SUMMARY

The agricultural sector is an important economic sector that is considered a source of income for nearly half of the population in Egypt as it contributed about 13.4% of the total gross domestic product as an average of the period 2000-2006. The animal production is a fundamental part of the agricultural production beside the plant production. The value of the animal production was about L.E. 34.1 billion, representing approximately 34.65% of the total value of the agricultural production as an average of the period 2000-2006. The value of the dairy production belongs to the fact that it represents a big portion of the animal production, where the real gross domestic product of the dairy products was about L.E. 8.06 billion which represents approximately 23.5% of the value of the animal production as an average of the period 2000-2006.

The problem of the study is the gap between the local production of dairy production and the total consumption due to the increasing demand. The gap was estimated as 1.3 million tons. The gap resulted a decrease in the average per capita.

The study aims, mainly, at identify the economics of production and marketing of dairy products in Fayoum Governorate. The objectives of the study were stated as following; investigating the current situation of dairy production and consumption in Egypt and, in particular, Fayoum governorate, investigate the production efficiency of dairy production in Fayoum governorate, and identify the main problems and constraints facing the dairy farmers in Fayoum Governorate.

The structure of the study includes four chapters in addition to the introduction and the references. Chapter one deals with the literature review within the field of production and marketing of dairy production. The review of the previous studies shows that the Egyptian buffalos are better than cows with regard to the efficiency.

Chapter two is clarifying the current status of production and consumption of dairy production in Egypt, and Fayoum Governorate. The chapter includes two sections; the first section includes the production of dairy in Egypt and Fayoum Governorate, highlighting the economic importance of dairy production, discussing the farm size of livestock and the number of milking cows. The number of animals has increased by 57.2% and 33.1% for buffalos and cows, respectively, from 1990 to 2006. The number of milking cows has increased by 85% and 24% for buffalo and cows, respectively, from 1990 to 2006. With regard to the dairy production in Fayoum Governorate; the dairy production in Fayoum comes from three main sources; buffalos, cows, and goats. The trend of the dairy production in Fayoum has shown a significant increase by about 0.97 tons annually. It also discussing the importance of dairy production in Fayoum Governorate relatively to Egypt. Fayoum represents about 4.92% of the total Egyptian production in 1990 where the total production for Fayoum were 108.36 thousand tons while the total production of milk in Egypt in the same year were 2204 thousand tons. The share of Fayoum

in milk production has decreased in 2003 to 2.56% where the total production for Fayoum were 135 thousand tons while the total production of milk in Egypt in the same year were 5280 thousand tons.

The second section of this chapter is discussing the dairy consumption in Egypt and the most important factors that influencing the consumption. The study indicated that the most important of these factors are; consumers' preferences, educational status, population, and percapita income. The study focuses on the gap between dairy production and consumption during the period (1990 - 2006). It also highlights the trends of production, consumption, and the gap. The trends show that the three factors tend to significantly increase by 4.8%, 5.4%, and 3.5%, respectively. The adjusted R^2 for the three factors were estimated as 94%, 94%, 29%, respectively.

The third chapter investigates with the economic efficiency of dairy production farms in Fayoum Governorate. The chapter consists of two sections; the first section highlights the study sample and examines the most important characteristics of the it. The sample were chosen as stratified random sample of 200 dairy farms of buffalos and cattle in Fayoum Governorate distributed into 3 categories. The second section highlights the productivity and economic efficiency of the farms. The calculations indicate that the average production of milk per head from the three categories is 1836, 1868, and 1900 kg, respectively. As for the total cost of the head of milking buffalos within the three categories; the costs were estimated at about 3780, 3550, and 3350 L.E, respectively. As for the total income; it has been estimated at about 5200, 5200, and 5500 L.E, respectively. The net revenues/costs ratio for the three categories were estimated as 0,379, 0,465, and 0,641, respectively. As for the cost per production unit; it has been estimated for the three categories as 2.06, 1.9, and 1.76 L.E, respectively.

It, also, been found that the milk production of milking cows from the three categories were about 1400, 1490, and 1550 kg, respectively. As for the total cost of the head of milking cows within the three categories; the costs were estimated at about 3460.3130, 3000 L.E, respectively. As for the total income; it has been estimated at about 4560, 4430, and 4700 L.E,. The net revenues/costs ratio for the three categories were estimated as 0,318, 0,415, and 0,567, respectively. As for the cost per production unit; it has been estimated for the three categories as 2.47, 2.1, and 1.94 L.E, respectively

The fourth chapter highlights the statistical analysis of production functions and costs functions of the dairy farms. The chapter includes four sections. The first section highlights the estimation of production functions for buffalo and cows' farms within the three categories. As for buffalos' farms; the study showed that for the first category of buffalos, the factors affecting the production were; the amount of clover, the number of working hours, and the length of the season. The production elasticity of the three factors were estimated as 0,324, 0.354, 0.84, respectively. The aggregate elasticity were estimated as 2.22. As for second category of buffalos, the factors affecting the production were; amount of sugar corn and the number of working hours. The

production elasticity of the two factors were estimated as 0,546, 0,969, respectively. The aggregate elasticity were estimated as 1.52. As for third category of buffalos, the factors affecting the production were; amount of clover, years of experience, amount of hay, the number of work hours, and the length of the season. The production elasticity of the four factors were estimated as 0.43, 0.75, 0.29, 0.11, 0.59, respectively. The aggregate elasticity were estimated as 2.17.

As for cows; the study showed that for the first category, the factors affecting the production were; the amount of clover and the length of the season. The production elasticity for the two factors were estimated as 1.04 and 1.06, respectively. The aggregate elasticity were estimated as 2.1. As for the second category; the factors affecting the production were; the amount of clover and the length of the season. The production elasticity for the two factors were estimated as 1.32 and 1.59, respectively. The aggregate elasticity were estimated as 2.9. As for the third category; the factors affecting the production were; the amount of clover and the number of work hours. The production elasticity for the two factors were estimated as 1.17 and 0.23, respectively. The aggregate elasticity were estimated as 1.4.

The second section highlights the estimation of costs' functions for buffalo and cows' farms within the three categories. As for buffalos' farms; the study showed that for the first category of buffalos, the cost-minimizing size were estimated as 3.3 tons, the profit-maximizing size were estimated as 14.1 tons. The average production for this category were estimated as 4.17 tons. Only 49% of the producers within this category reached the cost-minimizing level of production. As for the second category of buffalos, the cost-minimizing size were estimated as 12.48 tons, the profit-maximizing size were estimated as 13.24 tons. The average production for this category were estimated as 8.88 tons. Only 10% of the producers within this category reached the cost-minimizing level of production. As for the third category of buffalos, the cost-minimizing size were estimated as 9.67 tons, the profit-maximizing size were estimated as 14.55 tons. The average production for this category were estimated as 14.55 tons. 100% of the producers within this category reached the cost-minimizing level of production.

As for cows' farms; the study showed that for the first category of cows, the cost-minimizing size were estimated as 1.59 tons, the profit-maximizing size were estimated as 8.8 tons. The average production for this category were estimated as 2.21 tons. Only 51% of the producers within this category reached the cost-minimizing level of production. As for the second category of cows, the cost-minimizing size were estimated as 3.05 tons, the profit-maximizing size were estimated as 26.7 tons. The average production for this category were estimated as 7.8 tons. 100% of the producers within this category reached the cost-minimizing level of production. As for the third category of cows, the cost-minimizing size were estimated as 12.59 tons, the profit-maximizing size were estimated as 30.3 tons. The average production for this category were

estimated as 19.22 tons. Only 8% of the producers within this category reached the cost-minimizing level of production.

The third section focuses on the marketing channels of raw milk of both buffalos and cows and the structure of the distribution system within the three categories. The results showed that nearly about 5% of the production is used for feeding calves, about 75% is sold as liquid milk for both wholesalers and retailers and factories. The remaining amount of the production is self-processed at homes. The self-processed products might be sold to consumers or self-consumed. The marketing efficiency of raw buffalos' milk were estimated as 89.1%, 88.3%, and 88.2% for the three categories, respectively. As for cows' raw milk marketing efficiency, it was estimated as 90.8%, 89.3%, and 88.6% for the three categories, respectively.

The last section of this chapter highlights the most important problems facing dairy producers. It has been shown that the most important problems were; the high prices of dry and green fodders, the lack of fodders around the year, the livestock disease infections, and the slaughtering of small females. As for the marketing problems; the study showed that the most important problems of marketing are; the lack of collection centers, monopoly of raw milk purchasing, and the lack of adequate markets.

ABSTRACT

The agricultural sector is an important economic sector that is considered a source of income for nearly half of the population in Egypt as it contributed about 13.4% of the total gross domestic product as an average of the period 2000-2006. The animal production is a fundamental part of the agricultural production beside the plant production. The value of the animal production was about L.E. 34.1 billion, representing approximately 34.65% of the total value of the agricultural production as an average of the period 2000-2006. The value of the dairy production belongs to the fact that it represents a big portion of the animal production, where the real gross domestic product of the dairy products was about L.E. 8.06 billion which represents approximately 23.5% of the value of the animal production as an average of the period 2000-2006.

The study aims, mainly, at identify the economics of production and marketing of dairy products in Fayoum Governorate.. The structure of the study includes four chapters in addition to the introduction and the references. Chapter one deals with the literature review within the field of production and marketing of dairy production. The review of the previous studies shows that the Egyptian buffalos are better than cows with regard to the efficiency. the economic importance of milk production where the real value of milk production in Egypt in 2006 about 1968 million L.E, representing 9.9 %, 26.6% of the real value of agricultural production and livestock, respectively.

The third chapter investigates with the economic efficiency of dairy production farms in Fayoum Governorate, which consists of two sections; the first section highlights the study sample and examines the most important characteristics of the it. The sample were chosen as stratified random sample of 200 dairy farms of buffalos and cattle in Fayoum Governorate distributed into 3 categories. Then examines the most important characteristics of the sample, both producers of social or economic.

The calculations indicate that the average production of milk per head from the three categories is 1836, 1868, and 1900 kg, respectively. As for the total cost of the head of milking buffalos within the three categories; the costs were estimated at about 3780, 3550, and 3350 L.E, respectively. It, also, been found that the milk production of milking cows from the three categories were about 1400, 1490, and 1550 kg, respectively. As for the total cost of the head of milking cows within the three categories; the costs were estimated at about 3460.3130, 3000 L.E, respectively

The fourth chapter highlights the statistical analysis of production functions and costs functions of the dairy farms. The chapter includes four sections. The first section highlights the estimation of production functions for buffalo and cows' farms within the three categories. The second section highlights the estimation of costs' functions for buffalo and cows' farms within the three categories. The third section focuses on the marketing channels of raw milk of both buffalos and cows and the structure of the distribution system within the three categories.

The last section of this chapter highlights the most important problems facing dairy producers. It has been shown that the most important problems were; the high prices of dry and green fodders, the lack of fodders around the year, the livestock disease infections, and the slaughtering of small females. As for the marketing problems; the study showed that the most important problems of marketing are; the lack of collection centers, monopoly of raw milk purchasing, and the lack of adequate markets.