24 activities and more per year,

The previous results indicate that the majority of the agricultural cooperatives have achieved less than 12 activities a year. This means they failed in achieving one activity monthly that, in turn, refers to the reduction of their level of participation in the agricultural development. This may be due to the reduction of their annual budgets in addition to the legislative obstacles that hinder their direct contracting to provide the requirements of the agricultural production (Seeds, pesticides and fertilizers) to farmers.

Table 6 – 43: Classification of the agricultural cooperatives according to the number of activities achieved in the various agricultural fields during a year in the period from 01.07.2001 to 30.06.2002

Number of activities achieved	Number of the agricultural cooperatives	%
Less than 12 activities	44	66.7
(12 – 24) activities	19	28.8
More than (24)	3	4.5
Total	**66**	**100**

Source: Own research and calculation

6.4.2. Identifying the ratio of beneficiaries from the achieved activities

The degree of the agricultural cooperatives participation to the agricultural development is not only limited by the number of activities achieved but also by the number and ratio of farmers benefited from these activities.

Through classifying the agricultural cooperatives studied according to the average ratio of beneficiaries from **the activities of agricultural innovations diffusion**, data mentioned in table (6 – 44) indicate that:

- 83.3% of the agricultural cooperatives studied have an average ratio of farmers benefiting from these activities from 1% – 15%,
- 13.6% of them have an average ratio of 16% – 30%, while
- 3.1% of the agricultural cooperatives have an average ratio of 31% – 43% from the total number of farmers, who are members in the agricultural cooperatives.

Table 6– 44: Classification of the agricultural cooperatives according to the average ratio of the beneficiaries from their activities in the main agricultural fields during a year in the period from 01.07.2001 to 30.06.2002

1-Activities of agricultural innovations diffusion			**2- Activities of the supply of agricultural innovations**		
Beneficiaries percentage	Number of agricultural cooperative	%	Beneficiaries percentage	Number of agricultural cooperative	%
(1 – 15 %)	55	83.3	(1 – 12 %)	42	63.6
(16 – 30 %)	9	13.6	(13 – 24 %)	18	27.3
(31 – 43 %)	2	3.1	(25 – 35.5 %)	5	7.6
Neglected activity by cooperative	0	0	Neglected activity by cooperative	1	1.5
Total	**66**	**100**	**Total**	**66**	**100**
3- Activities of farmers training on the agricultural innovations use			**4- Activities of marketing knowledge diffusion**		
Beneficiaries percentage	Number of agricultural cooperative	%	Beneficiaries percentage	Number of agricultural cooperative	%
(0.5 – 4 %)	19	28.8	(1 – 8 %)	22	33.4
(4.1 – 10 %)	11	16.7	(8.1 – 16 %)	7	10.6
(10.1 – 17.3 %)	3	4.5	(16.1 – 25 %)	3	4.5
Neglected activity by cooperative	33	50	Neglected activity by cooperative	34	51.5
Total	**66**	**100**	**Total**	**66**	**100**
5- Activities of agricultural product's local marketing			**6-Activities of agricultural small projects supply and support**		
Beneficiaries percentage	Number of agricultural cooperative	%	Beneficiaries percentage	Number of agricultural cooperative	%
(0.6 – 6 %)	15	22.7	(1 – 6 %)	15	22.7
(6.1 – 12 %)	12	18.2	(6.1 – 11%)	9	13.6
(12.1 – 18.8.%)	3	4.5	(11.1 – 16.6%)	2	3.1
Neglected activity by cooperative	36	54.6	Neglected activity by cooperative	40	60.6
Total	**66**	**100**	**Total**	**66**	**100**
7- Activities to export of agricultural products					
Beneficiaries percentage	Number of agricultural cooperative	%			
Neglected activity by cooperative	66	100			
Total	**66**	**100**			

Source: Own research and calculation.

As for the ratio of beneficiaries from **the activities of the supply of agricultural innovations**, results indicate that:

- 63.6% of the agricultural cooperatives studied have an average ratio of beneficiaries from 1% – 12%,

- 7.6 % of the agricultural cooperatives have an average ratio of 25% – 35.5% from the total number of farmers.

Table 6 – 44 shows the classification of the agricultural cooperatives according to the average ratio of the beneficiaries from their activities in the main agricultural fields during a year in the period from 01.07.2001 to 30.06.2002.

Through classifying the agricultural cooperatives studied according to the average percentage of beneficiaries from **the activities of farmers training on the agricultural innovations use**, results mentioned in table (6 – 44) referred at

- A low percentage of beneficiaries from the activities,
- 28.8 % of the agricultural cooperatives have a percentage of beneficiaries from 0.5% – 4% in average from the total number of farmers who are members in the agricultural cooperatives,
- 4.5 % of the agricultural cooperatives have a percentage of 10.1% – 17.3% of beneficiaries in the average , and
- 50% of the agricultural cooperatives failed in achieving any activities related to training farmers on the agricultural innovations.

As for the percentage of beneficiaries from **the activities of marketing knowledge diffusion**, results mentioned in table (6 – 44) indicate that:

- 51.1% of the agricultural cooperatives did not achieve these activities nor provide any marketing knowledge so that farmers may make use of it,
- 33.4% of the agricultural cooperatives have a percentage of beneficiaries from 1% – 8% in average from the total number of farmers, and
- about 4.5% of the agricultural cooperatives managed in providing marketing knowledge for 16.1% – 25% of farmers.

Results in table (6 – 44) also indicate that:

- A low average percentage of beneficiaries profits from **the activities of agricultural product's local marketing,**
- 22.7% of the agricultural cooperatives have an average percentage of beneficiaries from the activities of local marketing agricultural products from 0.6% – 6 %,
- 4.5% of the agricultural cooperatives have an average percentage of 12.1% - 18.8%, and

- 54.6% of the agricultural cooperatives neglected these activities and did not achieve them, respectively the farmers did not make use of them.

Through classifying the agricultural cooperatives studied according to the average percentage of beneficiaries from **the activities of agricultural small projects supply and support**, results mentioned in table (6 – 44) referred to:

- A reduced number of beneficiaries profit from these activities.
- 22.7 % of the agricultural cooperatives have an average percentage of beneficiaries from 1% – 6% of the total number of farmers,
- 3,1 % of the agricultural cooperatives have average percentage of 11.1% –16.6 %,
- 60.6% of the agricultural cooperatives did not provide nor support to small agricultural projects and consequently their members did not make use of them.

Moreover, results in table (6 – 44) indicate that all farmers did not benefit from **the activities to export of agricultural products**, because no agricultural cooperatives exported agricultural products.

Previous results refer to the reduction of the percentage of beneficiaries from the activities of the agricultural cooperatives.

Through classifying the agricultural cooperatives studied according to **the average percentage of the beneficiaries profiting** from their activities, results referred to:

- A reduction of the average percentage of beneficiaries,
- 78.8% of the agricultural cooperatives have an average percentage of the beneficiaries using their activities from 0.8% to 7 % from the total number of farmers,
- 18.2 % of the agricultural cooperatives have an average percentage of the beneficiaries profiting from their activities from 7.1 % to 14% , and
- 3 % of the agricultural cooperatives have an average percentage of the beneficiaries taking part in their activities from 14.1% to 22% from the total number of farmers.

Table (6 – 45) shows the classification of agricultural cooperatives according to the average percentage of the beneficiaries from its activities, during a year in the period from 01.07.2001 to 30.06.2002.

Table 6 – 45: Classification of agricultural cooperatives according to the general average of percentage of the beneficiaries from its activities, during a year in the period from 01.07.2001 to 30.06.2002

Categories of the beneficiaries percentage	Number of agricultural cooperatives	%
0.8 – 7 %	52	78.8
7.1 – 14 %	12	18.2
14.1 – 22 %	2	3
Total	**66**	**100**

Source: Own research and calculation

These results, in turn, indicate the reduction of the percentage of beneficiaries from the activities of the agricultural cooperatives. From this result a reduction of contribution of the agricultural cooperatives to the agricultural development may be expected. That is because their contribution to the agricultural development depends on the number of activities achieved and the percentage of beneficiaries from these activities. Also, results indicate the reduction of the number of activities achieved, as well as, the reduction of the percentage of beneficiaries profiting from these activities that are actually achieved.

6.4.3. Classification of agricultural cooperatives according to their contribution to agricultural development

Through classifying the agricultural cooperatives studied, into categories according to the level of their contribution in the agricultural development, results mentioned in table (6 – 46) referred to

- 87.9 % of them have a low level of contribution,
- 9.1 % of them have a medium level of contribution, while
- 3 % of them have a high level of contribution.

Results indicate that the majority of the agricultural cooperatives has a low participation in the agricultural development. These are expected results due to the reduction of both, the activities achieved and the percentage of beneficiaries from these activities. In the following, factors related and affecting on the level of cooperatives participation in agricultural development can be identified.

Table 6 – 46: Classification of the agricultural cooperatives according to their contribution to agricultural development

Levels of contribution to agricultural development	Number of agricultural cooperatives	%
Low level	58	87.9
Medium level	6	9.1
High level	2	3
Total	**66**	**100**

Source: Own research and calculation

6.4.4. Correlation analysis between the independent research variables and the contribution level of the agricultural cooperatives to agricultural development

Results of correlation analysis mentioned in table (6 – 47) indicate, that there are significant and positive correlations between the contribution of the agricultural cooperatives in the agricultural development and all the following independent variables:

- Manager's education level,
- Total number of N.G.Os- membership of the manager,
- Type of N.G.Os membership of the manager,
- Informal social participation level of the manager,
- Number of population in the village with an agricultural cooperative,
- Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities,
- Village development level with an agricultural cooperative,
- Number of governmental employees in agricultural cooperative,
- Number of activity fields of the agricultural cooperative,
- Number of governmental organizations in the village,
- Cooperation level between agricultural cooperative and governmental organizations in the village, and
- Number of N.G.Os in the village.

Table 6 – 47: Correlation coefficients (r) , between independent research variables and level of the agricultural cooperatives contribution to agricultural development

N.	The independent research variables	Simple correlation coefficients (r)
1	Manager's age	- 0.199
2	Manager's education level	0.293*
3	Manager's experience level	- 0.116
4	Manager's training level	0.195
5	Distance between manager's residence and agricultural cooperative location.	- 0.118
6	Total number of N.G.Os- membership of the manager.	0.337**
7	Type of N.G.Os membership of the manager.	0.315**
8	Informal social participation level of the manager.	0.247*
9	Strength of the relations within the agricultural cooperative	0.116
10	Age of agricultural cooperative(Work duration)	0.045
11	Number of villages, which are benefiting from the agricultural cooperatives activities	- 0.019
12	Number of population in the village with an agricultural cooperative	0.307*
13	Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities	0.244*
14	The extent of agricultural cooperative building's suitability for achieving their activities and functions.	0.158
15	Village development level with an agricultural cooperative	0.255*
16	Number of governmental employees in agricultural cooperative.	0.342**
17	Number of activity fields of the agricultural cooperative.	0.418**
18	Number of governmental organizations in the village.	0.290*
19	Cooperation level between agricultural cooperative and governmental organizations in the village.	0.584**
20	Number of N.G.Os in the village.	0.283*
21	Number of the members serving in the agricultural cooperative board of directors	0.215

***T test, Correlation coefficient significant, (high significant) P≤ 0, 01*
**T test, Correlation coefficient significant, (significant) P≤ 0, 05*
Source: Own research and calculation

Through using the strength of relations as being reflected by the calculated values of the simple correlation coefficient, it is shown, that the strongest variables correlated with the contribution of the agricultural cooperatives in agricultural development, respectively, are:

1. Cooperation level between agricultural cooperative and governmental organizations in the village(0.584),
2. Number of activity fields of the agricultural cooperative(0.418),
3. Number of governmental employees in the agricultural cooperative(0.342),
4. Total number of N.G.Os- membership of the manager (0.337),
5. Type of N.G.Os membership of the manager (0.315),

6. Number of population in the village with an agricultural cooperative (0.307),
7. Manager's education level (0.293),
8. Number of governmental organizations in the village(0.290),
9. Number of N.G.Os in the village(0.283),
10. Village development level with an agricultural cooperative(0.255),
11. Informal social participation level of the manager (0.247),and
12. Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities (0.244).

Table (6 – 47) shows the correlation coefficients (r), between independent research variables and the level of the agricultural cooperatives contribution in agricultural development.

So, these variables are considered as good indicators for the contribution level of the agricultural cooperatives to the agricultural development.

6.4.5. Determining the variables affecting the agricultural cooperatives contribution level to agricultural development

The stepwise multiple correlation and regression analysis model was used for determining the most important variables that affect the level of the agricultural cooperatives contribution in agricultural development. The results shown in table (6 – 48) indicate that this model is significant till the second step of analysis, which means that there are only two independent variables that affect the level of the agricultural cooperatives contribution in the agricultural development. These variables are:

1. Cooperation level between the agricultural cooperatives and governmental organizations in the village, and
2. Number of governmental organizations in the village.

Moreover, the value of adjusted R^2 is 0.389, which means that the two independent variables explain together about 39 % of the variance in the level of the agricultural cooperatives contribution in agricultural development.

The calculated percentages of explained variance of the dependent variables refer that the most important independent variables that affect the level of the agricultural cooperatives contribution to agricultural development is the cooperation level between the agricultural cooperative and governmental organizations in the village, then the number of governmental organizations in the village, because its percentage of contribution to explain the total

variance in the independent variable are 33 % and 5.8% respectively. Table (6 – 48) summarizes the obtained results

Table 6 – 48: Stepwise multiple correlation and regression analysis for determining the variables affecting the level of agricultural cooperatives contribution to agricultural development

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F Value
Step.1	Cooperation level between agricultural cooperative and governmental organizations in the village	0.584^{**}	0.342	0.331	0.331	4.234^{**}	33.21^{**}
Step.2	Number of governmental organizations in the village	0.638^{**}	0.408	0.389	0.058	1.012^{*}	21.67^{**}
# **Adjusted** $R^2 = 1-(1-R^2)\frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)							
** **high significant** $P \leq 0{,}01$				* **significant** $P \leq 0{,}05$			

Source: Own research and calculation

6.4.6. Discussion and conclusion

The results demonstrate

- The low level of agricultural cooperatives contribution to agricultural development as a result of the small number of activities achieved, where the average number of activities achieved annually was 11 activities and 66.7 % of the agricultural cooperatives achieved 12 activities a year. These results mean, that the majority of these cooperatives failed in achieving one activity monthly.
- 5.4% of farmers benefited from the activities achieved. 87.8% of the agricultural cooperatives have an average of beneficiaries from their activities from 0.8 % to 7% of the total number of farmers.

The expected reasons of these results may be:

- The low ability of agricultural cooperatives to mobilize resources for achieving their activities,
- The low ability of agricultural cooperatives to employ available resources, and use them in optimal way for achieving their activities.

- The lack of financing and insufficiency of budgets, which are considered to be most important obstacles that hinder the agricultural cooperatives to achieve their activities.

The value of adjusted R^2 reached 0.389, which, in turn, means, that the independent variables in this study can explain about 39 % of variance in the level of contribution of the agricultural cooperatives to the agricultural development. This result is due to the influence of other independent variables, which were not included in this study, such as the political and the economical factors that affect the degree and the level of cooperative participation to agricultural development, as well as some legislative factors that may hinder the agricultural cooperatives.

The result of the step-wise multiple regression analysis revealed, that only two independent variables have significant and positive effects on the level of agricultural cooperatives' contribution in the agricultural development. These independent variables are the cooperation level between agricultural cooperatives and governmental organizations in the village, and the number of governmental organizations in the village. This result agrees with what was made clear by the results of study made by ***Elezaby (1994)*** on the determinants of the village developmental level, which referred that the degree of coordination among the local organizations in the village has positive effects on the village developmental level in general.

From another view, this may be explained, that the lack and low cooperation between the agricultural cooperatives and other organizations in the village leads to low contribution of the agricultural cooperatives in the agricultural development. Also, all agricultural cooperatives studied did not at all cooperate with non – governmental organizations in the villages, which in turn, indicates, that there is a great gap between them. This was made clear through the results of ***Ahmed's study (1992)*** that referred to the lack of coordination among the agricultural cooperatives on one hand and other organizations on the other hand.

In addition, results referred the need of a comprehensive developmental plan that takes into account the cooperation and coordination among:

- The agricultural cooperatives between each other, and
- The agricultural cooperatives and other organizations in village-planning and implementing the developmental projects and programs that may lead to an increasing of their contribution level to the rural development in general and the agricultural development in particular.

6.5. Organizational effectiveness of the agricultural cooperatives in agricultural development

The organizational effectiveness of the agricultural cooperatives in agricultural development means the agricultural cooperatives ability to mobilize and to employ resources necessary for achieving their activities and performing their functions as well as providing necessary needs for farmers, and therefore participating effectively in the agricultural development. This variable was measured through the following variables:

1. Agricultural cooperatives ability to mobilize resources for achieving its activities.
2. Agricultural cooperatives ability to employ the available resources.
3. Contribution of the agricultural cooperative to agricultural development

Table (6 – 49) refers to the descriptive and statistical indicators of the variables of the organizational effectives of agricultural cooperatives and the sub-variables (indicators) of which it is formed. The actual range for the measurement of the organizational effectiveness of agricultural cooperatives ranges from 514.13 to 802.06 standard units with an average of 599.9 standard units and a standard deviation of 54.57 standard units.

Table 6 – 49: Descriptive and statistical indicators for the variable of the organizational effectiveness of the agricultural cooperatives in the agricultural development and its sub- components

The Variables	Mean	Standard deviation	Minimum	Maximum
Organization effectiveness of the agricultural cooperatives in agricultural development. This measurement has estimated by the total of the following sub-variables:	599,9	54,57	514,13	802,06
1. Agricultural cooperatives' ability to mobilize resources for achieving its activities.	300	37,2	242,64	429,9
2. Agricultural cooperatives' ability to employ the available resources.	199,9	23,2	156,66	280,89
3. Contribution of the agricultural cooperatives in agricultural development.	100	19,15	77,8	192,7

Source: Own research and calculation

6.5.1. Classification of agricultural cooperatives according to their organizational effectiveness

Through classifying the agricultural cooperatives studied according to their organizational effectiveness in the agricultural development, results indicated that:

- 69.7% of the agricultural cooperatives have shown low organizational effectiveness,
- 24.2% of them have medium organizational effectiveness, and
- 6.1% of them have high organizational effectiveness in the agricultural development.

Table (6 – 50) shows the classification of the agricultural cooperatives according to their organizational effectiveness.

These results refer to the low organizational effectiveness for the majority of agricultural cooperatives, which is considered as a direct result showing the problems and obstacles that agricultural cooperatives face. Most important may be the insufficiency of capital resources and the lack of budget as well as the low level of managers training and in addition, certain legislative obstacles as disallowing the agricultural cooperatives to contract directly for buying production requirements from the agricultural factories and providing them to farmers.

Table 6 – 50: Classification of the agricultural cooperatives according to their organizational effectiveness

Level of organizational effectiveness	Number of agricultural cooperatives	%
Low level	46	69.7
Medium level	16	24.2
High level	4	6.1
Total	**66**	**100**

Source: Own research and calculation

6.5.2. Correlation analysis between the independent research variables and the organizational effectiveness of the agricultural cooperatives.

Results of correlation analysis shown in table (6 – 51) indicate, that there are significant and positive correlations between the organizational effectiveness of the agricultural cooperatives and the following independent variables:

- Manager's training level,
- Total number of N.G.Os- membership of the manager,

- Type of N.G.Os membership of the managers,
- Number of population in the village with an agricultural cooperative,
- Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities,
- Village development level with an agricultural cooperative,
- Number of governmental employees in agricultural cooperative,
- Number of activity fields of the agricultural cooperative,
- Governmental organizations number in the village,
- Cooperation level between agricultural cooperative and governmental organizations in the village,
- Number of N.G.Os in the village, and
- Number of the members serving in the agricultural cooperative board of directors.

Through using the strength of relations as being reflected by the calculated values of the simple correlation coefficient in table (6 – 51), it is shown, that the strongest variables correlated with the organizational effectiveness of the agricultural cooperatives, respectively, are:

1. Number of population in the village with an agricultural cooperative (0.726),
2. Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities (0.682),
3. Number of governmental organizations in the village(0.627),
4. Number of governmental employees in agricultural cooperative(0.494),
5. Number of N.G.Os in the village (0.492),
6. Number activity fields of the agricultural cooperative(0.417),
7. Number of the members serving in the agricultural cooperative board of directors (0.402),
8. Total number of N.G.Os- membership of the manager(0.327),
9. Village development level with an agricultural cooperative (0.284),
10. Manager's training level (0.276),
11. Cooperation level between agricultural cooperative and governmental organizations in the village (0.267), and
12. Type of N.G.Os membership of the manager (0.266).

So, these variables represent positive indicators for the organizational effectiveness of the agricultural cooperatives. The significant and positive correlation between these variables and

organizational effectiveness of the agricultural cooperatives means, that increasing any of these variables will contribute to increase the organizational effectiveness of the agricultural cooperatives in agricultural development.

Table 6 – 51: Correlation coefficients (r), between independent research variables and organizational effectiveness of the agricultural cooperatives in agricultural development

N.	The independent research variables	Simple correlation coefficients (r)
1	Manager's age	- 0.127
2	Manager's education level	0.189
3	Manager's experience level	- 0.075
4	Manager's training level	0.276*
5	Distance between manager's residence and agricultural cooperative location.	- 0.185
6	Total number of N.G.Os- membership of the manager.	0.327**
7	Type of N.G.Os membership of the manager.	0.266**
8	Informal social participation level of the manager.	0.142
9	Strength of the relations within the agricultural cooperative	0.063
10	Age of agricultural cooperative(Work duration)	0.121
11	Number of villages, which are benefiting from the agricultural cooperatives activities	- 0.086
12	Number of population in the village with an agricultural cooperative	0.726**
13	Cultivated area in the villages, which are benefiting from the agricultural cooperatives activities	0.682**
14	The extent of agricultural cooperative building's suitability for achieving their activities and functions.	0.195
15	Village development level with an agricultural cooperative	0.284*
16	Number of governmental employees in agricultural cooperative.	0.494**
17	Number of activity fields of the agricultural cooperative.	0.417**
18	Number of governmental organizations in the village.	0.627**
19	Cooperation level between agricultural cooperative and governmental organizations in the village.	0.267*
20	Number of N.G.Os in the village.	0.492**
21	Number of the members serving in the agricultural cooperative board of directors	0.402**

****** *T test, Correlation coefficient significant, (high significant) P≤ 0, 01*
***** *T test, Correlation coefficient significant, (significant) P≤ 0, 05*
Source: Own research and calculation

6.5.3. Determining the variables affecting the organizational effectiveness of the agricultural cooperatives in agricultural development

In order to determine the most important variables that affect the organizational effectiveness of agricultural cooperatives in agricultural development the stepwise multiple correlation and regression analysis model was used. Results indicate, that this model is significant till the second step of analysis, which means that there are only two independent variables that affect the organizational effectiveness of the agricultural cooperatives in the agricultural development. These variables are:

1. Number of population in the village with an agricultural cooperative , and
2. Total number of N.G.Os- membership of the managers.

Table (6 – 52) shows the results of stepwise multiple correlation and regression analysis.

Table 6 – 52: Stepwise multiple correlation and regression analysis for determining the variables affecting the organizational effectiveness of the agricultural cooperatives in agricultural development

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F *Value*
Step.1	Number of population in the village with an agricultural cooperative	0.726^{**}	0.526	0.519	0.519	0.006^{**}	71.13^{**}
Step.2	Total number of N.G.Os- membership of the manager	0.762^{**}	0.580	0.567	0.048	11.21^{**}	43.52^{**}

**Adjusted** $R^2 = 1 - (1 - R^2)\frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)

** **high significant** $P \leq 0{,}01$ * **significant** $P \leq 0{,}05$

Source: Own research and calculation

The value of adjusted R^2 reached 0.567, which means, that both independent variables explain together about 57% of the variance in the organizational effectiveness of agricultural cooperatives

The calculated percentage of explained variance of the dependent variables shows that the variable representing the number of population in the village with an agricultural cooperative could alone explain 52 % of the total variance in the organizational effectiveness of the agricultural cooperatives in agricultural development. The total number of N.G.Os-

membership of the agricultural cooperative's managers and its percentage of contribution to explain the total variance reached about 5 %. Table (6 – 52) summarizes the obtained results

6.5.4. Discussion and conclusion

Previous results indicate a low organizational effectiveness of agricultural cooperatives in the agricultural development. These results agree with the results of the previous parts of this study as they referred to:

- The low ability of the great majority of the agricultural cooperatives to mobilize resources for achieving their activities (Table 6 – 33),
- The low ability to employ available resources (Table 6 –38) that , in turn , leads to the scarce number of activities achieved by the majority of the agricultural cooperatives (Table 6 – 43), and
- The low percentage of beneficiaries from activities achieved (Table 6 – 44 , 6 – 45), that in turn led to the low contribution to agricultural development (Table 6 – 46) , that eventually leads again to a low organizational effectiveness of cooperatives in agricultural development .

These results may be due to numerous problems and obstacles faced by the majority of agricultural cooperatives. The most important problems and obstacles are:

- The lack of budget for achieving and providing activities for the farmers,
- Disallowing the cooperatives to buy directly the requirements of the agricultural production (seeds – fertilizer – pesticides) from related private firms,
- The low training level of the agricultural cooperatives managers,
- The low level contribution of members to the General Assembly meeting as a result of their mistrust in the agricultural cooperatives and the low performance to market their agricultural products.

The value of adjusted R^2 reached 0.567 means, that the independent variables included in this study can explain only 57% of variance in the organizational effectiveness of the agricultural cooperatives, which is a reasonable percentage. As for the remaining percentage, that is 43%, it is due to other independent variables not included in this study. The most important of these may be:

- The organizational effectiveness of the governmental and non-governmental organizations in the village especially that those, which have a direct relation to the agricultural development,

- The economical efficiency of agricultural cooperatives,
- The level of governmental employees teaching and training in the agricultural cooperatives,
- Cooperatives' managers and employees monthly income as being the most important organizational elements in cooperatives,
- The vertical communication between the local agricultural cooperatives in villages and other agricultural cooperatives such as the central agricultural cooperatives and the communication with the cooperative public union,
- The horizontal communication among the agricultural cooperatives to each other,
- The level of cooperatives boards members training and learning,
- The efficiency of cooperatives technical departments such as the departments of agricultural extension,
- The impact of the political factors such as the public election between various political parties and their effect on the agricultural cooperatives,
- The degree of women's contribution to the public projects in villages with agricultural cooperatives,
- The economical efficiency of the agricultural projects achieved by the agricultural cooperatives,
- The legislative variables such as the degree of suitability of current law of the agricultural cooperation with the international and local economical factors that face the agricultural cooperatives, and
- The impact of the international and local economical factors on organizational effectiveness of the agricultural cooperatives.

Result of the step-wise multiple regression analysis revealed that only two independent variables have significant and positive effects on the organizational effectiveness of agricultural cooperatives in the agricultural development. These independent variables are the number of population in villages with an agricultural cooperative and the total number of N.G.Os membership of the agricultural cooperative managers. This can be explained that the increasing of the population number leads to a higher number of cooperatives members, which, in turn, leads to increasing membership subscription, which increases consequently the volume of financing and budget of cooperatives that again help to increase the agricultural cooperatives ability to mobilize necessary resources. The results of the previous parts show, that the population number also has a significant and positive effect on the ability of

agricultural cooperatives to mobilize necessary resources for achieving their activities (Table 6 – 35). In addition, table (6-36) indicates that there are positive and significant correlations among population number, cooperatives members' number and budget value.

In addition, the membership of cooperatives managers in a large number of non-governmental organizations and their contribution to their activities has a positive and significant effect on increasing the organizational effectiveness of the agricultural cooperatives. The membership of managers in non-governmental organizations give them the opportunity for increasing their experience and acknowledging on the most important activities achieved by those non-governmental organizations as well as identifying the aspects of success and failure for projects achieved by these cooperatives . Through the principle of experience transmission, a cooperative manager can make use from this during planning and implementing of agricultural projects and activities. In addition to this, by increasing his participation in these organizations, coordination and cooperation with the mangers of the non-governmental organizations in achieving common activities for the benefits of farmers can be increased. It also provides the opportunity for agricultural cooperatives managers to interact with village problems and identifying farmers main needs, and so, supporting confidence between him and village population who are members of non-governmental organizations. This will contribute to increase and support farmers trust in the agricultural cooperatives that encourages them for a higher contribution to the meeting of the agricultural cooperatives.

Conclusion: The study, as mentioned previously, recommends to

1. Merge the agricultural cooperatives of small size, which are located in villages with a small number of population with each other in order to form large agricultural cooperatives of great economic identities that can mobilize and provide necessary resources for achieving their activities and, therefore, increase the number of activities to be achieved and providing them for the majority of farmers in a village that leads to the increase of their contribution to the agricultural development and consequently increasing their organizational effectiveness in the agricultural development, and
2. Encourage the cooperatives managers to join the membership of non-governmental organizations and increase the level of cooperation and coordination between them and the agricultural cooperatives in planning, designing and implementing the developmental projects in villages.

6.6. Benefit extent for farmers from the agricultural cooperatives activities

The agricultural cooperatives are considered to be the most important organizations that pay attention and try to support the rural development in general and the agricultural development in special through the activities and services achieved for the sake of farmers.

So, this part of results aims to review the results related to farmers. The main characteristics of the farmers may affect the degree of their beneficence from the agricultural cooperatives activities. These characteristics may also affect their attitudes towards agricultural cooperatives. So this part is a review of the extent of benefit from provided activities as well as farmers' attitudes towards agricultural cooperatives and the variables that affect both of them.

6.6.1. Identifying the main characteristics of the farmers

This part includes a description of the farmers, who are members in the agricultural cooperatives, according to some characteristics (variables) that are shown in table (6 – 53). Considering the data mentioned in table (6 – 53) the following results are interesting:

- **Farmers' ages**

  It is shown that:

  (1) 45.4% of farmers are 25 – 50 years old ,

  (2) 51.2% of them are 51– 75 years old , and

  (3) 3.4 % of them are 76 – 98 years old.

  These results indicate, that the majority of farmers are less than 75 years old and more than 25 years old, which shows, that some of them have more experience in agricultural work than others.

- **Main profession of farmers**

  Results indicate that the majority of farmers' main profession is agriculture, while 28.5 % of them have another profession in addition to agriculture.

- **Farmers' education level**

  Farmers' education level was measured by the number of education years of a farmer. Results indicate that:

  (1) 26.5% of farmers are illiterate,

  (2) 43% of them have an education covering a time of 8 – 14 years , while

  (3) 5.1 % of them have an education of 14 – 22 years.

These results indicate, that more than a quarter of farmers are illiterate. This may affect negatively their extent of benefit from the activities of the agricultural cooperatives as well as their ability to use modern agricultural innovations. In addition, the majority of farmers have a weak level of education.

- **Agricultural experience level of farmers**

  Agricultural experience level of farmers was estimated as the number of farmers' working time in the field of agriculture. Results referred to:

  (1) 35.7 % of farmers have a weak level of agricultural experience,

  (2) 43.3% of them have a medium level of agricultural experience, while

  (3) 21 % of them have a high level of agricultural experience.

  Results indicate, that the majority of farmers have either weak or medium level of agricultural experience that may affect negatively their agricultural production and its quality.

- **Farmers' membership duration in agricultural cooperatives**

  Farmers' membership duration in agricultural cooperatives was measured by the number of their membership years in the agricultural cooperatives. Results indicate that:

  (1) 54% of farmers have a membership duration of 2–21 years,

  (2) 46 % of them have membership duration of more than 21 years, which reflect their ability to identify activities and services provided by the agricultural cooperatives.

- **Distance between farmers' residence and agricultural cooperatives' location**

  Results indicate that

  (1) 77.3 % of farmers live at distances from 0.1 to 2 Km from the location of the agricultural cooperatives,

  (2) 17.2% of them live at medium distances from the location of the agricultural cooperatives and

  (3) 5.5 % of them live at far distances from the location of the agricultural cooperatives.

  These results refer that the majority of farmers live near the agricultural cooperatives and, therefore, increasing their ability to identify the agricultural cooperatives activities that, in turn, affect positively their benefits from agricultural cooperatives activities.

Table 6 – 53: Results of the description analysis of farmers' main characteristics

Characteristics and qualifications	N *	%
Farmer's age		
25 – 50 years	**132**	**45.4**
51 – 75 years	**149**	**51.2**
76 – 98 years	**10**	**3.4**
Main profession of farmer		
Farmer	**208**	**71.5**
Other (not farmer)	**83**	**28.5**
Farmer's education level (Number of education years of farmer)		
Illiterate	**77**	**26.5**
Low level (1 – 7 years)	**125**	**43.0**
Medium level (8 – 14 years)	**74**	**25.4**
High level (14 – 22 years)	**15**	**5.1**
Agricultural experience level of farmer (Work duration (years) in agricultural field of farmers)		
Low level (4 –26 years)	**104**	**35.7**
Medium level (27 – 48 years)	**126**	**43.3**
High level (49 – 70 years)	**61**	**21.0**
Farmer's membership duration in agricultural cooperatives (years)		
(2 –21 years)	**157**	**54.0**
(22 – 40 years)	**116**	**40.0**
(41 – 60 years)	**18**	**6.0**
Distance between farmer's residence and agricultural cooperative location.		
Short distance (0.1 – 2.0 Km)	**225**	**77.3**
Medium distance (2.1 – 4.0 Km)	**50**	**17.2**
Far distance (4.1 – 6.0 Km)	**16**	**5.5**
Size of farmer family (Number of persons)		
Low size (1 – 4 persons)	**55**	**18.9**
Medium size (5 – 9 persons)	**213**	**73.2**
High size (10 – 14 persons)	**23**	**7.9**
Size of farmer farm (Number of faddens)		
Small size (0.1 – 2.4 faddens)	**236**	**81.1**
Medium size (2.5 – 4.7 faddens)	**48**	**16.5**
High size (4.8 – 12 faddens)	**7**	**2.4**
Farmer's attitudes towards voluntary work		
Negative attitudes	**48**	**16.5**
Moderate attitudes	**88**	**30.2**
Positive attitudes	**155**	**53.3**
Farmer's voluntary participation in developmental projects (number of projects)		
No participation (no any project)	**32**	**11**
Low number (one project)	**100**	**34.4**
Medium number (two projects)	**115**	**39.5**
High number (3 – 4 projects)	**44**	**15.1**
Total number of N.G.Os-membership of farmer		
No participation (no any organization)	**95**	**32.6**
Low number (1 – 2 organizations)	**153**	**52.6**
Medium number (3 – 4 organizations)	**39**	**13.4**
High number (5 – 6 organizations)	**4**	**1.4**
Informal social participation level of farmer		
Low level	**51**	**17.5**
Medium level	**149**	**51.2**
High level	**91**	**31.3**

** Total number of farmers = 291*

Source: Own research and calculation

- **Size of farmers' family**

  This variable was measured by the number of individuals who live with farmer in one house. Through classifying farmers according to family size, it is shown that:

  (1) 18.9 % of farmers have families of small size with 1– 4 persons,

  (2) 73.2 % of them have families of medium size with 5 –9 persons, and

  (3) 7.9 % of them have families of large size with 10 –14 persons.

  These results refer that the majority of farmers have families of medium size with 5 –9 persons. It means that the majority of farmers face burdens of social life, which motivate them to activate within agricultural cooperatives.

- **Size of farmers' farm**

  This variable was measured by the number of feddans by farmers. Results refer to a small the size of the farming lands for the great majority of farmers, as 81.1% of farmers have farms with a size between 0.1 and 2.4 feddans that, in turn, affects negatively their economic ability to buy modern agricultural innovations. In addition, small size of farms are considered to be the most important factors that hinder the application of modern technology, that again affects negatively the quantity and quality of agricultural production.

- **Farmers' attitudes towards voluntary work**

  According to the measurement that was used in measuring the attitude towards voluntary work, it is shown that:

  (1) 16.5% of farmers have weak or negative attitudes towards voluntary work,

  (2) 30.2% of farmers have medium or moderate attitudes, and

  (3) 53.3% of them have positive attitudes towards voluntary work.

  These results mean, that the majority of farmers have positive attitudes towards voluntary work in the village that may influence positively their voluntary participation to developmental projects and activities in the village.

- **Farmers' voluntary participation to developmental projects**

  This variable was measured by the number of voluntary and developmental projects in which farmers participated in the village. Results indicate that:

  (1) 11% of farmers don't participate in voluntary and developmental activities in the village,

(2) 34.4% of farmers have a weak level of participation as they participate only in one developmental project,

(3) 39.5% of farmers have a medium level of participation as they participate only in two projects, while

(4) 15.1% of farmers have a high level of participation as they participate in more than 3 developmental projects.

These results indicate a low farmers' participation level to the voluntary and developmental projects in the village.

- **Total number of N.G.Os-membership of farmers**

Results indicate that:

(1) 32.6% of farmers do not have a membership nor participate in N.G.Os,

(2) 52.6% of farmers have a weak level of participation as they participate in less than 3 N.G.Os ,

(3) 13.4% of them have a medium level of participation as they participate only in 3– 4 N.G.Os while

(4) 1.4% of farmers have a high level of participation as they participate in more than 5 N.G.Os.

These results refer to a reduction of farmers' participating in N.G.Os.

- **Informal social participation level of farmers**

This variable was measured by the participation of farmers in some social activities whether with other farmers, cooperative staff, or cooperative's board members such as wedding ceremonies, mourning ceremonies, patient visiting, visits exchange, lending and crediting others as well as helping others in solving social problems.

Results indicate that:

(1) 17.5% of farmers have a weak level of participation,

(2) 51.2% of farmers have a medium level of participation, while

(3) 31.3% of farmers have a high level of participation in informal social activities with others.

Summary of results concerning the analysis of farmers' main characteristics

Previous results indicate

(1) that agriculture is considered the main profession for the majority of farmers,

(2) an increasing percentage of illiteracy and low level of education of most farmers,

(3) that the majority of farmers have a medium agricultural experience,

(4) that most of farmers are cooperatives members since more than 21 year,

(5) that the majority of farmers live near the agricultural cooperatives' location,

(6) that the majority of farmers have families of medium size with 5 – 9 persons,

(7) that the majority of farmers have farms of a small size with 0.1 – 2.4 feddans,

(8) an increase of positive attitudes towards voluntary work in the village for the majority of farmers ,and

(9) the low level of participation for the majority of farmers in both voluntary developmental projects and N.G.Os as well.

6.6.2. Identifying the number of beneficiaries from agricultural cooperatives activities

Data mentioned in table (6 – 54) refers to the number of farmers, who benefit from each activity presented by the agricultural cooperatives. It is shown from these results, that the activities from which a large number of farmers benefit are the following:

(1) local marketing of maize (89,7% of farmers),

(2) diffusion of agricultural innovations of new seeds (84,9% of farmers),

(3) local marketing of wheat (83,2% of farmers),

(4) diffusion of agricultural innovations of new pesticides and new methods of pest control (82,5% of farmers),

(5) supply of new pesticides (80,4% of farmers) and of new fertilizers (80,1% of farmers).

In contrast to the above mentioned results, a smaller number of farmers benefit form the following activities:

(1) Diffusion of agricultural innovations of new methods of agriculture (58,2% of farmers),

(2) Supply of new seeds (58,2% of farmers),

(3) Training on use of new pesticides (65,3% of farmers) and new methods of pest control (65,3% of farmers), and

(4) Training on use of new seeds (65,6%).

In general, the results refer to an increasing percentage of farmers who benefited from the majority of activities achieved by agricultural cooperatives. It will be more useful and necessary to identify the degree of farmers' satisfaction about these activities.

Table 6 – 54: Number of beneficiaries from agricultural cooperatives activities

Activities		beneficiaries	not beneficiaries	Total
Diffusion of agricultural innovations of new seeds	N	247	44	291
	%	84.9	15.1	100
Diffusion of agricultural innovations of new methods of agriculture	N	248	43	291
	%	58.2	14.8	100
Diffusion of agricultural innovations of new pesticides and new methods of pest control	N	240	51	291
	%	82.5	17.5	100
Supply of new seeds	N	248	43	291
	%	58.2	14.8	100
Supply of new fertilizers	N	233	58	291
	%	80.1	19.9	100
supply of new pesticides	N	234	57	291
	%	80.4	19.6	100
Farmers Training on use of new seeds	N	191	100	291
	%	65.6	34.4	100
Farmers Training on implementation of the agriculture new methods	N	203	88	291
	%	69.8	30.2	100
Farmers Training on use of new pesticides and new methods of pest control	N	190	101	291
	%	65.3	34.7	100
Diffusion of marketing knowledge	N	208	83	291
	%	71.5	28.5	100
Local Marketing of wheat	N	242	49	291
	%	83.2	16.8	100
Local Marketing for maize	N	261	30	291
	%	89.7	10.3	100
Supply and support of agricultural machinery	N	196	95	291
	%	67.4	32.6	100
Supply and support of electrical machines and home appliances	N	226	65	291
	%	77.7	22.3	100

Source: Own research and calculation

6.6.3. Farmers classification according to the number of activities from which they got benefits

Data mentioned in table (6 – 55) indicate that

(1) 15.8 % of farmers benefited from less than 7 activities,

(2) 33 % of farmers benefited from 7 –11 activities, and

(3) 15.2 % of farmers benefited from more than 12 activities.

Results indicate that the majority of farmers benefited from 12 activities for more

Table 6 – 55: Farmers classification according to the number of activities from which they got benefits

Number of activities	Number of beneficiaries	%
Lowest thru 7	46	15.8
7 thru 11	96	33.0
12 thru highest	149	51.2
Total	**291**	**100**

Source: Own research and calculation

6.6.4. Farmers classification according to their satisfaction degree about the agricultural cooperatives activities

It is important for farmers to benefit from the agricultural cooperatives activities. But, most important is their satisfaction degree about these activities. Results in table (6 – 56) indicates that

(1) 31.3% of the farmers, who benefited from cooperatives activities were not satisfied about these activities,

(2) 51.5% of beneficiaries were fairly satisfied , while

(3) 17.2% of them were satisfied about the activities from which they got benefits .

The results show in general the low rate of beneficiaries, who are satisfied with the agricultural cooperatives activities.

Table 6 – 56: Farmers classification according to their satisfaction total degree about all activities of agricultural cooperatives

Categories of satisfaction degree	Number of farmers	%
Not satisfied	91	31.3
Fairly satisfied	150	51.5
Satisfied	50	17.2
Total	**291**	**100**

Source: Own research and calculation

Table 6 – 57: Farmers classification according to their satisfaction degree about the agricultural cooperatives activities.

Activities		not benefit	benefit			Total
			Not satisfied	Fairly satisfied	satisfied	
Diffusion of agricultural innovations of new seeds	N	44	64	102	81	291
	%	15.1	22.0	35.1	27.8	100
Diffusion of agricultural innovations of new methods of agriculture	N	43	81	96	71	291
	%	14.8	27.8	33.0	24.4	100
Diffusion of agricultural innovations of new pesticides and new methods of pest control	N	51	66	119	55	291
	%	17.5	22.7	40.9	18.9	100
Supply of new seeds	N	43	63	104	81	291
	%	14.8	21.7	35.7	27.8	100
Supply of new fertilizers	N	58	94	100	39	291
	%	19.9	32.3	34.4	13.4	100
supply of new pesticides	N	57	95	87	52	291
	%	19.6	32.6	29.9	17.9	100
Farmers training on use of new seeds	N	100	51	72	68	291
	%	34.4	17.5	24.7	23.4	100
Farmers training on implementation of the agriculture new methods	N	88	64	97	42	291
	%	30.2	22.0	33.4	14.4	100
Farmers training on use of new pesticides and new methods of pest control	N	101	69	73	48	291
	%	34.7	23.7	25.1	16.5	100
Diffusion of marketing knowledge	N	83	49	107	52	291
	%	28.5	16.8	36.8	17.9	100
Local marketing of wheat	N	49	26	105	111	291
	%	16.8	8.9	36.1	38.2	100
Local marketing for maize	N	30	64	70	127	291
	%	10.3	22.0	24.1	43.6	100
Supply and support of the agricultural machinery	N	95	40	69	87	291
	%	32.6	13.8	23.7	29.9	100
Supply and support of the electrical machines and home appliances	N	65	56	76	94	291
	%	22.3	19.3	26.1	32.3	100

Source: Own research and calculation

Through checking the data mentioned in table (6 – 57) it is shown that the activities with which the beneficiaries were not satisfied are :

(1) Supply of new fertilizers (32,3% of beneficiaries),

(2) Supply of new pesticides (32,6% of beneficiaries).

In addition, the activities with which the beneficiaries were satisfied are:

(1) Supply and support of electrical machines and home appliances (32,3% of beneficiaries),

(2) Supply and support of the agricultural machinery (29,9% of beneficiaries),

(3) Supply of new seeds (27,8% of beneficiaries), and

(4) Diffusion of agricultural innovations about new seeds (27,8% of beneficiaries).

6.6.5. Farmers classification according to their extent of benefit from agricultural cooperatives activities

The extent of benefits for farmers from agricultural cooperative activities was measured by the total of T-Score for the two following sub-variables:

(1) Total number of the agricultural cooperative activities from which the farmers got benefits.

(2) Average of farmers' satisfaction degree about all the agricultural cooperative activities. That was measured through evaluating the average of farmers' satisfaction degree about each activity individually from which they got benefits.

Data mentioned in table (6 – 58) show that indicators for the main variable and sub-variables are the following:

(1) The mean of activities number from which the farmers got benefits reached about 11 activities, with a standard deviation of 2.94 and range of 4 – 14 activities.

(2) The average farmers' satisfaction degree about all agricultural cooperatives activities reached 1.6 degrees with a standard deviation of 0.59 and range of 0.36 – 3 degrees.

Through classifying the studied farmers according to their benefit extent from agricultural cooperatives activities , results that shown in table (6 – 59) referred that

(1) benefits of 18.6 % of the farmers were low,

(2) benefits of 45.7 % of the farmers were medium , while

(3) benefits of 35.7% of the farmers were high.

Results indicate, that the majority of the farmers have got medium benefits from agricultural cooperatives activities.

Table 6 – 58: Descriptive statistical indicators for the variable of the extent of benefit for farmers from agricultural cooperatives activities and its sub – components

The Variables	Mean	Standard deviation	Minimum	Maximum
The benefit extent for farmers from agricultural cooperatives activities This variable has estimated by the total of T-Score* for the following sub-variables :	100.0	18.842	55.46	134.30
1. Total number of the agricultural cooperative activities from which the farmers got benefits.	10.97	2.942	4	14
2. Average of farmers' satisfaction degree about all the agricultural cooperatives activities	1.586	0.589	0.36	3
* **T =10 Z + 50** where **Z =** $\frac{X-M}{S}$ **..... M= Mean** **S = Standard deviation** **(Allam, 1985, pp. 210 – 214)**				

Source: Own research and calculation

Table 6 – 59: Farmers classification according to their extent of benefit from agricultural cooperatives activities

Categories of benefit level	Number of farmers	%
Low benefit	54	18.6
Medium benefit	133	45.7
High benefit	104	35.7
Total	**291**	**100**

Source: Own research and calculation

6.6.6. Correlation analysis between the independent research variables and the extent of benefit for farmers from agricultural cooperatives activities

Results of correlation analysis shown in table (6 – 60) come to the conclusion, that there are positive and significant correlations between the extent of benefit for farmers from agricultural cooperatives activities and the following independent variables, which have

arranged downwards by using the strength of relations that were reflected by the values of simple correlation coefficients:

1. Farmer's attitudes towards agricultural cooperative(0.770),
2. Total number of NGOs-membership of the farmer (0.760),
3. Type of voluntary participation of the farmer in developmental projects (0.756),
4. Total number of the voluntary development projects in which farmers have participated (0.732),
5. Type of NGOs membership of the farmer(0.725),
6. Informal social participation level of farmer (0.724),
7. Farmer's attitudes towards voluntary work(0.652),
8. Main profession of the farmer (0.362),
9. Farmer's education level (0.248).

So, these variables are considered to be good indicators for the extent of benefit for farmers from agricultural cooperatives activities.

Table 6 – 60: Correlation coefficients (r), between independent research variables and the extent of benefit for farmers from agricultural cooperatives activities

N.	The independent research variables	Simple Correlation Coefficients
1	Farmer's age	- 0.007
2	Main profession of the farmer	0.362**
3	Farmer's education level	0.248**
4	Agricultural experience level of the farmer	0.002
5	Farmer's membership duration of agricultural cooperative	- 0.011
6	Distance between farmer's residence and agricultural cooperative' location	- 0.063
7	Size of farmer's family	- 0.011
8	Size of farmer's farm	0.089
9	Farmer's attitudes towards voluntary work	0.652**
10	Total number of the voluntary development projects in which farmer have participated	0.732**
11	Type of voluntary participation of the farmer in developmental projects	0.756**
12	Total number of NGOs-membership of the farmer	0.760**
13	Type of N.G.Os membership of the farmer	0.725**
14	Informal social participation level of farmer	0.724**
15	Farmer's attitudes towards agricultural cooperative	0.770**

***T test, Correlation coefficient significant, (high significant) P≤ 0,01*

**T test, Correlation coefficient significant, (significant) P≤0,05*

Source: Own research and calculation

Table 6 – 61: Stepwise multiple correlation and regression analysis for determining the variables affecting the extent of benefit for farmers from agricultural cooperatives activities

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F Value
Step.1	Farmer's attitudes towards agricultural cooperative	0.770^{**}	0.592	0.591	0.591	1.6^{**}	420.17^{**}
Step.2	Informal social participation level of Farmer	0.842^{**}	0.718	0.716	0.125	0.832^{**}	366.81^{**}
Step.3	Total number of NGOs- membership of the farmer	0.876^{**}	0.768	0.766	0.05	5.29^{**}	316.78^{**}
Step.4	Type of voluntary participation of the farmer in developmental projects	0.884^{**}	0.781	0.778	0.012	1.33^{**}	255.59^{**}
Step.5	Main profession of the farmer	0.887^{**}	0.787	0.783	0.005	3.37^{**}	210.05^{**}

**Corrected** $R^2 = 1 - (1 - R^2)\frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)

** **high significant** $P \leq 0{,}01$ * **significant** $P \leq 0{,}05$

Source : Own research and calculation

6.6.7. Determining the variables affecting the extent of benefit for farmers from agricultural cooperatives activities

For determining the most important variables affecting the benefit for farmers from agricultural cooperatives activities, the model of stepwise multiple correlation and regression analysis was used. The results shown in table (6 – 61) refer that this model is significant till the fifth step of the analysis, which means that there are only five independent variables that affect the benefit for farmers from agricultural cooperatives activities. These variables are the followings:

1. Farmer's attitudes towards agricultural cooperative.
2. Informal social participation level of farmer.
3. Total number of N.G.Os- membership of the farmer.
4. Type of voluntary participation of the farmer in developmental projects.
5. Main profession of the farmer.

Also, the value of the multiple correlation coefficient (R) reached 0.887 , while the value of adjusted R^2 reached 0.783, that means that the five independent variables mentioned previously can explain 78.3 % of the variance in the dependent variable , which is , the extent of benefit for farmers from agricultural cooperatives activities .

Regarding the percentage of explained variance of the dependent variable, results refer that the most independent variables affecting the benefit for farmers from agricultural cooperatives activities, respectively, are the following:

1. The farmer's attitudes towards agricultural cooperative.
2. Informal social participation level of farmers.
3. Total number of N.G.Os-membership of the farmer.
4. Type of voluntary participation of the farmer in developmental projects.
5. The main profession of the farmer.

The percentage of participation in explaining the total variance of the previous dependent variable are 59 %, 12.5 %, 5 % , 1.2 % and 0.5 % respectively. (see Table 6 – 61).

6.6.8. Discussion and conclusion

Results refer to a low benefit degree for farmers from agricultural cooperatives activities. It is made clear that only 35.7 % from the total number of farmers benefited highly from these activities. Moreover results showed the low farmers' satisfaction degree about the agricultural cooperatives activities they benefited from, as it is made clear that only 17.2 % of farmers who benefited from these activities were satisfied.

The low benefit and satisfaction degree concerning these activities for farmers may be due to a group of factors, which are the following:

1. The low ability of cooperatives to mobilize and employ necessary resources for achieving its activities. Results show, that 71,2% of the agricultural cooperatives have a low capability of mobilizing resources and 48,5% of them have a low capability of employing resources, as well as 72.7 % of agricultural cooperatives have not sufficient budget for achieving its activities.
2. The low level of cooperation between the agricultural cooperatives and other governmental organizations in the village.
3. Lack of cooperation among the non-governmental organizations, which could explain the reasons behind the low benefit degree for farmers from agricultural cooperatives activities and its services.

The value of adjusted R^2 reached 0.783 that means that the independent variables in this study could explain 78.3% of variance in the extent of benefit for farmers from agricultural cooperatives activities. For the remaining percentage, that is 21.7 % , it is due to other independent variables that were not included in this study as (for example) the number and kind of animals which farmers owns, the kind of crops which farmers cultivates, the farmers' number of visits to the agricultural cooperatives, the level of farmers' children education, the main profession of farmers' children, the level of farmers participation in political activities such as participation in parliamentary elections (members election of people's Assembly, Shoura Assembly, local councils), farmers attitudes towards the Board of directors of agricultural cooperatives , farmers' attitudes towards the manager of agricultural cooperatives and employees , farmers' attitudes towards the agricultural production requirements provided by village banks , farmers' ambition level , and degree of communication between the farmer and local leaders.

The result of the step-wise multiple regression analysis revealed only five independent variables affect the extent of benefit for farmers from agricultural cooperatives activities, which are the following:

1. Farmer's attitudes towards agricultural cooperative.
2. Informal social participation level of farmer.
3. Total number of N.G.Os-membership of the farmer.
4. Type of voluntary participation of the farmer in developmental projects.
5 Main profession of the farmer.

The results explain that the positive attitudes of farmers towards agricultural cooperatives reflect the degree of farmers' awareness of the vital role and tasks of the agricultural cooperatives in the field of the agricultural development. These positive attitudes of farmers will lead to increase the trust of activities provided by cooperatives and increasing degree of a farmers' application and benefiting as well as satisfaction in agricultural development activities. Also, the increasing level of farmers' participation in different activities will lead to increasing the degree of a farmer application and benefiting from these activities, such as

- Informal social activities,
- N.G.Os ,
- The voluntary and developmental projects in village.

6.7. Farmers' attitudes towards agricultural cooperatives

This variable was measured by eight statements related to the agricultural cooperative services and the benefit for farmers from them (Table 6–62), considering that statements (1 – 4) are considered positive ones towards the agricultural cooperatives, statements (5 – 8) are considered negative towards agricultural cooperative. Each farmer was asked to express his opinion about each statement according to three answers (agree, fairly agree, and disagree). These answers were given the values 3, 2, 1 respectively in the case of the positive statements towards an agricultural cooperative. As for the negative statements towards an agricultural cooperative, they were given the values 1, 2, 3 respectively. Scores were collected to express farmers' attitude towards agricultural cooperative. Measurement scores were from 8 to 24 marks. Farmers were classified into three categories upon scores they achieved that expressed their attitudes towards agricultural cooperative. (see Table 6 – 63).

6.7.1. Farmers classification according to their attitudes towards agricultural cooperatives

Data mentioned in table (6 – 63) indicate that most farmers (54.6 % of total number farmers) have moderate attitudes towards agricultural cooperative, and only 17.5 % of farmers have positive attitudes towards agricultural cooperatives.

The low percentage of farmers who have positive attitudes towards agricultural cooperatives could be identified through data in table (6 – 62)**,** where

- 27.8 % of farmers said that agricultural cooperative provide the agricultural innovations and the production requirements for farmers in suitable prices ,
- 21.3 % of farmers agreed that they provide agricultural information, innovations and production requirements in a suitable time,
- 30.9 % of farmers agreed that some of the cooperative's activities are executively provided to board members, their relatives and friends,
- 23 % of farmers stressed that agricultural cooperatives could not solve agricultural problems in a suitable time,
- 28.4 % of farmers agreed that the agricultural production requirements provided by private agricultural companies and traders are better than those provided by the agricultural cooperatives,
- 33.3 % of the farmers stressed that most cooperatives activities are only devoted to big farms (owners of big farm) and

- 39.9 % of farmers agreed that agricultural cooperatives provide their activities for all farmers in the village.

These results explain the main reasons for the weak positive attitudes of farmers towards agricultural cooperatives

Table 6 – 62: Farmers classification according to their opinions about some statements towards agricultural cooperatives

The Statements		Farmers' opinion about the statements			
		Disagree	Fairly agree	Agree	Total
1. The most farmers in village are in a good relation with agricultural cooperative : manager, employees and board members	N	40	127	124	291
	%	13.7	43.6	42.6	100
2. The agricultural cooperative supplies its activities for all farmers in village	N	82	93	116	291
	%	28.2	32.0	39.9	100
3. The agricultural cooperative supplies agricultural innovations and agricultural production requirements in suitable prices for farmers	N	127	83	81	291
	%	43.6	28.5	27.8	100
4. The agricultural cooperative supplies agricultural information, agricultural innovations and agricultural production requirements in a suitable time for farmers	N	113	116	62	291
	%	38.8	39.9	21.3	100
5. Some of agricultural cooperative activities are exclusively provided to board members, their relatives and friends	N	84	117	90	291
	%	28.9	40.2	30.9	100
6. Agricultural cooperative can not solve agricultural problems of farmers in a suitable time	N	109	115	67	291
	%	37.5	39.5	23.0	100
7. The agricultural production requirements provided by private agricultural companies and traders are better than those provided by the agricultural cooperatives nowadays	N	129	79	83	291
	%	44.3	27.1	28.5	100
8. Most of agricultural cooperative activities are providing only for big farms (owners of big farm).	N	54	140	97	291
	%	18.6	48.1	33.3	100

Source: Own research and calculation

Table 6 – 63: Farmers classification according to their attitudes towards agricultural cooperatives

Categories	Number of farmers	%
Negative attitudes	81	27.8
Moderate attitudes	159	54.6
Positive attitudes	51	17.5
Total	**291**	**100**

Source: Own research and calculation

6.7.2. Correlation analysis between the independent research variables and the farmers' attitudes towards agricultural cooperatives

The results of correlation analysis mentioned in table (6 – 64) indicate that there are positive and significant correlations between the farmers attitudes towards agricultural cooperatives and the following independent variables :

1. Main profession of the farmers,
2. Farmer's education level,
3. Farmer's attitudes towards voluntary work,
4. Total number of the voluntary development projects in which farmers have participated,
5. Type of voluntary participation of the farmers in developmental projects.
6. Total number of N.G.Os-memberships of the farmers,
7. Type of N.G.Os membership of the farmers,
8. Informal social participation level of the farmers, and
9. The extent of benefit for farmers from agricultural cooperatives activities.

Moreover, there is a negative and significant correlation between the farmer's attitudes towards agricultural cooperatives and an independent variable related to the distance between farmer's residence and agricultural cooperative's location. These results mean that a shorter distance between farmer's residence and agricultural cooperative's location leads to increasing positive attitudes of farmers towards agricultural cooperatives and vice versa.

Through using the strength of relations as reflected by the values of the simple correlation coefficients, it is shown that the strongest independent variables correlated with the farmers' attitudes towards agricultural cooperatives respectively, are:

1. The extent of benefit for farmers from agricultural cooperatives activities (0.770) ,
2. Type of voluntary participation of the farmers in developmental projects (0.689) ,

3. Type of NGOs membership the farmers (0.679),
4. Total number of NGOs-memberships of the farmers (0.672),
5. Total number of the voluntary development projects in which farmers have participated (0.644),
6. Farmer's attitudes towards voluntary work (0.578) ,
7. Informal social participation level of farmers (0.559) ,
8. Main profession of the farmers (0.343) ,
9. Farmer's education level (0.294), and
10. Distance between farmer's residence and agricultural cooperative's location (- 0.236).

So, these independent variables are considered as good indicators for farmers' attitudes towards agricultures cooperatives. (Table 6 – 64).

Table 6 – 64: Correlation coefficients (r), between independent research variables and farmers' attitudes towards agriculture cooperatives

N.	The independent research variables	Simple correlation coefficients
1	Farmer's age	- 0.069
2	Main profession of the farmer	0.343**
3	Farmer's education level	0.294**
4	Agricultural experience level of the farmer	- 0.009
5	Farmer's membership duration of agricultural cooperative	- 0.036
6	Distance between farmer's residence and agricultural cooperative's location.	- 0.236**
7	Size of farmer's family	- 0.011
8	Size of farmer's farm	0.063
9	Farmer's attitudes towards voluntary work	0.578**
10	Total number of the voluntary development projects in which farmer have participated	0.644**
11	Type of voluntary participation of the farmer in developmental projects	0.689**
12	Total number of NGOs-membership of the farmer	0.672**
13	Type of N.G.Os membership of the farmer	0.679**
14	Informal social participation level of farmer	0.559**
15	The extent of benefit for farmers from agricultural cooperatives activities	0.770**

***T test, Correlation coefficient significant, (high significant) P≤ 0,01*
**T test, Correlation coefficient significant, (significant) P≤0,05*
Source: Own research and calculation

Table 6 – 65: Stepwise multiple correlation and regression analysis for determining the variables affecting farmer's attitudes towards agricultural cooperatives.

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F Value
Step.1	The extent of benefit for farmers from agricultural cooperatives activities	0.770^{**}	0.592	0.591	0.591	0.1^{**}	420.17^{**}
Step.2	Distance between farmer's residence and agricultural cooperative's location	0.792^{**}	0.628	0.625	0.034	-0.38^{**}	242.97^{**}
Step.3	Type of voluntary participation of the farmer in developmental projects	0.806^{**}	0.649	0.646	0.021	0.26^{**}	177.05^{**}
Step.4	Type of NGOs membership of the farmer	0.811^{**}	0.658	0.653	0.007	0.44^{**}	137.43^{**}

Corrected $R^2 = 1 - (1 - R^2)\frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)

** **high significant** $P \leq 0{,}01$ * **significant** $P \leq 0{,}05$

Source: Own research and calculation

6.7.3. Determining the variables affecting farmers' attitudes towards agricultural cooperatives

For determining the most important variables affecting farmers' attitudes towards agricultural cooperatives, the model of stepwise multiple correlation and regression analysis was used. The results shown in table (6 – 65) indicate that the model is significant till the forth steps of the analysis, which means that there are only four independent variables that affect farmers' attitudes towards agricultural cooperatives. These variables are:

1. Benefits for farmers from agricultural cooperatives activities ,
2. Distance between farmer's residence and agricultural cooperative's location,
3. Type of voluntary participation of the farmers in developmental projects , and
4. Type of N.G.Os membership of the farmers.

Also, the value of the multiple correlation coefficient (R^2) reached 0.811 , while the value of adjusted R^2 reached 0.653 . These results indicate that the four independent variables mentioned previously can explain 65.3 % of the variance in the dependent variable, i.e., farmers' attitudes towards agricultural cooperatives.

Considering the percentage of explained variance of the dependent variable, it is shown that the most effective independent variables on the farmers' attitudes towards agricultural cooperatives are respectively:

1. The extent of benefit for farmers from agricultural cooperatives activities (59.1 %),
2. Distance between farmer's residence and agricultural cooperative's location (3.4 %),
3. Type of voluntary participation of the farmers in developmental projects (2.1 %)
4. Type of N.G.Os membership of the farmers (0.7 %)

(The percentage of participation in explaining the total variance of the previous dependent variable is written in brackets.) Table (6 – 65) summarized the obtained results.

6.7.4. Discussion and conclusion

Results refer at the low percentage of farmers who have positive attitudes towards the agricultural cooperatives comparing to these who have negative attitudes, as it is shown that only 17.5 % of farmers have positive attitudes towards cooperatives while 27.8 % have had negative attitudes.

The high ratio of farmers, who have negative attitudes towards the agricultural cooperatives, may be explained by the following aspects:

- 43.6 % of farmers think, that cooperatives don't provide the farmers with the agricultural innovation and production requirements at suitable prices.
- 38.8 % of farmers stress that cooperatives do not provide farmers with the agricultural information, innovations and production requirements at suitable time.
- 30.9% of farmers think that some cooperatives' activities are deducted to board members, their relatives and friends.
- 23 % of farmers stress that agricultural cooperatives are not able to solve the agricultural problems in a suitable time.
- 28.5 % of farmers said that the agricultural production requirements provided by private agricultural companies and traders are better than those provided by the agricultural cooperatives.

- 33.3 % of farmers stress that the majority of activities provided by that agricultural cooperatives are provided for big farms (owners of big farm).

So, what is mentioned previously can be considered as reasons that led to a low percentage of farmers who have positive attitudes towards agricultural cooperatives showing at the same time increasing their negative attitudes towards them.

The value of adjusted R^2 reached 0.653 that means that the independent variables mentioned in this study could explain 65.3 % of variance in farmer's attitudes towards agricultural cooperatives. The remaining percentage 34.7 % is due to other independent variables, which were not included in this study, as (for example)

1. Farmer's attitudes towards the following issues:
    a) Services provided by private agricultural companies and traders.
    b) Board members of the agricultural cooperatives.
    c) Managers and workers of the agricultural cooperatives.
    d) Participation in political activities.
2. Farmers' ambition level.
3. Degree of communication between farmers and local leaders
4. Level of farmers' sons' education.
5. Main profession of farmers' sons.
6. Number and kind of animals which farmers owns,
7. Kind of crops which farmers cultivates

Results indicate, that the benefit for farmers from agricultural cooperatives activities is the independent variable that affects more the dependent variable – farmers' attitudes towards agricultural cooperatives - as its percent of participation in explaining the variance of dependent variable is 59.1 %. This may be due to the high degree of benefit for farmers from the agricultural cooperatives activities, which may lead to high farmers' confidence in cooperatives and increasing their degree of awareness of importance of provided cooperatives' activities.

Results also indicate, that there is a negative and significant effect for the variable of distance between farmers' residence and agricultural cooperatives' location. This, in turn, may indicate, that a short distance between farmers' residence and agricultural cooperatives' location makes the farmers able to visit the agricultural cooperatives more frequently and,

then, identify the activities provided that are suitable for their needs and consequently making use of them. Both independent variables, which are the type of voluntary participation of farmers in developmental projects and N.G.Os membership of the farmers, indicate a positive and significant effect. Both variables reflect clearly the degree and level of social participation of farmers whether in developmental activities and projects or N.G.Os membership. They also reveal increasing participation of farmers for any of them, assert their awareness of the social participation importance in developing the society and, then, perceive the importance of the agricultural cooperatives as developmental organization as well as the importance of its activities.

Chapter 7: General Conclusion and Recommendations

7.1. General conclusion

From the results of this study the following conclusions could be derived:

1. The most problems and obstacles that the agricultural cooperative in Menoufiya Governorate, Egypt face are the followings:
   - The Low level of cooperatives managers' education and training level,
   - Lack of budget to achieve their activities and provide them to the majority of farmers,
   - Agricultural cooperatives disability to provide modern agricultural machines for farmers and disability to market the agricultural crops as a result of the lack of necessary financing capital and the lack of suitable stores for storing production requirements.
   - Disallowing agricultural cooperative to buy directly the requirements of the agricultural production (seeds – fertilizers – pesticides) from the agricultural factories, that lead to disability to provide these requirements in quantities , prices and time suitable for farmers, that , in turn , lead to lack of farmers' trust in the agricultural cooperatives
   - Lack of farmers' trust in the agricultural cooperatives lead to decreasing farmers' participation in the General Assembly meetings, which refers to disability to discuss a cooperative's policy and unsuitable decision making affecting negatively the cooperative's efficiency.

   All these problems lead to a low cooperatives ability to mobilize and to employ resources and to a low contribution in agricultural development as a result to the small number of activities achieved and the low ratio of farmers who benefited from the activities achieved.
2. Results showed that 71,2% of the agricultural cooperatives were found to have a low capability of mobilizing resources, 48,5% of them have a low capability of employing resources and 87,9% have only limited contribution to agricultural development. In general, 69,7% of the agricultural cooperatives have shown low organizational effectiveness in agricultural development.
3. The most important and positive independent variables affecting the dependent variables (cooperatives ability to mobilize and employ resources, contribution and organizational effectiveness of cooperatives in agricultural development) are:

- The number of population in the village.
- Cooperation level between agricultural cooperatives and governmental organizations in the village.
- Number of governmental organizations in the village.
- Cultivated area in the villages which are benefiting from agricultural cooperatives activities.

4. The lack of a comprehensive developmental plan that considers cooperation and coordination among the agricultural cooperatives between each other on one hand and between them and all organizations in the village on the other hand in planning and implementing the developmental projects and programs leads to low contribution of the cooperatives to rural and agricultural development.

5. The findings of the farmers, who are members in the agricultural cooperatives, can be concluded as follows:

- A low benefit degree for farmers from agricultural cooperatives activities.
- A low farmers' satisfaction degree about the agricultural cooperatives activities.
- A low percentage of farmers who have positive attitudes towards the agricultural cooperatives.

The low percentage of farmers who have positive attitudes towards agricultural cooperatives may be due to a group of factors, which are the following:

a) Agricultural cooperatives don't provide the agricultural innovations and the production requirements for farmers at suitable prices and in a suitable time.
b) Some of the cooperatives' activities are devoted only for board members, their relatives and friends,
c) The agricultural cooperatives could not solve agricultural problems in a suitable time.
d) The agricultural production requirements provided by traders and private agricultural companies are better than those provided by the agricultural cooperatives.
e) The majority of cooperatives' activities are devoted only for big farms (owners of big farm).

6. The most important independent variables affecting the benefit for farmers from agricultural cooperatives activities and farmers' attitudes towards agricultural cooperatives are:
    - Informal social participation level of farmer,
    - Total number of N.G.Os membership of the farmer,
    - Type of voluntary participation of the farmer in developmental projects,
    - .Main profession of farmer,
    - Distance between farmers' residence and agricultural cooperatives' location, and
    - N.G.Os membership of the farmers.

7.2. General recommendations

In order to develop and improve the performance of agricultural cooperatives, the study recommends the following strategies:

1. Establishing a Cooperative Bank to provide loans necessary for agricultural cooperatives with suitable interests and consequently overcoming the problem of the budget deficit.
2. Allowing the agricultural cooperatives to contract directly with the agricultural factories that produce production requirements and consequently the possibility of providing them for farmers at suitable time, prices and quantities.
3. Organizing training courses for boards' members, official employees and farmers for training on using a modern technology.
4. Providing modern equipments necessary for training farmers on using and spreading the modern technology, such as multimedia and communication equipment.
5. Providing advanced means of transport for marketing the agricultural products.
6. Providing and establishing warehouses necessary for storing the agricultural production requirements till they are made available.

7.3. Specific recommendations

The specific recommendations that can be derived from this study are the following:

1. It is necessary to combine small agricultural cooperatives that are located in low-populated small areas and in small numbered members' villages to form large agricultural cooperatives of large economic entities that could provide, mobilize and

employ resources for achieving their activities and then participating effectively in agricultural development.

2. The agricultural cooperatives must be given more economical and organizational freedom to make them less dependent from the central cooperatives, especially in obtaining and distributing of production inputs.
3. During planning of agricultural development, government should activate the coordination and cooperation among the roles of both agricultural cooperatives and other organizations in the villages, in order to enhance their abilities and the organizational effectiveness in agricultural and rural development**.**
4. The administrative efficiency of agricultural cooperatives must be raised and developed through :
    a) Clear separation between the responsibilities of the General Assembly and the board of directors on one side, and the management (professional staff), which is in charge of implementation of the plans approved by the board of directors on the other side.
    b) The board of directors has to be responsible for designing the general policy of the cooperative, supervising its implementation through professional management and staff, within the frame of the national policy.
    c) Forming a strong board of directors that are capable for managing cooperatives effectively through :
        - Reconsidering preconditions of Board of Directors membership.
        - Representing women and the younger generation in the Board of Directors membership.
        - Forming the board of directors by free election within the General Assembly members.
    d) Training the cooperatives boards' members on cooperative principles and management resp. improving their administrative performance.
    e) Supporting the cooperative training centers on governorates level.
    f) Establishing a National Cooperative Training Center to teach and inform the cooperatives leaders and farmers.
5. The system of surplus distribution in cooperatives must be reconsidered for ensuring reasonable and suitable profits for members from their investment in cooperatives capital shares.

6. The members of cooperatives must be encouraged for participating in financing the projects established by agricultural cooperatives, especially the marketing projects for agricultural products, production and processing of the seeds, and establishing nurseries for vegetables and fruits.
7. Agricultural cooperatives must be allowed, to establish or participate in shareholding companies related to the cooperative system that practice economic activities.
8. Agricultural cooperatives must participate in establishing cooperative companies which produce agricultural inputs (seeds, fertilizers, pesticides, feed etc.).
9. Market researches and marketing data bank must be established.
10. The cooperation between the agricultural cooperatives and agricultural extension centers, agricultural research institutions and universities must be supported.
11. Agricultural cooperatives must cooperate with research institutes in determining and developing suitable agricultural machines for farmers.
12. The fields' canals and agricultural drains must be maintained and purified through cooperation with the government (Ministry of agriculture).
13. Laboratories for soil analysis, processing water and veterinary units must be established.
14. The agricultural cooperatives' participation in the rural and environmental development must be enhanced through**:**
    a) Participation in the rural woman development activities.
    b) Establishment of family planning centers and health care units.
    c) Establishing information centers for awareness campaigns.
    d) Spreading and developing rural industries at the village level.
    e) Contribution to activities of improving literacy.
    f) Participation in projects of environment protection and agricultural resources conservation, for example: rationalizing pesticides and water use, covering drainage canals and participation in the sanitary drainage projects.
15. Disseminating the cooperative awareness among members of the general assembly with regard to their rights and responsibilities especially in controlling, monitoring and evaluating the performance of cooperatives is necessary.
16. The articles of law number 122 of 1980, which contradict with democratic management and the independence of cooperatives in order to coincide with market economy conditions, must be revised, reformulated and amended.

17. Enacting a new cooperative law that agrees with the international cooperative criteria and Egyptian conditions is necessary.

18. The role of administrative authority should be:

1. Registration and declaration of cooperatives.
2. Carrying out necessary studies and researches for developing cooperatives and evaluating their performance.
3. Providing official data and information.
4. Verifying the application of laws, administrative and financial instructions by cooperatives.
5. Participating in setting and elaborating the national plan of cooperative training

The investigated results for Menoufiya Governorate are widely congruent with the investigated results of the pervious studies. So, that the recommendations gain a general meaning for cooperative policy in Egypt for the other areas which are similar to the studied area.

Chapter 8: Summary

Background and objectives

Agricultural cooperatives are considered to be important social and economic units, which aim to the agricultural development. In Egypt, these organizations are expected to play a very important role in solving problems in rural society through agricultural production improvement and a balanced stabilization of imports and exports. The main research problem of this study is to identify the role of agricultural cooperatives in agricultural development and determinants of its effectiveness and its ability to achieve their goals. The main objectives of the study are to identify the current status of agricultural cooperatives in Menoufiya Governorate in Egypt and determine the following items as well as the variables affecting them: (1) Agricultural cooperatives ability to mobilize resources for achieving its activities. (2) Agricultural cooperatives ability to employ the available resources. (3) Contribution of the agricultural cooperatives in agricultural development, (4) Organizational effectiveness of the agricultural cooperatives in agricultural development, (5) Extent of benefit for farmers from the agricultural cooperatives activities, and thus (6) Farmers' attitudes towards agricultural cooperatives.

Methodology

To achieve the objectives of this study, two questionnaires were designed, pre-tested, modified and formulated in their final shape. The first questionnaire attended the agricultural cooperatives managers and the second attended the cooperatives members (farmers). Data were collected through personal interviews with 66 managers and 291 members of agricultural cooperatives in Menoufiya Governorate. The Pearson simple correlation coefficient and stepwise multiple correlation and regression analysis were used to analyze the collected data.

Results

The most important results of this study could be summarized as follows:

- As for the current status of agricultural cooperatives in Menoufiya governorate – Egypt, results indicate:
    1. A low level of cooperatives' managers learning and training.

2. A weak participation of members in the meetings of the General Assembly. In 62% of the agriculture cooperatives by less than half of the members attended the meetings. That is a result for members' feeling of the uselessness of these meetings.
3. About 86% of agricultural cooperatives have 5 member boards, and about 20% of the board councils are chosen by election while 80% were chosen by honorable records. These results refer to the low level of cooperatives members' participation whether in the General Assembly meeting or being nominated to the board membership.
4. About 65 % of the agricultural cooperatives are located in dependent (minor) villages, 84.5 % of them provide their service and activities for only one village , 7.6% of them are located in villages with a high level of development, 84.8 % of them are located in villages with a number of population less than 14360 persons.
5. About 41 % of cooperatives building are not provided with main facilities and utilities such as electricity, drinking water and bathrooms.
6. About 73 % of agricultural cooperatives have insufficient budgets for achieving their activities. The main sources of budget are the members' subscription and the profits of selling production requirements and duties of service as well as issuing agricultural documents.
7. A low level of cooperatives cooperation with other organizations in the village. It is made clear, that 83% of them did not cooperate at all with governmental organizations in villages in planning, and implementing developmental activities and projects.
8. All cooperatives included in this study didn't cooperate at all with non-governmental organizations. This result refers to the lack of a comprehensive developmental plan considering coordination and cooperation between the agricultural cooperatives and other organizations in villages.

- Results indicate, that the most critical problems that cooperatives face and hinder them from achieving their goals and activities and which were mentioned by both cooperatives managers and farmers are:
    1. Insufficiency of the budget and the lack of financing necessary for achieving activities.
    2. High loan prices that cooperatives have to pay to village or commercial banks,
    3. Lack of cooperatives to market the agricultural crops as a result of deficits in necessary financing and the lack of suitable stores for storing production requirements.

4. Lack of production requirements at suitable times, quantities and prices as a result of the prohibition for agricultural cooperatives to contract production requirements (seeds – pesticides –fertilizers) directly with the agricultural companies. This, in turn, lead to a lack of farmers' trust in the agricultural cooperatives.
5. Lack of farmers' trust in agricultural cooperatives lead to decreasing farmers' participation in the General Assembly meetings, that refers to disability to discuss the cooperatives' policies and unsuitable decision making that affect negatively the cooperatives efficiency.

- Regarding the agricultural cooperatives ability to mobilize resources for achieving its activities, the results show that
    1. About 71 % of the agricultural cooperatives have a low capability of mobilizing resources, which is expected to coincide with their low ability to achieve their activities.
    2. The following independent variables have a positive and a significant effect on the agricultural cooperatives ability to mobilize resources for achieving its activities:
        a) Number of population in the villages with agricultural cooperatives.
        b) Cultivated area in the villages, which benefit from the activities of the agricultural cooperatives.

        These variables could explain 58 % of the variance in the agricultural cooperatives ability to mobilize resources for achieving its activities.

- Regarding the agricultural cooperatives ability to employ the available resources, the results indicate:
    1. A low ability of agricultural cooperatives to employ the available resources, which means that the agricultural cooperatives could not use their available resources in an optimal way that affects negatively their ability to achieve their goals.
    2. The agricultural cooperatives could not contribute efficiently in the process of agricultural development.
    3. The most independent variables affecting *(a positive and a significant effect)* the agricultural cooperatives' ability to employ the available resources, are
        a) Cultivated area in the villages, which benefit from the agricultural cooperatives activities and,
        b) The extent of agricultural cooperative building's suitability for achieving their activities

These variables could explain 14% of the total variance in agricultural cooperatives' ability to employ the available resources. The remaining percentage, that is 86 %, is due to other independent variables, which were not included in this study, such as financial regulations, levels of workers' and board members' training and education

- Regarding the contribution of the agricultural cooperatives to agricultural development, the results show that
    1. About 88 % of the agricultural cooperatives have a low level of contribution in agricultural development. These results are considered to be natural ones to what was mentioned previously as the low ability of cooperatives to mobilize and employ resources on one hand and lack of budget on the other hand. These reasons are considered to be the most critical obstacles that hinder cooperatives from achieving their goals and activities and providing agricultural requirements for the majority of farmers. This bad situation affects negatively the level of contribution of the agricultural cooperatives to the agricultural development.
    2. The following independent variables have a positive and a significant effect on the agricultural cooperatives contribution to the level in the agricultural development
        a) Cooperation level between agricultural cooperatives and governmental organizations in the village,
        b) Number of governmental organizations in the village.

        The percentage of the contribution of these factors in explaining the total variance in the level of agricultural cooperatives contribution in the agricultural development reached about 39 %. The remaining percentage that is 61 % is due to other variables, which were not included herein such as the influence of the political and economic factors of the current political and economic system in addition to certain legislative factors that hinder the agricultural cooperatives.

- Regarding the organizational effectiveness of agricultural cooperatives in the agricultural development, the results indicate:
    1. The organizational effectiveness of the agricultural cooperatives in the agricultural development is low. This may be due to the low ability of mobilizing and employing resources by agricultural cooperatives, as well as a low level of agricultural cooperatives contribution to agricultural development.

2. The variable of number of population in the villages with agricultural cooperatives could explain 52 % of the total variance in the organizational effectiveness of the agricultural cooperatives in agricultural development. On the second place the variable of the total number of N.G.O's membership of agricultural cooperative managers explains the total variance in the organizational effectiveness of the agricultural cooperatives in agricultural development, reached a percentage of 5 %.

- Regarding the benefit for farmers from agricultural cooperatives activities, the important results are the followings:
    1. The low benefit degree for the sample of farmers included in this study from agricultural cooperatives activities. Only 35.7 % from the total number of farmers benefited significant from these activities.
    2. The low farmers' satisfaction degree related to the agricultural cooperatives activities they benefited from, as it is made clear that only 17.2 % of farmers, who benefited from these activities, were satisfied about them.
    3. The most independent variables affecting the benefit for farmers from agricultural cooperatives activities, respectively, are
        c) The farmers' attitudes towards agricultural cooperative,
        d) Informal social participation level of farmers,
        e) Total number of N.G.Os-membership of the farmer,
        f) Type of voluntary participation of the farmer in developmental projects, and
        g) Main profession of the farmer.

    These variables could explain 78.3% of the variance in the benefit for farmers from agricultural cooperatives activities.

- Regarding the attitudes of farmers towards the agricultural cooperatives, the important results are the followings:
    1. The low percentage of farmers, who have positive attitudes towards the agricultural cooperatives comparing to these who have negative attitudes is shown by the fact, that only 17.5 % of farmers have positive attitudes towards cooperatives while 27.8 % have had negative attitudes. This result may be due to the following causes:
        a) The majority of farmers believe, that the agricultural cooperatives could not provide information, innovations and the requirements of the agricultural production at suitable time and prices.

b) The majority of farmers believe that most cooperatives activities are devoted for board members, their relatives and friends and owners of big farm in the village.
c) The cooperatives could not solve their agricultural problems at suitable time.
d) The agricultural production requirements provided by traders and agricultural companies are better than those provided by the agricultural cooperatives

2. The most independent variables affecting the farmers' attitudes towards agricultural cooperatives are:
   a) The benefits extent for farmers from agricultural cooperatives activities,
   b) Distance between farmers' residence and agricultural cooperatives location,
   c) Type of voluntary participation of the farmers in developmental projects, and
   d) Type of N.G.Os-membership of the farmers.

   These variables could explain 65.3 % of variance in the farmers' attitudes towards agricultural cooperatives.

Conclusions

The study reveals, that most of the agricultural cooperatives in Menoufiya Governorate – Egypt are not playing their role in the agricultural development in the desired effectiveness. This fact makes it necessary, that these small cooperatives need to be modified in order to form more efficient, self-dependent economical bodies, which are capable to run themselves administrationally and financially. It is recommended also, that these cooperatives be given more economical and organizational freedoms to make them less dependent on the central cooperatives, especially in obtaining and distributing the production inputs. During planning of agricultural development, the government should activate the coordination and cooperation among the roles of both agricultural cooperatives and other organizations in the villages, in order to enhance their abilities and the organizational effectiveness in the agricultural and rural development**.** The agricultural cooperatives should be developed in order to provide activities and services which are adapted to farmers' needs. This means, that the existent cooperative laws must be modified. This modification will lead to positive consequences for the cooperative system in the whole country and consequently incorporated positive macroeconomic effects.

List of References

Abdel-Bary, Ismael Hassan (1980) Local Rule and Rural Development, Dar AL Ma'rif for Printing and Publishing, First Edition, Cairo, Egypt.

Abdel-Wahab, Abdel-Sabor Ahmed (1985) Role of the Social Organizations in Supporting Extension Work. In: Principles for the Agricultural Extension Education, Agricultural Extension and Rural Development Research Institute, the Agricultural Research Center (ARC), Ministry of Agriculture, Egypt. pp. 83 – 91.

Abo Al-Khear, Kamal Hamdy (1984) Organizing the Agriculture Property, A Comparative Cooperative Study, Ain Shams library , Cairo, Egypt

Abo Mandoor, Mohamed (1994) Role of the Agricultural Non-governmental Organizations in the Structural Adjustment Programs , "Current Statuses, Challenges and Development Possibilities with Emphasizing on the Agricultural Cooperatives" , The Third Conference of Agricultural Economists, February, Cairo, Egypt.

Abo Tahoon, Adly Ali (1992) The Relation between the Organizations Effectiveness and Returns of Development Process, Menoufiya Journal of Agricultural Researches, Vol.(12) , No.(2).

Abo Tahoon, Adly Ali(1995) the Necessary Organizational Changes for Promoting the Role of the Community Development Associations in Egyptian Countryside. A Conference of Developing the Programs and Services of Social Care, Higher Institute of Social Service in Alexandria, August 5 – 7 ,Egypt.

Administration of Associations (2002) Statistical Guideline of the Non-governmental Organizations (Associations of Social Care)in the Villages of Menoufiya Governorate till March 2002 , Unpublished Data, the Social Affairs Authority of Menoufiya Governorate , Ministry of Social Affairs, Egypt.

Administration of Development (2002) Statistical guideline of the Non-governmental Organizations (Associations of Development) in the Villages of Menoufiya Governorate till March 2002, Unpublished Data, the Social Affairs Authority of Menoufiya Governorate, Ministry of Social Affairs, Egypt.

Agricultural Cooperatives in Agricultural Credit Areas "ACACA" (1999) Statistical Guideline of Cooperative Activities, Report No. 12, Central administration for Agricultural Cooperation and Rural Development, Ministry of Agriculture, Egypt,

Agricultural Cooperatives Reform Committee (2001) Draft Strategy for the Development of Agricultural Cooperatives (2002 – 2017), Ministry of Agriculture, Egypt.

Ahmed, Ahmed Kamal (1976) the Relation among the Rural Services Systems; In: Mokhtar Hamzah et al , Studies of the Integrated Rural Development , Series of the Rural Development , First Book , Dar Al Ta'lif for Printing and Publishing, Cairo , Egypt

Ahmed, Mahmoud Saleh (1992) A Sociological Study of Coordination among Organizations in Some Egyptian Rural Areas, Master's Thesis in Agricultural Science, Faculty of Agriculture, Menoufiya University, Egypt.

Al-Adly, Abd El Fattah Migahid (1984) A Study of Some Factors Related to the Efficiency of the Agricultural Cooperatives, Master's Thesis in Agricultural Science, Faculty of Agriculture in Kafr El-Sheikh, Tanta University , Egypt.

Al-Ganzory, Kamal (Egyptian Prime Minister) (1998) The Government Statement about the Cooperatives. In: Rashad, Mohammed (1998) Cooperative Egypt and the Future Challenges, Dar El-Ta'wen for Press, Printing and Publishing, Cairo, Egypt

Allam, Salah El-Dien (1985) Data Analysis in Psychological and Pedagogic Research, Dar El-Fikr El-Araby, Cairo, Egypt.

Anderson, W.A. and Parker, F.B.(1964) Society : Its Organization and Operation , New Jersey : Van Nostrand , 1964, p. 252

Asphahani, Fatima (1972) A Descriptive Study of Some Factors Affecting Farmers' Opinions and Behavior Towards Agricultural Cooperatives Societies in Assuit Province, Master's Thesis in Agricultural Science, Faculty of Agriculture, Assuit University, Egypt.

Bakke, E. Wight(1967) Concept of the Social Organization. In: Haire, Mason, "Modern Organization Theory ", Fifth Printing, January, New York, John Wiley & Sons, Inc

Barakat, Mohamed et al. (1993) A Comparative Study Between the Performance of Rural Community Development Associations and Village Local Units in Planning and Implementation of Rural Development Programs in Sharkia Governorate, Bulletin No. 105, Agricultural Extension and Rural Development Research Institute, The Agricultural Research Center (ARC), Egypt.

Bedear, Mahmoud Ibrahim (1983) The Rural Social Organization " An Analytic and Descriptive Study of the Relations among the Village Local Units and other Organizations in the Field of the Rural Development in El Giza Governorate, Ph.D. Dissertation, Faculty of Agriculture , Cairo University, Egypt

Blau, M. Peter and Scott, W. Richard (1962) Formal Organization: A Comparative Approach, San Francisco: Chandler

Blau, M. Peter und Scott, W. Richard (1963)Organisationen als formalisierte Sozialysteme : In K. H. Tjaden, Soziale Systeme,Soziologische Texte, Luchterhand Verlag GmbH, Neuwied und Berlin, Germany, 1971, p.p. 259-268

Cameron, K. S. (1978) Organizational Effectiveness: Its Measurement and Prediction in higher Education, Ph Dissertation, Yale University.

Central Agency for Public Mobilization and Statistics "CAPMAS" (1996 A) Population Distribution in the Villages of Menoufiya Governorate according to (Urban – Rural), Cairo, Egypt .

Central Agency for Public Mobilization and Statistics "CAPMAS" (1996 B)Population Distribution in the Villages of Menoufiya Governorate according to Age and Kind , Cairo , Egypt, pp. 4 – 40.

Central Agency for Public Mobilization and Statistics "CAPMAS" (1996 C)Population Distribution in the Villages of Menoufiya Governorate according to Education Level and Kind, Cairo , Egypt, pp. 232 – 270.

Central Agency for Public Mobilization and Statistics "CAPMAS" (1996 D) Population Distribution in the Villages of Menoufiya Governorate according to Main Professions, and Kind; Cairo, Egypt, pp. 271 – 307

Central Agency for Public Mobilization and Statistics "CAPMAS" (1996 E) Number of Workers in the Villages of Menoufiya Governorate, Egypt, pp. 271 – 307

Champion, Dean J. (1975) The Sociology of Organizations, McGraw-Hill, Inc.

Champion, Dean J. (1975) The Sociology of Organizations, McGraw-Hill, Inc. pp. 73-74.

Chitambar, J. B. (1973) Introductory Rural Sociology, A Synopsis of Concepts and Principles, Wiley Eastern Private Limited, New Delhi, 1973, pp.182- 185.

Davis, Louis E. (1973) Job Satisfaction Research: The Post- Industrial View, In: Gibson, James L. et al. Readings in Organizations Structure, Processes and Behavior, Business Publications, Inc. p. 233

Dawod, Reda (1998) The Adoption and Diffusion of Conservation Innovations of the Agricultural Resources in the Rural Areas of Menoufiya Governorate, Master's Thesis in Agricultural Science, Faculty of Agriculture, Menoufiya University, Egypt.

Department of Agricultural Cooperation (2002 A) the Agricultural Cooperatives Records: Date of Establishing the Agricultural Cooperatives, till July 2002, Shebin El-Kom, Menoufiya Governorate, Egypt

Department of Agricultural Cooperation (2002 B) the Agricultural Cooperatives Records: Number of the Agricultural Cooperatives Members, till July 2002, Shebin El-Kom, Menoufiya Governorate, Egypt

Department of Agricultural Cooperation (2002 C) the Agricultural Cooperatives Records: Number of the Cooperatives Boards Members, till July 2002, Shebin El-Kom, Menoufiya Governorate, Egypt

Department of Agricultural Cooperation (2002 D) the Agricultural Cooperatives Records: Cultivated area (agricultural area) in the Villages, till July 2002, Shebin El-Kom, Menoufiya Governorate, Egypt

Department of Agricultural Cooperation (2002 E) the Agricultural Cooperatives Records: Statistical guideline of achieved activities by agricultural cooperatives from 01.07.2001 to 30.06.2002, Shebin El-Kom, Menoufiya Governorate, Egypt

Devid, Popenoe (1971) Sociology, Meredith corporation, New York, pp. 174 – 175.

El-Abbasy, Seyam(1980) Role of Social Organization in the Egyptian Social Change with Concentrating on the Role of the Village Bank in the Rural Development Master's Thesis in Agricultural Science, Faculty of Agriculture, Cairo University , Egypt.

El-Akhws, Ibrahim Kamal (1985) Study of the Extension Work under Local Rule System and Methods of Coordination between this System and the other Service Systems at the Level of the Egyptian Village, Ph.D. Dissertation, Faculty of Agriculture, Al Azhar University, Cairo, Egypt.

El-Batrik, Mohamed Kamel & Shedid, Mohamed (1969) Development of the local Community, the Egyptian Anglo library, Cairo, Egypt.

El-Damaty, Mohamed (1996) Agricultural Technology Transfer in Menoufiya Governorate, Master's Thesis in Agricultural Science, Faculty of Agriculture, Menoufiya University, Egypt.

Elezaby, Mohamed I. (1985) Impact of Situational and Orientational Factors on Residents Contribution to Community Field Structure: A Case Study, Ph Dissertation Library, Iowa State University, Ames, Iowa, U.S.A.

Elezaby, Mohamed I. (1994) Path Analysis for the Determinants of the Village Developmental Level, Alexandria Journal of Agricultural Researches, Egypt, Vol.(19) , No.(2), 209 – 231 .

Elezaby, Mohamed I. (1997) The Public Participation in the Local Community. In: the Development of the Local Rural Community, Faculty of Agriculture, Alexandria University, Egypt, pp. 1- 31.

El-Gebaly, Gamal El-Dien (1994) A Study on Integration Among Developmental Organizations in Some Villages of Sohag Governorate, Master's Thesis in Agricultural Science, Faculty of Agriculture, Al-Azhar University, Egypt

El-Gohary, Omar (1981) Village Banks and Development in the Arab Republic of Egypt, Journal of Management, Vol. (4) , No.(3). Cairo, Egypt.

El-Hanafy, Mohamed Ghanem (1992) Analytical Study of Some Factors Affecting Informal Social Participation of Farmers in Some New Villages at Maryout, Bulletin No. 103, Agricultural Extension and Rural Development Research Institute, The Agricultural Research Center (ARC), Egypt.

El-Haydary, Abdelrahim (1983) Der Einfluss der ländlichen Genossenschaftstypen in Ägypten auf die Bildung und Ausbildung ihrer Mitglieder, Inaugural-Dissertation zur Erlangung des Doktorgrades des Fachbereichs Nahrungswirtschafts- und Haushaltswissenschaften der Justus- Liebig- University of Giessen, Germany.

El-Helbawy, Hesham (1998) Role of Non-Governmental Organizations in Rural Development, Ph.D. Dissertation, Faculty of Agriculture, Alexandria University, Egypt.

El-Houseiny, El-Sayed Mohamed (1975) The Social Theory and the Study of Organization, Series of the Modern Sociology, (18th) Book, Dar AL Ma'rif for Printing and Publishing, Cairo, Egypt.

El-Kholy, Sanaa(1985)The Social Change and Modernization, Dar Al-Ma'refa Al-Gam'eia for Printing and Publishing, Alexandria, Egypt.

El-Masry, Abdel-Wahab (1983) Issues of the Public Participation in the Environmental Development. In : the Arab Organization of the Agricultural Development and the Arab Institute of Planning in Kuwait, A Symposium of the Integrated Rural Development , Rabat, Morocco, May 24 – 27 , pp. 236 – 89 .

Elsayed, M. Kamel (1985) Der Einfluss landwirtschaftlicher Genossenschafen auf die Ernährungssituation Ihrer Mitglieder Empirische Erhebung im Bezirk Samanud und in der Provinz Nord-Tahrir, Ägypten.

El-Sharkawi, Ahmed (1993) Role of the Social Organizations in Planning and Implementation of the Rural Development Programs, Master's Thesis in Agricultural Science, Faculty of Agriculture, Ain Shams University , Cairo , Egypt .

El-Sherbeny, Ibrahim (1975) Role of the Health Services in Integrated Development, Integrative Approach for Planning of Rural Development, Africa Organization, May 5 – 17, Cairo, Egypt.

El-Yamany, Abd El Tawab, Fawzy El-Danasoury et al. (1988) An Socio-Economic Study of the Agricultural Cooperatives in New Lands of Fayoum Governorate, Project of the Cooperative Training in New Lands, Ministry of Agriculture, Egypt.

El-Yamany, Abdel Tawab et al (1987 A) New Lands Cooperatives in Egypt, Members Socio-economic Status, State of Knowledge, Awareness and Concern with their Cooperative, Ministry of Agriculture and ILO/ Danida Project.

El-Yamany, Abdel Tawab et al (1987 B) New Lands Cooperatives in Egypt, Financial and Human Resources, Ministry of Agriculture and ILO/ Danida Project.

El-Yamany, Abdel Tawab et al (1987 C) Study of the Manager of the Agricultural Cooperatives in New Lands Part, Ministry of Agriculture and ILO/ Danida Project.

Esman, Milton J. and Uphoff, Norman T. (1984) Local Organizations, Intermediaries in Rural Development, Cornell University Press.

Etzioni, Amitai (1961) A Comparative Analysis of Complex Organizations The First Edition, New York, The Free Press ,1961. p. xi

Etzioni, Amitai (1964) Modern Organizations, Prentice- Hall, Inc., Englewood Cliffs, New Jersey ,1964. pp. 4 – 5.

Etzioni, Amitai (1965) Complex Organizations, A Sociological Reader, Holt, Rinehart and Winston, Inc., United States of America ,1965. p.143

Etzioni, Amitai (1975) A Comparative Analysis of Complex Organizations ,Revised and Enlarged Edition, New York, The Free Press ,1975. p. xi

Fahmy, Samya (1985) Management in Social Institutions, Almaktb Algam'eiy Alhadeth for Press, Printing and Publishing, Second Edition, Alexandria, Egypt.

Fahmy, Samya (1987) Management in Social Institutions, Dar Al-Ma'refa Al-Gam'eia for Printing and Publishing, Alexandria, Egypt

Fouad, Ali Ahmed (1966) Rural Sociology, Cairo Modern Library, Cairo, Egypt.

Gad El-Rab, Mohamed (1989) Some Organizational, Societal, Rural and Local Factors that Affect on the Organizational Effectiveness of the Multipurpose Local Agricultural Cooperatives in the Some Villages of Al-Gharbeya and Kafr El-Sheikh Governorates, Master's Thesis in Agricultural Science, Faculty of Agriculture , Alexandria University , Egypt.

Gamie, Mohamed Nabil et al. (1987 A) The Comprehensive Analysis for Reasons of Staying Behind of the Egyptian Village, First Part , Main Report , Academy of Scientific Research and the Technology in Cairo in Cooperation with Faculty of Agriculture, Alexandria University , Egypt.

Gamie, Mohamed Nabil et al. (1987 B) The Comprehensive Analysis for Reasons of Staying Behind of the Egyptian Village, Second Part, Modernization and Development of Rural Organizations and Institution, Academy of Scientific Research and the Technology in Cairo in Cooperation with Faculty of Agriculture, Alexandria University , Egypt.

Gamie, Mohamed Nabil et al. (1987 C) An Introduction in Sociology, Al-Shehaby Center for Printing and Publishing, Alexandria, Egypt, pp. 172 - 179

Gamie, Mohamed Nabil(1973) " Al-Moftatah" An Introduction in Sociology , Dar Al Matboaat Algadedah for Printing and Publishing – Alexandria, Egypt

Georgpouls, Basil S. and Mann, Floyd C. (1962) The Hospital as an Organization, Hospital Administration Quarterly, 7, pp. 50 – 64.

Gheath, Mohamed Atef (1979) A Dictionary of Sociology, The General Egyptian Authority for Books, Cairo, Egypt, p. 447.

Gibson, James L. and Donnelly, James H. (1979) Organization, Business Publications, Inc., Third Edition.

Gohar, Salah El-Deen (1973) Management of Social Institutions, Ain Shams library, Cairo, Egypt, p. 59.

Goodman, P. S. and Pennings, J. M. (1977) New Perspectives on Organizational Effectiveness, C.A.: Jossey – Bass.

Halol, Fath-Allah and El-Kholy, Hussein (1960) Social and Economic Factors lead to the Success or Failure of the Rural Cooperatives- Faculty of Agriculture, Alexandria University, Egypt.

Hamad, Awn Khair-Allah (1990) The Most Features of the Cooperation Movement in the Arab Republic of Egypt, Master's Thesis in Agricultural Science, Faculty of Agriculture, Alexandria University, Egypt

Hamad, Awn Khair-Allah (1994) A Comparative Study of the Agricultural Cooperatives in District of Abo-Homass of Al-Behira Governorate, Ph.D. Dissertation, Faculty of Agriculture, Alexandria University, Egypt .

Hamodah, Mosaad Al Farooq (1982) Development of the Rural and Urban Community (Role of Social Service), Almaktb Algam'eiy Alhadeth for Printing and Publishing, Alexandria, Egypt.

Hamodah, Mosaad Al Farooq (1995) The Management of the Social Institutions, Almaktb Al'lmey for Computer, Printing and Publishing, Alexandria, Egypt. pp. 126 – 127

Hassan , Hassan Aly (1985) The Countryside , A Simple Rural Societal Study, Almaktb Algam'eiy Alhadeth for Printing and Publishing, Alexandria, Egypt.

Hassan, Mohamed Harby (1989) Science of Organization: Principles, Development and Integration, Dar Al-kotob for Printing and Publishing, Mosul, Iraq, p.27- 30.

Hicks, Herbert G.(1972)The Management of Organization : A Systems and Human Resources, McGraw-Hill, Inc., The Second Edition.

Hussein, Aleyah (1977) The Development "Theoretically and Practically", The General Egyptian Authority for Books, Egypt

Ibrahim, Saad El-Dean (1998) The Non-governmental Work in Egypt, Strategic Files (62), Centre for Political and Strategic Studies, Al-Ahram Organization for Press, Printing and Publishing, Cairo , Egypt

Information and Decision Support Centre "IDSS "(1999) Description of Menoufiya Governorate in Information, July 1999, Shebin El-Kom, Menoufiya Governorate, Egypt.

Information and Decision Support Centre "IDSS "(2002 A) Number of the Land Reform cooperatives in the Villages of Menoufiya Governorate, Shebin El-Kom, Menoufiya Governorate, Egypt.

Information and Decision Support Centre "IDSS "(2002 B), Number of the Population in the Villages of Menoufiya Governorate, Shebin El-Kom, Menoufiya Governorate, Egypt.

Information and Decision Support Centre " IDSS " (2002 C) Number of the Governmental and Non-governmental Organizations in the Villages of Menoufiya Governorate, Shebin El-Kom, Menoufiya Governorate, Egypt

Information and Decision Support Centre "IDSS "(2002 D) Education Percentage and Female Education Percentage in the Villages of Menoufiya Governorate, Unpublished Data, Shebin El-Kom, Menoufiya Governorate, Egypt

Information and Decision Support Centre " IDSS "(2002 E) Number of the Workers in the Villages of Menoufiya Governorate, Unpublished Data, Shebin El-Kom, Menoufiya Governorate, Egypt

Information and Decision Support Centre"IDSS "(2002 F) Cultivated area (agricultural area) in the Villages of Menoufiya Governorate, Unpublished Data, Shebin El-Kom, Menoufiya Governorate, Egypt

Information and Decision Support Centre"IDSS "(2002 G) Villages Classification of Menoufiya Governorate (Main Villages, Dependent Villages), Unpublished Data, Shebin El-Kom, Menoufiya Governorate, Egypt

Institute of Blanket for Cooperative Studies (1989) A Study of Creating Appropriate Environment and Circumstances for the Cooperative Development in Egypt, In : Rashad, Mohammed (1992) The Crisis of the Cooperative Sector in Egypt , Problems and Solutions , Dar El- Ta'wen for Press, Printing and Publishing, Cairo , Egypt, pp. 481-502.

Kasim, Refaat (1993) Lectures in Society Planning, Orfoua for Printing– Kafr El-Sheikh, Egypt.

Katz, Dinel and Kahn Robert (1966) The Social Psychology of Organizations, New York, John Wiley and Sons, Inc.

Keeley, M. (1978) A Social– Justice Approach to Organizational Evaluation, Administrative Science Quarterly, 23 , pp. 272 – 292.

Khalifah, Mahroos Mahmoud (1990) An Introduction in the Management of the Social Institutions ”Analysis of Structure and Function”, Dar Al-Ma’refa Al-Gam’eia for Printing and Publishing, Alexandria, Egypt. Pp. 321 – 328 .

Khalil, Mohamed Abdel-Wadood et al (1981) A Study of Evaluation of Cooperation Movement in reclaimed lands cooperatives, The International Center of Rural Development, Ministry of Housing, Utilities and Urban Communities, Egypt.

Khalil, Nabil Mohamed (1986) Measurements of Organizational Effectiveness , A Study of the Effect of Some Situational Variables on the Effectiveness , Master’s Thesis, Department of Business Administration, Faculty of Commerce, Assuit University, Egypt.

Khamis , Mohamed Antar (1989) Role of the Village Units in the Rural Development A Field Study in Menoufiya Governorate , Master’s Thesis in Agricultural Science, Faculty of Agriculture in Kafr El-Sheikh, Tanta University , Egypt.

Khatir, Ahmed (1984) Method of Society Organization, Approach of the Local Society Development, Roles and Strategies of Social Organization, Almaktb Algam’eiy Alhadeth for Printing and Publishing, Alexandria, Egypt, pp. 27- 29

Kirchhoff, B. A. (1977) Organization Effectiveness Measurement and Policy Research, Academy of Management Review, 1977(2), pp. 347 – 355.

Kishk, Mohamed (1985) the Organizations and Principles of its Management, Almaktb Algam’eiy Alhadeth for Printing and Publishing, Alexandria, Egypt, pp. 11-12.

Law of the Local Management System and its Executive Bill (1989) The General Organization for Government Printing Offices “ Al Amiria printing press “, Embaba, Giza, Egypt.

Light, Donald and Keller, Suzanne (1979) Sociology, Alfried A. Knopf Inc.,Second Edition.

Mansour, Mohamed Ali (1988) The Rural Organizations and their Role in the Agricultural Extension, Master's Thesis in Agricultural Science, Faculty of Agriculture in Kafr El-Sheikh, Tanta University , Egypt.

Marcson, Simon (1961) Organization and Authority in Industrial Research, In: William A. Faunce, Readings in Industrial Sociology, Meredith Publishing company , New York , 1967 . p. 183

Miles, Raymond E. (1980) Theories of Management, New York, McGraw-Hill.

Miller, Dilbert (1977) Hand book of Design and Social Measurement. David McKay Co.

Ministry of Local Rule (1979) Law of the Local Rule No 43 / 1979, Cairo, Egypt

Ministry of Local Rule (1981) Law of the Local Rule Conditioned No 50 / 1981, Cairo, Egypt

Ministry of Local Rule (1988) Law of the Local Rule No 145 / 1988, Cairo, Egypt

Ministry of Social Affairs (1982) A study of Local Unit, Cairo, Egypt.

Ministry of Social Affairs (1964) Law No 32/ 1964 for Establishing and Forming the Community Development Associations, Public Administration of Social Development, Cairo, Egypt.

Mohamed, Farahat (2003) Role of Agricultural Co-operatives in Agricultural Development of Menoufiya Governorate, Egypt (Deutscher Tropentag) 2003, International Research on Food Security, Natural Resource Management and Rural Development, Technological and Institutional Innovations for Sustainable Rural Development, Georg-August-University Goettingen, Germany, October 8 - 10.

Mohamed, Farahat (1996) An Evaluative Study of Measurements of Adoption and Diffusion of Agricultural Innovations in Some Rural Areas of Menoufiya Governorate ,Egypt, Master's Thesis in Agricultural Science, Faculty of Agriculture, Menoufiya University, Egypt.

Mohamed, Farahat (1997) Role of Agricultural Extension in Agricultural Development and Environment Maintenance, the First Conference of Egyptian Rural Development, Towards Better Rural Environment, Faculty of Engineering, Menoufiya University, Egypt, June 25- 27.

Mohamed, Mohamed Ali (1981) Free Time in the Modern Society, Series of the Modern Sociology, (46th) Book , Dar Al-Ma'refa Al-Gam'eia for Printing and Publishing, Alexandria, Egypt.

Mohamed, Mohamed Ali (1985) The Sociology of Organization, An Introduction to Heritage, Problems, Subject and Approach, Dar Al-Ma'refa Al-Gam'eia for Printing and Publishing, Alexandria, Egypt.

Moharam, Ibrahim et al. (1983) The Development of the Agricultural Cooperatives in Egypt, First Report, the Project of Developing the Egyptian Agriculture, Ministry of Agriculture, Egypt.

Motawea, Ibrahim Esmat (1980 A) Education Principles, Second Edition, Dar Al Ma'rif for Printing and Publishing, Cairo, Egypt.

Motawea, Ibrhaim Esmat and Aminah Hamed Hassan(1980 B)Administrative Priniciples of Education, First Edition , Dar AL Ma'rif for Printing and Publishing, Cairo, Egypt

Nasr, Amir Mohamed (1995) Role of Agricultural Cooperatives in New Lands in Rural Development, A Field Study in Alexandria and Al-Behira Governorates, Master's Thesis in Agricultural Science, Faculty of Agriculture, Alexandria University, Egypt.

Nassrat, Mohamed Mohi El Din (1963) Notes on Society Development, Department of Agricultural Economics, Faculty of Agriculture, Cairo University, Egypt.

Omar, Ahmed Mohamed (1980) The Agricultural Extension, Offset for Print, Cairo, Egypt.

Page, Charles H. (1973) Sociology, the Study of Human Interaction, Alfried A. Knopf Inc., Second Edition, p.304.

Parsons, T. (1937) The Structure of Social Action , New York , McGraw-Hill.

Parsons, T. (1960) Structure and Process in Modern Societies , Glencoe, III., The Free Press.

Perrow, Charles (1968) Organizational Goals, In: International Encyclopedia of the Social Sciences, New York. Growell Collier and MacMillian.

Pindyck, Robert S. and Rubinfeld, Daniel L. (1981) Econometric Models and Economic Forecasts, Second Edition, International Student Edition, McGraw-Hill Book Company, pp. 78 – 80.

Price, James L. (1972) The Study of Organizational Effectiveness, The Sociological Quarterly, 13, pp. 3 – 15.

Qandeel, Amany (1995) The Social and Political History of the Non-governmental Organizations in Egypt. In: Amany Qandeel and Sarah Bin Nafisah, Non-governmental Organizations in Egypt, Centre for Political and Strategic Studies, Al-Ahram Organization for Press, Printing and Publishing, Cairo, Egypt, pp. 47 – 67.

Rady, Abdel Moneam(1987) Economic Readings in Planning and Cooperation, Ain Shams library , Cairo, Egypt

Ragab, Ibrahim Abdel-Rahman, et al (1983) Models and Theories of Society Organization , Culture House for printing and publishing, Cairo, pp. 49 - 51

Rashad, Mohammed (1992) The Crisis of the Cooperative Sector in Egypt , Problems and Solutions , Dar El- Ta'wen for Press, Printing and Publishing, Cairo, Egypt

Rashad, Mohammed (1998) Cooperative Egypt and the Future Challenges, Dar El-Ta'wen for Press, Printing and Publishing, Cairo, Egypt

Refaat, Fath-Allah (1982) An Applied Study on the Role of the Agricultural Cooperation in the Rural Communities Development. In: Al-Aabd , Salah et al. (1982) the Second Annual Book of Rural Development , Nahdat Misr library , Cairo, Egypt.

Report of the Agricultural Cooperatives (1984) Centre of Cooperative Development for Training and Education, Egypt.

Report on Cooperative Marketing (1986) Cooperative Development and Training for Settlers in New Lands Egypt, ILO/ Danida Project.

Rihan, Ibrahim et al. (1993) Performance Determinants of Village Local Units and Rural Community Development Associations in Planning and Implementation of Rural Development Programs in Sharkia Governorate, Bulletin No. 107, Agricultural Extension and Rural Development Research Institute, The Agricultural Research Center (ARC), Egypt.

Rogers, Everett M. (1983) Diffusion of Innovation, Third Edition, Free Press.

Rogers, Everett M. and Shoemaker, F. Floyd (1971) Communication of Innovations, A cross – Cultural Approach, Second Edition, New York, Macmillan Publishing Company, pp. 303- 304.

Sabir, Mohye Al-Deen (1962) Civilization Change and Society Development, the Centre of Community Development in the Arab World , Sirs El-layan , Menoufiya, Egypt.

Sadik , Nabil Mohamed (1991) An approach to the Social Service, Higher Institute of Social Service, Kafr EL-Sheikh, Egypt , p. 185

Said-Ahmed, Ghareeb Mohamed (1985) Rural Sociology, Dar Al-Ma'refa Al-Gam'eia for Printing and Publishing, Alexandria, Egypt.

Sedky, Atef (Egyptian Prime Minister) (1992) A Report about Works and Activities of the General Union for Cooperatives as well its Final Account till 30/6/1991. In: Rashad, Mohammed , 1992, The Crisis of the Cooperative Sector in Egypt , Problems and Solutions , Dar El- Ta'wen for Press, Printing and Publishing, Cairo , Egypt.

Serag El-Din, Ismail (1995) Nurturing Development, Aid and Cooperation in Today's Changing World, Washington, D.C. The World Bank.

Solaiman, Adly (1959) The Youth Centers and School Public Service, The General Organization for Government Printing Offices " Al Amiria printing press ", Embaba, Giza, Egypt.

Solaiman, Hanafy Mahmoud (1978) Effectiveness of the Organization, the Arab Organization for Administrative Sciences, p. 5

Taryal, Abdel Rahman (1999) Study on Land Reclamation Cooperatives in Egypt, In: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH, Germany

The Branch of Agricultural and Irrigation in the National Council for Production and Economical Affairs (1998) the Importance and Functions of Cooperatives in the Agricultural Development, In: Rashad, Mohammed (1998) Cooperative Egypt and the Future Challenges, Dar El-Ta'wen for Press, Printing and Publishing, Cairo, Egypt, pp.141-144.

The Budget Records of Agricultural Cooperatives in Village of Manshyat Sultan (2002) Final Accountancy for the Financial Year starts in 01.07.2001 and ends in 31.06.2002, , Department of Agriculture , Menouf Distric, Menoufiya Governorate, Egypt

The Budget Records of Agricultural Cooperatives in Village of Meleeg (2002) Final Accountancy for the Financial Year starts in 01.07.2001 and ends in 31.06.2002, Department of Agriculture , Shebin El-Kom District, Menoufiya Governorate, Egypt

The Egyptian Law for the Agricultural Cooperation Number 122 /1980, Official Newspaper, Edition 27 (1), July 3, 1980, Egypt.

The Egyptian Shoura Assembly (1992) Committee of agricultural production , irrigation , and land reclamation, a report on agricultural credit in : In : Rashad, Mohammed (1992) The Crisis of the Cooperative Sector in Egypt , Problems and Solutions , Dar El- Ta'wen for Press, Printing and Publishing, Cairo , Egypt, pp. 223 - 227 .

The International Organization for the Development of the Agricultural Cooperation in U.S.A (1990) Evaluation of the Agricultural Cooperation, A Report of Results and Recommendations, In: Rashad, Mohammed (1992) The Crisis of the Cooperative Sector in Egypt , Problems and Solutions , Dar El- Ta'wen for Press, Printing and Publishing, Cairo , Egypt, pp. 505-517.

The Possession Records of Agricultural Cooperatives in Village of Meleeg (2002) Department of Agriculture , Shebin El-Kom District, Menoufiya Governorate, Egypt. July, 2002.

The Possession Records of Agricultural Cooperatives in Village of Manshyat Sultan (2002) Department of Agriculture, Menouf District, Menoufiya Governorate, Egypt, July, 2002.

The Principal Bank for Development and Agricultural Credit (PBDAC) (1976) Village Bank System, Training Management, Egypt.

The Supreme Council for Youth and Sport (1992) Decision No 346/1992 for Principal System of Village Youth Centers, Ministry of Youth and Sport, Egypt

United Nations (1990) Global Outlook 2000. An Economic, Social and Environmental Perspective, United Nations Publications.

United Nations (1994) International Conference on Population and Development, September 5 – 13, Cairo, Egypt.

Wahdan, Nadera et al. (1996) Non-governmental Organizations and Development in Egypt, (Cases Studies), Series of the Planning Issues and Development, No. (106), Institute for National Planning, Cairo, Egypt.

Warren Richard, Mulford C. L., Beal G.M. and Evers F. T. (1975 A) The Personian Functional Imperatives: Operationalization of System and Organization, the Rural Sociological Society Meeting, August 1975, San Francisco, California.

Warren Richard, Rogers David and Evers Frederick (1975 B) Social System Goals in Cooperatives, Rural Sociology, Vol. 40, No. 1, pp. 31 – 44.

Youssef , Samir Mohamed (1980) Management of Organizations, Shabab Al-Gam'ah Organization for Printing, Publishing and Distributing, Alexandria, Egypt.

Yuchtman, Ephraim and Seashore, Stanley (1967) A System Resource Approach to Organizational Effectiveness, American Sociological Review, Vol. 32, pp. 891 – 902.

Zaki, Eshrak (1995) Egyptian Non-Governmental Organizations (NGOs), Review of Literature. A Report Submitted to UNICEF/ Egypt in Preparation for June 1995, National Forum for NGOs.

Appendixes

Appendix 1: Questionnaire of the agricultural cooperative managers

Name of the manager.....Name of the village.....

Name of the district……..Name of the collector……..

1) Age of agricultural cooperative manager .....Years.

2) Manager education level of: number of education years of manager …….....Years

3) Manager experience level: work duration in the agricultural cooperatives…….....Years

4) Manager Training level:

Number of training courses in the work field of agricultural cooperatives.....courses

5) Distance between manager's residence and agricultural cooperative' location…….Km

6) N.G.Os membership of manager:

Please, remind the N.G.Os, which you share in it and the type of membership:

Name of N.G.Os	Type of membership		
	Member of N.G.O	Board of directors member	Board of directors head

7) Informal social participation level of manager :

Please, do you participate in the following social activities with agricultural cooperative members, employees and board of directors' members**?**

social activities	Agricultural cooperative members			Agricultural cooperative employees			Board of directors' members		
	Generally	sometimes	rarely	Generally	sometimes	rarely	Generally	Sometimes	rarely
1. Visits exchange									
2. Patient visit									
3. Wedding ceremonies									
4. Mourning ceremonies									
5. Lending and crediting others persons									
6. Helping others in solving social problems									

8) Strength of the relationships within the agricultural cooperative:

Please, what is your evaluation for strength of the following relations**?**

Type of relations	Evaluation				Remarks
	excellent	good	mediate	weak	
1. Relation among board members					
2. Relation between board members and farmers					
3. Relation between board members and employees					
4. Relation among the employees					
5. Relation between employees and farmers					
6. Relation among farmers					
7. Relation between village leaders and agricultural cooperative					

9) Date of agricultural cooperative establishment. 19.....

10) Type of village in which agricultural cooperative are located. ( ) main or ( ) dependent.

11) Number of villages which are benefiting from the agricultural cooperative activities……..

12) Number of population in the village which has agricultural cooperative..... Persons.

13) Total numbers of agricultural cooperative members. …….Members.

14) Number of female members. …….Members.

15) Cultivated area (agricultural area) in the villages which are benefiting from the agricultural cooperative activities. ……...Fadden.

16) Number of members of the agricultural cooperative board of directors……..Members

17) Selection method of the agricultural cooperative board' members.

( ) election ( ) Honorable records "recommendation "

18) How many meeting preformed by the agricultural cooperative board' members from 01.07.2001 to 30.06.2002?. ……Meetings.

19) What is the average of the cooperatives board members' presentation in board' meeting? ..... Members.

20) What is the average of hours number of the board' members meetings in each meeting? ……Hours.

21) What is the percentage average of the agricultural cooperative members' presentation in the General Assembly meetings? ……..%

22) What is the source of finance for the agricultural cooperative? And how many Egyptian pound from each resource from 01.07.2001 to 30.06.2002.?

1- Member shares (Subscription).....	( ) Egyptian pound
2- Profits from buying agricultural production requirements	( ) Egyptian pound
3- Finance from ministry of agricultural…….....	( ) Egyptian pound
4- Duties for issuing agricultural certificates and for agricultural services.....	( ) Egyptian pound
5- Profits from trading in house and electrical appliances…	( ) Egyptian pound
6- Revenues of hiring agricultural machines…….	( ) Egyptian pound
7- As a gift (People contribution)……..	( ) Egyptian pound
8- International finance for agricultural cooperative……..	( ) Egyptian pound
Other resources:……	( ) Egyptian pound
…….	( ) Egyptian pound
Total finance from all resources.....	( ) Egyptian pound

23) Do you think that this finance is enough for achieving agricultural cooperative activities?

( ) not enough ( ) fairly enough ( ) much enough

24) If this finance is not enough, what is the requested finance? .....Egyptian pound.

25) What is the number of governmental employees in agricultural cooperative?

Workers	Technical workers	Agronomists	Total

26) What are activity fields of the agricultural cooperative?

( ) Field Crops production	( ) Vegetable production
( ) Fruits production	( ) Medicinal and aromatic plant production
( ) Animal production	( ) poultry production
( ) Export of agricultural products	( ) Local marketing of agricultural products
( ) Agricultural machinery	
Activity fields number ……..... ……..fields	

27) The building area of agricultural cooperative. …….. m^2

28) Is the building area of the cooperative suitable for its employee's number?

( ) suitable ( ) fairly suitable ( ) unsuitable.

29) Is the building area of the cooperative suitable for achieving its activities and functions?

( ) suitable ( ) fairly suitable ( ) unsuitable

30) Is the location of the cooperative suitable for achieving its activities and functions?

( ) suitable ( ) fairly suitable ( ) unsuitable.

31) Is the building of the cooperative provided with facilities and instruments which are necessary for the organization work?

( ) yes ( ) Fairly provided ( ) no

32) From point of view, are the farmers satisfied about cooperative activities?

( ) satisfied ( ) fairly satisfied ( ) not satisfied

33) What is the number of the governmental organizations in the village? ……. organizations

34) Evaluation of cooperation between agricultural cooperative and governmental organizations from ***01.07.2001 to 30.06. 2002.*** What is the number of activities, level of cooperation and obstacles of cooperation (is there obstacles in cooperation)?

Name of governmental organizations	**Number of activities**	**Level of cooperation**				**Obstacles of cooperation**	
		high	**medium**	**low**	**neglected**	No	Yes, what?
1-Mosques							
2-Rural healthy care unit							
3-Schools							
4-Police							
5-Village's bank							
6-Rural social unit							
7-Veterinary clinic							
8-Rural youth center							
9-Village local unit							
Others.....							

35) What is the number of the N.G.Os in the village? .....organizations

36) Evaluation of cooperation between agricultural cooperative and non governmental organizations from ***01.07.2001 to 30.06. 2002***, what is the number of activities, level of cooperation, and obstacles of cooperation (is there obstacles in cooperation)?

Name of governmental organizations	**Number of activities**	**Level of cooperation**				**Obstacles of cooperation**	
		high	**medium**	**low**	**neglected**	No	Yes, what?
1-							
2-							
3-							
4-							
5-							
6-							
7-							
8-							

37) To what extent the supervisor organizations (authorities) interference in the work of agricultural cooperative? What are the supervisor organizations for these agricultural co-operative, their finance" if there" and work obstacles" if there**"?**

Name of supervisor organizations	**Finance** "if there**"** **How many?**	**Work obstacles** **"**if there**"** **What's this?**
1-		
2-		
3-		
4-		
5-		

38) Do you suggest any deletion, correction or addition of agricultural cooperative roles or functions and agricultural cooperative rules to accommodate by the liberalization of Egyptian agricultural policy and rural social changes nowadays?

Deleted functions and rules	**Corrected functions and rules**	**Added functions and rules**
1- functions :	*1- functions :*	*1- functions :*
2- rules :	*2- rules :*	*2- rules :*

39) Do you have any other suggestions for development of agricultural cooperative?

( ) yes ( ) no

40) If yes, what's this ?

1-	2-
3-	4-

41) What are the most important problems and obstacles that the agricultural cooperative faces nowadays? And what your suggestions for solving these problems**?**

The problems and obstacles	**Suggestions for solving these problems**
1-	
2-	
3-	
4-	
5-	
6-	
7-	

42) Please, indicate which activities achieved by your agricultural cooperative from ***01.07.2001 to 30.06. 2002***, and the percentage of beneficiaries from the total number of the agricultural cooperative members**.**

Activities	**Achievement of the activities**	
	No	***If Yes:*** **What is the percentage of beneficiaries from the total number of the agricultural cooperative. members ?**
A- Diffusion of agricultural innovations:		
1-Field crops :		
- New seeds		
- New methods of agriculture		
2-Fruits :		
- New transplants		
- New methods of agriculture		
3-Vegetable :		
- New seeds		
- New transplants		
- New Methods of agriculture		
4-Medicinal and aromatic plants :		
- New seeds		
- New transplants		
- New Methods of agriculture		
5 – Production requirements:		
- New fertilizers		
- New pesticides & new methods of pest control		
6- Animal production :		
-New races of animal		
-New methods of husbandry		
-New methods of nutrition(feeding)		
7- Poultry production :		
-New races of poultry		
-New methods of husbandry		
-New methods of nutrition(feeding)		
8. Agricultural machinery :		
-Equipment of seed bedprabration		
-Planters & Seed drill machinery		
-Service machinery		
-Harvest machinery		

Activities	Achievement of the activities	
	No	*If Yes:* What is the percentage of beneficiaries from the total number of the agricultural cooperative members ?
B- Supply of agricultural innovations :		
1-Field Crops :		
- New seeds		
- New methods of agriculture		
2-Fruits :		
- New transplants		
- New methods of agriculture		
3-Vegetable :		
- New seeds		
- New transplants		
- New Methods of agriculture		
4-Medicinal and aromatic plants :		
- New seeds		
- New transplants		
- New Methods of agriculture		
5 – Production requirements:		
- New fertilizers		
- New pesticides & new methods of pest control		
6- Animal production :		
-New races of animal		
-New methods of husbandry		
-New methods of nutrition(feeding)		
7- Poultry production :		
-New races of poultry		
-New methods of husbandry		
-New methods of nutrition(feeding)		
8. Agricultural machinery :		
-Equipment of seed bedprabration		
-Planters & Seed drill machinery		
-Service machinery		
-Harvest machinery		

Activities	Achievement of the activities	
	No	***If Yes :*** **What is the percentage of beneficiaries from the total number of the agricultural cooperative members ?**
C- Farmers training on the agricultural innovations use :		
- New seeds		
- New methods of agriculture		
2-Fruits :		
- New transplants		
- New methods of agriculture		
3-Vegetable :		
- New seeds		
- New transplants		
- New Methods of agriculture		
4-Medicinal and aromatic plants :		
- New seeds		
- New transplants		
- New Methods of agriculture		
5 – Production requirements:		
- New fertilizers		
- New pesticides & new methods of pest control		
6- Animal production :		
-New races of animal		
-New methods of breeding		
-New methods of husbandry		
-New methods of nutrition(feeding)		
7- Poultry production :		
-New races of poultry		
-New methods of breeding		
-New methods of husbandry		
-New methods of nutrition(feeding)		
8. Agricultural machinery :		
-Equipment of seed bedprabration		
-Planters & Seed drill machinery		
-Service machinery		
-Harvest machinery		

Activities	Achievement of the activities	
	No	*If Yes :* What is the percentage of beneficiaries from the total number of the agricultural cooperative members ?
D-Diffusion of marketing knowledge :		
-Field Crops		
-Fruits		
-Vegetable		
-Medicinal and aromatic plant		
-Production requirements		
- Animal		
- Animal products		
- Poultry		
- poultry products		
- Agricultural machinery		
E- Local (domestic) marketing of agricultural products :		
-Field Crops		
-Fruits		
-Vegetable		
-Medicinal and aromatic plant		
- Animal		
- Animal products		
- Poultry		
- poultry products		
F-Export of agricultural products :		
-Field Crops		
-Fruits		
-Vegetable		
-Medicinal and aromatic plant		
- Animal		
- Animal products		
- Poultry		
- Poultry products		

Activities	Achievement of the activities	
	No	***If Yes:*** **What is the percentage of beneficiaries from the total number of the agricultural cooperative members ?**
G- Supply and support of agricultural small projects :		
-Projects of agricultural drainage		
- Refrigerators construction to keep agricultural products		
-Building of stores for agricultural factors		
-Feed production		
-Fertilizer production		
-Pesticides or herbicides production		
- Animal feeding		
- Poultry rearing		
- Bee rearing		
- Milk products		
-Meat processing		
-Food industry (Food technology)		
-Drying ,press and packing of fruits		
-Drying ,press and packing of vegetables		
-Electrical machines and home appliances		

Appendix 2: Questionnaire of the agricultural cooperative members (the farmers)

Name of the farmer.....Name of the village.....

Name of the district……..Name of the collector……..

1) Age of farmer ……Years.

2) Main profession of farmer: ( ) farmer ( ) other, what's this……...

3) Farmer education level : number of education years of farmer …….....Years

4) Agricultural experience level of farmer: work duration in agricultural field……Years

5) Farmer' membership duration in agricultural cooperative …….. ...Years.

6) Distance between farmer' residence and agricultural cooperative' location...…….....Km

7) Size of farmer' family: how many persons you have in your family? ……..... Persons.

8) Size of farmer' farm: how many Fadden you have in your farm? .....Fadden.

9) Farmer' attitudes towards voluntary work:

Please, do you agree with the following statements?

- Village development is government responsibility.

( ) agree ( ) fairly agree ( ) not agree

- People must help the government in the developmental projects which service the village.

( ) agree ( ) fairly agree ( ) not agree

10) N.G.Os membership of farmer:

please, remind the N.G.Os which you share in it and the type of your membership :

Name of N.G.Os	**Type of membership**		
	Member of N.G.O	**Board of directors member**	**Board of directors head**
1-			
2-			
3-			
4-			
5-			

11) Informal social participation level of farmer:

Please , do you participate in the following social activities with board of directors' members, cooperative employees and other farmer**?**

social activities	**Board of directors' members**			**Cooperative employees**			**other farmer**		
	Generally	**sometimes**	**rarely**	**Generally**	**sometimes**	**rarely**	**Generally**	**Sometimes**	**rarely**
1. Visits exchange									
2. Patient visit									
3. Wedding ceremonies									
4. Mourning ceremonies									
5. Lending and crediting others persons									
6. Helping others in solving social problems									

12) Voluntary participation of farmer :

Please, say which developmental voluntary projects have you participated in your village from ***01.07.2001 to 30.06. 2002*** and the type of your participation in each project?

Developmental voluntary projects	**Type of participation**		
	Money	**Effort**	**Point of view**
1-			
2-			
3-			
5-			
6-			
7-			

13) What are the most important problems and obstacles that the agricultural cooperative faces nowadays? And what your suggestions for solving these problems**?**

The problems and obstacles	**Suggestions for solving these problems and obstacles**
1-	
2-	
3-	
4-	
5-	
6-	
7-	
8-	

14) What are the most important problems facing you during your contact with agricultural co-operative nowadays? And what your suggestions for solving these problems?

Problems	**Suggestions for solving these problems**
1-	
2-	
3-	
4-	
5-	
6-	

15) Do you suggest any deletion, correction or addition of agricultural cooperative roles or functions and their rules to accommodate by the liberalization of Egyptian agricultural policy and rural social changes nowadays?

Deleted functions and rules	**Corrected functions and rules**	**Added functions and rules**
1- functions :	*1- functions :*	*1- functions :*
2- rules :	*2- rules :*	*2- rules :*

16) Do you have any other suggestions for development of agricultural cooperative?

( ) yes ( ) no

17) If yes, what's this ?

1-	2-
3-	4-

18) Farmer attitudes towards the agricultural cooperative:

Please, do you agree with the following statements?

The statements	**Farmers' opinion**		
	Agree	**Fairly agree**	**Disagree**
1. The most farmers in village are in a good relation with agricultural cooperative (manager, employees and board members).			
2. The agricultural cooperative supplies its activities for all farmers in village.			
3. The agricultural cooperative supplies agricultural innovations and agricultural production requirements in suitable prices for farmers			
4. The agricultural cooperative supplies agricultural information, agricultural innovations and agricultural production requirements in a suitable time for farmers			
5. Some of the agricultural cooperative activities are exclusively provided to board members, their relatives and friends			
6. Agricultural cooperative can not solve agricultural problems of farmers in a suitable time.			
7. The agricultural production requirements provided by private agricultural companies and traders are better than those provided by the agricultural cooperatives nowadays.			
8. Most of agricultural cooperative activities are providing only for big farms (owners of big farm).			

19) Please, Tell me which activities achieved by the agricultural cooperative from 01.07.2001 to 30.06. 2002, which you have benefit and what is your satisfaction degree about each activity?

Activities	**The benefit from activities**			
	No	**If Yes: What is your satisfaction degree about each activity?**		
		Satisfied	**Fairly satisfied**	**Not satisfied**
A- Diffusion of agricultural innovations through extension meetings and panel discussions:				
- New seeds				
- New methods of agriculture				
- New pesticides & new methods of pest control				
B- Supply of agricultural innovations :				
- New seeds				
- New fertilizers				
- New pesticides				
C- Farmers training on use and implementation of the agricultural innovations:				
- Farmers training on use of the new seeds				
- Farmers training on implementation of the agriculture new methods				
- Farmers training on use of the new pesticides & new methods of pest control				
- Farmers training on use of the new seeds				
D-Diffusion of marketing knowledge through extension meetings and panel discussion about agricultural products:				
E- Local (domestic) marketing of the agricultural Products :				
- Wheat				
- Maize				

Activities	The benefit from activities			
	No	If Yes: What is your satisfaction degree about each activity?		
		Satisfied	Fairly satisfied	Not satisfied
F-Export of agricultural products:				
…….....				
…….....				
……				
……				
G- Supply and support of the small projects :				
- Supply and support of the agricultural machinery				
- Supply and support of the electrical machines and home appliances				

Appendix 3: Results of the empirical study related to the farmers in the village of Meleeg

Table A1: Results of the description analysis of farmers' main characteristics in the village of Meleeg

Characteristics and qualifications	N *	%
Farmer's age		
25 – 50 years	**75**	**44.9**
51 – 75 years	**84**	**50.3**
76 – 98 years	**8**	**4.8**
Main profession of farmer		
Farmer	**124**	**74.3**
Other (not farmer)	**43**	**25.7**
Farmer's education level (Number of education years of farmer)		
Illiterate	**66**	**39.5**
Low level (1 – 7 years)	**44**	**26.4**
Medium level (8 – 14 years)	**44**	**26.4**
High level (14 – 22 years)	**13**	**7.8**
Agricultural experience level of farmer (Work duration in agricultural field of farmers)		
Low level (4 –26 years)	**67**	**40.1**
Medium level (27 – 48 years)	**65**	**38.9**
High level (49 – 70 years)	**35**	**21.0**
Farmer's membership duration in agricultural cooperatives (years)		
(2 –21 years)	**102**	**61.1**
(22 – 40 years)	**54**	**32.3**
(41 – 60 years)	**11**	**6.6**
Distance between farmer's residence and agricultural cooperative location.		
Short distance (0.1 – 2.0 Km)	**104**	**62.3**
Medium distance (2.1 – 4.0 Km)	**47**	**28.1**
Far distance (4.1 – 6.0 Km)	**16**	**9.6**
Size of farmer's family (Number of persons)		
Low size (1 – 4 persons)	**31**	**18.6**
Medium size (5 – 9 persons)	**123**	**73.6**
High size (10 – 14 persons)	**13**	**7.8**
Size of farmer's farm (Number of faddens)		
Small size (0.1 – 2.4 faddens)	**145**	**86.8**
Medium size (2.5 – 4.7 faddens)	**16**	**9.6**
High size (4.8 – 12 faddens)	**6**	**3.6**
Farmer's attitudes towards voluntary work		
Negative attitudes	**23**	**13.8**
Moderate attitudes	**57**	**34.1**
Positive attitudes	**87**	**52.1**
Farmer's voluntary participation in developmental projects (number of projects)		
No participation (no any project)	**21**	**12.6**
Low number (one project)	**57**	**34.1**
Medium number (two projects)	**70**	**41.9**
High number (3 – 4 projects)	**19**	**11.4**
Total number of N.G.Os membership of farmer		
No participation (no any organization)	**58**	**34.7**
Low number (1 – 2 organizations)	**97**	**58.1**
Medium number (3 – 4 organizations)	**12**	**7.2**
High number (5 – 6 organizations)	**0**	**0**
Informal social participation level of farmer		
Low level	**27**	**16.2**
Medium level	**81**	**48.5**
High level	**59**	**35.3**

** Total number of farmers = 167*

Source: Own research and calculation

Table A2: Number of beneficiaries from agricultural cooperatives activities in the village of Meleeg

Activities		Beneficiaries	Not beneficiaries	Total
Diffusion of agricultural innovations of new seeds	N	137	30	167
	%	82.0	18.0	100
Diffusion of agricultural innovations of new methods of agriculture	N	139	28	167
	%	83.2	16.8	100
Diffusion of agricultural innovations of new pesticides and new methods of pest control	N	135	32	167
	%	80.8	19.2	100
Supply of new seeds	N	147	20	167
	%	88.0	12.0	100
Supply of new fertilizers	N	141	26	167
	%	84.4	15.6	100
supply of new pesticides	N	136	31	167
	%	81.4	18.6	100
Farmers training on use of new seeds	N	117	50	167
	%	70.1	29.9	100
Farmers training on implementation of the agriculture new methods	N	126	41	167
	%	75.4	24.6	100
Farmers training on use of new pesticides and new methods of pest control	N	102	65	167
	%	61.1	38.9	100
Diffusion of marketing knowledge	N	122	45	167
	%	73.1	26.9	100
Local marketing of wheat	N	155	12	167
	%	92.8	7.2	100
Local marketing of maize	N	154	13	167
	%	92.2	7.8	100
Supply and support of agricultural machinery	N	118	49	167
	%	70.7	29.3	100
Supply and support of electrical machines and home appliances	N	138	29	167
	%	82.6	17.4	100

Source: Own research and calculation

Table A3: Farmers classification according to the number of activities from which they got benefits in the village of Meleeg

Number of activities	Number of beneficiaries	%
Lowest thru 7	22	13.2
7 thru 11	49	29.3
12 thru highest	96	57.5
Total	**167**	**100**

Source: Own research and calculation

Table A4: Farmers classification according to their satisfaction total degree about all activities of agricultural cooperatives in the village of Meleeg

Categories of satisfaction degree	Number of farmers	%
Not satisfied	48	28.7
Fairly satisfied	97	58.1
Satisfied	22	13.2
Total	**167**	**100**

Source: Own research and calculation

Table A5: Farmers classification according to their satisfaction degree about the agricultural cooperatives activities in the village of Meleeg

Activities		Not benefit	Benefit			Total
			Not satisfied	Fairly satisfied	Satisfied	
Diffusion of agricultural innovations of new seeds	N	30	42	62	33	167
	%	18.0	25.1	37.1	19.8	100
Diffusion of agricultural innovations of new methods of agriculture	N	28	58	58	23	167
	%	16.8	34.7	34.7	13.8	100
Diffusion of agricultural innovations of new pesticides and new methods of pest control	N	32	43	70	22	167
	%	19.2	25.7	41.9	13.2	100
Supply of new seeds	N	20	39	70	38	167
	%	12.0	23.4	41.9	22.8	100
Supply of new fertilizers	N	26	70	52	19	167
	%	15.6	41.9	31.1	11.4	100
supply of new pesticides	N	31	72	42	22	167
	%	18.6	43.1	25.1	13.2	100
Farmers training on use of new seeds	N	50	36	51	30	167
	%	29.9	21.6	30.5	18.0	100
Farmers training on implementation of the agriculture new methods	N	41	47	62	17	167
	%	24.6	28.1	37.1	10.2	100
Farmers training on use of new pesticides and new methods of pest control	N	65	46	39	17	167
	%	38.9	27.5	23.4	10.2	100
Diffusion of marketing knowledge	N	45	42	48	32	167
	%	26.9	25.1	28.7	19.2	100
Local marketing of wheat	N	12	17	77	61	167
	%	7.2	10.2	46.1	36.5	100
Local marketing of maize	N	13	34	47	73	167
	%	7.8	20.4	28.1	43.7	100
Supply and support of the agricultural machinery	N	49	27	42	49	167
	%	29.3	16.2	25.1	29.3	100
Supply and support of the electrical machines and home appliances	N	29	38	43	57	167
	%	17.4	22.8	25.7	34.1	100

Source: Own research and calculation

Table A6: Farmers classification according to their extent of benefit from agricultural cooperatives activities in the village of Meleeg

Categories of benefit level	Number of farmers	%
Low benefit	26	15.6
Medium benefit	80	47.9
High benefit	61	36.5
Total	**167**	**100**

Source: Own research and calculation

Table A7: Correlation coefficients (r), between independent research variables and the extent of benefit for farmers from agricultural cooperatives activities in the village of Meleeg

N.	The independent research variables	Simple Correlation Coefficients
1	Farmer's age	- 0.110
2	Main profession of the farmer	0.148
3	Farmer's education level	0.243**
4	Agricultural experience level of the farmer	- 0.117
5	Farmer's membership duration in agricultural cooperative	- 0.122
6	Distance between farmer's residence and agricultural cooperative's location	- 0.141
7	Size of farmer's family	- 0.115
8	Size of farmer's farm	0.059
9	Farmer's attitudes towards voluntary work	0.647**
10	Total number of the voluntary development projects in which farmer have participated	0.748**
11	Type of voluntary participation of the farmer in developmental projects	0.787**
12	Total number of NGOs-membership of the farmer	0.774**
13	Type of N.G.Os membership of the farmer	0.763**
14	Informal social participation level of farmer	0.757**
15	Farmer's attitudes towards agricultural cooperative	0.806**

** *T test, Correlation coefficient significant, (high significant) P≤ 0,01*

* *T test, Correlation coefficient significant, (significant) P≤0,05*

Source: Own research and calculation

Table A8: Stepwise multiple correlation and regression analysis for determining the variables affecting the extent of benefit for farmers from agricultural cooperatives activities in the village of Meleeg

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F Value
Step.1	Farmer's attitudes towards agricultural cooperative	0.806**	0.649	0.647	0.647	1.44**	305.19**
Step.2	Informal social participation level of farmer	0.865**	0.748	0.745	0.098	0.781**	243.2**
Step.3	Total number of NGOs-membership of the farmer	0.892**	0.795	0.792	0.047	5.43**	211.33**
Step.4	Type of voluntary participation of the farmer in developmental projects	0.904**	0.817	0.813	0.021	1.82**	181.4**

#Adjusted $R^2 = 1 - (1 - R^2)\frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)

** **high significant** P≤ 0,01 * **significant** P≤ 0,05

Source: Own research and calculation

Table A9: Farmers classification according to their opinions about some statements towards agricultural cooperatives in the village of Meleeg

The Statements		Farmers' opinion about the statements			
		Disagree	Fairly agree	Agree	Total
1. The most farmers in village are in a good relation with agricultural cooperative : manager, employees and board members	N	24	82	61	167
	%	14.4	49.1	36.5	100
2. The agricultural cooperative supplies its activities for all farmers in village	N	44	68	55	167
	%	26.3	40.7	32.9	100
3. The agricultural cooperative supplies agricultural innovations and agricultural production requirements in suitable prices for farmers	N	78	51	38	167
	%	46.7	30.5	22.8	100
4. The agricultural cooperative supplies agricultural information, agricultural innovations and agricultural production requirements in a suitable time for farmers	N	69	73	25	167
	%	41.3	43.7	15.0	100
5. Some of agricultural cooperative activities are exclusively provided to board members, their relatives and friends	N	55	69	43	167
	%	32.9	41.3	25.7	100
6. Agricultural cooperative can not solve agricultural problems of farmers in a suitable time	N	78	66	23	167
	%	46.7	39.5	13.8	100
7. The agricultural production requirements provided by private agricultural companies and traders are better than those provided by the agricultural cooperatives nowadays	N	101	51	15	167
	%	60.5	30.5	9.0	100
8. Most of agricultural cooperative activities are providing only for big farms (owners of big farm).	N	24	92	51	167
	%	14.4	55.1	30.5	100

Source: Own research and calculation

Table A10: Farmers classification according to their attitudes towards agricultural cooperatives in the village of Meleeg

Categories	Number of farmers	%
Negative attitudes	53	31.7
Moderate attitudes	104	62.3
Positive attitudes	10	6.0
Total	**167**	**100**

Source: Own research and calculation

Table A11: Correlation coefficients (r), between independent research variables and the farmers' attitudes towards agriculture cooperatives in the village of Meleeg

N.	The independent research variables	Simple correlation coefficients
1	Farmer's age	- 0.152*
2	Main profession of the farmer	0.111
3	Farmer's education level	0.272**
4	Agricultural experience level of the farmer	- 0.127
5	Farmer's membership duration in agricultural cooperative	- 0.159*
6	Distance between farmer's residence and agricultural cooperative's location.	- 0.172*
7	Size of farmer's family	- 0.172*
8	Size of farmer's farm	0.005
9	Farmer's attitudes towards voluntary work	0.640**
10	Total number of the voluntary development projects in which farmer have participated	0.677**
11	Type of voluntary participation of the farmer in developmental projects	0.731**
12	Total number of NGOs-membership of the farmer	0.711**
13	Type of N.G.Os membership of the farmer	0.722**
14	Informal social participation level of farmer	0.640**
15	The extent of benefit for farmers from agricultural cooperatives activities	0.806**

** *T test, Correlation coefficient significant, (high significant) P≤ 0,01*

* *T test, Correlation coefficient significant, (significant) P≤0,05*

Source: Own research and calculation

Table A12: Stepwise multiple correlation and regression analysis for determining the variables affecting the farmers' attitudes towards agricultural cooperatives in the village of Meleeg

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F Value
Step.1	The extent of benefit for farmers from agricultural cooperatives activities	0.806**	0.649	0.647	0.647	0.075**	305.19**
Step.2	Type of NGOs membership of the farmer	0.822**	0.676	0.672	0.025	0.71**	171.43**
Step.3	Farmer's attitudes towards voluntary work	0.834**	0.695	0.690	0.018	0.42*	124.1**
Step.4	Type of voluntary participation of the farmer in developmental projects	0.840**	0.706	0.699	0.009	0.24*	97.17**

Adjusted $R^2 = 1 - (1 - R^2)\frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)

** **high significant** P≤ 0,01 * **significant** P≤ 0,05

Source: Own research and calculation

Appendix 4: Results of the empirical study related to the farmers in the village of Manshyat Sultan

Table A13: Results of the description analysis of farmers' main characteristics in the village of Manshyat Sultan

Characteristics and qualifications	N *	%
Farmer's age		
25 – 50 years	**57**	**46.0**
51 – 75 years	**65**	**52.4**
76 – 98 years	**2**	**1.6**
Main profession of farmer		
Farmer	**84**	**67.7**
Other (not farmer)	**40**	**32.3**
Farmer's education level (Number of education years of farmer)		
Illiterate	**11**	**8.9**
Low level (1 – 7 years)	**81**	**65.3**
Medium level (8 – 14 years)	**30**	**24.2**
High level (14 – 22 years)	**2**	**1.6**
Agricultural experience level of farmer (*Work duration in agricultural field of farmers)*		
Low level (4 –26 years)	**37**	**29.8**
Medium level (27 – 48 years)	**61**	**49.2**
High level (49 – 70 years)	**26**	**21.0**
Farmer's membership duration in agricultural cooperatives (years)		
(2 –21 years)	**55**	**44.4**
(22 – 40 years)	**62**	**50.0**
(41 – 60 years)	**7**	**5.6**
Distance between farmer's residence and agricultural cooperative location.		
Short distance (0.1 – 2.0 Km)	**121**	**97.6**
Medium distance (2.1 – 4.0 Km)	**3**	**2.4**
Far distance (4.1 – 6.0 Km)	**0**	**0**
Size of farmer's family (Number of persons)		
Low size (1 – 4 persons)	**24**	**19.4**
Medium size (5 – 9 persons)	**90**	**72.5**
High size (10 – 14 persons)	**10**	**8.1**
Size of farmer's farm (Number of faddens)		
Small size (0.1 – 2.4 faddens)	**91**	**73.4**
Medium size (2.5 – 4.7 faddens)	**32**	**25.8**
High size (4.8 – 12 faddens)	**1**	**0.8**
Farmer's attitudes towards voluntary work		
Negative attitudes	**25**	**20.2**
Moderate attitudes	**31**	**25.0**
Positive attitudes	**68**	**54.8**
Farmer's voluntary participation in developmental projects (number of projects)		
No participation (no any project)	**11**	**8.9**
Low number (one project)	**43**	**34.7**
Medium number (two projects)	**45**	**36.3**
High number (3 – 4 projects)	**25**	**20.1**
Total number of N.G.Os membership of farmer		
No participation (no any organization)	**37**	**29.8**
Low number (1 – 2 organizations)	**56**	**45.2**
Medium number (3 – 4 organizations)	**27**	**21.8**
High number (5 – 6 organizations)	**4**	**3.2**
Informal social participation level of farmer		
Low level	**24**	**19.4**
Medium level	**68**	**54.8**
High level	**32**	**25.8**

Source: Own research and calculation ** Total number of farmers = 124*

Table A14: Number of beneficiaries from agricultural cooperatives activities in the village of Manshyat Sultan

Activities		beneficiaries	Not beneficiaries	Total
Diffusion of agricultural innovations of new seeds	N	110	14	124
	%	88.7	11.3	100
Diffusion of agricultural innovations of new methods of agriculture	N	109	15	124
	%	87.9	12.1	100
Diffusion of agricultural innovations of new pesticides and new methods of pest control	N	105	19	124
	%	84.7	15.3	100
Supply of new seeds	N	101	23	124
	%	81.5	18.5	100
Supply of new fertilizers	N	92	32	124
	%	74.2	25.8	100
supply of new pesticides	N	98	26	124
	%	79.0	21.0	100
Farmers training on use of new seeds	N	74	50	124
	%	59.7	40.3	100
Farmers training on implementation of the agriculture new methods	N	77	47	124
	%	62.1	37.9	100
Farmers training on use of new pesticides and new methods of pest control	N	88	36	124
	%	71.0	29.0	100
Diffusion of marketing knowledge	N	86	38	124
	%	59.4	30.6	100
Local marketing of wheat	N	87	37	124
	%	70.2	29.8	100
Local marketing for maize	N	107	17	124
	%	86.3	13.7	100
Supply and support of agricultural machinery	N	78	46	124
	%	62.9	37.1	100
Supply and support of electrical machines and home appliances	N	88	36	124
	%	71.0	29.0	100

Source: Own research and calculation

Table A15: Farmers classification according to the number of activities from which they got benefits in the village of Manshyat Sultan

Number of activities	Number of beneficiaries	%
Lowest thru 7	24	19.4
7 thru 11	47	37.9
12 thru highest	53	42.7
Total	**124**	**100**

Source: Own research and calculation

Table A16: Farmers classification according to their satisfaction total degree about all activities of agricultural cooperatives in the village of Manshyat Sultan

Categories of satisfaction degree	Number of farmers	%
Not satisfied	43	34.7
Fairly satisfied	53	42.7
Satisfied	28	22.6
Total	**124**	**100**

Source: Own research and calculation

Table A17: Farmers classification according to their satisfaction degree about the agricultural cooperatives activities in the village of Manshyat Sultan

Activities		Not benefit	benefit			Total
			Not satisfied	Fairly satisfied	Satisfied	
Diffusion of agricultural innovations of new seeds	N	14	22	40	48	124
	%	11.3	17.7	32.3	38.7	100
Diffusion of agricultural innovations of new methods of agriculture	N	15	23	38	48	124
	%	12.1	18.5	30.6	38.7	100
Diffusion of agricultural innovations of new pesticides and new methods of pest control	N	19	23	49	33	124
	%	15.3	18.5	39.5	26.6	100
Supply of new seeds	N	23	24	34	43	124
	%	18.5	19.4	27.4	34.7	100
Supply of new fertilizers	N	32	24	48	20	124
	%	25.8	19.4	38.7	16.1	100
supply of new pesticides	N	26	23	45	30	124
	%	21.0	18.5	36.3	24.2	100
Farmers training on use of new seeds	N	50	15	21	38	124
	%	40.3	12.1	16.9	30.6	100
Farmers training on implementation of the agriculture new methods	N	47	17	35	25	124
	%	37.9	13.7	28.2	20.2	100
Farmers training on use of new pesticides and new methods of pest control	N	36	23	34	31	124
	%	29.0	18.5	27.4	25.0	100
Diffusion of marketing knowledge	N	38	7	59	20	124
	%	30.6	5.6	47.6	16.1	100
Local marketing of wheat	N	37	9	28	50	124
	%	29.8	7.3	22.6	40.3	100
Local marketing for maize	N	17	30	23	54	124
	%	13.7	24.2	18.5	43.5	100
Supply and support of the agricultural machinery	N	46	13	27	38	124
	%	37.1	10.5	21.8	30.6	100
Supply and support of the electrical machines and home appliances	N	36	18	33	37	124
	%	29.0	14.5	26.6	29.8	100

Source: Own research and calculation

Table A18: Farmers classification according to their extent of benefit from agricultural cooperatives activities in the village of Manshyat Sultan

Categories of benefit level	Number of farmers	%
Low benefit	28	22.6
Medium benefit	53	42.7
High benefit	43	34.7
Total	**124**	**100**

Source: Own research and calculation

Table A19: Correlation coefficients (r), between independent research variables and the extent of benefit for farmers from agricultural cooperatives activities in the village of Manshyat Sultan

N.	The independent research variables	Simple Correlation Coefficients
1	Farmer's age	0.139
2	Main profession of the farmer	0.597**
3	Farmer's education level	0.301**
4	Agricultural experience level of the farmer	0.135
5	Farmer's membership duration in agricultural cooperative	0.130
6	Distance between farmer's residence and agricultural cooperative' location	0.028
7	Size of farmer's family	0.099
8	Size of farmer's farm	0.142
9	Farmer's attitudes towards voluntary work	0.658**
10	Total number of the voluntary development projects in which farmer have participated	0.728**
11	Type of voluntary participation of the farmer in developmental projects	0.753**
12	Total number of NGOs-membership of the farmer	0.767**
13	Type of N.G.Os membership of the farmer	0.746**
14	Informal social participation level of farmer	0.700**
15	Farmer's attitudes towards agricultural cooperative	0.814**

** *T test, Correlation coefficient significant, (high significant) P≤ 0,01*

* *T test, Correlation coefficient significant, (significant) P≤ 0,05*

Source: Own research and calculation

Table A20: Stepwise multiple correlation and regression analysis for determining the variables affecting the extent of benefit for farmers from agricultural cooperatives activities in the village of Manshyat Sultan

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F *Value*
Step.1	Farmers' attitudes towards agricultural cooperative	0.814**	0.662	0.659	0.659	2.09**	238.86**
Step.2	Total number of NGOs-membership of the farmer	0.878**	0.772	0.768	0.109	5.13**	204.33**
Step.3	Type of voluntary participation of the farmer in developmental projects	0.891**	0.795	0.789	0.021	1.4**	154.66**
Step.4	Main profession of the farmer	0.896**	0.803	0.797	0.008	4.8**	121.55**
Step.5	Informal social participation level of Farmer	0.900**	0.811	0.803	0.006	0.45**	101.12**

**Adjusted** $R^2 = 1 - (1 - R^2)\frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)

** **high significant** P≤ 0,01 * **significant** P≤ 0,05

Source : Own research and calculation

Table A21: Farmers classification according to their opinions about some statements towards agricultural cooperatives in the village of Manshyat Sultan

The statements		Farmers' opinion about the statements			
		Disagree	Fairly agree	Agree	Total
1. The most farmers in village are in a good relation with agricultural cooperative : manager, employees and board members	N	16	45	63	124
	%	12.9	36.3	50.8	100
2. The agricultural cooperative supplies its activities for all farmers in village	N	38	25	61	124
	%	30.6	20.2	49.2	100
3. The agricultural cooperative supplies agricultural innovations and agricultural production requirements in suitable prices for farmers	N	49	32	43	124
	%	39.5	25.8	34.7	100
4. The agricultural cooperative supplies agricultural information, agricultural innovations and agricultural production requirements in a suitable time for farmers	N	44	43	37	124
	%	35.5	34.7	29.8	100
5. Some of agricultural cooperative activities are exclusively provided to board members, their relatives and friends	N	29	48	47	124
	%	23.4	38.7	37.9	100
6. Agricultural cooperative can not solve agricultural problems of farmers in a suitable time	N	31	49	44	124
	%	25.0	39.5	35.5	100
7. The agricultural production requirements provided by private agricultural companies and traders are better than those provided by the agricultural cooperatives nowadays	N	28	28	68	124
	%	22.6	22.6	54.8	100
8. Most of agricultural cooperative activities are providing only for big farms (owners of big farm).	N	30	48	46	124
	%	24.2	38.7	37.1	100

Source: Own research and calculation

Table A22: Farmers classification according to their attitudes towards agricultural cooperatives in the village of Manshyat Sultan

Categories	Number of farmers	%
Negative attitudes	28	22.6
Moderate attitudes	55	44.4
Positive attitudes	41	33.1
Total	**124**	**100**

Source: Own research and calculation

Table A23: Correlation coefficients (r), between independent research variables and the farmers'attitudes towards agriculture cooperatives in the village of Manshyat Sultan

N.	The independent research variables	Simple Correlation Coefficients
1	Farmer's age	0.054
2	Main profession of the farmer	0.569**
3	Farmer's education level	0.402**
4	Agricultural experience level of the farmer	0.043
5	Farmer's membership duration in agricultural cooperative	0.035
6	Distance between farmer's residence and agricultural cooperative's location	0.038
7	Size of farmer's family	0.151
8	Size of farmer's farm	0.078
9	Farmer's attitudes towards voluntary work	0.576**
10	Total number of the voluntary development projects in which farmer have participated	0.621**
11	Type of voluntary participation of the farmer in developmental projects	0.631**
12	Total number of NGOs membership of the farmer	0.625**
13	Type of N.G.Os membership of the farmer	0.622**
14	Informal social participation level of farmer	0.611**
15	The extent of benefit for farmer from agricultural cooperatives activities	0.814**

***T test, Correlation coefficient significant, (high significant) P≤ 0,01*

**T test, Correlation coefficient significant, (significant) P≤ 0,05*

Source: Own research and calculation

Table A24: Stepwise multiple correlation and regression analysis for determining the affecting variables on the farmers` attitudes towards agricultural cooperatives in the village of Manshyat Sultan

Steps of analysis	The independent variables	Multiple correlation coefficient (R)	R^2	# Adjusted R^2	percentage of explained variance of the dependent variable	Regression coefficient (b)	F Value
Step.1	The extent of benefit for farmer from agricultural cooperatives activities	0.814**	0.662	0.659	0.659	0.15**	238.86**
Step.2	Farmer's education level	0.830**	0.689	0.684	0.025	0.21**	134.05**

 # Adjusted $R^2 = 1 - (1 - R^2)\frac{N-1}{N-K}$ (Pindyck and Rubinfeld, 1981, pp. 78 – 80)

** **high significant** P≤ 0,01 * **significant** P≤ 0,05

Source: Own research and calculation