**An Economic Study of the Most Important Oilseed Crops in Egypt**

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**Abstract:** Egypt imports of vegetable oils about 676 thousand tons per year as an average during the period (1995-2010), which cost the state about 1.9 billion pounds annually. It is expected to increase the burden on the state budget in the coming years as a result of the increase in population and decreasing of oil crops production.Turns out the results of the study fluctuation of area and production oilseed crops under study (sunflower, soybean, peanut, sesame, cotton) between increases and decreases.The production of crops per feddan under study, had taken an increasing general trend statistically significant, except for the sesame crop productivity that increased at a non- statistically significant; as for the contribution of vegetable oils, both domestic or imported product in domestic consumption has increased from about 824 thousand tons in 1995 to about 1783 thousand tons in 2010; the average annual rate of about 1201 tons and the average per capita per year of vegetable oils had reached a minimum of about 4.2 kgs / year in 1999 and a maximum of about 18 kgs / year in 2010 and an average annual rate of about 11.3 kgs / year during the study period. The self-sufficiency rate ranged from a low of 19% in 2005 and a maximum of 54% in 2002, representing vegetable oils imported a significant proportion of the total Egyptian imports ranged from a minimum of 1.3% during the years 2001،2003and 2007; a maximum of around 4 % in 1995 and ranged from the cost of imports about 1.6 billion pounds, and in 2010 was the increase of 1.4% at a cost estimated at 3.9 billion pounds. The study examined the problems of production and marketing of oilseed crops, which lies in the lack of adoption of technological packages due to the presence of some obstacles, such as the high cost of implementation and the lack of improved seeds and lack of marketing information and offers crop for many diseases and pests. As for the means of the development of oil crops depend on the expansion of the cultivation of certain oil crops in the new lands until it exceeded from the circle of the competition of individual crops in addition to the organizing of the local marketing.

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**Introduction**

Oil crops are considered the main source of food for vegetable oils used in human food and in some food industries, it is also representing the secondary output (gain) including diet importance for animals and poultry, due to the importance that the vegetable oil is a good source of energy. Plant oils which are used in some industries supplying materials for manufacturing of margarine, paints, cosmetics and some medical industries.Vegetable oils contain the essential amino acids necessary for the human body and that the body can not configure inside and also considered the most important vegetable oils from the food industry in Egypt. Despite the importance of oil crops, the domestic production is not enough to meet the increasing demand for consumption, which led to the increasing gap in the production of vegetable oils; and moving toward increasing year after year due to increased demand, which is due to the steady increase in population with a lack of production, including the direction of consumers towards increased consumption of oils because they contain a small percentage of cholesterol due to increased health awareness.

**Problem of the study**:

The problem with vegetable oils in the imbalance between demand and supply them, Egypt achieved rate of self-sufficiency from vegetable oils amounts to about 54% in 2002, and took this rate to decline to about approximately 20% in 2010, and this increasing deficit in the ability of local production of vegetable oils to meet the food requirements of the consumer is one of the important things that occupy policymakers productivity related to food security.

**Objective of the study:**

The study aimed to the current situation of the most important oilseed crops in Egypt, (sunflower - soybean - peanut - sesame - cotton) during the period (1995-2010) through the study of the evolution of indicators for production of those crops (acreage, productivity and total production) in addition to the study the extent of stability in these indicators for production, as well as the study of consumption and imports, marketing and identify the problems of production and marketing of oilseed crops and the possibility of the development of its production in Egypt.

**The method research and sources of data collection:**

Descriptive and quantitative analyses were used to estimate trend in overall time, and calculate the coefficient of instability of the productivity indices, were calculated coefficient of instability through the following equation:

Instability coefficient = ∑ N (Yh -^Yh ) / ^Yh x 100

Where Yh = actual value of the variable in the year h ^Yh = estimated value of the variable in the year h

h = 1-2 years of........... 15 and was achieved the optimum situation of the stability of indicators for production if the value of stability coefficient equal to zero.Increasing the value of this parameter from zero, it means there is a stability in the value of this indicator.

In this study was relied on data from published and unpublished, Ministry of Agriculture and Land Reclamation Ground and the Central Agency for Public Mobilization and Statistics and Statistical Yearbook and bulletins of consumption of goods.

**Research plan:**

To achieve the objectives of the study has addressed the current status of the most important crops of oilseed in Egypt and the domestic consumption of oilseeds and vegetable oils, and then study the evolution of the quantity of imports of oilseeds and vegetable oils during the study period (1995 - 2010) and then dealt with the problems of production and marketing of oilseed crops and the possibility of development in Egypt.

**Research results:**

**First: the evolution of space, the productivity, and the production of oilseed crops under study: -**

Table (1) shows the study of evolution in the area and production of the most important oilseed crops under study during the period (1995-2010), the cotton seeds, sunflower, soybean, peanut and sesame, as shown in Table (2) the trend overall time for area and productivity. The production of these crops is evident from the following tables: -

**Table (1): The evolution of area and productivity of oilseed crops during the period (1995-2010)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **year** | **Sunflower** | | | **Soybean** | | | **Peanut** | | | **Sesame** | | | **Cotton seeds** | | | |  | **Area** | **Productivity** | **Production** | **reaa** | **Productivity** | **Production** | **Area** | **Productivity** | **Production** | **Area** | **Productivity** | **Production** | **Area** | **Productivity** | **Production** | | 1995  1996  1997  1998  1999  2000  2001  2002  2003  2004  2005  2006  2007  2008  2009  2010 | 74  54  26  33  44  28  46  37  32  46  32  46  28  30  32  35 | 0.9  .092  0.96  0.97  0.99  0.98  0.96  0.95  0.98  0.97  0.97  1  1.1  1.12  1.1  1.04 | 67  50  25  32  44  27  44  35  31  45  31  36  29  33.6  35.2  36.8 | 62  36  32  43  17  9.2  12.7  14.1  19.7  34.220.1  17.8  19  21  25  36 | **1.02**  1.1  1.1  1.11  1.14  1.17  1.25  1.45  1.27  1.29  1.29  1.27  1.38  1.39  1.41  1.19 | **63**  **40**  **35**  **47**  **19**  **10**  **15**  **18**  **29**  **43**  **26**  **23**  **26**  **29**  **39.1**  **43.2** | 106  104  103  104  141  144  151  141  147  144  148  132  155  146  153  158 | **1.23**  **1.21**  **1.23**  **1.28**  **1.28**  **1.3**  **1.36**  **1.35**  **1.33**  **1.33**  **1.35**  **1.39**  **1.41**  **1.43**  **1.4**  **1.2** | **130**  **126**  **125**  **133**  **180**  **187**  **205**  **190**  **196**  **192**  **200**  **184**  **218**  **209**  **170**  **202** | **72**  **75**  **67**  **52**  **65**  **72.4**  **67.9**  **72.8**  **71.5**  **69.6**  **66.9**  **73.4**  **75**  **66**  **75**  **87** | **0.45**  **0.49**  **0.5**  **0.5**  **0.5**  **0.51**  **0.51**  **0.51**  **0.51**  **0.53**  **0.55**  **0.55**  **0.56**  **0.56**  **0.55**  **0.53** | **32**  **37**  **34**  **26**  **33**  **37**  **35**  **37**  **36**  **37**  **37**  **41**  **42**  **37**  **41**  **46** | 710  920  859  **789**  **645**  **518**  **731**  **716**  **535**  **715**  **657**  **536**  **575**  **313**  **340**  **369** | 0.54  0.6  0.65  0.49  0.66  0.92  1.1  0.92  1.1  0.98  1.1  1.12  1.08  1.16  1.2  1.02 | **383**  **552**  **558**  **387**  **426**  **477**  **408**  **650**  **589**  **701**  **723**  **600**  **621**  **362**  **408**  **377** | | Mean | 35.1 | 0.99 | 37.5 | 26.17 | 1.2 | 31.5 | 136 | 1.3 | 177.9 | 70.5 | 0.52 | 34.6 | 620 | 0.91 | 446.7 | |

Area: - feddan. productivity: - tons / feddan. production: - thousand tons

Source: - Central Agency for Public Mobilization and Statistics, Statistical Yearbook - the number of sporadiction.

**Table (2): The equations of the general trend of the area, productivity and total production of oilseed crops during the study period (1995 - 2010).**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Yield | Statement | Equations general trend | R2 | F | T. calculated | Average period | Growth rate% |
| Sunflower | Area (feddan) | ^Yh= 51.792 - 1.35 Xh | 0.22 | 3.4 | (1.85) | 39.7 | 3.7 |
| Productivity (ton/fedd) | ^Yh = 1.03 + 1.67 Xh | 0.62 | 19.14 | 4.38\*\* | 0.98 | 1 |
| Production (ton) | Y= 47.5 - 1.34 Xh^ | 0.214 | 3.3 | (1.81) | 37.8 | 3.3 |
| Soybean | Area (feddan) | ^Yh = 40.36 - 1.9.72 Xh | 0.23 | 5.75 | 2.4\* | 25.6 | 7.6 |
| Productivity (ton/fedd) | Yh = 1.22 + 0.83 Xh^ | 0.79 | 44.2 | 6.65\*\* | 1.22 | 2.2 |
| Production (ton) | ^Y= 42.25 - 1.49 Xh | 0.19 | 2.76 | (1.66) | 30.2 | 4.9 |
| Peanut | Area (feddan) | ^Yh = 105.64 + 3.68 Xh | 0.6 | 17.88 | 4.2 \*\* | 133.2 | 2.8 |
| Productivity (ton/fedd) | ^Yh = 1.204 + 0.03 Xh | 0.9 | 112.8 | 16.6\*\* | 1.32 | 1.51 |
| Production (ton) | ^Yh = 129.52+ 6.84 Xh | 0.74 | 34.08 | 5.84\*\* | 176.8 | 3.9 |
| Sesame | Area (feddan) | ^Y= 57.89 + 0.24 Xh | 0.03 | 0.354 | (0.6) | 69 | 0.35 |
| Productivity (ton/fedd) | ^Yh = 0.789 + 0.19 Xh | 0.89 | 92.3 | 9.6\*\* | 0.25 | 2.8 |
| Production (ton) | ^Yh = 0.487+ 42.95 Xh | 0.44 | 9.3 | 3.04\*\* | 35.9 | 1.7 |
| Cotton seeds | Area (feddan) | ^Yh = 753.36 - 35.25 Xh | 0.54 | 13.89 | 3.73\*\* | 658 | 4.1 |
| Productivity (ton/fedd) | ^Yh = 0.78 0 + 0.06 Xh | 0.8 | 47.1 | 6.86\*\* | 0.89 | 5.6 |
| Production (ton) | ^Yh = 352.5+956 Xh | 0.102 | 1.36 | (1.17) | 559.5 | 1.9 |

yh ^ = estimated value of space and productivity and total production in the year

Xh = time element in the year () is not significant

\* Significant at the level of 5% \*\* significant at the level of 1%

Source: calculated and collected in Table (1)

**Table (3): The coefficients for each of the instability of the area, productivity and total production of the most important oilseed crops during the study period (1995 - 2010).**

|  |  |  |  |
| --- | --- | --- | --- |
| Yield | Area (%) | Productivity (%) | Production (%) |
| Sunflower | 31 | 21 | 1 |
| Soybean | 62 | 3 | 1.3 |
| Peanut | 7.4 | 28.4 | 0.3 |
| Sesame | 0.2 | 1.8 | 0.3 |
| Cotton seeds | 0.02 | 14 | 0.05 |

Source: calculated and collected from Table (1), (2).

**Sunflower crop: -**

The area decreased from 74 thousand feddans in 1995 to 35 thousand feddans in 2010 had taken this decline in volatility during the study period, reaching below 1996, including an estimated 54 thousand feddans As for productivity per feddan, had tended to increase during the same period was kept to a minimum about 0.9 ton / fedd. in 1995 and capped at about 1.12 ton / fedd. in 2009, an increase of about 24.4% from what it was in 1995.Table (1) showed that a marked decrease in the total production of sunflower during the study period, dropping from 67 thousand tons in 1995 to about 36.8 thousand tons in 2010 by a decrease of about 50%. By studying the trend overall time for each of the area, productivity and production of sunflower crop was observed a direction of each of the area and the total production to decline at an annual rate decreased by an annual rate of about 3.7 %, 3.3 %, respectively, but that this decline is uncertain of destination statistical. This means that estimates of area and total production of sunflower revolves around the arithmetic average which indicates that all of area and production of the crop was not affected nearly by factors, which reflects the impact of the time element, but it was noted that productivity per feddan for this crop took a general trend increased during the same period, an increase of about 1 % and that this increase is certain of the destination at the statistical level of significance 0.01.

**Soybean crop:**

The area decreased of 62 thousand feddans in 1995 to 36 thousand feddans in 2010 which had taken this decline in volatility during the study period, reaching below the year 2000, including an estimated 9.2 thousand feddans and no later than 1998, including an estimated 43 thousand feddans. As for productivity per feddan has tended to increase during the same period amounted to about 1.02 ton / fedd in 1995 to about 1.41 ton / fedd in 2009, an increase of about 35.3% from what it was in 1995. Table (1) shows the significant decrease in the total production of soybean during the study period, dropping from 63 thousand ton in 1995 to about 43 thousand tons in 2010.

Table (2) shows the area and production of soybean decreasing annually at an annual rate significant statistically amounted to about 7.6% and 4.9%, respectively, at 0.05 and that of the average area, which is about 26.17 thousand feddans and an average production of about 31 thousand tons while production had tended to increase at a rate of statistically significant annual growth estimated at 2.2% per annum.

**Peanut crop:**

The area of peanut has fluctuated, reaching in 1995 an estimated 106 thousand feddans and reached a maximum in 2010 by about 202 thousand feddans, an increase of about 52.4% and reached its lowest value of 170 thousand feddans. Studying the trend overall time for each of the area, productivity and production of peanut crop during the period (1995 -2010),it was observed the direction of area to grow annually at a rate of annual growth of significant statistically amounted to about 2.8% of the average area of 136 thousand feddans, 1.5 ton / fedd. of average productivity per feddan, which amounted to about 1.3 ton/fedd., 3.9% ton / fedd.,with an average production of about 177.9 thousand tons.

**Sesame crop:**

Table (1and 2) show that the area of sesame had wiggled between the increase and decrease as it became clear that the values ​​of the area revolves around the arithmetic average of a 70.5 thousand feddans during the study period where the area was 72 thousand feddans in 1995 and reached a maximum in 2010, including an estimated 87 thousand feddans. This has led to the volatility that the equation of the trend overall time for the area of sesame has taken an increasing trend, but not statistically significant because most of the values ​​revolve around the mean. As for productivity per feddan of sesame crop has increased from 0.45 ton / fedd. in 1995 to 0.53 tons in 2010 by an increase of around 11.7% were taken productivity per feddan general trend increasing and significant statistically significant at the level of significance 0.01 and the annual growth rate of approximately 2.8% of the average productivity per feddan during the study period, which is 0.52 ton / fedd., and for the total production of crop has taken a general trend increasing and significant statistically at the level of significance 0.01 and an annual growth rate estimated at 1.7% of the average total production during the study period and amounting to about 34.6 thousand tons.

**Cotton crop:**

Area was fluctuated where cotton was low 1995 and estimated at about 710 thousand feddans and reached the maximum in 1996 by about 920 thousand feddans and reached its lowest value of 313 thousand feddans have overall average for the area during the study period, 620 thousand feddans, and by studying the time trend for each year of the area, productivity and production of cotton crop area observed trend was decreasing annually at a rate of diminishing annual rate of about 4.1% at the 0.05 level of significance of the average area during the study period. Increased productivity per feddan where amounted to about 0.54 tons/fedd. in 1995 and reached a maximum of 1.2 ton / fedd. in 2009 and by studying the trend overall time for the production of cotton crop, it has taken a general trend growing and uncertain statistically significant at the level of significance 0.01 and the annual growth rate of about 5.6% of the average productivity per feddan during the study period, amounting to about 0.91 ton/fed. The fluctuation of the total production of cotton crop during the study period between increase and decrease, but it took a general trend increasing and that this increase is not significant statistically.

**2 – coefficient instability of the productivity indicators for oilseed crops under study: -**

Table (3) shows that the instability indicators for each of the area, the productivity and production of crops, sunflower, soybean, peanut, sesame, cotton, where it was found that the area of ​​each of the cotton and peanut more stable than the area of ​​sunflower and soybean where the coefficients of stability were (0.02%, 0.2%, 7.4% 0.31% 0.62%), respectively. For productivity per feddan has been observed the instability of productivity per feddan but the sesame more stable in productivity per feddan for the rest of the crops under study where the coefficient of stability was 1.8, followed by all of the soybean and cotton where the coefficients of stability were (3% 0.14%), respectively, compared to sunflower and peanut crops where the coefficient of stability was (21%, 28.4%) respectively. For the production is considered the cotton crop is more stable than the rest of the oil crops where the coefficient of stability for the production was 0:05 followed by sesame and peanut where the coefficient of stability was 0.3% for each, compared to the crops of sunflower and soybean where the coefficient of stability for each was 1%, 1.2%, respectively, and it is clear that sesame is ranked the first in terms of the stability indicators for production, followed by cotton crop, then peanut, sunflower and finally soybean.

**Second: - The domestic consumption of oilseeds and plant oils: -**

**1 - domestic consumption of oilseeds: -**

The consumption of oilseeds is directly or by seeds or used oils after drawn in human food also are consumed in animal feed, this can be seen from Table (4), the fluctuation of the total human consumption of oilseeds during the study period (1995-2010) was from a minimum 119 thousand tons in 1998 and a maximum of 2010, including an estimated 291 thousand tons, has reached the annual average about 212.6 thousand tons during the study period, and for the average consumption of capita per year has ranged from a minimum 3 kg / year in 2006 and a maximum of around 3.9 in 2010, while the average annual approximately 3.7 kg / year during the study period.

The data also indicate the quantity consumed of oilseeds locally produced or imported in the industry during the study period stood alone near about 477 thousand tons in 1995 and have been increasing until it reached its limit, including an estimated 1599 tons in 2010, while the average annual about 915.1 thousand tons during the study period, while the amount of seeds used has been shown a fluctuating quantity between increases and decreases.

**Table (4) The end-uses of oilseeds in Egypt in thousand tonDuring the period (1995 - 2010).**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | Human consumption | | Industry (2) | Seeds (3) | Wastage (4) | Total consumption (1+2+3+4) |
| Total(1) | Per capita / year kg |
| 1995  1996  1997  1998  1999  2000  2001  2002  2003  2004  2005  2006  2007  2008  2009  2010 | 231  203  204  119  127  138  174  181  260  243  234  216  247  260  275  291 | 3.9  3.4  3.4  3.2  3.5  3.6  3.7  3.7  3.8  3.5  3.3  3  3.4  3.4  3.5  3.9 | 477  551  686  630  676  692  682  711  650  751  1007  1007  1468  1500  1556  1559 | 29  38  37  41  39  36  48  44  28  27  25  25  25  23  25  26 | 10  12  12  13  14  15  16  14  17  19  26  26  40  42  45  48 | 747  804  939  803  856  881  920  95  955  1040  1292  1274  1780  1825  1901  1964 |
| Mean | 212.06 | 3.7 | 915.1 | 32.2 | 23.06 | 1080.08 |

Source: 1 - Ministry of Agriculture - Economic Affairs Sector, General Administration of economic resources – Bulletin of food balance of Arab Republic of Egypt, different numbers.

**2 - Central Agency for Public Mobilization and Statistics, Statistical Yearbook - different numbers.**

**Table (5) The evolution of the amount of consumption of liquid vegetable oils and margarine and self-sufficiency rate in thousand tons during the period (1995-2010).**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **year** | **soybean** | **Cotton seed and sunflower** | **Corn oil** | **Palm oil** | **Margarine** | **Other Oils** | **Total (1)** | **Per capita per year / kg** | **Industry (2(** | **Total consumption (1 +2(3)** | **Total domestic prodution (4(** | **Self-sufficiency rate (4 /) 3X 100** |
| 1995  1996  1997  1998  1999  2000  2001  2002  2003  2004  2005  2006  2007  2008  2009  2010 | 97  141  58  115  98  60  63  64  20  20  15  20  23  24  25  27 | 329  304  466  256  308  372  289  284  234  232  154  159  180  185  190  197 | 19  23  22  23  19  27  25  31  40  43  40  41  42  45  47  50 | 203  245  248  208  218  220  223  241  410  772  989  907  950  967  984  995 | 102  113  190  210  275  307  304  258  243  421  310  331  380  395  406  427 | 74  80  43  9  65  54  43  61  56  49  78  70  75  78  82  87 | 824  906  1027  821  983  1040  947  889  1003  1637  1586  1528  1650  1694  1714  1783 | 10.4  11.1  8.2  5.6  4.2  7.1  7.1  6.9  10.2  14.0  16.6  15.6  15  16  17  18 | 76  76  74  92  96  95  98  102  111  98  114  116  120  125  132  139 | 900  982  1101  913  1079  1135  1045  991  1114  1735  1700  1644  1770  1819  1846  1922 | 364  382  388  397  420  450  480  535  520  501  323  378  390  396  395  398 | 40  39  35  43  39  39  46  54  47  29  19  23  22  21.7  21.3  20.2 |
| Mean | 23.1 | 264.9 | 33.5 | 554.3 | 292 | 62.7 | 1201.3 | 11.36 | 104 | 1356 | 419.2 | 33.6 |

Source: 1 - Ministry of Agriculture - Economic Affairs Sector, General Administration of economic resources - Bulletin balance of food to Arab Republic of Egypt, the number of sporadic.

**2 - Central Agency for Public Mobilization and Statistics, Bulletin of annual consumption of goods - different numbers.**

**Table (6) The evolution of the quantity and value of imported oilseeds during the period (1995 - 2010). Quantity / thousand tons, Value / million pounds**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **Soybean** | | **Sesame** | | **Flax seeds** | | **Peanut** | | **Sunflower seeds** | | **Cotton seeds** | | **Other oil seeds** | | **Total** | | **Total value of imports** | **Percentage**  **Of the value of imports** |
| **Quantity** | **Value** | **Quantity** | **Value** | **Quantity** | **Value** | **Quantity** | **Value** | **Quantity** | **Value** | **Quantity** | **Value** | **Quantity** | **Value** | **Quantity** | **Value** |
| 1995  1996  1997  1998  1999  2000  2001  2002  2003  2004  2005  2006  2007  2008  2009  2010 | 55  124  140  115  85  212  350  322  132  215  574  572  1126  960  650  480 | 48  129  145  108  75  162  316  322  211  400  1122  926  2409  2250  3040  3873 | 25  39  46  38  45  92  69  50  39  27  11  13  9  10.5  11.8  13.7 | 126  152  152  112  125  167  227  186  145  147  59  71  49  65  99.5  114 | 5  6  24  18  19  53  11  25  21  3  13  18  3  2.5  1.7  1.5 | 6  7  72  20  18  42  11  37  45  69  36  37  7  17.5  18.5  34 | -  0.526  0.438  2  34  -  0.168  0.03  0.32  0.035  0.133  0.187  0.123  0.19  1.9  4.5 | -  0.703  0.546  3  0.195  -  0.871  0.245  0.364  0.179  0.544  0.47  0.876  1.5  2.2  3.9 | 14  21  4  2  3  -  11  0.001  -  10  0.074  0.002  0.099  0.12  0.18  0.24 | 34  21  6  2  5  -  9  0.39  -  20  0.24  0.19  0.53  0.62  0.95  2.4 | -  -  -  -  -  -  -  -  -  -  -  0.06  0.03  0.04  0.04  0.05 | -  -  -  -  -  -  -  -  -  -  -  0.04  0.03  0.04  0.06  0.07 | 0.73  0.33  0.36  0.24  0.71  0.08  0.13  0.32  0.35  0.59  30  13  31  18  15  13 | 0.27  1.38  0.12  0.46  1.81  0.49  0.71  3  2  4  56  23  80  95  123  142 | 110  191  215  177  187  357  441  399  192  256  628  617  1178  991  680  512 | 224  310  375  247  225  371  564  549  403  577  1274  1067  2547  2429  3284  4069 | 39884  44219  44884  56025  54399  48645  50660  56480  65082  76718  114687  118373  152587  287767  249964  300344 | **0.60**  **0.7**  **0.8**  **0.4**  **0.4**  **0.8**  **0.01**  **1**  **0.6**  **0.72**  **1.1**  **0.9**  **1.7**  **0.84**  **1.3**  **1.4** |
| Mean | 569.5 | 962.8 | 33.6 | 124.8 | 14.1 | 29.8 | 2.8 | 0.97 | 4.1 | 6.3 | 0.045 | 0.053 | 7.7 | 33.3 | 445 | 1157 | 110044 | 0.83 |

Source: - Central Agency for Public Mobilization and Statistics, Statistical Yearbook, Bulletin of Foreign Trade, different numbers.

**Table (7) The evolution of the quantity and value of imports of oilseeds group oils and margarine during the period (1995 -2011). Quantity / thousand tons, Value / million pounds**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Year | Oil palm | | Sunflower oil | | Soybean oil | | Corn oil | | Cotton seeds oil | | Olive oil | | Flax seeds oil | | Margarine | | Other oils | | Total | | Percentage  Of the value of imports | | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value | | 1995  1996  1997  1998  1999  2000  2001  2002  2003  2004  2005  2006  2007  2008  2009  2010  2011 | 249  272  309  300  215  262  210  143  17  618  754  957  261  277  283  275  153 | 557  558  608  646  415  358  202  286  36  1252  1548  1912  742  950  1020  966  1612 | 172  225  324  163  180  81  54  26  123  115  116  127  151  160  172  182  201 | 408  475  637  360  364  129  105  80  417  449  453  451  630  720  789  945  1039 | 81  106  34  97  149  239  180  156  107  92  88  45  96  107  112  125  239 | 178  223  63  231  290  336  283  350  340  245  289  340  394  430  465  492  718 | 14  10  11  15  7  9  11  11  13  14  43  15  16  17  18  20  14 | 26  25  27  36  22  22  22  32  51  63  82  50  82  95  110  130  126 | 96  21  10  4  8  4  1  -  -  2.6  6  2  4  5  7  8 | 211  45  0.80  23  7  15  9  2.3  -  -  4  21  8.4  9.1  10.2  12.8  14 | 0.35  0.27  0.66  0.40  0.62  0.13  0.54  0.22  0.25  2  0.23  0.39  0.54  0.57  0.60  0.65  0.33 | 2.5  4  4  3  5  5  4  3  2  8  3.7  6  8  9  11  13  56 | 5.5  6  5  9  8  4  5  2  2.5  1  1.8  -  1  1.5  1.8  1.9  1.7 | 10  13  9  19  16  6  9  7  8  4  9  -  5  6  7  8  15 | 11  13  8  20  15  6  4  0.7  0.8  2  11  7  7  7.5  8  9  13 | 25  29  20  41  21  17  9  2  4.4  17  58  34  42  43  45  48  163 | 111  142  71  97  61  45  7  7  2  23  54  43  21  23  25  28  16 | 195  295  162  270  140  83  15  14  6  76  150  103  82  95  102  107  165 | 739  797  762  711  640  655  475  249  265  878  1070  1205  556  597  625  648  646 | 1611  1666  1522  1629  1289  970  657  777  865  2215  2598  2740  1992  2357  2559  2721  3908 | 4  3.8  3.4  2.9  2.4  2  1.3  1.4  1.3  2.8  2.3  2.3  1.3  0.8  1.1  0.9  1.4 | | Mewn | 273 | 715 | 144 | 497.1 | 145 | 301 | 15.2 | 58.9 | 10.5 | 23.1 | 0.56 | 8.6 | 3.4 | 8.9 | 8.8 | 36.3 | 45.6 | 112 | 676 | 1886.6 | 4.1 | |

Source: - Central Agency for Public Mobilization and Statistics, Statistical Yearbook, Bulletin of Foreign Trade, different numbers.

**2 - domestic consumption of vegetable oils: -**

Table (5) shows that the contribution of vegetable oils, both domestic or imported product in terms of domestic consumption increased from about 824 thousand tons in 1995 to about 1783 thousand tons in 2010,by an increase of about 46.2%, while the average per capita in the year amounted to about 10.4 kg / year in 1995.It has been taken in terms of the decline was the smallest since the year 1999 is estimated at 4.2 kg / year and reached its maximum about 18 kg / year with an average of about 11.36 kg / year during the study period. The amount consumed from vegetable oils used in the industrial products has increased from about 76 thousand tons in 1995 to about 129 thousand ton in 2006, an increase of about 55% and an average estimated at about 104 thousand tons during the study period, the data show the table that the domestic production of vegetable oils has failed to meet the local needs of vegetable oils during the study period (1995 -2010), where the self-sufficiency rate ranged between a maximum of 54% in 2002 and a minimum of 19% in 2005 with an average of about 33.6 during the study period.

**Thirdly - the evolution of imports of oilseeds, vegetable oils and costs by Egyptian Pound: -**

**1- The evolution of the quantity and value of imports of oilseeds: -**

Table ( 5 ) shows that the inability of domestic production of oilseeds and vegetable oils to cover the demand, and thus increasing the need to import them, leading to the increasing burden on the balance of payments, which can be seen from Table ( 6) that the soybean crop came as the first for the quantities imported from oilseeds, followed by sesame and linseed has ranged total imported quantities of oilseeds during the study period (1995 -2010) from a minimum of around 110 thousand ton in 1995 and a maximum of around 1178 thousand ton in 2007, and for the cost of imported amounted kept to a minimum in 1995 about 224 million pounds alone in 2010, including an estimated 4069 million pounds and an average of about 1157 million pounds during the study period. The proportion of imported oilseeds estimated 0.83% of the total value of Egyptian imports, which amounted to 110.04 billion pounds annual average during the study period.

**2 - The evolution of the quantity and value of imports of vegetable oils and margarine: -**

Table (7) shows that palm oil is ranked the first in terms of value and quantity, followed by sunflower, and soybean, cotton seeds, corn, and other oils in terms of the relative importance of imported vegetable oils, has reached a total value of oil imports, with an estimated 657 million pounds and its maximum in 2010, with an estimated 3908 million pounds, representing the portion of imported oils which is estimated at about 4.1% of the total value of Egyptian imports during the study period.

**Fourth: - problems of production and marketing of oilseed crops: -**

Low acreage oilseeds crops, is due to several reasons, including: -

1 - self-sufficiency in oil output of the cottonseeds oil crops with other crops, delusion for cotton cultivation for several years.

2 - competition between oil crops and the major crops of strategic importance such as rice, maize and vegetable crops, especially in the old lands.

3 - the lack of profitability of some oil crops as compared with some other crops.

4 - Non-availability of extracting oil from the seeds of some oil crops such as sunflower seeds that need private transactions in addition to the cancellation of the contract on the receipt of these crops with factories.

5 - Non-availability of good varieties of these crops.

**The problems of production and marketing of oilseed crops: -**

The high cost of the application of technological packages, which stand in the way before the application, and the inadequacy of new strains improved to meet the demand or lack of time availability and high price, making farmers resort to commercial varieties with high mixing ratio as well as the lack of agricultural extension interested in this area and the lack of information. In addition to the marketing exposure for many oil crops from pests and diseases affecting the productivity of the crop.

**Recommendations of the study: -**

- The need for the development of oilseed crops in terms of cultivating in the new land, which does not make them compete with traditional crops in the territory of Valley and Delta, such as the successful cultivation of peanut in sandy soil and the successful cultivation of sesame in sandy soil, as well as the success of cultivating sunflower in calcareous soils and clay, and as a result of favorable weather conditions of Egypt, help on the success of the cultivation of these crops with higher productivity.

- The attention of the Ministry of Agriculture to produce new varieties of oil crops and to supply farmers,the private sector can contribute in solving the problems of concentrated feed after the crush of seeds and thus compensate the large gap in the feed, which is considered the first cause of the problems of meat production in Egypt.

- Effective regulation of domestic marketing to ensure product delivery delay farmers the price at the right time, the output by contracting between farmers and cooperatives, and the agency responsible for marketing and extraction plants.

- To find places to store the product to control the quality attributes, as well as reduce the cost of transport to the extraction factories, linking local prices to international prices to compensate farmers for escaped price by establishing a fund to offset oilseed prices through a tax on imported oilseeds and vegetable oils.

**Conclusion:**

Vegetable oils represent main source of edible oils can be used in human food and in some industries as a gain output of them in a bush important food for animals and poultry. The problem of the study, the Republic of Egypt suffer a large deficit in the production of vegetable oils, the need for national consumption, as Egypt imports of vegetable oils about 676 thousand tons per year as an average during the period (1995-2010), which costs the state about 1.9 billion pounds a year is expected to increase the burden on the state budget in the coming years as a result of the increasing in population and the lack of production from oil crops. The fluctuation of area and production of oilseed crops under study (sunflower, soybean, peanut, sesame, cotton) between increases and decreases. The area of ​​each of sunflower, soybean and cottonseed has taken a general trend decreasing and statistically significant, while it took the area of ​​each of peanut and sesame a general trend for increasing the productivity of the crops per feddan, study has taken all general trend growing and statistically significant except for the sesame crop productivity increased at a rate of non-statistically significance, as for the contribution of vegetable oils, both from the domestic product or imported in domestic consumption has increased from about 824 thousand tons in 1995 to about 1783 thousand tons in 2010 and an average annual rate of about 1201 tons, and the average per capita per year of vegetable oils has reached a minimum of about 4.2 kgs / year in 1999 and a maximum of about 18 kgs / year in 2010 with an average annual rate of about 11.3 kgs / year during the study period, and that the self-sufficiency rate ranged from a low of 19% in 2005 and a maximum of 54% in 2002.The imported vegetable oils has a significant portion of the total Egyptian imports ranged from a minimum of 1.3% during the years 2001.2003, 2007, and a maximum of around 4% in 1995 and ranged from the cost of imports, about 1.6 billion pounds, and in 2010 was the increase 1.4% at a cost estimated about 3.9 billion pounds. The study examined the problems of production and marketing of oilseed crops, which lies in the lack of adoption of technological packages due to the presence of some obstacles, such as the high cost of implementation, lack of improved seeds and lack of marketing information, and offers crop for many diseases and pests, and as for the means of the development of oil crops depend on the expansion in the cultivation of some oil crops in the new lands until the graduation from the department of competition of traditional crops as well as local marketing organization.

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