International Journal of Cultural Inheritance & Social Sciences (IJCISS)
Vol. 1 Issue 2, September 2019, ISSN: 2632-7597
Journal Homepage: http://ijciss.com/, Email: journal.ijciss@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal

Geographical Factors Affecting the Distribution of Livestock, Minia Governorate - Egypt as an Example

Huda Abdul Rahim Abdul Qadir
PHD, Researcher of Economic Geography,
Directorate of Education - Minia – Egypt
Email: carsminya@yahoo.com

Abstract
This research is specialized in studying The Geographical Factors affecting the Distribution of Livestock, Minia Governorate - Egypt as an Example, which includes:
1. Planted zipper, the agricultural lands have been subjected to the expansion of urban activities, which leads to the existence of agricultural lands exploited in other non-agricultural activities, it also addresses, the relationship of planted zipper with animal species, together with the call for horizontal agricultural expansion is vital as one aspect of economic development.
2. Agricultural tenures which is also a basis for the production of food for humans, animals and industrial services through the type of land used, which is closely related to the costs of crop and yield production.
3. Crop structure addresses the relationship between the composition of the crop and the types of feed and the amount and thus the amount of its contribution to the development of livestock.
4. Agricultural Employment represents the effort in agricultural production, the impact of agricultural labor on the distribution of animals, and the size of agricultural labor.
5. Agricultural mechanization for the liberalization of the animal from agricultural work and its transformation into its main objective, it addresses Geographical distribution of agricultural machinery.
6. Environmental factors and animal breeds, that the animals and their products are affected by the characteristics of the geographical environment. Animal breeds includes: Cows, Buffalo, Camels, Sheep and Goats.
7. Government Policies which aims at increasing livestock production and aims at structural changes in the animal economic structure.
Keywords: Geographical Factors, distribution of livestock, Minia Governorate, planted zipper, agricultural tenures, crop structure, agricultural employment, agricultural mechanization, environmental factors, animal breeds.

The number of livestock varies from place to place in Minia governorate. There are areas where livestock are close to half a million head, as in the center of Mallawi, and areas of just over 100,000 head such as Bani Mazar, due to several geographical factors:

First: planted zipper

The cultivated zipper is a geographical factor affecting the distribution of animals, especially with the absence of natural pastures, and the reciprocal relationship between agricultural land and animals. They provide animals with feed material. While the animals contribute to increasing the fertility of the soil by adding to its components of organic fertilizers[1].

[1]National Planning Institute, Agricultural Development in Egypt, Part One, Planning and Development Issues in Egypt, No. 21, Cairo, February 1990, p. 58.

The agricultural lands have been subjected to the expansion of urban activities, the need for rail networks, the establishment of public facilities, etc.[2], which leads to the existence of agricultural lands exploited in other non-agricultural activities such as government buildings and residential buildings. Minia University on the area of the best agricultural land.

The spread of reconstruction and housing has created many non-agricultural activities on agricultural land, which helps to erode agricultural land. Therefore, animal development needs to pay attention to horizontal agricultural expansion to compensate for the urban encroachment on agricultural land as a result of population increase [3], which has a significant impact on the price of agricultural products, land price, level of return and labor cost[4].

In spite of serious attempts to add arable land, the agricultural area is increasing by a very small percentage after a stressful effort and cumbersome costs, although this increase is in agricultural land and in some areas of the governorate[5].

Table (1) and Figure (1) show the following:

1. The distribution of the agricultural leadership in the governorate centers differed and the distribution of animal units differed. The centers of Malawi, Samalut and Minia (14.4%, 14.6% and 13.7%, respectively) had the highest percentage of agricultural control (42.7% of the total governorate) (49.4%). This is confirmed by the coefficient of geographical correlation [6] between planted area and animal units, which is 0.8, which is a strong correlation showing the effect of planted area in the distribution of animal units, if not the only effect in distribution.

2. Bani Mazar, Abu Qurqas, and Maghagha were followed by 35.3% of the total population of the governorate, while 24.7% of the total units were in the governorate.

While the percentage of area of control over the units in the other two centers increased due to the spread of cultivars and vegetables, and the increase in the proportion of small ruminants and animals. In addition, the production of the land below was in the centers of Al-'Odwa, Maghagha and Bani Mazar[7], and this can be compensated by reclaimed land.

3. In the end, the centers of Al-'Odwa, Matay and Deir Muwas with the lowest proportion of the area of agricultural leadership, which amounted to 22.0%, and includes 25.9% of the total animal units in the governorate.

4. As for the relationship of planted zipper with animal species, the geographical correlation between cattle, buffaloes, sheep, donkeys and zipper is 0.8; this is a direct link to livestock breeding in agricultural zipper areas, and with agricultural expansion, the need for pregnant and trapping animals is particularly important to contribute to agricultural operations. The geographical correlation between cultivated zipper, goats and horses is 0.7, which is also a strong correlative link, where the same breed of sheep is raised on crop residues, while horses need high incomes to spend.

While the relationship between cultivated zebra, camels and mules was average 0.6, where camels and mules in their diets needed large quantities of processed feeds, which

[2] Newbury, A.R., Geography of agriculture, London, 1984, p.77.
[3] Richard, A.P., Migrationmechanizationandagricultural markets in Egypt, U.S.A, 1983, P.144.
[4] Grigg, D. B., Population growth and agrarians change and historical perspective, London, 1980. P.24.
[5] Robinson, H. (1969). Human geography, London, p. 95.
[6]Geographical correlation coefficient, See: Saif, Mahmoud Mohamed (1985). Industrial Sites, Cairo: Nahdet Al-Sharq Library, p. 357.
[7] Al-Zouka and Hamed, Mohamed Khamis and Nawal Fouad (1991). Geography of the countryside, Alexandria: Dar Al Maarifa University, p. 460.

concentrated them in areas that were associated with their usefulness in labor.
5. The previous picture of the agricultural authority and the animal units confirms that the relationship is intertwined and that the expansion of the agricultural leadership works to increase the animal production. It also requires increasing the number of animals supporting agricultural operations such as livestock. This is invested in the acquisition of small animals on the margin of agricultural production, to expand the production base of animal proteins.

Reclaimed land and livestock

Horizontal agricultural expansion is vital as one of the aspects of economic development, especially after the apparent decrease in per capita agricultural and crop area as a result of the growing population and the erosion of agricultural land. Most of the agricultural land is concentrated in the reclaimed villages of Al-'Odwa Center, In addition to the land facing Abu Qurqas and Deir Mawas, an extension of the old villages to the west. It was found that through the study of these villages the following:
1. The crop composition varies in these villages where wheat comes at the top of crops with an area of 19025 feddans (41.6% of the total cropland area in the governorate reclamation)[8]. The highest percentage of wheat comes in the center of Samalut (36.7%). The clover (in both permanent and hegazi varieties) comes with 6351 feddans, representing 13.8% of the total cropland.
2. In general, Al-'Odwa, Samalut and Minia are the main areas in the cropland area, especially the villages of Al-Azima and the Samalut. The village is located in the village of Al-Azima. The village includes 13 livestock projects. The projects of the Evangelical Authority are among the most important livestock projects in terms of the size of livestock and the capital invested, and these projects have all the specifications required in terms of accommodation and food type, and the marketing plan for production outside the governorate through vehicles equipped with milk transport. While the villagers of the reclamation villages sell dairy products in nearby villages nearby.
3. In addition to the previous projects, there are some animals that are raised in the reclaimed villages. There are an estimated 8920 head of sheep, 3940 head of goats, 8842 head of cattle, 928 heads of buffaloes. In 2008, Governmental on scientific grounds to try to contribute to solving the meat crisis, and most projects rely on the side of the green feed on large amounts of concentrated feeds.
4. Finally, the crop structure in the reclamation areas does not help to expand the breeding and development of livestock - as the new land is less fertile and therefore less productive and return, and it is estimated that the cost of reclamation and cultivation of new land is five times the cost of cultivation of old land in the valley, It is one of the most profitable types of investment, but it requires the concerted efforts of both individuals and responsible entities.

2. Agricultural tenure

The possession shall be defined as an area of land and shall be in one or more plots that exploit the agricultural production in whole or in part by the holder, either through the King or the rent, or both. The holder may be a person, body, company or enterprise[9].
These are indicators of the economic conditions and social conditions in the country,

[8]Directorate of Agriculture, Department of Statistics, previous reference.
[9]Jamal al-Din and Wafiq Mohammed. Agricultural Geography of Qalyoubia Governorate, Master Thesis, Department of Geography, Faculty of Arts, Minia University, 1993, p. 84.

especially in rural areas[10]. It is also a basis for the production of food for humans, animals and industrial services through the type of land used[11], which is closely related to the costs of crop and yield production [12]. Small holdings in their area are relatively high in production compared with larger farms[13].

The study showed that the categories of agricultural tenure ranged from 65% to less than 1 feddan and 25% to less than 3 feddans. While 5.7%, 1.3% for both groups are less than 5 feddans and less than 10 feddans, and the remaining 3% for the latter category (10 feddans or more)[14].

Types of tenure in Minia Governorate

Types of tenure vary in Minia governorate, as shown in the following table:

1. The agricultural tenure in Minia Governorate was divided into three types (the king and the rent). The king's possession was 98.8% of the total area of holdings in Minia governorate. (43.8% of the king's total land in the governorate). This helps to expand the acquisition of animals. This type of possession represents 81.5% of the total sample in the villages of Minia Governorate.

Followed by the second type of holdings (rent), representing 1.0% of the total holdings in the governorate. The highest percentage was in Minia (29.1%) followed by Mallawi (17.4%) and Abu Qaras (15.5%). The vastness of the agricultural land and the number of small properties, most of which are rented for the cultivation of clover in winter and winnowing in summer or vegetable growing on the outskirts of cities and nearby villages. This pattern represents 14.1% of the sample of the field study in the governorate villages. In the center of Matai, due to the high proportion of workers in the Gulf States (as it turned out during the Emirates Field), and the ownership of agricultural land is the most important investment for them, in addition to the return of most of the agricultural land leased to the owners after the issuance of the law that regulates the relationship between the owner and tenant.

The percentage of arable lands reached the lowest percentage of 0.2% of the total landholdings. Most of them were concentrated in the Abu Qirqas center, which accounted for 96.0% of the total landholdings in Minia Governorate. This is due to the lack of expansion in the reclamation lands because of the limited desert backyard suitable for agriculture to the west, which belongs to the Abu Qirqas Center. The beneficiaries of this type represent 3.1% of the total sample.

4. Another pattern emerged from the field study of the sample villages, namely, participation in the ownership or rent of an agricultural plot of not more than one feddan for livestock feed during the winter and summer planting seasons, representing 3.1% of the total sample.

5. The distribution of the type of possession within each center is consistent with its distribution for the governorate or center level. (Table 1) shows that the king's share of the total holdings in each governorate reached 97.4% 99.9% of the total holdings in the centers of Abu Qirqas and Bani Mazar respectively.

6. It is clear from the above that the acquisition of individuals to agricultural land comes in

[10]Al-Deeb, Mohamed Mahmoud (1978). Geography of Agriculture, Cairo: Anglo-Egyptian Library, p. 84.

[11]Nicholas, S., Agrarian transformation in Egypt, Cairo, Egypt, 1988, P. 56.
[12]Robinson, H. Human geography, p. 23.
[13]Robinson, H. Human geography, p. 24.
[14]A field study in the villages of Minia Governorate at different periods in summer and winter and during the research preparation stage (2006, 2007, and 2008).

different forms and varied ownership of agricultural land, which gives the ability to acquire animals, and control the possession of the amount of feed supported when disbursed to breeders such as the amount of bran extracted from the Central Mills Company, That possession controls the number of animals purchased by farms.

Acquisition and acquisition of animals

Different categories of tenure in Minia Governorate, as already mentioned, and shows the extent of acquisition of owners of animals of different types as will be clear from (Table 3) :

1. The percentage of animal owners of the sample in the villages of Minia governorate represented 100% in all categories of possession, and the percentage of possession of each type of animals varied.
2. The percentage of livestock (cows and buffaloes) in the tenure category (3-5 feddans), (10 feddans or more), although owners of animals (3-5 feddans) grow medicinal, aromatic crops, crops, vegetables and cash crops. Part of the agricultural land for green fodder, and livestock rearing to the last owners (10 feddans or more) sometimes in the form of large projects (50 head of livestock), especially cattle fattening.
3. The proportion of livestock owners in the first, second and third possession categories compared with other animals for the same categories was also attributed to:

A - The dependence of these small groups on livestock as a basic source of livelihood through the sale of milk and dairy products.

B) The prevalence of the pattern of participation in livestock ownership, which represents 12.2% of the total sample, especially in the small holding category.

1. The percentage of sheep and goats holding has increased from the third holding category (3-5 feddans) to the fifth (10 feddans and more), and goats and sheep are usually raised in the form of herd as in (Table 3). The first and second categories are the number of goats and sheep from the two heads as in the plate (4) to ten heads.
2. The proportion of livestock owners in most categories of tenure - where agricultural operations depend mainly on them, with their share in the tenure category (10 feddans or more) - is higher than the previous category;
3. As shown in (Table 3), there is a relationship between the small holding categories and the dispersal of the herds of animals, which in turn led to the weakness of the milk productivity and the difficulty of collection and low quality. This indicates the extent of the lack of return during these holdings[15], and many of them work outside their land as work after the completion of the work of small possession, which does not drain all the energy of the worker[16].

Third: Crop structure

There is a relationship between the composition of the crop in the centers of Minia governorate, the types of feed and the amount and thus the extent of its contribution to the development of livestock, as well as the feed clearly on the numbers of animals and the production of meat and milk, and the sources of feed on which the animals depend on their food variety and most important clover and then the remnants of field crops and vegetables And fruit[17].

[15]Ilhami and Saleh, Muhammad and Hadi Mohammed (1983). An Economic Study on Milk and its Produce in Egypt, External Note, Cairo: Institute of Regional Planning, p. 6.
[16]Mayro, Robert (1976). Translation of Cross of Peter, the Egyptian Economy (1952 - 1972), Cairo, p. 295.
[17]Jamal al-Din, Mohamed Wafik. Features of the Geography of Animal Production in the Sultanate of Oman, Journal of the Geographical Society, No. 38, 2, Cairo, 2005, p. 328.

The crop composition in Minia Governorate is divided into winter and summer composition (in addition to the Nile loop) and long-standing crops. They represent 41.3%, 49.6% and 9.1% respectively[18]. The most important winter crops include wheat, clover and mullet, and summer crops: cotton and maize. These crops, as well as their associated animal units, vary from one location to another.As shown in (Table 4) and Figure (2-3).

1. The maize comes from the list of agricultural crops in terms of area (33% of the total cropped area). Minia governorate occupies the second place on the republic level[19]. Corn requires a climate free of frost. Strong correlation, which confirms its usefulness as food for the animal, as for its geographical distribution at the level of the centers of conservation is clear from (Table 4):

The maize area is concentrated from the center of Samalut to the center of Mallawi. The five centers account for 55% of the total area of maize, comprising 61.9% of the total livestock units, which confirms their value for livestock.

2. Wheat comes in second place in terms of area of the crop by 23.5% of the total crop area. The wheat crop is the oldest food crop and is perhaps the oldest of its kind. It has been used as food for humans since the dawn of history[20].

• Since it is a necessary food for human and most crops related to population density[21], this is evidenced by the geographical correlation between them 0.7, which is particularly strong with the transformation of the productive village into a consumer.

• The geographical correlation between the area of wheat and animal units was 0.8, a strong correlation showing the importance of wheat waste as a main food next to alfalfa and as concentrated feed.

This is followed by the production of alfalfa, alfalfa and the ancient clover of Pharaonic agriculture and alfalfa. Not only does it appear, at first glance, the only "main animal food" in Egypt, winter as green fodder and summer as dried drier, but almost the same "food of the earth" itself, not only as a natural fertilizer Nitrogen concentrates nitrogen in the soil and acts as a chemical compost; but also as a mechanically corrector, leaving organic humus that enriches and clings to the loose sandy soil and the disintegration of the heavy clay soil.

• Alfalfa also add about half a kantar of zucchini per feddan per year, equivalent to about 6: 3 bunches of nitrogen fertilizers concentration of 1%[22].Besides, alfalfa is a crop difficult to move from one governorate to another only in very narrow, and in the governorate Minia was found to be the most important type of clover[23]. Alfalfa represents 15.3% of the total cropland area in Minia governorate in 2006. The geographical correlation between alfalfa area and animal units is 0.8, which is a strong correlation.

• The ratio of distribution of alfalfa area in the governorate centers has increased due to the fact that it is necessary food. The center of Minia and Bani Mazar came at the top of the list of these centers by 16.2% and 15.1% respectively of the governorate. In 2006). It is

[18]Directorate of Agriculture, Information and Decision Support Center, unpublished data, Minia, 2006.
[19]Minia Governorate, Information and Decision Support Center, Statistical Yearbook of Minia Governorate, 2006, p. 18.
[20]Al-Banna, Ali Ali (1967). Economic Resources, Beirut, p. 67.
[21]Hamdan, Jamal (1970). The Personality of Egypt, a Study in the Genius of the Place, 3, Cairo: World Book Library, p. 324.
[22] Jamal al-Din and Wafiq Mohammed. Livestock in Menoufia Governorate, PhD Thesis, Department of Geography, Faculty of Arts, Banha, Cairo University, 1999, p. 114.
[23] Mohammed, Mohammed al-Husseini. A Ketofarian study of the variables related to the meat problem in Egypt, PhD thesis, Department of Agricultural Economics, Faculty of Agriculture, Kafr El-Sheikh, Tanta University, 1985, pp. 95-96.

noticed that the percentage of animal units in the center of Bani Mazar is low despite the high percentage of clover, due to the fact that most of the production goes to the center of Matai.

• The lowest percentage was Al-'Odwa and Deir Mawas (6.3% and 5.3%, respectively), depending on the type of agricultural cycle in the two centers.

4. In addition to the previous crops, there are some crops that feed the animals on their wastes, including the cotton crop, which represents 3.7% of the total area of the governorate. Minia governorate was the first governorate in Upper Egypt in terms of cotton area, It represents more than one third of the area of cotton at the top, and the correlation between the area of cotton and animal units was 0.5, which is an average correlation.

5. The percentage of the area of municipal beans was 0.8% of the total cropped area in Minia Governorate, while the geographical correlation coefficient between the area of municipal bean and animal units was 0.6, which is an average correlation.

• The highest area of the crop was located in Al-'Odwa, Abu Qirqas and Bani Mazar. It comprises 61.5% of the total area of the municipal bean in the governorate. These centers comprise 25.5% of the total animal units. The importance of the local bean is the legume of the population, the yield of auxiliaries and the natural fertilizer of the soil. It is cultivated in Upper Egypt, and is superior to is cultivated in Upper Egypt in terms of quantity, quality and fame.

6. There are also some crops that are used to feed animals such as sugar cane, although the correlation between crop and animal units is weak (+0.4).

7. In addition to the above, animals also benefit from some vegetable and fruit residues with an area of 41128 feddans (5% of the total cropland), but the use is incomplete due to excessive use of pesticides, making them unsuitable for animal feed.

8. From the previous study and the correlation coefficients between the components of the crop structure and the animal units, it is necessary to expand the cultivation of important crops such as green fodder, or the crops that are left behind in the introduction of concentrated feed, where some estimated that buffalo or cow head needs one and a half feddans to provide food[24]. However, by cultivating the soil directly with population food, such as vegetables, it is possible to obtain proteins that are equivalent to animal proteins[25]. In addition, it is necessary to get out of the bottleneck of the problem of agriculture and conflict resolution between commercial crops and feed crops[26].

In addition to the study of previous crops, there is concentrated feed and non-traditional feed, which will be explained in some detail in Chapter 5, as the three kinds of cultivated, processed and non-traditional feeds are the basis of livestock development in Minia governorate.

Fourth: Agricultural Employment:

Agricultural employment represents the effort exerted in agricultural production, which includes holders of tenure, their families, unpaid workers and wage earners[27]. The shortage

[24] Hanna, George Basile. The effect of the freeing of livestock from work on the provision of fodder, scientific symposium on the role of scientific research in the provision of fodder, Scientific Research Academy, Cairo, 1977, p. 99.

[25] Helman, Hull (1974). The problem of population inflation, translated by Mohammed Badr al-Din Khalil, Cairo: Dar Maarif, p. 78.

[26] Siddle, D., & Swindel, K. (1990). Rural change in tropical Africa, U.S.A, P. 159.

[27] Hamed, Nawal. Urban Transformation of the Egyptian Village, Geographical Research Bulletin, Department of Geography, Girls' College, Ain Shams University, No. 22 April 1991, p. 22.

of agricultural labor affects the crop structure, which is contrary to the objectives of the agricultural sector[28].

- Agricultural employment also affects the distribution of animals in terms of their role in the cultivation of fodder and animal husbandry, both domestic education and economic farms[29].

- Agricultural employment has seen a decrease in numbers in recent years with higher wages, especially as agricultural employment increases demand in certain seasons, namely the period of primary agriculture and the collection or harvest, due to several reasons including the transformation of new employment to other non-agricultural sectors such as services or crafts As well as migration to the Arab Petroleum Countries and migration to cities.

The size of agricultural labor:

The number of agricultural workers in Minia Governorate in 1996 was 465026 workers[30], and in 2006 it increased to 572194 workers at an annual rate of increase of 2.3%. (Table 5) and Figure (4) show that the volume of agricultural labor increased by 23.0% Compared to the increase in the size of animal units amounting to 49.2% during the ten years.Is due to:

A. Non-agricultural categories in the field of animal husbandry, such as the projects of young graduates and other investment projects for animal production (dairy-fattening).

B. The rate of education in rural areas of the governorate increased by 26.5% in 2006[31] compared to 1996. Which led to the enrollment of some agricultural workers in other professions that required a minimum of education (literacy).

Table 14 shows the shortage of animal units in Minia Center in 2006 (-9.3%) compared with the increase in agricultural labor. This is due to several factors, including the decrease in the area of agricultural land, the closure of some fattening projects, without cultivating and fattening them with their farms.

As shown in (Table 5) and Figure (5): Distribution of agricultural labor by distribution

Where the geographic correlation between labor and units reached 0.8, a strong correlation.

As for distribution at the level of the centers of the governorate is as follows:

1. The centers of Minia, Mallawi and Samalut comprise 44.9% of the total labor force and 49.9% of the animal units. This is due to the cultivated area and the rural population (157,971 people) with 46.6% of the total rural population in the governorate. Land employment is the only one that can explain the differences in productivity, and the income per capita[32].

2. The centers of Abu Qaras, Maghagha and Bani Mazar are followed by the ratio of agricultural employment(36.5%), as well as 24.7% of the total animal units. The percentage of the increase in labor from animal units is due to the increase in the percentage of small ruminants and the pattern of crop structure in these centers. In addition, agricultural employment includes males and females, especially with the increase in population.

3. Finally, the centers of Matai, Al-'Odwa and Deir Mawas are 19.6% of the total number

[28]Diab, Abdelkader Mohamed (1982) Egyptian Agriculture and Agricultural Development Plan in the Next Phase, National Planning Institute Cairo, p. 45.

[29]Zekri, Abd al-Khaliq et al. (1967). The development of the labor force in Egypt is mainly for the rural labor force, Institute National Planning, Cairo, p. 61.

[30]Directorate of Agriculture, Information and Decision Support Center.

[31]Adult Education Authority, Illiteracy Program in Minya Governorate, unpublished data, Minia, 2006.

[32] Thirlwall, A. P.,Growth and development with special reference to developing economics, Hong Kong,1983, p . 92.

of workers compared to 25.9%, with more than a quarter of the animal units in the governorate. This is attributed to the lack of agricultural control (22.0% of the total agricultural control in the governorate) and the entry of the investor's category in the field of animal production, especially in the center of Matai.

As can be seen from (Table 5) and Figure (6):

1 - The average animal units of each worker increased from 2 animal units / workers in central and Malawi, due to the increase in animal units, especially livestock compared to employment.

2. The average number of animal units per worker ranged from 1: less than 2 in Minia, Abu Qurqas and Deir Mawas.

3. The average animal units were less than 2 units per worker in other centers in the governorate such as Maghagha and Bani Mazar centers (0.8 and 0.6 respectively), indicating the increase in the number of small ruminants in the two centers; The number of agricultural workers, and as a result, the workers joined other occupations accompanying the original work.

In addition to the above, the decline in the share of the agricultural worker of animal units in general is due to the poor ability of farmers in terms of material to buy animals for high prices, and the lack of feed necessary for the needs of food animals in a balanced manner throughout the year, in addition to the high price of feed, Feeding costs; thus reducing the profit generated by breeding.

Fifth: Agricultural mechanization

The liberalization of the animal from agricultural work and its transformation into its main objective, the production of meat and milk, will lead to an increase in animal products. On the other hand, animals can be relied on in the agricultural process in terms of preparation of soil and supply of natural fertilizers to increase agricultural production, To the places of consumption, and this leads to increasing the acquisition of animals, especially those directly related to agricultural activity such as livestock, and the use of machines to increase interest in livestock (cattle and buffaloes), especially as a source of income.

Geographical distribution of agricultural machinery

Geographical distribution of agricultural machinery:

The distribution of agricultural machinery in Minia governorate varies from one type to another depending on the agricultural leadership, crop area and farmers' physical capacity.

(Table 6) and Figure (7) show:

1. The center of Minia came first with 13.9% of the total agricultural machinery, followed by the center of Samalut (13.7%) and Malawi (13.6%), where the three represent 42.1% and comprise 42.7% of the total agricultural leadership in the governorate.

2. It follows:Abu Qirqas (11.9%), Maghagha (11.7%) and Bani Mazar (10.7%). The three centers comprise 34.3% of the total number of machines in the governorate.In the end, the centers of Deir Mawas, Al-'Odwa and Matay are 24.5% of the total agricultural machinery and comprise 22% of the agricultural sector.

4. As for the distribution of mechanization at the level of centers, it is shown:

1. Irrigation machines ranked first with 71.0% of the total machines. They are divided into two types (35%) and moving (65% of the total irrigation machines in the governorate). Table No. 5 is due to different sizes and can be transported from one place to another On the back of the animals, for example, in addition to the low prices, and almost none of the homes of farmers who have an feddan or more in Minia governorate from this machine as it was clear from the field study of the sample villages in Minia Governorate.

2. The spray machine (10.0%) comes where farmers need to protect crops from pests.
3. Agricultural tractors follow (9.8%), because they are the fundamentals of agricultural work

The distribution of tractors on the local level is largely related to the size of the agricultural plant, the type of crop structure and the size of the agricultural holdings.

4. Other agricultural machines, such as surveying machines, have decreased in number (8) because they are present in some people, but the crops are collected in the adjacent lands, which are studied in one day in one of the fields. The narrowness of the agricultural area largely controls the extent to which farmers own agricultural machinery.
5. The relative distribution of machines within each center differed. In the first place, the center of Minia was 16.1% of the total spraying machines, while the tractors in the center of Samalut (16.1% of the total tractors in the governorate), 19.0% of the total study machines in the governorate.
6. The percentage of mechanization within the Al-'Odwa Center is also high despite the small area of the cultivated area (6.3%) compared to the Matai and Deir Mawas (7.7% each). This is due to the high level of some farmers. An agricultural machine to rent the land reclamation, and some villages and adjacent to the center of Maghagha as a kind of investment due to the high prices of some machines.

In addition to the above, the field study of some of the villages in Minia Governorate has shown that cattle and buffaloes are not used in agricultural operations, and rely on agricultural mechanization in irrigation and plowing operations. There are also villages such as Beni Kheir and Bani Sa'id (Abu Qirqas) Ali Bahr Yousef is still used by donkeys, but on a limited scale.

The distribution of agricultural machinery may not be an indicator of the ability to serve fieldwork and the extent of the efficiency of agricultural machinery and the removal of animals. For example, a single feddan of the machine requires three hours on average, while nine hours are needed in the equator.

It is also shown that the livestock capacity is equivalent to 4% of the automatic displacement capacity, 9% of the field tractor, 2% of the orchard tractor and 0.5% of the capacity of the study machine. It is also noted that the animal performance rate is lower than that of the machines where the husband is animal till 0.5 feddans per day. While the rate of performance of the tractor from 8: 6 feddans per day, an increase of 1400% in tillage, up to 1200% in irrigation, and 600% in the study[33], where the estimated minimum estimate of the feddan of mechanical energy by about 0.5 HP so that agriculture Efficiency, and agricultural mechanization plays its role in agricultural production[34].

Due to the importance of these machines and the widespread use of them, the percentage of those who own the machines out of the sample of the study was 41.4%. While the most important machines owned by farmers are irrigation machines with 23.9%, tractors by 65.9% and 10.2% other machines. The average area of agricultural land used by these machines should be compared with the target set by the Ministry of Agriculture for mechanization (7 tractors, 2 drills, and 6 trailers per 1000 feddans of cropland)[35]. This is illustrated by the following table:

The number of tractors in Minia governorate reached 8832 in 2006, serving a crop area of 815917 feddans, which is 10.8 tractors per 1000 feddans during the agricultural season.

[33]Bakir, Mohammed al-Fathi. Breeding animals and their products in the province of the lake, unpublished doctoral thesis, Department of Geography, Faculty of Arts, Alexandria University, 1984, p. 236.
[34]Ghoneim, Joseph (1981). Economics of Agricultural Mechanization, Cairo, p. 157.
[35]Jamal al-Din and Wafiq Mohammed. , Department of Geography, p. 47.

This rate reached 16.4 tractors / 1000 feddans In the center of Matay, followed by the center of Samalut rate 12.5 and the center of Abu Qirqas and Minia rate of 11.2, 10.8 each, respectively, which is higher than the general rate of the governorate in Abu Qirqas as shown in (Table 7) .

It is also clear that the rate of each agricultural machine per 1000 feddans of cropland is higher than the rate approved by the Ministry of Agriculture. This is due to the spread of mechanization in all areas of Minia governorate except in some extreme areas, with small and scattered areas, especially between the bridge of the watercourse and the watercourse itself Such as the eastern bank of the Nile.

Sixth: Environmental factors and animal breeds:

Animals and their products are affected by the characteristics of the geographical environment. The climate is one of the most important environmental factors affecting the acquisition of animals. It shares with other geographical, economic and social factors in drawing up a picture of the geographical distribution of livestock in the governorate.

The aim of the study of climatic conditions of the governorate is to identify the local characteristics and defects that affect the animals. Heat is one of the most important factors affecting the characteristics and types of livestock in the governorate.

Minia Governorate is located between 27,40 and 28,40 North, which is located within the desert region. Therefore, the region is characterized by climate extremes[36]. The impact of climate in animals is more complex than that of plants. It is difficult to reach a general rule relating to this relationship[37].

Climate and its impact on livestock

Heat is one of the most important climatic factors affecting the animal. Heat plays a prominent role in climatic changes. The average annual temperature in Minia Governorate is 21.2 ° C, with a maximum temperature of 36.7 ° C in July. While the lowest temperature in January was 20.2 ° C, and the governorate is subjected to cold in four months in the year beginning in December and ending in March and ranged during this period between ,(م1-) (م4-) as in (December and January)[38], and this helped the nature of the governorate of Thermodynamics. As the extension of the plateau in the east along the governorate and the Western desert range, which helped to penetrate the wind, and the region is under the influence of the cold northern wind, which helped to the severity of the cold winter in the Governorate.

This is a big problem for production when it is much higher than usual. The low temperature is not considered an obstacle in this case, especially if the means of nutrition are available. Studies conducted at the Animal Health Research Center in Minia Governorate have shown that the mortality rate in sheep increased from 2007 to Due to unexpected high temperatures. It was also found that the ratio of reproduction and animal susceptibility to food is affected by differences in temperature. The effect of temperature is in the following areas:

a. That the high temperature of the extent to which the animal carries a lot of physiological disorders, and the first of these disorders that the animal is not normal. The pituitary gland, which is found to be related to the brain, may be affected and control growth and sexual activity, so the animal does not reproduce normally[39].

[36]Dansouri, Jamal al-Din et al. (1957). A Study in Geography of Egypt, Cairo, p. 186.
[37]Bakir, Mohammed al-Fathi. Breeding of animals and their products in the province of the lake, p. 240.
[38]Meteorological Authority, unpublished data, Cairo, 2006.
[39]Badr, Mahmoud Fouad (1969). Feeding Agricultural Animals, Alexandria: New Publications House, p. 12.

B. High or low temperatures affect the reproductive efficiency of the tails. It has been found that exposure to 38 ° C for several weeks leads to reduced reproductive efficiency, and the same happens if the temperature drops below 10 ° C for a long period of time (3 weeks), thus increasing the reproductive efficiency of males during the spring and autumn. While less fertile during the winter and summer.

C. The temperature affects animal health and the adaptation of foreign breeds - where they are less tolerable to high temperatures than local breeds that are highly adaptable to climatic conditions in summer or winter[40]. The breeders in the study area create field umbrellas to protect animals from grading Heat (plate 9).

The bad weather does not stop directly affecting animals[41], but it destroys crops, which affect the availability of animal food. Each plant has a maximum and a small temperature for its growth, and optimal temperatures for each crop. For example, alfalfa is the optimum temperature

From 1 to 37̊ m[42]. Also during the winter months, green fodder, which is the basic food for all animals, is cultivated. However, during the summer and autumn months, most animals rely on dry feed, hay, and spray.

Animal breeds

The strain is a type of animal common in one basic biological and economic characteristics[43]. Each animal strain has evolved to match certain natural conditions. These conditions should not be neglected when genetic improvement is carried out in local animals. In the modern era, with specialized species[44]. Man has succeeded in finding new animal species with excellent characteristics through means of selection and hybridization. This allows them to obtain the finest wool, meat, leather and large amounts of milk and other products and animals[45]. In addition, animal breeds increase animal wealth through their reproductive efficiency and the twin recipe in small ruminants, which ultimately serves to fill the population's need for various animal products.

To illustrate the effect of breeds on livestock, light will be shed on the breeds found in the governorate for animal species as follows:

A. Cows:

The cows surpassed the buffalo in Egypt in general and Minia governorate, especially the number of breeds, where each strain is characterized by increased production both in meat or dairy and from these breeds:

1. The domestic cattle (plate 10) are Upper Egyptianand al-Menoufi, and represent 83.8% of the total head of cattle in the governorate. This is indicative of the prevalence of municipal cattle due to their importance and suitability to the environmental conditions (climate - food type) (202 days)[46], and the dry season has reached a minimum of 30 days.

[40]Mar'i, Mohamed Ahmed. Production and Dairy Industry in Kafr El-Sheikh, Journal of the Geographical Society, 35/1, Cairo, 2002, p. 202.
[41]Arnold, E., Pattern of development (population and food resources in the developing world), London, 1988, p.26.
[42]Abdul Salam, Mohammed Ahmed. Economics of Feed Crops in Egypt, Master Thesis, Department of Agricultural Economics, Faculty of Agriculture, Minia University, 2006, p. 14.
[43]Bakir, Mohammed al-Fathi. Breeding animals and their products in the province of the lake, p. 244.
[44] Morshedi, Najla. Animal Production and Related Industries in Gharbia Governorate, Master Thesis, Department of Geography, Faculty of Arts, Tanta University, 1994, p. 23.
[45] Aqeel and Al-Saqar Mohammed Fatih and Fuad Mohammed (1977). Geography of Resources and Production, General Rules and Agricultural Production, Alexandria: Knowledge Establishment, p. 118.
[46]Abdel-Alim, Adel Abdel-Wahab. Economic Study of Cows and Buffalo in Minia Governorate, MA, Faculty of Agriculture, Minia University, 2008, p. 120.

While a maximum of 90 days, and municipal cattle in Minia about 800 kg in the season.
2. Cattle are 15.3% of the total number of cows in the governorate, which is a small percentage compared to the previous type, despite the geographical distribution in all areas of the governorate - where there are some obstacles to expand the process of genetic improvement by mixing between municipal and foreign species, including the arrival of the milk season to more than 222 days / year, and the season produces about 2000 kg of milk.
3. The percentage of foreign cows is 1.2% of the total number of cows in governorate, namely the Friesian strain, and specializes in the production of milk as in Table 11, the Holstein Friesians for milk production, The Brown Swiss, one of the largest dairy breeds, In some villages, it is more prevalent than other species of foreign breeds, such as the village of Bardanouha in the center of Matai. It specializes in the production of meat and more than the production of milk, which is spread throughout the villages of Matai center, representing 60.7% of the total foreign strain in the governorate.

B. Buffalo:

Buffalo spread in Minia governorate type buffalo Monofy plate (12), and did not enter foreign qualities[47], the percentage of milk production for buffaloes in Minia governorate increased by 85.9% compared with cows (76.7%)[48]. The period between the two deliveries was a minimum of 375 days,while reaching its maximum limit, In addition, some of the villages in the center of Mallawi, such as Mughalqa, Umm Qumas and Qulba, as well as some villages in Abu Qirqas, such as Manhri, Barba, Faqa'i, Koum al-Zuhair and Nazlat Jeris, are more than 70% (65.0% of the farms of these breeds are owned by agricultural doctors and engineers), in order to familiarize them with the most important ways to create suitable conditions for foreign breeds. The foreign cows produce about 4000 kg in the season 420 days at the total sample level[49]. Milk season. It was a minimum of 210 days and a maximum of 300 days. The dry season reached a minimum of 30 days and a maximum of 150 days. Therefore, the dry season reached about 60 days at the level of buffalo flocks.

C. Camels

There are four strains of camels in Egypt: the peasant, the Moroccan, the Sudanese and the born (the hybrid of the Moroccan and peasant dynasty), moreover, with the passing of years and the commercial exchange of camels among the governorates, it is not known to the general breeders the classification of their camel dynasties, and they are always called Sudanese or Arab camels[50], camels multiply and produce only about five times in their lifetime, and are carried every two to three years. Females are vaccinated for the first time at 48 months and gestational age between 12-13 months. The interval between the two births is 24 months, the production of head of lint is 1-1.5 kg / year.

D. Sheep

The existing breeds of sheep are limited in the conservation of the Upper Egyptian and peasant breeds, and each type of sheep in Minia governorate differs in the production of wool and meat as follows[51]:

[47]Directorate of Veterinary Medicine, Information and Decision Support Center.
[48]Al-Jamsy, Imam Mahmoud Farghaly. Analytical statistical study of the main milestones of estimates of milk production in Egypt, Zagazig Journal of Agricultural Research, 22, 1995, p. 16.
[49]Directorate of Agriculture, Information Center.
[50]Interview with some camel breeders and farmers in the sample villages in Minya Governorate, May, 2007.
[51] ¡Amin, Hani Mohamed (2008). Sheep Production and Care, Central Administration of Agricultural Extension, Cairo: Agricultural Research Center, p. 4.

1. Upper EgyptianSheep: It is spread in Upper Egypt, especially the governorates of Minia and Assiut, and the fertility rate to 82%[52], has been monitoring the proportion of some traders in the villages of the sample estimated at 1.5% of the total sample.
2) Sheep are a mixture between the Osemi sheep and other breeds[53]. This type is found in all the governorates of Minia governorate[54]. The fertility rate is 94% and the number of births is high. The foreign breeds of sheep are found only in one of the reclamation villages And the project of the Faculty of Agriculture Minia University[55], as well as a village in the center of Al-'Odwa (Slakos)[56].

E. Goats

The conditions of animal marketing in Minia governorate and its geographical location led to the absence of a pure strain of goats, but became a mixture of breeds:
1. The Municipal goat: This breed is characterized by high reproductive efficiency with three or four females and male production, which affects the number of livestock, and more than once a year, and the production of milk is 60-120 kg in the season.
2.Upper Egyptiangoats: spread in the Upper and the average weight of about 30 kg, and reproductive efficiency, such as municipal goats and their production of milk from 60-140 kg in the season and bear the climatic conditions warm[57], and there are no foreign strains of goats only at the farm of Minia University, Consumers are traded for goat meat in the governorate.
In addition to the above, the breed works to identify the genetic traits on which the selection plans are supported, and the guidance of specific animals for a specific type of production in order to increase the yield without raising the costs of care and the same quantity produced (raising the quality efficiency)[58]. In Minia Governorate, depending on several factors, the most important of which is the type of strain[59], the type of animal and the degree of fattening, usually 50% of cattle are eliminated, and the percentage of reflux in ordinary cattle from 55% -57%. While for cattle it ranges from 62% -63%, sometimes up to 65% -75%[60].
The results of the field study showed that the percentage of staining in buffalo calves for one year and slaughtering at the ages of 12-18-24 months was 50.8%, 55.8% and 53.8%, respectively, and the weight of the bones decreased to the total weight of the carcass by age. While the weight of fat increased in large animals[61]. The percentage of deworming in municipal cattle was 55.2% and in Friesian cows 59.4%. The high percentage of friesian

[52]Hassan, Raouf Abdel Molly (2007). Economics of Sheep Breeding, Animal Health Research Center, Assiut, p. 18.
[53]Hassan, Raouf Abdel Molly. Economics of Sheep Breeding, p. 18.
[54]Directorate of Agriculture, Agricultural Extension Department, Small Ruminants, unpublished data, Minia, 2006.
[55]Field visit to the farm of the Faculty of Agriculture in one of the villages of reclamation, April, 2007.
[56]One of the animal projects owned by a veterinarian, and imports French sheep because they are more suited to the geographical conditions in the region.
[57]Hussain Abdel Hai Kaoud, Mohammed Anwar Hussein Marzouk, Calves, Sheep, Goats and Camels, Dar Al Ma'arif Cairo, 2003, p. 61.
[58]El-Beltagy, Ahmed Radi (2003). Genetic Resources and Animal Production, Cairo: Animal Research Institute, p. 18.
[59]The percentage of carcasses is the percentage of carcass weight after slaughtering and slaughtering is attributed to animal weight before slaughter.
[60]Al-Beltagy, Ahmed Radi. Genetics and Animal Production, p. 48.
[61]Afifi, Youssef et al. (1974). Production of buffalo veal in different ages, Journal of Agricultural Research, Ministry of Agriculture, Cairo, pp. 1-21.

strain was attributed to genetic factors, animal treatment and food type[62].
Domestic cows have less conversion efficiency than for mixed cows. Local cows consume about 2345 kg, and the weight is 360 kg (164 kg meat). While the cows consume about 2345 kg to reach the weight of 490 kg (240 kg of meat), or in other words they consume 55 kg of feed, and produces more than 100 kilograms of meat, and as a result of the net cash income The result of the breeding of domestic and foreign cattle is higher than that produced by municipal cows.

Seventh: Government Policies:
The government policy aims at increasing livestock production and aims at structural changes in the animal economic structure. The role of government policies is to:
1. The project of the Veal.
2. Livestock insurance.
3. Loans.

1. The National Project of Veal:
The project aims to achieve some important objectives that affect the distribution of livestock and its role in meeting the needs of the population of animal proteins, the objectives of which are:
1. Increase local production of red meat to cover the needs of citizens.
2. Provide a strategic reserve of red meat.
3. Minimize the import of frozen meat.
4. Avoiding diseases that citizens may suffer from consumption of imported meat.
5. Operation of feed factories and means of transport.
6. Providing employment opportunities for citizens.
7. Increase the amount of skin displayed and available in front of the industries that depend on it.

Due to the importance of the national project of the Veal, the officials of the Ministry of Agriculture and Land Reclamation were able to obtain external grants to finance the project Veal. In addition, the political leadership in Egypt allocated in 1996 about 200 million pounds for raising and fattening calves until the number of calves were fed 300 The head of the Veal calves in the Republic[63], and the share of Minia Governorate 4.3% of the total Veal calves codified in 1996.
Efforts are under way to increase the funding of the Veal national project by 100 million pounds, through the Ministry of Planning and International Cooperation, and another 100 million from the Social Fund under the same terms and conditions as the American Grant Project (revolving loan 6.5% Months). Minia Governorate has been involved in this project since its inception.
The strategy aims to expand and develop the Veal project and increase its production capacity to 500 thousand head annually, which will be 450 kg in two phases. The necessary funding, estimated at 450 million pounds instead of 350 million pounds, will be provided through benefiting from the agricultural sector development program , And the Ministry of Agriculture will increase the volume of loans for the Veal project to 1000 pounds per head from 80 kg to 200 kg in the first stage to help small farmers to meet the costs of production, especially from feed, and increase the volume of loans in the second stage to 1500 pounds for the head from 200 kg to 450 kg and the loan for one year at

[62]Ministry of Agriculture, Agricultural Research Center, Cairo, 2006, International Information Network.
[63]Barbari, Adel (2004). Camel Animal Food Security, Alexandria: Knowledge Facility, pp. 348-349.

interest 6. 5% and the development of the process of granting loans to educators.
(Table 8) shows:
1. The first stage of the project represents 96.1% of the total head of the Veal in the two phases. Headers are distributed in the first phase of the project in all the centers of Minia governorate, although primarily the Abu Qurqas and Mallawi centers with 46.4% of the Veal in the first phase.
2. The second stage represents 3.9% of the two stages. Only four centers are Abu Qurqas (51%), Samalout (30.2%), Malawi (16.6%) and Al-'Odwa (2.2%).
In addition to all the previous efforts to develop the project, these efforts do not show fruit on the market of red meat, and do not lead to a drop in prices felt by the consumer, because educators are not obliged to hand these heads to the stations of education of government agencies as usual, and complete the journey In the breeding and putting it in the markets and government complexes, due to the closure of the plants of the government after the spread of corruption and high feed prices, and collapsed as a government system provides the consumer needs of animal protein - as well as private entities where the project of the Veal at the beginning of his tenure to stabilize the Shame for red meat for several years.
In addition, the authorities responsible for the project now, the Ministry of Agriculture in cooperation with the Social Fund to finance the project to pay the educators, and no disbursements of subsidized feed to the breeders, making Veal calves a costly project, and thus lead to borrowers to repay these loans, Of this project with its first two phases of farmers and young graduates 65% and 35%, respectively[64].
- Where the farmer depends on his agricultural experience in raising animals and its potential in the care of the first stage of its life, and most of the young graduates are inexperienced experience, which exposes the project to failure. They should be supported by agricultural consultants, which led to a decrease in the number of beneficiaries in the second phase of the project.

2. Insurance of livestock

The system of insurance for livestock was introduced since 1959, and this system was designed to be the best guarantee for livestock, which at the beginning ensured the availability of feed for livestock as well as medical care and compensating the breeders in case of death of cattle. This gives the opportunity to have the appropriate climate for the expansion of cattle breeding, the livestock insurance fund has contributed to many of the Commission's projects for the care and protection of animals. There is another type of insurance, unlike the insurance of live animals or loans. It is the insurance of slaughterers in massacres that are executed for disease that makes them unfit for human consumption. This protects the breeder and the consumer so that the breeder does not resort to slaughtering them outside the slaughterhouse.
Insurance fees:
The insurance fees for animals are determined by species and age groups of animals in Minia Governorate as follows:
1 - Fees are 2% of the price of the animal for a year of insurance for buffaloes, and cattle at the age of 3 months to less than 6 months.
2 - While the fees 1.5% of the price of the animal at the time of insurance for one year for:
A - Domestic cattle and buffaloes at the age of 6 months or more.
B - Sheep and goats at the age of 6 months and more.
C- Local transportation after replacement of milk teeth.

[64]Directorate of Agriculture, Information and Decision Support Center.

D - Local fertilization from 1 to 5 years.

In addition to the above, when insurance on calves and calves from one month to less than 3 months, insurance fees are paid at 4% for 6 months - and fees for imported animals are doubled.

Geographical distribution of insurance animals

The total number of animals insured in Minia Governorate reached 15736 in 2006, representing 0.8% of the total livestock in the governorate, and 2.6% of the total number of insured animals in the Republic in 2006. There are many observations that can be inferred from (Table 9) They are as follows:

1 - Animals of fattening, dairy and sheep make up the bulk of insurance animals (99.1%), due to:

A. Dairy cattle are a daily source of livelihood, and breeders seek to protect their investment.

B - Periods of fattening animals vary and need help increase the amount of feed supported and protected from diseases and epidemics.

C - Fats for a short period of time in preparation for holidays and events, and does not believe on goats because they are fast trading between the breeder and the market.

2- The Veal insurance (0.7%) is included in the total number of insured animals in Minia Governorate. The Veal insurance is limited to the Abu Qurqas Center, which is a loan project that is insured in the lending process. Especially at the beginning of the project.

3 - The percentage of students (0.01) decreases in the belief of the teachers in the safety of the students and after the diseases and fear of death and increase the proportion of fees depending on the high price.

4 - As for the distribution of head count insured in the centers of the governorate. The center of Matai came first (28.2%), due to the spread of fattening projects based on short-term loans, insurance to avoid the causes of collapses of small investments

5- The lowest percentage of the insurance animals at Deir Mawas Center (0.8). For the sale and purchase of animals, traders and breeders do not stay for long periods of time and reach the minimum insurance period, and the animals can change two or three times a week.

In addition to the above, livestock insurance increased in November and December (26.3% of total insurance in 2006)[65]. This is due to the birth of livestock at the beginning of winter. The financial conditions of breeders are in the process of increasing the number of births for sale, In the south and south of the governorate according to the prevalence of dairy cattle, and the percentage of believers on animals from the sample field study 0.5%, because the breeders need more quantities of subsidized feeds, in addition to the low insurance fees or installment amount over the period of insurance.

3. Loans:

The results of the questionnaire analysis reveal that 18.5% of the study sample is obtained from the Development Bank and Agricultural Credit Bank and Nasser Social Bank. Agricultural support is one of the tools that contribute to achieving the goals of the production plans As well as subsidized income to farmers, which encourages them to stay in their occupations and villages, and the most important areas of support and size provided by the Ministry of Agriculture in Minia governorate , the following:

1. The Comprehensive Agricultural Development Project[66]: (CGIAR) is a cooperation

[65]Directorate of Agriculture, Information and Decision Support Center.
[66]Directorate of Agriculture, Department of Animal Production.

between the Directorate of Agriculture in Minia, the Social Fund and the Development Bank and the value of the loan is LE 5 million. It aims to provide capital, equipment, technical investments and field follow-up free of charge to those interested in animal production.

• Loans of 50 thousand pounds at a rate of 9%.
• Loans up to 100 thousand pounds with an interest rate of 11%.

And repayable for 3 years and the first year grace period during which the interest is paid only and then the interest is paid every 3 months or 6 months or year depending on the type of project (animal - poultry - fish) and the desire of the client.

1. The project for female fattening (cattle): funded by the Social Fund and estimated at 5 million pounds, and the disposal of 5000 per head and the duration of the loan 5 years at an interest rate of 8%.
2. The male cattle breeding project and the value of the project is 3750000 pounds, the drainage category is 6250 pounds for the head and the minimum 4 headers, the maximum 6 heads at 37500 pounds.

Conclusion

The factors influencing the distribution of livestock showed a number of factors that constitute the image of current animals.

• Agricultural zipper, which represents 434957 feddans spread over nine administrative centers, and the correlation between it and the distribution of animal units is 0.8, which is a strong correlative link, similar to the association between the distribution of agricultural zemat and animal species. The correlation was strong with all animals except camels and mules,), Which is an average linear correlation, where these species tend to feed on concentrated feeds more than green fodder, and add to this area 45351 acres, which represents the reclaimed land, and the agricultural hierarchy is decreasing day after day because of the urbanization resulting from the high population, Increase the agricultural area to meet the needs of the population and animals of food so he likes to direct efforts to new territories.

• Crop composition: varies from maize, wheat, clover and other crops to which animals directly or indirectly benefit. The area of the crop in Minia Governorate is 815,917 feddans. The geographical correlation between the crop area and animal units is 0.8, Corn, wheat and alfalfa (0.8 each). While the average geographical correlation between animal units, vegetables and fruit (0.6) and cotton (0.5). While the correlation between animal units and cane was weak (0.4).

• The variation of the tenure pattern of the agricultural land in Minia Governorate, characterized by small holdings, as follows: 65% of the holdings are less than 1 acre and 25% are holdings less than 3 feddans, 5.7% are holdings from 3 to less than 5 acres, Of the 5 acres is 95.7%. There are about 3% holdings from 5 acres to less than 10 acres, 1.3% holdings of 10 acres and more. The acquisition was in three forms: possession of the king, representing 98.8% of the total holdings. , While the rent was 1.0% and the usufruct was 0.2%. With each category of previous tenure, the livestock were distributed among the holders. The more possession, the more the possession of animals increased, especially as they needed large areas of green fodder.

• Agricultural employment represented the human side in the care of animals. In 2006, the number of agricultural workers in Minia Governorate reached 572194 workers. The geographical correlation between agricultural labor and animal units reached 0.8, which is a strong correlation between the two countries. Its main roles include the cultivation of

fodder crops as well as animal husbandry and care.

• The application of agricultural mechanization to the liberation of the animal from agricultural work, and the use of animal products, and the application of agricultural mechanization covers all parts of the governorate, although the agricultural machinery is still over the capacity of many farmers resorted to rent either by land area or per hour per acre, (9.5%) of machinery, irrigation (71.7%), study (6.1%) and other machinery (12.7%).

• The animals and their products are affected by the climate, where the temperature is most influential on animals in terms of fodder cultivation between winter and summer, the degree of fertility and animal appetites for food, and the heat affects the adaptation of foreign breeds, where they are less tolerable to high temperature. Among the foreigners, representing 1.2% of the total cattle in the governorate, 83.8% in the municipality and 15% in the governorate, while the buffalo has only the municipal type, as well as the other animals, except for the few cases of sheep and goats (Minia University Farm and some breeders at Al-'Odwa) , And vary For animal breeds in terms of animal growth rate, filtration rate, and food conversion efficiency. Lack of acquisition of foreign species is one of the reasons for the shortage of meat.

• Government policies aim to increase livestock production by achieving the highest level of economic efficiency through available livestock resources, and to effect structural changes in the animal economic structure. The role of government policies is: The Veal Project - Livestock and Loan Insurance, The Veal project aims at achieving some important objectives affecting livestock and their economic efficiency, and their role in filling the population's needs of animal proteins. The Veal project was carried out in two phases, which included 11597 head in 2006, 96.1% And increased In 2008 the loans for the first stage to 1000 pounds for the head of the weight of 80: 200 kg, and the second stage amounted to 1500 pounds for the head from 200 to 450 kg, and the second stage in 2012 to 3000 pounds for the head, and the number of heads of the Veal with the stages of 9200 head, After fertilization to the government sector, but is sold to the private sector, which does not lead to lower meat prices and provision

The policy of the government in animal insurance has been in operation since 1959 and directed this system to be the best guarantee for livestock. The Fund contributed to the insurance of livestock in many projects of the Commission for the care and protection of animals - in addition to another type of insurance is the slaughtered in the massacres that And a number of loans have been put forward through more than one government outlet to finance small animal projects to run young graduates and increase the animals raised for fattening to contribute to solving the problem of animal protein deficiency in Minia governorate. Ha Aam2012-19214 head, ratios were similar to 2012 with the geographical distribution ratios Geoanat insurance in 2006, which means the stability of some factors including breeders keen on the insurance, especially with the spread of diseases.

References

Abdel-Alim, Adel Abdel-Wahab. Economic Study of Cows and Buffalo in Minia Governorate, MA, Faculty of Agriculture, Minia University, 2008.

Abdul Salam, Mohammed Ahmed. Economics of Feed Crops in Egypt, Master Thesis, Department of Agricultural Economics, Faculty of Agriculture, Minia University, 2006.

Adult Education Authority, Illiteracy Program in Minya Governorate, unpublished data, Minia, 2006.

Afifi, Youssef et al. (1974). Production of buffalo veal in different ages, Journal of Agricultural Research, Ministry of Agriculture, Cairo.

Al-Banna, Ali Ali (1967). Economic Resources, Beirut.
Al-Beltagy, Ahmed Radi. Genetics and Animal Production.
Al-Deeb, Mohamed Mahmoud (1978). Geography of Agriculture, Cairo: Anglo-Egyptian Library.
Al-Jamsy, Imam Mahmoud Farghaly. Analytical statistical study of the main milestones of estimates of milk production in Egypt, Zagazig Journal of Agricultural Research, 22, 1995.
Al-Zouka and Hamed, Mohamed Khamis and Nawal Fouad (1991). Geography of the countryside, Alexandria: Dar Al Maarifa University.
Amin, Hani Mohamed (2008). Sheep Production and Care, Central Administration of Agricultural Extension, Cairo: Agricultural Research Center.
Aqeel and Al-Saqar Mohammed Fatih and Fuad Mohammed (1977). Geography of Resources and Production, General Rules and Agricultural Production, Alexandria: Knowledge Establishment.
Arnold, E., Pattern of development (population and food resources in the developing world), London, 1988.
Badr, Mahmoud Fouad (1969). Feeding Agricultural Animals, Alexandria: New Publications House.
Bakir, Mohammed al-Fathi. Breeding animals and their products in the province of the lake, unpublished doctoral thesis, Department of Geography, Faculty of Arts, Alexandria University, 1984.
Barbari, Adel (2004). Camel Animal Food Security, Alexandria: Knowledge Facility.
Dansouri, Jamal al-Din et al. (1957). A Study in Geography of Egypt, Cairo.
Diab, Abdelkader Mohamed (1982) Egyptian Agriculture and Agricultural Development Plan in the Next Phase, National Planning Institute Cairo.
Directorate of Agriculturein Minia, Department of Animal Production and Statistics Department.
Directorate of Agriculture, Agricultural Extension Department, Small Ruminants, unpublished data, Minia, 2006.
Directorate of Agriculture, Information and Decision Support Center, unpublished data, Minia, 2006.
Directorate of Veterinary Medicine, Department of Insurance, Minia, unpublished data, 2006.
Directorate of Veterinary Medicine, Information and Decision Support Center.
El-Beltagy, Ahmed Radi (2003). Genetic Resources and Animal Production, Cairo: Animal Research Institute.
Field visit to the farm of the Faculty of Agriculture in one of the villages of reclamation, April, 2007.
Ghoneim, Joseph (1981). Economics of Agricultural Mechanization, Cairo.
Grigg, D. B., Population growth and agrarians change and historical perspective, London, 1980.
Hamdan, Jamal (1970). The Personality of Egypt, A Study in the Genius of the Place, 3, Cairo: World Book Library.
Hamed, Nawal. Urban Transformation of the Egyptian Village, Geographical Research Bulletin, Department of Geography, Girls' College, Ain Shams University, No. 22 April 1991.

Hanna, George Basile. The effect of the freeing of livestock from work on the provision of fodder, scientific symposium on the role of scientific research in the provision of fodder, Scientific Research Academy, Cairo, 1977.
Hassan, Raouf Abdel Molly (2007). Economics of Sheep Breeding, Animal Health Research Center, Assiut.
Helman, Hull (1974). The problem of population inflation, translated by Mohammed Badr al-Din Khalil, Cairo: Dar Maarif.
Hussain Abdel Hai Kaoud, Mohammed Anwar Hussein Marzouk, Calves, Sheep, Goats and Camels, Dar Al Ma'arif Cairo, 2003.
Ilhami and Saleh, Muhammad and Hadi Mohammed (1983). An Economic Study on Milk and its Produce in Egypt, External Note, Cairo: Institute of Regional Planning.
Jamal al-Din and Wafiq Mohammed. Agricultural Geography of Qalyoubia Governorate, Master Thesis, Department of Geography, Faculty of Arts, Minia University, 1993.
Jamal al-Din and Wafiq Mohammed. Livestock in Menoufia Governorate, PhD Thesis, Department of Geography, Faculty of Arts, Banha, Cairo University, 1999.
Jamal al-Din, Mohamed Wafik. Features of the Geography of Animal Production in the Sultanate of Oman, Journal of the Geographical Society, No. 38, 2, Cairo, 2005.
Mar'i, Mohamed Ahmed. Production and Dairy Industry in Kafr El-Sheikh, Journal of the Geographical Society, 35/1, Cairo, 2002.
Mayro, Robert (1976). Translation of Cross of Peter, the Egyptian Economy (1952 - 1972), Cairo.
Meteorological Authority, unpublished data, Cairo, 2006.
Minia Governorate, Information and Decision Support Center, Statistical Yearbook of Minia Governorate, 2006.
Ministry of Agriculture, Agricultural Research Center, Cairo, 2006, International Information Network.
Mohammed, Mohammed al-Husseini. A Ketofarian study of the variables related to the meat problem in Egypt, PhD thesis, Department of Agricultural Economics, Faculty of Agriculture, Kafr El-Sheikh, Tanta University, 1985.
Morshedi, Najla. Animal Production and Related Industries in Gharbia Governorate, Master Thesis, Department of Geography, Faculty of Arts, Tanta University, 1994.
National Planning Institute, Agricultural Development in Egypt, Part One, Planning and Development Issues in Egypt. No. 21, Cairo, February 1990.
Newbury, A.R., Geography of agriculture, London, 1984.
Nicholas, S., Agrarian transformation in Egypt, Cairo, Egypt, 1988.
One of the animal projects owned by a veterinarian, and imports French sheep because they are more suited to the geographical conditions in the region.
Richard, A.P., Migrationmechanizationandagricultural markets in Egypt, U.S.A, 1983.
Robinson, H. (1969). Human geography, London.
Saif, Mahmoud Mohamed (1985). Industrial Sites, Cairo: Nahdet Al-Sharq Library.
Siddle, D., & Swindel, K. (1990). Rural change in tropical Africa, U.S.A.
Thirlwall, A. P., Growth and development with special reference to developing economices, Hong Kong,1983.
Zekri, Abd al-Khaliq et al. (1967). The development of the labor force in Egypt is mainly for the rural labor force, Institute National Planning, Cairo.

Tables and Figures

Table 1. Percentage Distribution of Cultivated Cultures and Units Animals in Minia

International Journal of Cultural Inheritance & Social Sciences (IJCISS)
Vol. 1 Issue 2, September 2019, ISSN: 2632-7597
Journal Homepage: http://ijciss.com/, Email: journal.ijciss@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal

Governorate 2006[67]

Center	The zebra is Planted in feddans	%	animal species								Total units	
			Cows	Buffalo	Sheep	goat	Camel	Donkeys	Mules	Horses	Number	% of the Gove.
Al-'Odwa	27737	6.4	8.3	4.2	10,9	16,4	11,0	4.6	2.2	8.7	64100	7.7
Magagha	44599	10.3	6,9	7.0	8.3	6.8	4.1	5.1	34,8	16,5	57274	6,9
Bani Mazar	52870	12.2	5.2	5.1	6.3	4.4	4.9	5.7	0.7	6.1	43672	5.3
Mattay	32376	7.5	12,3	8.5	13,2	10,9	6.2	10,6	3.0	4.7	89344	10,8
Samalut	63424	14.7	16,8	6.5	13,9	10,3	4.8	18,6	4.4	9.3	105036	12,6
Minia	59610	13.8	12,3	21,6	13,8	9.6	5.8	12,1	22,7	7.3	125005	15,1
Abu Qurqas	53565	12.4	13,3	13,6	12,3	8.3	5.5	11,9	9.4	10,7	104089	12,5
Mallawi	62433	14.4	19,1	24,2	17,2	26,8	48,7	20,4	16,8	29,6	180215	21,7
Dear mouas	35926	8.3	5.8	9.3	4.1	6.5	9.0	11,0	6.0	7.1	61673	7.4
Wholesale	432540	100	28579	261983	88643	86683	6586	97524	1305	1892	830408	100
% Gov.	-	-	0.8	0.8	0.8	0.7	0.6	0.8	0.6	0.7	0.8	

Table 2. Percentage Distribution of Types of Possession in Minia Governorate[68]

Center	Ownership	rent	usufruct	Wholesale

[67] The table was based on data from the Department of Animal Production and Statistics Department, Agriculture Directorate, Minia, 2006.

[68] Directorate of Agriculture, Information and Decision Support Center, 2006

	%Gov.	%Center	%Gov.	%Center	%Gov.	%Center	%
Al-'Odwa	98.4	6.2	1.6	10	-	-	100
Magagha	98.7	9.3	1.3	12.5	0.01	4.6	100
Bani Mazar	99.9	12.7	0.1	1.9	-	-	100
Mattay	99.9	7	-	-	0.09	3.2	100
Samalut	99.9	16.2	0.3	5.3	-	-	100
Minia	97.7	12.4	2.3	29.1	0.02	0.1	100
Abu Qurqas	97.4	12.4	1.2	15.5	1.4	96	100
Mallawi	98.9	15.2	1.1	17.4	-	-	100
Dear mouas	99.0	8.6	1	8.3	-	-	100
Wholesale	373468		3724		7.6		37789
%Gov.	98.8		1		0.2		100

Table 3. Category of tenure and its effect on the acquisition of animals sample study in Minia Governorate[69]

Number of sample	Category of tenure in feddans	Possession of animals		Cows		Buffalo		Sheep		goat		Donkeys, Mule and horses	
		Yes	No	Number of sample	%	Number of sample	%	Number of sample	%	Number of sample	%	Number of sample	%
142	Less than an feddan	100%	-	93	66.4	54	38.0	41	28.8	21	14.7	90	63.4
180	-3	100%	-	130	72.2	57	31.6	64	35.5	10	5.5	128	71.1
45	-5	100%	-	39	86.6	21	46.6	18	40.0	28	62.2	45	100
38	-10	100%	-	31	81.5	16	42.1	25	65.1	19	50.0	38	100
15	10 or more	100%	-	15	100	10	66.6	15	100	15	100	12	80

[69] Source of the table: The results of the field study of the sample villages (Qayyat, Helwa, Abalaf, Qalosna, Edmo, Bani Dheir, Dalja) in Minia Governorate from 2006-2008, through 420 questionnaires.

International Journal of Cultural Inheritance & Social Sciences (IJCISS)
Vol. 1 Issue 2, September 2019, ISSN: 2632-7597
Journal Homepage: http://ijciss.com/, Email: journal.ijciss@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal

Table 4. Percentage Distribution of Crop Composition Areas and Animal Units in Minia Governorate, 2006[70]

Center	Corn	Wheat	Clover	Cotton	Foley	sugar cane	Vegetables and f...	Other crop	Animal Units		Total cropped area	
									n	٪	unit	٪
Al-'Odwa		7.7	6.3	16.4	11.1		3.4	7	55096	6.7	64100	7.7
Magagha		10,6	12.6	18.7	8.6	0.3	4.9	7.7	85369	10.5	57274	6,9
Bani Mazar	12.0	12	15.1	23.7	32.5	0.6	11.9	16.9	5	13.1	43672	5.3
Mattay		7.7	10.4	15	4.4	0.3	9.1	3.1	60981	7.5	89344	10,8
Samalut	14,5	15,5	11.7	11.7	4.2	0.4	37.6	9.4	113627	13.9	105003	12,6
Minia	14,3	15	16.2	2.8	4.7	2.5	15.9	22	9	14.9	12500	15,1
Abu Qurqas	13,2	12,5	11.3	4.4	17.9	18.6	6.6	11.8	99402	12.2	10408	12,5
Mallawi	13	13	11.1	3.5	8.1	51.4	4.3	12.2	9	13.6	18021	2107
Dear mouas	6.4	6.6	5.3	3.8	8.5	25.9	7.2	9.8	62179	7.6	61673	704
Wholesale	4	9	0	30071	6424	38103	41128	113628	815917	100	1775408	100
% Gov.	33	23	3	3.7	0.8	4.7	5	14	100	-		
Coefficient of correlation	0.8	0.8	0.8	0.5	0.6	0.4	0.6	0.7	0.8			

Table 5. Development of agricultural labor and animal units and percentage of increase (1996-2006)[71]

[70]Directorate of Agriculture in Minya - Statistics Department – 2006.
[71]Table prepared by the researcher based on data from the Directorate of Agriculture, Information Center, unpublished data, 2006.

Statement	Agricultural employment			Animal Units		
Center	1996	2006	the increase %	1996	2006	the increase %
Al-'Odwa	28826	33480	16.1	42485	64100	50.8
Magagha	57925	65222	12	31268	57274	83.1
Bani Mazar	50994	69604	36,4	29650	43672	47.2
Mattay	28978	36051	24,4	53064	89344	68.3
Samalut	65709	88667	34.9	59205	105036	77.4
Minia	68543	83023	21,1	137959	125005	-9.3
Abu Qurqas	54973	74213	34.9	60196	104089	72.9
Mallawi	73886	85057	15,1	113156	180215	59.2
Dear mouas	35192	36867	4.3 4.3	39559	61673	108.6
Wholesale	465026	572194	23,0	556542	830408	49.2

Table 6. Percentage Distribution of Agricultural Machines in Minia Governorate

Center	Irrigation	Spray	Tractors	Threshing	Disturbances	Fogging	Other		Wholesale	% of the governorate
Al-'Odwa	9.6	7.7	8.2	8.8	5.0	9.2	5.4	100	6677	7.4
Magagha	12,8	6.0	12,0	11,4	12,6	7.5	12,0	100	10709	11,9
Bani Mazar	10,1	12.2	9,7	12,5	9,7	9.5	24,0	100	9852	11,0
Mattay	7.4	6.3	11,2	9.1	4.5	8.8	5.3	100	7086	7,9
Samalut	12,3	16.1	16,1	19,0	17,9	10,3	24,0	100	12368	13,7
Minia	13,2	18.3	14,8	12,3	17,0	20,3	9.3	100	13073	14,5
Abu Qurqas	12,1	12.3	12,5	9.2	14,6	8.8	6.7	100	11061	12,3
Mallawi	14,6	12.2	9.6	10,2	14,4	15,3	12,0	100	12127	13,5
Dear mouas	7,9	8.9	5.9	7.5	4.3	10,3	1.3	100	7098	7.8
Wholesale	63940	8930	8832	5582	1568	443	756	100	90051	100
%Gov.	71,0	10.0	9,8	6.2	1.7	0,5	0.8	100	100	-

Table 7. Mechanical Capacity and Crop Area in Minia Governorate

Machines / Center	The general average per 1000 feddans of crop area							Crop area in feddan
	Tractors	irrigation	Threshing	Disturbances	spray	Fogging	Other	
Al-'Odwa	17.9	88.0	9.2	0.7	10.1	0.7	0.07	55096
Magagha	12.9	113.0	6.0	1.2	12.9	0.4	1.0	85369
Bani Mazar	9.8	63.0	6.5	0.9	10.1	0.1	1.6	107265
Mattay	8.9	87.1	6.9	2.9	13.2	0.7	0.6	60981
Samalut	13.8	77.2	7.5	7.8	20.6	1.6	1.6	113627
Minia	11.7	67.5	8.7	0.6	11.9	0.2	0.5	121339

Abu Qurqas	8.6	86.0	6.4	0.8	5.4	0.1	0.5	99402
Mallawi	7.7	87.9	5.2	0.6	6.2	0.6	0.9	110659
Dear mouas	7.4	102.0	5.2	0.20	6.1	0.08	0.1	62179
Wholesale	8832	63940	5582	1568	8930	443	756	815917
Average per 1000 feddans	10.9	78.4	6.8	1.9	10.9	0.5	0.09	-

Table 8. the geographical distribution of the head of the national project in Minia governorate 2006[72]

Center	Phase I		Phase II		Wholesale
	Number	%	Number	%	
Al-'Odwa	440	3.9	10	2.2	450
Magagha	1106	10	-	-	1106
Bani Mazar	55	0,5	-	-	55
Mattay	1248	11,2	-	-	1248
Samalut	1402	12,6	136	30,2	1538
Minia	510	4.6	-	-	510
Abu Qurqas	2711	24,3	230	51	2941
Mallawi	2465	22,1	75	16,6	254
Dear mouas	1209	10,8	-	-	1209
Wholesale	11146	100	451	100	11597
%Gov.	96,1	-	3.9	-	100

Table 9. Percentage Distribution of Insurance Animals in Minia Governorate Centers[73]

Statement Center	young		fattening	Dairy products	Male for vaccination	Sheep	Wholesale	
	beef	Pork					Number	%
Al-'Odwa	-	-	16,3	12.0	-	24.3	1589	10,1
Magagha	-	-	11,0	-	-	21.2	2518	16,0
Bani Mazar	23,5	-	22,2	5.2	33,3	14.3	3181	20,2
Mattay	-	-	29,9	23	-	-	4444	28,2
Samalut	-	-	13,4	2.2	-	1.2	1878	11,9
Minia	5.9	-	2.7	13.8	-	5.2	604	3.8
Abu Qurqas	70,6	100	2.1	27.3	66,7	23.7	910	5.8
Mallawi	-	-	2.1	11.6	-	6.4	487	3.1
Dear mouas	-	-	0,3	4.9	-	3.7	125	0.8
Wholesale	17	100	13696	1514	3	406	15736	100
% of the sentence	0.1	0.7	87	9.6	0,01	2.5	100	-

[72]Directorate of Agriculture, Department of Animal Production, unpublished data, Minia, 2006.
[73]Directorate of Veterinary Medicine, Department of Insurance, Minya, unpublished data, 2006.

International Journal of Cultural Inheritance & Social Sciences (IJCISS)
Vol. 1 Issue 2, September 2019, ISSN: 2632-7597
Journal Homepage: http://ijciss.com/, Email: journal.ijciss@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal

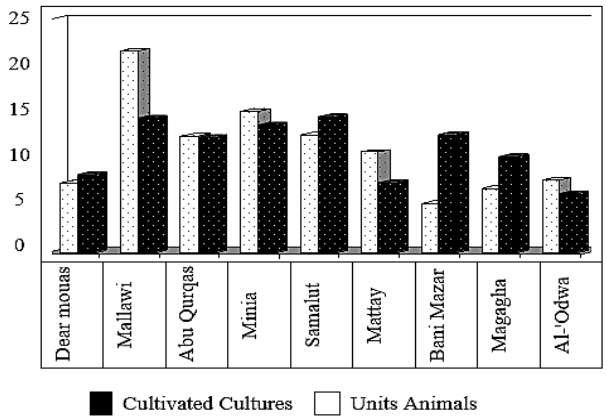

Fig. 1. Percentage distribution of planted and unit power in Minia governorate 2006

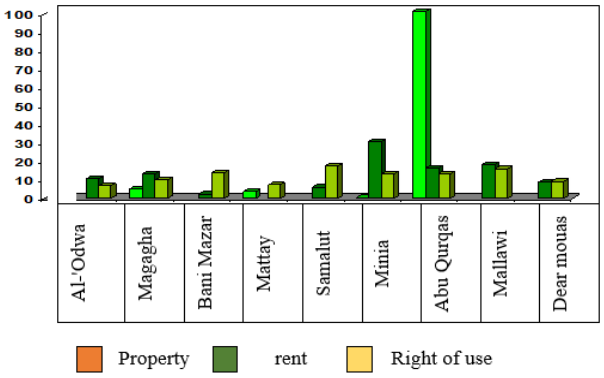

Fig. 2. Percentage distribution of types of tenure in Minia Governorate 2006

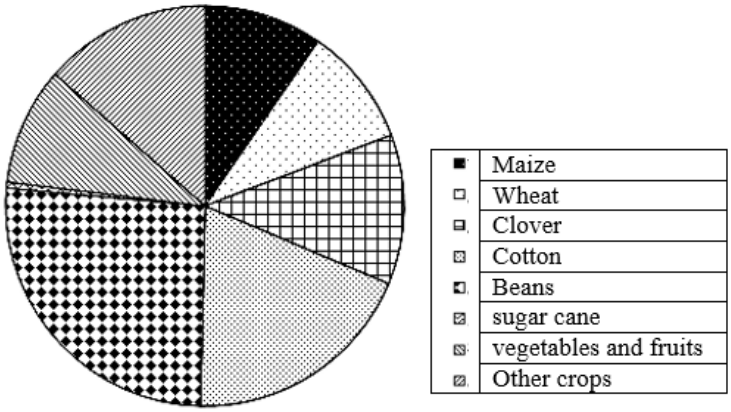

Figure 3. Relative distribution of species in the governorate of Minia in 2006

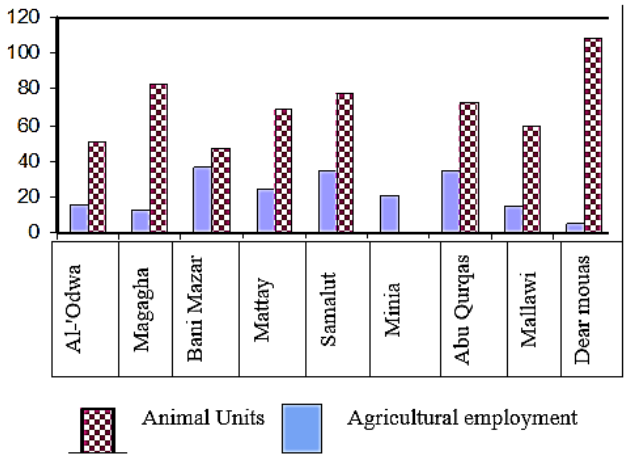

Fig. 4. Rate of increase of agricultural labor and animal units in Minia governorate 2006

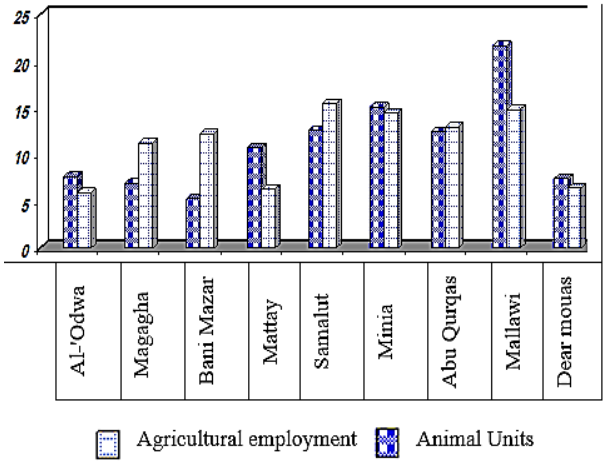

Fig. 5. Relative distribution of agricultural labor and animal units in Minia Governorate 2006

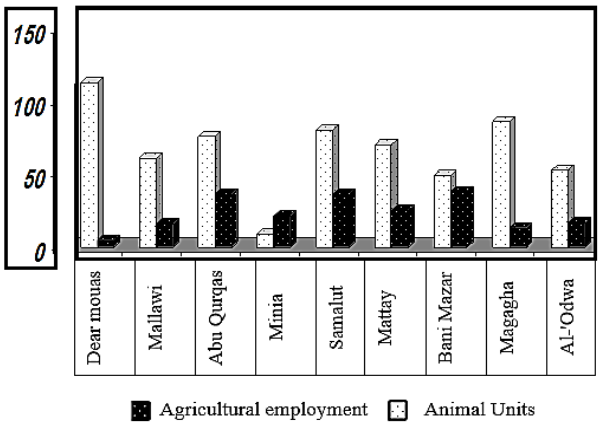

Figure 6. Distribution of agricultural labor and animal units in Minia Governorate 1996-2006

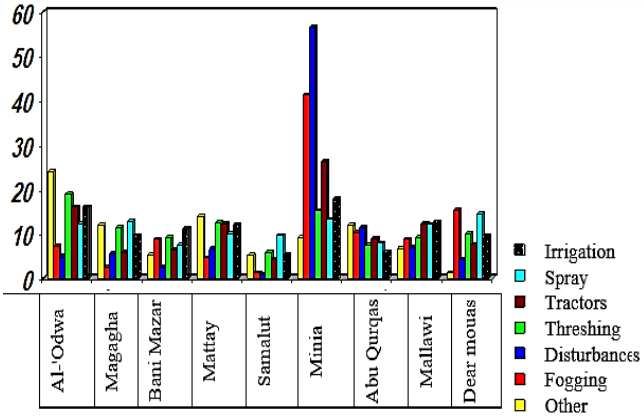

Figure 7. Percentage distribution of agricultural machines in the governorates