The Summary

Introduction :

The agricultural production is a sort of creating or increasing benefit. It plays an important part in the national economic structure of the national economic structure of the Arab Republic of Egypt. It is the people's main source of food . The production expenses of wheat , maize, beans and lentils are very important from the economic point of view. Therefore, any attempt to increase the acre productivity must take into consideration the effect of the acre productivity expenses, the prevailing crops and the extent of increasing or decreasing the cultivated areas. This is the reason why this study analyses the production expenses of some of the main field crops of Egypt.

Firstly : The Summary :

The problem of this paper is that the analytical studies of many field crops are vague or misleading. It has been noticed in the last few years that food production expenses have increased according to the general prices standard.

This study consists of four main chapters, an introduction, Arabic and English summaries, Arabic and English reference lists.

The introduction speaks about the importance of this research, its problem, its method, the data resources, the reference review of previous studies and the plan of this study.

The first chapter contains the statistical analysis of the yield of some main field crops : wheat, maize, beans and lentils.

The study shows the importance and total of the area cultivated with wheat for most governorates. It has greatly

increased statistically except in Suez, Monoufiya, Kalioubiya, Giza and Aswan. As regards Cairo, it has decreased at a rate of 9.7% of the cultivated area.

All over the republic, the acre productivity is statistically increasing. The total yield hasn't statistically changed in Monoufiya, Fayoum and Menya. In the other governorates, except Cairo, it has statistically decreased.

The area cultivated with maize generally increased statistically in Sharkiya, Bani-Swaif, Ismailia, Fayoum, Menya, Asiout, Souhag, Kena and Aswan and decreased in Gharbiya and Damietta. No considerable change was noticed in the remaining governorates.

The yield of maize increased significantly all over the governorates except Cairo where it decreased statistically. The total yield did not significantly change in Damietta and Cairo. It generally increased statistically in the other governorates.

The beans yield generally increased statistically except in Alexandria, Behaira, Gharbiya, Ismailia, Suez, Monoufiya, Kalioubiya, Giza, Bani-Swaif, Menya, Asiout and Aswan but significantly decreased statistically year after year in Fayoum and Kena.

The acre yield did not significantly change all over the republic as well as in Middle Egypt and Upper Egypt but generally decreased statistically. The total yield did not significantly change in most of the producing governorates except in Behaira, Kafr-el-Shaikh, Dakahliya, Damietta, Sharkiya, Ismailia, all Lower Egypt and Bani-Swaif. All over the republic, the total significantly increased statistically but decreased in Fayoum at a rate of nearly 0.43% .

The study shows no significant change in the cultivated area of lentils during the analyzed period, but it significantly increased statistically in Dakahlia and Sharkiya but decreased in Asyout, Sohag, Kena, and Fayoum. All over the republic, the

lentils acre yield generally increased statistically except in Dakahliya, Damietta, Monoufiya, Menya, all Middle Egypt and Souhag where it did not significantly change and in Aswan where it significantly decreased statistically year after year.

The lentils total yield showed no significant change in most governorates but significantly increased statistically at the rate of 8.5 %, 11.2 %, 12.5 % and 11.1 % in Kafr-el-Shaikh, Dakahliya, Sharkiya and the rest of Lower Egypt, but decreased in Souhag, Kena, Aswan and the rest of Upper Egypt.

The second chapter statistically analyses the production expenses. It contains two parts the first of which speaks about the structure of the production expenses per acre. It shows that the workers wages are the main cause of the high expenses of crop production during the two periods from 1977 to 1985 and from 1986 to 1994 all over the republic and in the most important governorates. Another cause is the expenses of using agricultural machines more and more.

The second part of this chapter speaks about the statistical development of the production expenses. It analyses the food production expenses as well as those of the unit. The results show that the total food production expenses according to the current wheat prices have statistically increased all over the republic. No significant change has been noticed according to the constant prices.

The crop unit expenses per ardab have generally increased statistically. The real crop production expenses per ardab have also generally increased significantly and statistically except in the governorates of Sharkiya, Giza, Menya, Asiout and Kena.

The total food production expenses of maize according to the current prices have statistically increased significantly all over the republic.

No significant change of the constant or real total expenses have been noticed except in Souhag where they significantly decreased statistically . The unit production expenses and the current unit expenses have significantly increased at an annual statistical rate . The constant unit expenses have significantly decreased statistically all over the republic, in Kalioubiya, Menya and Souhag but have not significantly decreased in the other governorates.

The beans total production expenses per acre have significantly increased statistically all over the republic and in the most important governorates of Upper and Lower Egypt. No significant change has occurred in the total permanent prices production expenses except Kafr-el-Sheikh, Sharkiya and Fayoum where they significantly increased statistically at an annual rate. The permanent prices expenses per unit showed no significant decrease all over the republic .

The lentils total production expenses generally increased statistically and significantly all over the republic .No significant decrease was observed in the expenses according to the permanent prices .The current prices unit expenses have generally increased at an annual significant statistical rate. No significant change was observed in Kena and the rest of the republic .

Chapter three speaks about the function relation between the production and the expenses and estimating the production cost functions of wheat and deducing the optimum the production size compared with the average sizes of various governorates during the analysis period. It was noticed that eight governorates averages as well as the total one of the republic exceed this size but seven governorates averages are less. Estimating the production functions at four levels (Lower Egypt, Middle Egypt, Upper Egypt and the total of the republic) and the total elasticity account of the estimated models, a 1% increase was found in all the production

elements in the prevailing circumstances and this will lead to the following increases in the wheat yield : 0.89% , 1.7%, 0.94% and 1.1% at the four levels (in the form of 3 variables) and this reflects the size decrease and increase.

All the maize producing governorates exceed the optimum yield. The production functions and the total elasticity account of the estimated models as in wheat show an increase of 1% in all the production elements will lead to the following yield increase percentages 1.5%, 0.3%, 0.2% and 0.1% at the four levels respectively and reflect the increasing and decreasing size yield .

Six governorates excel the optimum yield of beans but five can't . Souhag approaches it . As regards the production cost functions and the total elasticity account of the estimated models, it has been found that a 1% increase of the components will result in the following yield increase percentages for the four standards.

The lentils producing governorates are unable to reach the optimum yield. Estimating the production functions of the four standards and the total elasticity accounts show no significant linear or power model in Upper Egypt and all the republic. In Lower Egypt , 1% increasing all the production elements leads to a 0.64% increase of the yield. This means that the yield is decreasing in capacity.

Chapter four speaks about the cost strategy of the production policy bearing in mind the farm prices and the food profitability of the studied crops because the producer makes his decisions according to the crops prices and profitability. The current farm price of wheat is significantly increasing statistically year after year in most governorates of Upper Egypt, Lower Egypt and all the republic.

The permanent prices underwent many ups and downs during the period of study and showed no significant change.

Studying the unit cost and the farm price in these governorates, it was noticed that the increase in the currant farm price of the unit led to an increase in its current production cost. The elasticity factor shows the response degree of the price policy to the response to change in the production costs. This means that increasing the current unit production cost 1% leads to a significant statistical increase in the current farm price in the most important governorates in Lower Egypt, Upper Egypt and all over the republic.

Studying the real unit production cost and the real farm price of wheat showed no significant change in this relation . The response elasticity is less than one. This shows the weak response degree of the wheat price policy to the increase in the real production costs . It has been noticed that the net yield per acre significantly increased statistically year after year .

Studying the maize current farm price showed an annual increase statistically significant in Lower Egypt, Upper Egypt and all the republic.

The permanent farm prices generally decreased 1.7 % annually in Behaira, Kafr-el-Shaikh and Sharkiya, 2.5% in Gharbiya and Kalioubiya and 1.3% in Dakahliya.

Such rate was not statistically significant in Monoufiya. Studying the unit cost and the farm price in these governorates showed that the current farm price and the current unit production cost per ardab went side by side. The elasticity factor showed that a 1% increase in the current production cost of an ardab of maize went side by side with a significant statistical increase in the farm price in the most important governorates of Lower Egypt, Upper Egypt and all the republic.

The function relation between the real production cost per ardab and the real farm price showed no significant positive relation except in Kalioubiya, Menya, Souhag and Kena. The elasticity factor showed that a 1% increase of the real cost per

ardab was accompanied by these significant statistical increases in the farm price : 0.62% , 0.37%,0.39% and 0.47% in these governorates respectively. This proves the weak response of the maize price policy to increasing its production costs. The net yield per acre generally increased significantly and statistically year after year.

The beans current farm price significantly and statistically increased in the most important governorates of Lower Egypt, Upper Egypt and all the republic.

The permanent or real form prices underwent ups and downs during the period from 1977 to 1994 . They generally and significantly decreased statistically according to these annual rates : 1.3%, 1.01% , 1.7% and 1.4% in Gharbiya, Kafr-el-Shaikh, Dakahliya and Monoufiya respectively. No significant increase occurred in the rest of the studied governorates and all the republic. The function relation between the farm price and the unit cost per ardab of beans is positive. The elasticity factor of this relation shows an increase of 1% in the current cost per ardab of beans, accompanied by a significant statistical increase in the farm price in the studied governorates and all the republic. The function relation between the real farm price and the real production cost per ardab shows no significant positive relation during the analysis period except in Souhag where the estimated response elasticity is about 0.36. This shows the weak response of the beans price policy of which the elasticity is less than one, except in Souhag and Kena. The net yield per acre significantly increased statistically at these rates : 8.03%, 11.7%, 8.1%, 11.5% and 9.4% in the most important governorates of Lower Egypt respectively (Behaira, Gharbiya, Kafr-el-Shaikh, Dakahliya, Sharkiya and Monoufiya) and at these rates respectively : 12.2%, 6.7% , 10.2%, 8.1%, 9.7%, and 16.3% in Bani-Swaif, Fayoum, Menya, Asyout, Sohag and Kena.

This chapter shows that the lentils current farm price annually increases statistically and significantly 9.6% in Kafr-el-Shaikh, 9.4% in Sharkiya, 10.6% in Asiout, 10.9 % in Kena and 9.2 in all the republic. The permanent prices decrease significantly and statistically 3.8% in Kafr-el-Shaikh and 3.99 % in Sharkiya. No significant decrease happened in Asiout, Kena and all the republic.

The function relation between the farm price of lentils and the production cost per ardab is positive. The elasticity factor shows that 1% increase in the unit cost leads to these percentages in the unit price: 0.31%, 0.45%, 0.85%, 0.97% and 0.95% in Kafr-el-Shaikh, Sharkiya, Asiout, Kena and all the republic respectively. This shows the weak response of the price policy to the increase of production costs. There is no significant function relation between the real farm price and the real production cost per ardab in Kafr-el-Shaikh, Sharkiya, Asiout and all the republic. In Kena, a 1% increase of the real production cost per ardab goes side by side with a significant statistical increase in the real farm price amounting to 0.44%. This also shows the weak elasticity of the price response. The study shows that the net yield per acre generally increased statistically and significantly 10.3%,9.8% and 11.2 in all the republic, Asyout and Kena respectively. But in Kafr-el-Shaikh and Sharkiya, no significant change happened in the net yield during the study period. It is noticed in general that most of the agricultural resources used in producing the study crops are below the standard of good economic use. This necessitates holding meetings for the agronomists and agricultural economists to estimate the optimum blends of the used agricultural resources to economize their optimum use.

Secondly : Recommendations :

The study has made these recommendations which may help increase the net yield of these crops : the price policy should go side by side with increasing the actual production

costs, ameliorating the strains of these crops to increase their productivity; raising the economic value of these crops yield may affect the average production costs per acre and all the cost elements, especially these related to human work; increasing the areas of wheat and maize to reach the optimum yield reducing the production costs to the minimum and raising the yield to the maximum by increasing the productivity per acre; the price policy of these crops (the economic prices).