

## **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 2001-2003 and 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:

$$\text{Instability coefficient} = \sum N (Y_h - \bar{Y_h}) / \bar{Y_h} \times 100$$

Where  $Y_h$  = actual value of the variable in the year  $h$

$\bar{Y_h}$  = 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)**

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

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).**

Growth rate%	Average period	T. calculated	F	R <sup>2</sup>	Equations general trend	Statement	Yield
3.7	39.7	(1.85)	3.4	0.22	$\hat{Y}_h = 51.792 - 1.35 X_h$	Area (feddan)	Sunflower
1	0.98	4.38**	19.14	0.62	$\hat{Y}_h = 1.03 + 1.67 X_h$	Productivity (ton/fedd)	
3.3	37.8	(1.81)	3.3	0.214	$Y = 47.5 - 1.34 X_h$	Production (ton)	
7.6	25.6	2.4*	5.75	0.23	$\hat{Y}_h = 40.36 - 1.9.72 X_h$	Area (feddan)	Soybean
2.2	1.22	6.65**	44.2	0.79	$Y_h = 1.22 + 0.83 X_h$	Productivity (ton/fedd)	
4.9	30.2	(1.66)	2.76	0.19	$\hat{Y} = 42.25 - 1.49 X_h$	Production (ton)	
2.8	133.2	4.2 **	17.88	0.6	$\hat{Y}_h = 105.64 + 3.68 X_h$	Area (feddan)	Peanut
1.51	1.32	16.6**	112.8	0.9	$\hat{Y}_h = 1.204 + 0.03 X_h$	Productivity (ton/fedd)	
3.9	176.8	5.84**	34.08	0.74	$\hat{Y}_h = 129.52 + 6.84 X_h$	Production (ton)	
0.35	69	(0.6)	0.354	0.03	$\hat{Y} = 57.89 + 0.24 X_h$	Area (feddan)	Sesame
2.8	0.25	9.6**	92.3	0.89	$\hat{Y}_h = 0.789 + 0.19 X_h$	Productivity (ton/fedd)	
1.7	35.9	3.04**	9.3	0.44	$\hat{Y}_h = 0.487 + 42.95 X_h$	Production (ton)	
4.1	658	3.73**	13.89	0.54	$\hat{Y}_h = 753.36 - 35.25 X_h$	Area (feddan)	Cotton seeds
5.6	0.89	6.86**	47.1	0.8	$\hat{Y}_h = 0.780 + 0.06 X_h$	Productivity (ton/fedd)	
1.9	559.5	(1.17)	1.36	0.102	$\hat{Y}_h = 352.5 + 956 X_h$	Production (ton)	

$\hat{y}_h$  = estimated value of space and productivity and total production in the year

$X_h$  = 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 (1 and 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 ton During the period (1995 - 2010).**

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

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).**

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

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**

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

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**

Percentage Of the value of imports	Total		Other oils		Margarine		Flax seeds oil		Olive oil		Cotton seeds oil		Corn oil		Soybean oil		Sunflower oil		Oil palm		Year
	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	
4	1611	739	195	111	25	11	10	5.5	2.5	0.35	211	96	26	14	178	81	408	172	557	284	1995
3.8	1666	797	295	142	29	13	13	6	4	0.27	45	21	25	10	223	106	475	225	558	272	1996
3.4	1522	762	162	71	20	8	9	5	4	0.66	0.80	23	10	11	63	34	637	324	608	309	1997
2.9	1629	711	270	97	41	20	19	9	3	0.40	23	10	27	15	231	97	360	163	646	300	1998
2.4	1289	640	140	61	21	15	16	8	5	0.62	7	4	22	7	290	149	364	180	415	215	1999
2	970	655	83	45	17	6	6	4	5	0.13	15	8	22	9	336	239	129	81	358	262	2000
1.3	657	475	15	7	9	4	9	5	4	0.54	9	4	22	11	283	180	105	54	202	210	2001
1.4	777	249	14	7	2	0.7	7	2	3	0.22	2.3	1	32	11	350	156	80	26	286	143	2002
1.3	865	265	6	2	4.4	0.8	8	2.5	2	0.25	-	-	51	13	340	107	123	36	17	17	2003
2.8	2215	878	76	23	17	2	4	1	8	2	-	-	63	14	245	92	449	115	1252	618	2004
2.3	2598	1070	150	54	58	11	9	1.8	3.7	0.23	4	2.6	82	43	289	88	453	116	1548	754	2005
2.3	2740	1205	103	43	34	7	-	-	6	0.39	21	6	50	15	340	45	451	127	1912	957	2006
1.3	1992	556	82	21	42	7	5	1	8	0.54	8.4	2	82	16	394	96	630	151	742	261	2007
0.8	2357	597	95	23	43	7.5	6	1.5	9	0.57	9.1	4	95	17	430	107	720	160	950	277	2008
1.1	2559	625	102	25	45	8	7	1.8	11	0.60	10.2	5	110	18	465	112	789	172	1020	263	2009
0.9	2721	648	107	28	48	9	8	1.9	13	0.65	12.8	7	130	20	492	125	945	182	966	275	2010
1.4	3908	646	165	16	163	13	15	1.7	56	0.33	14	8	126	14	718	239	1039	201	1612	153	2011
4.1	1886.6	676	112	45.6	36.3	8.8	8.9	3.4	8.6	0.56	23.1	10.5	58.9	15.2	301	145	497.1	144	715	273	Mewn

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 tons 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 tons in 1995 and a maximum of around 1178 thousand tons 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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