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Problems Selecting a Cotton Variety Mix for EGYPT

Report No. 93

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Executive Summary

Egypt has at present about a dozen commercial cotton varieties developed specifically for its growing conditions. These varieties are aimed at satisfying both the export market for long-staple cotton, as well as the ordinary domestic market.

Each Egyptian cotton variety has unique agronomic requirements and fibre characteristics. For every major agricultural region, cotton breeders have developed varieties that perform best under their specific soil, water, and meteorological conditions. The overall aim of this study is to identify the most promising varieties for the immediate future, in the light of those agronomic and fibre properties and the markets in which they are sold.

There are two major types of decisions that Egyptian cotton authorities make every year, namely assigning areas for each variety to plant the following season, and setting prices for each variety at harvest time. For brevity's sake we refer to these as the variety mix and the pricing decisions, respectively. Though these two decisions are taken independently of each other, they should in fact be part of a unified strategy.

This report is primarily concerned with the variety mix decision. Ministry of Agriculture cotton authorities required two types of information for this purpose: what yields to expect from each variety in each Governorate; estimates of what prices to expect for each variety in the coming year. Other secondary considerations affecting the variety mix decision are also present, such as the availability of good quality seed of each variety and breeders' commitments to expand areas for varieties recently developed.

Given expected prices and yields it becomes possible to assign variety areas to Governorates in such a way as to generate the maximum national revenue from cotton production. A table of variety areas to be planted in each Governorate is issued by decree every year by the Ministry of Agriculture and Land Reclamation.

A spreadsheet program has been designed to search for the best variety mix, for a given set of variety yields and variety prices. The best variety

mix for farmers is one that generates the highest farm revenue from cotton. Using this program we have explored the relative strength of varieties in terms of how often and in what proportion they appear in the best variety mix under a wide range of market conditions. There are alternative ways of defining the "best mix." For example, the mix that maximizes export earnings of lint cotton, or that generates the largest income for domestic spinners. But, since the decision is being made on behalf of farmers, the obvious criteria should be farmer's income.

Before a variety is introduced in a Governorate on a commercial basis, it is thoroughly tested by the Cotton Research Institute, the agency of the Ministry of Agriculture responsible for cotton breeding and development. Experimental yield data from experiment-station trials over several seasons are the bases for the Ministry to decide to try a variety on farmers' fields. But, oftentimes, the on-farm performance does not conform with experiment station trials.

Data on actual variety yields per governorate were obtained from official Ministry of Agriculture statistics on cotton production over the past decade. Those data are presented separately in Annex A to this report. For the purposes of this exercise, data for 1996/97 and 1997/98 crop seasons were combined to arrive at expected average yields for each of the main varieties in each governorate.

Current export prices for each variety were used in the analysis. Ideally, the variety mix should be selected on the basis of expected prices next year. No such price forecasts are available for cotton. However, the program can determine the best variety mix under a wide range of possible prices for different varieties.

Results from the variety mix program were obtained for possible situations with total national cotton area set at 700, 800, and 900 thousand feddans. The baseline areas for each Governorate were the averages for the 1996 and 1997, plus or minus an arbitrary percentage change that was set ranging from 100 to zero percent.

In the initial results of the variety mix program we found that Giza-75 enters very strongly, even at the current price of 96 c/lb which is below the 102 c/lb of Giza-86. This result reflects the fact that Giza-75 has had consistent good performance in several governorates over the years. From the perspective of spinners Giza-75 is very user-friendly.

Unfortunately, cotton authorities stopped production of Giza-75 in 1998, and there is no longer seed available for commercial planting. At that time there were huge stocks of unsold Giza-75 that cotton officials attributed to genetic deterioration of the variety rather than to the high price demanded for it. (Later on, when prices were lowered, foreign and domestic spinners eagerly bought the remaining stocks).

To account for the loss of Giza-75, the variety mix program was also run with the additional restriction that area for that variety be kept at zero. Alternative best variety mix results without Giza-75 are also provided in the body of the report.

Two ELS varieties, Giza-70 and Giza-77 are among the most competitive that Egypt has to offer in terms of revenue to farmers. They both have good yields and good prices. Giza-70 in particular always enters the best variety mix under all postulated conditions. The dominance of Giza-70 and Giza-77 was restrained by a restriction imposed on the program keeping the combined area in ELS varieties to a maximum of 40 percent, otherwise it could be even higher. The total area in the country suitable for growing ELS cotton is probably about that much. The main reason for the strength of the position of Giza-70 and 77 is their high yield performance in governorates where growing conditions for ELS varieties are good.

Yields of Giza-70 and Giza-77 are superior to those of some LS varieties in several Governorates. Costs of production per kentar are therefore lower for these two ELS varieties. At the same time, fibre properties such as staple length and strength for both Giza-70 and Giza-77 are above those of Giza-86 and other LS varieties. As a result, cotton authorities have priced these two ELS varieties far above the prices of other LS varieties, even though their farm unit costs of production are lower.

The unfortunate result of high prices for Giza-70 and Giza-77 has been the accumulation of unsold stocks. This has led cotton authorities to reduce their production drastically in recent years: in 1999 Giza-77 was not produced at all, and the area of Giza-70 was severely curtailed. This limits the potential for expansion of these two varieties in the 2000/01 season.

Giza-86 is a variety with highly desirable fibre properties. But it makes modest appearances in the best variety mix solutions, and in many instances it does not enter at all. This disappointing result is attributed to the fact that Giza-86 yields in the two baseline years considered, 1996

and 1997, were modest in the Governorates where it was planted. Additional testing of growing Giza-86 in other Governorates might be required to identify where it can be grown commercially. (Unfortunately, the experience in 1998 might not be useful because performance of all cotton varieties in that year were affected by unfavorable weather and pest infestation).

Another promising variety, Giza-89, contributes small shares of the best variety mix when Giza-75 is not available, but fails to appear whenever Giza-75 is allowed. Yields of Giza-89 in relatively small areas in El-Gharbia and El-Menoufia were very favorable but further testing of this variety in other zones might be required before widespread expansion to other Governorates.

Performance of both Giza-86 and Giza-89 in experimental station trials is reportedly superior to most of the standard varieties. However, their yields under actual farm conditions have not yet lived up to expectations. Finding out what factors account for the gap between experimental trials and actual field output should be a priority.

At the lower end of the staple spectrum, three varieties with shorter staple length, Giza-85, Giza-80, and Giza-83 consistently appear among the best variety mix solutions. Despite lower prices of these varieties, their consistent high yields in the Governorates where they are grown, result in their inclusion in all best variety mix results. Limited expansion possibilities exist for Giza-80 and Giza-83 because they are only grown in Upper Egypt. Giza-85, on the other hand, offers good prospects for expansion in several of the Governorates where Giza-75 was cultivated before.

Roughly similar results to those described above emerged when prices of ELS varieties in the program were reduced by 10 percent, bringing them down to the levels of Giza-86. The dominance of Giza-70 and Giza-77 in most best variety mix results was repeated, even at prices equivalent to those of the top LS varieties.

The general conclusion that emerges from this analysis is that Egyptian cotton farmers should concentrate their efforts in growing one or at most two high-yielding ELS varieties – Giza-70 and Giza-77, and one to three high-yielding LS varieties – Giza-85, Giza-83, and Giza-80. Intermediate varieties designed to replace the legendary Giza-75 have yet to demonstrate that their performance in farmers' fields match the results in experimental station trials.

Chapter 1

INTRODUCTION

"What cotton varieties should Egyptian farmers grow?" The main motivation behind this report is to respond to this simple question.

Every year a special committee is set up by the agricultural authorities to respond to this question and to assemble all relevant information concerning the choice of variety decision. The Committee brings together representatives from all sectors with a stake on the issue, including among others, agronomists, breeding and pest control scientists, textile specialists, farmers cooperatives, exporters, ginning companies, public and private trading companies, spinning companies, the agricultural bank, textile industry consolidation fund, and spokesmen

Sometime around November of each year the Committee makes a tentative decision and invites general discussion from interested officials and representatives from industry and the private sector. After a series of discussions, recommendations are made to the Minister and a decree is issued on or about the following January announcing for each variety the specific districts and governorates and target surface areas where it will be grown. Seed distribution is done according to those decisions. Farmers in a given district can cultivate only the cotton variety specified in the Ministerial Decree. The target areas announced by the Ministry are mere estimates of what farmers decide, but in the past actual planted areas have come very close to the target figures.

Ideally, cotton farmers in each district should make the decision regarding which cotton variety to plant. Farmers in Egypt can decide how much area to plant to cotton, but the particular variety is mandated by the authorities, according to the district where the farm is located. A few farmers and cooperative representatives participate in the deliberations of the special committee charged with responsibility for assigning areas and zones to each cotton variety. However, final zoning decisions are made mainly high officials at the Ministry of Agriculture.

The Government cites a number of reasons why cotton authorities, not farmers, should make the critical varietal decisions. The main justification is that cotton fiber from several varieties should not be mixed. The textile industry and its equipment require a high degree of

homogeneity in the fiber they process in order to maintain strict product and quality specifications. Mixing of varieties at the gin would result in severe grading penalties and consequent fall in prices and income. Note, however, that spinners regularly blend cotton lint from different varieties and grades to produce yarn of the desired characteristics, but each component of the blend is well defined and standardized.

In countries and situations where a single farmer controls a sufficiently large cotton area, it is in his or her personal interest and responsibility to ensure that cotton from different varieties are grown, ginned, and stored separately. However, in Egypt most cotton farmers cultivate only a few feddans and kerats and it becomes impractical, if not impossible, to keep separate the output from each farmer. Moreover, a single ginning mill can process cotton from thousands of small farmers. The danger of mixing cotton of different varieties would increase if several varieties were cultivated side by side in the same area.

A second major reason for mandatory variety assignments is the danger of genetic contamination of cottonseed. Cotton planting in Egypt requires on average from 70 to 80 kg of seed per feddan, and each feddan produces about 500 kg of cottonseed. The ratio of seed requirement to total output is very high for cotton, compared to most other crops. As a result, a large proportion of the crop must be selected as seed for the following year. Were farmers allowed to cultivate several varieties side by side, the resulting cottonseed would be cross-pollinated and each variety would quickly lose its purity. In order to maintain seed purity from year to year, Government imposes the variety for each district, and assigns several neighboring districts to the same variety to ensure that stray pollen from other varieties do not mingle with flowers in fields designated for seed multiplication.

Other justifications advanced for mandatory varietal zoning is that the Government is the sole breeder of cotton varieties and therefore it knows in greater depth the relative characteristics and agronomic requirements for the best performance of each variety. In addition, the bulk of the Egyptian spinning industry is in public hands. Decisions on cotton varieties should be compatible with the demands and preferences of spinning mills and the Government has the best access to this information.

For these reasons, in Egypt the Government decides every year which districts are to be planted to each cotton variety. This paper takes this

situation as is, and attempts to examine the criteria used in reaching those decisions in a rigorous and quantitative basis.

Decisions regarding cotton variety selection are made mainly by officials at the Ministry of Agriculture and Land Reclamation – MALR. However, such decisions must take into account not only the agronomic characteristics of each variety, but also marketing aspects such as prices, and the local and international demand for lint with specific properties.

There are two distinct markets for Egyptian cotton, the international market and the domestic market. The long-staple type of cotton produced in Egypt has a specialized and relatively small international market, distinct from the market for ordinary short staple or upland cotton. It is an elite market, with great diversity of requirements. Egyptian cotton varieties are specially suited to produce fine count yarns, but are also highly appreciated to produce coarse yarns with very low twist and high strength and absorbency characteristics, much appreciated for towels and terry cloth robes.

At the same time, Egyptian cotton is used in the domestic market to produce ordinary fabrics for 60 million Egyptians. The domestic market requires coarse yarns and cloth for which the special features of Egyptian cotton are superfluous.

The rest of this report is organized into several sections corresponding to the information required by cotton authorities to make decisions concerning variety selection and acreage planted to each variety.

Chapter 2 presents the official record of yields obtained for each variety in most recent years, in each of the cotton growing Governorates. Chapter 3 brings together yield and price data in order to arrive at variety mixes that generate the most income for farmers. A spreadsheet program was designed to search for the best variety mix. Simulations using this program under a wide spectrum of market conditions allow us to identify varieties that offer farmers strong prospects for higher revenues.

Other alternative objectives could be postulated to select the best cotton variety mix. For example we could choose the varieties that generate the most employment, but that could lead to choosing varieties with low yields, or low prices. Spinners' income and job creation in the textile sector are also legitimate objectives, but that also might lead to producing only the varieties with the lowest prices. From the perspective of farmers, the subsequent uses of cotton beyond the gins is relevant only in

so far as they are reflected in the market prices for each variety. A separate paper will examine how spinners might choose among cotton varieties, given a known demand for yarns of various types, and the market prices for each variety.

Cotton is grown purely as a cash crop. In deciding how much cotton to grow and which varieties, Egyptian farmers seek to maximize their net income over costs, within the limits of their household's resources, experience, and attitudes towards risk. The variety mix program seeks to simulate or approximate the decisions farmers make regarding cotton varieties and areas planted. Maximization of income is a common criterion used by economists to derive realistic estimates of production adjustments in agriculture. For that reason, the variety mix program adopts farmers' income maximization as the driving force to decide what varieties to grow where.

The total area planted to cotton is closely linked to the area planted to other crops. Land in Egypt is cultivated year-round. Farmers have developed over the years crop rotation plans that allows them to take best advantage of winter, summer, and transition crops. Adjustments in crop rotations lag several years. Livestock and on-farm processing activities also affect use of farmers' resources. To be able to predict total areas planted to cotton it should be necessary to take into account other crops and rotation schedules, as well as livestock production in cotton growing governorates. The cotton variety mix program does not attempt to do that. Instead it takes the total cotton area in a particular year as a given, and assumes that cotton farmers across the nation make roughly similar adjustments.

Chapter 2

AREA, PRODUCTION AND YIELD OF COTTON VARIETIES IN EGYPT

The relative performance of cotton varieties in each growing region is the basic information that policy makers in the cotton sector must have, in order to make informed decisions regarding which areas to assign to each variety.

The Ministry of Agriculture compiles and publishes detailed data on the results of the cotton crop for each district (*markaz*) in each Governorate. Data includes area planted, variety or varieties, yield in seed kentars and lint kentars, and total production. These results are compiled from both extension agents and from ginning mills in each district. District level reports are aggregated first at the Governorate level and then nationally in Cairo. Preliminary figures are available around April for official purposes, and final figures become available to the general public sometime in June for the crop harvested in September and October of the previous year.

Annex 1 provides a complete data set of the official MALR results for the cotton crops 1990/91 to 1997/98. Official figures for 1998/99 have not yet been released as of June 1999. For purposes of this report only the last two years of complete data are used, namely 1996/97 and 1997/98. These two years enjoyed roughly average weather conditions and cotton yields are considered normal.

Weather in 1998/99 had a three-week hot spell when temperatures reached over 40 degrees Celsius, which resulted in exceptionally low cotton yields. The heat wave as well as a boll worm infestation resulted in cotton yields 30 percent below average, across the board for all varieties. Even if figures for 1998/99 were available, most cotton experts would view them as not representative of normal conditions. They can be set aside for purposes of making decisions based on expectations for future performance.

Tables 2-1, 2-2, and **2-3** present data on area, production, and yield, respectively, for the 1996/97 season, by variety and Governorate. Yields were obtained by dividing production figures obtained from ginning mills by the area planted to each variety in each Governorate. There is considerable variation in yields between different Governorates for the same variety. The same statistics are shown for the 1997/98 season in **Tables 2-4, 2-5, and 2-6.**

A composite of these data is presented in **Table 2-7,** where the combined 96/97 and 97/98 areas, production, and yields are given for every combination of varieties and Governorates. In each cell the top number is the area, the bottom figure is production and the middle number is the resulting yield. **Table 2-8** summarizes average yields for each variety in each Governorate where it was grown in 96/97 or 97/98.

One surprising finding from the 1996 tables is the high yields obtained by two ELS varieties, namely, 8.17 kentars/feddan for Giza 70 and 7.77 kentars/feddan for Giza 77. These yields are significantly higher than those for the two main LS varieties, namely, Giza-75 (7.08 kt/fd) and Giza-86 (7.13 kt/fd). This surprising result goes counter to the general pre-conception that ELS varieties have lower yields than LS varieties.

The highest yields are obtained by the two Upper-Egypt varieties, Giza 80 with 8.31 kt/fd and Giza 83 with 10.85 kt/fd. These two varieties have shorter staple than the average length for all LS varieties, and they are attractive to domestic spinners because of their lower prices and despite the presence of high percentages of trash.

Table 2-1. Areas Planted to Cotton in each Governorate, by variety. 1996. (feddans)

Giza variety >>>	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	Total
ALEXANDRIA		2,850		245				122				3,217
BEHEIRA	747	99,697	14,978		54,608					340		170,370
GHARBIA	55			8,194	70,863							79,112
KAFR EL-SHEIKH	2,129	158	187	30,757	100,490			381	286			134,388
PORT SAID					573							573
DAMIETTA					13,384			573				13,957
DAKAHLIA					68,000			20,069	42,202			130,271
MENOUFIA					32,097						775	32,872
SHARKIA								107,707				107,707
ISMAILIA								1,247				1,247
KALIOUBIA								9,759				9,759
FAYOUM					37,994			6,776				44,770
BENY SUEF						54,594						54,594
MENIA						72,576	70					72,646
ASSYOUT							43,748					43,748
SOUHAG						20,524						20,524
KENA						8						8
FARAFRA												
Total	**2,931**	**102,705**	**15,165**	**39,196**	**378,009**	**147,702**	**43,818**	**146,634**	**42,488**	**340**	**775**	**919,763**

Source: MALR, Central Administration for Agricultural Economics. 1999.

Table 2-2. Cotton Production by Variety and by Governorate. 1996. (kentars of 50 kg)

Giza Variety >>>	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	Total
ALEXANDRIA		11,796		977				217				12,990
BEHEIRA	3,543	739,431	81,216		455,784					1,492		1,281,466
GHARBIA	315			61,538	484,070							545,923
KAFR EL-SHEIKH	5,807	469	268	213,982	628,555			1,984	1,373			852,438
PORT SAID					2,718							2,718
DAMIETTA					79,608			7,050				86,658
DAKAHLIA					375,504			128,393	257,732			761,629
MENOUFIA					262,626						6,678	269,304
SHARKIA								855,785				855,785
ISMAILIA								4,708				4,708
KALIOUBIA								88,378				88,378
FAYOUM					230,585			45,482				276,067
BENY SUEF						477,847						477,847
MENIA						656,341	424					656,765
ASSYOUT							516,231					516,231
SOUHAG						218,282						218,282
KENA						43						43
FARAFRA												
Total	**9,665**	**751,696**	**81,484**	**276,497**	**2,519,450**	**1,352,513**	**516,655**	**1,131,997**	**259,105**	**1,492**	**6,678**	**6,907,232**

Source: MALR, Central Administration for Agricultural Economics. 1999.

Table 2-3. Average Yields per Feddan of Cotton Varieties in Various Governorates, 1996. (kentars of 50 kg)

	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	Average
ALEXANDRIA		4.14		3.99				1.77				4.04
BEHEIRA	4.74	7.42	5.42		8.35					4.39		7.52
GHARBIA	5.73			7.51	6.83							6.90
KAFR EL-SHEIKH	2.73	2.96	1.43	6.96	6.25			5.21	4.80			6.34
PORT SAID					4.74							4.74
DAMIETTA					5.95			12.30				6.21
DAKAHLIA					5.52			6.40	6.11			5.85
MENOUFIA					8.18						8.62	8.19
SHARKIA								7.95				7.95
ISMAILIA								3.78				3.78
KALIOUBIA								9.06				9.06
FAYOUM					6.07			6.71				6.17
BENY SUEF						8.75						8.75
MENIA						9.04	6.06					9.04
ASSYOUT							11.80					11.80
SOUHAG						10.64						10.64
KENA						5.38						5.38
FARAFRA												
Average	**3.30**	**7.32**	**5.37**	**7.05**	**6.67**	**9.16**	**11.79**	**7.72**	**6.10**	**4.39**	**8.62**	**7.51**

Source: MALR, Central Administration for Agricultural Economics. 1999.

Table 2-4. Areas Planted to Cotton in each Governorate, by variety. 1997. (feddans)

Giza variety >>>	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	G-88	TOTAL
ALEXANDRIA		3,521											3,521
BEHEIRA		116,208	12,733		31,479								160,420
GHARBIA				8,310	59,527						66		67,903
KAFR EL-SHEIKH	135	202	301	26,175	82,264			329	183	94	102	78	109,863
PORT SAID								539					539
DAMIETTA	5,130								7,555				12,685
DAKAHLIA									112,697				112,697
MENOUFIA					24,956						9,550		34,506
SHARKIA								99,218					99,218
ISMAILIA								1,883					1,883
KALIOUBIA								11,422					11,422
FAYOUM								42,951					42,951
BENY SUEF						61,541							61,541
MENIA						71,079	152						71,231
ASSYOUT							47,440						47,440
SOUHAG						21,356							21,356
KENA						8							8
FARAFRA							57						57
Total	**5,265**	**119,931**	**13,034**	**34,485**	**198,226**	**153,984**	**47,649**	**156,342**	**120,435**	**94**	**9,718**	**78**	**859,241**

Source: MALR, Central Administration for Agricultural Economics. 1999

Table 2-5. Cotton Production by Variety and by Governorate. 1997. (kentars of 50 kg)

Giza Variety >>>	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	G-88	Total
ALEXANDRIA		23,621											23,621
BEHEIRA		1,041,585	84,263		289,630								1,415,478
GHARBIA					464,966						556		542,582
KAFR EL-SHEIKH	290	1,708	1,013	219,291	597,901			1,687	1,472	419	546	534	824,861
PORT SAID								3,313					3,313
DAMIETTA	25,467								55,234				80,701
DAKAHLIA									845,513				845,513
MENOUFIA					210,358						75,302		285,660
SHARKIA								792,346					792,346
ISMAILIA								8,199					8,199
KALIOUBIA								96,762					96,762
FAYOUM								289,848					289,848
BENY SUEF						451,743							451,743
MENIA						528,398	1,140						529,538
ASSYOUT							474,362						474,362
SOUHAG						175,669							175,669
KENA						45							45
FARAFRA							296						296
Total	**25,757**	**1,066,914**	**85,276**	**219,291**	**1,562,855**	**1,155,855**	**475,798**	**1,192,155**	**902,219**	**419**	**76,404**	**534**	**6,840,537**

Source: MALR, Central Administration for Agricultural Economics. 1999

Table 2-6. Average Yields per Feddan of Cotton Varieties in Various Governorates, 1997. (kentars of 50 kg)													
	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	G-88	Average
ALEXANDRIA		6.71											6.71
BEHEIRA		8.96	6.62		9.20								8.82
GHARBIA				9.27	7.81						8.42		7.99
KAFR EL-SHEIKH	2.10	8.46	3.37	8.38	7.27			5.13	8.04	4.46	5.35	6.85	7.51
PORT SAID								6.15					6.15
DAMIETTA	4.96								7.31				6.36
DAKAHLIA									7.50				7.50
MENOUFIA					8.43						7.89		8.28
SHARKIA								7.99					7.99
ISMAILIA								4.35					4.35
KALIOUBIA								8.47					8.47
FAYOUM								6.75					6.75
BENY SUEF						7.34							7.34
MENIA						7.43	7.50						7.43
ASSYOUT							10.00						10.00
SOUHAG						8.23							8.23
KENA						5.63							5.63
FARAFRA							5.19						5.19
Average	**4.89**	**8.90**	**6.54**	**8.59**	**7.88**	**7.51**	**9.99**	**7.63**	**7.49**	**4.46**	**7.86**	**6.85**	**7.96**

Source: MALR, Central Administration for Agricultural Economics, 1999

Table 2-7. Egypt. Area, Yield and Production of Cotton Varieties by Governorate. 1996 and 1997 Combined

	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	G-88	Totals
ALEXANDRIA		6,371		245				122					6,738
		5.56		*3.99*				*1.78*					*5.43*
		35,417		977				217					36,611
BEHEIR	747	215,905	27,711		86,087					340			330,790
	4.74	*8.25*	*5.97*		*8.66*					*4.39*			*8.15*
	3,543	1,781,016	165,479		745,414					1,492			2,696,944
GHARBI	55			16,504	130,390						66		147,015
	5.73			*8.40*	*7.28*						*8.42*		*7.40*
	315			138,598	949,036						556		1,088,505
KAFR E	2,264	360	488	56,932	182,754			710	469	94	102	78	244,251
	2.69	*6.05*	*2.63*	*7.61*	*6.71*			*5.17*	*6.07*	*4.46*	*5.35*	*6.85*	*6.87*
	6,097	2,177	1,281	433,273	1,226,456			3,671	2,845	419	546	534	1,677,299
PORT SAID					573			539					1,112
					4.74			*6.15*					*5.42*
					2,718			3,313					6,031
DAMIET	5,130				13,384			573	7,555				26,642
	4.96				*5.95*			*12.30*	*7.31*				*6.28*
	25,467				79,608			7,050	55,234				167,359
DAKAHLIA					68,000			20,069	154,899				242,968
					5.52			*6.40*	*7.12*				*6.61*
					375,504			128,393	1,103,245				1,607,142
MENOUFIA					57,053						10,325		67,378
					8.29						*7.94*		*8.24*
					472,984						81,980		554,964
SHARKIA								206,925					206,925
								7.96					*7.96*
								1,648,131					1,648,131
SMAILIA								3,130					3,130
								4.12					*4.12*
								12,907					12,907
KALIOUBIA								21,181					21,181
								8.74					*8.74*
								185,140					185,140
FAYOUM					37,994			49,727					87,721
					6.07			*6.74*					*6.45*
					230,585			335,330					565,915
BENY SUEF						116,135							116,135
						8.00							*8.00*
						929,590							929,590
MENIA						143,655	222						143,877
						8.25	*7.05*						*8.25*
						1,184,739	1,564						1,186,303
SSYOUT							91,188						91,188
							10.86						*10.86*
							990,593						990,593
OUHAG						41,880							41,880
						9.41							*9.41*
						393,951							393,951
ENA						16							16
						5.50							*5.50*
						88							88
ARAFRA							57						57
							5.19						*5.19*
							296						296
T Area	8,196	222,636	28,199	73,681	576,235	301,686	91,467	302,976	162,923	434	10,493	78	1,779,004
/. Yield	*4.32*	*8.17*	*5.91*	*7.77*	*7.08*	*8.31*	*10.85*	*7.67*	*7.13*	*4.40*	*7.92*	*6.85*	*7.73*
Producti	35,422	1,818,610	166,760	572,848	4,082,305	2,508,368	992,453	2,324,152	1,161,324	1,911	83,082	534	13,747,769

Table 2-8. Average Yields per Feddan of Cotton Varieties in Various Governorates, 1996 & 1997 Combined. (kentars of 50 kg)

Governorate	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	G-88	Average
ALEXANDRIA		5.56		3.99				1.78					5.43
BEHEIRA	4.74	8.25	5.97		8.66					4.39			8.15
GHARBIA	5.73			8.40	7.28						8.42		7.40
KAFR EL-SHEIK	2.69	6.05	2.63	7.61	6.71			5.17	6.07	4.46	5.35	6.85	6.87
PORT SAID					4.74			6.15					5.42
DAMIETTA	4.96				5.95			12.30	7.31				6.28
DAKAHLIA					5.52			6.40	7.12				6.61
MENOUFIA					8.29						7.94		8.24
SHARKIA								7.96					7.96
ISMAILIA								4.12					4.12
KALIOUBIA								8.74					8.74
FAYOUM					6.07			6.74					6.45
BENY SUEF						8.00							8.00
MEINIA						8.25	7.05						8.25
ASSYOUT							10.86						10.86
SOUHAG						9.41							9.41
KENA						5.50							5.50
FARAFRA							5.19						5.19
Average	4.32	8.17	5.91	7.77	7.08	8.31	10.85	7.67	7.13	4.40	7.92	6.85	7.73

Source: MALR. Central Administration for Agricultural Economics. 1999

The separation between Delta varieties and Upper Egypt varieties is worth noting. Only Giza 75 and Giza 85 have been grown in both Delta Governorates and in Upper Egypt, in Fayoum. Giza 80 and 83 have been grown only in Upper Egypt Governorates, despite the potential for higher yields when cultivated in Delta Governorates.

National average yields overshadow significant differences in yields between regions for the same variety. For example, Giza 75's national average is 7.08 kt/fd, however in El-Menoufia it yields 8.29 kt/fd and in El-Beheira 8.66 kt/fd, but only 5.52 kt/fd in El-Dakahlia and 6.07 kt/fd in Fayoum. Cotton authorities must therefore specify which Governorate is selected for each variety, in addition to how much acreage to allocate to each variety nation-wide.

Broader pictures of the evolution of cotton production by variety and by Governorates in the 1990's decade are presented in **Tables 2-9 and Table 2-10.** It is first of all remarkable how much total cotton area has fluctuated between 1990 and 1997. Data for 1998 was not available at the time of preparation of this study (June 1999). Total cotton area in Egypt has ranged from a high of 993,047 feddans in 1990 to a low of 710,207 feddans in 1995, and the total area in 1999 is estimated even lower at 645,000 feddans. All Governorates, as shown in **Table 2-9**, have shared these changes in areas, in more or less equal proportions. The largest Governorates in terms of cotton area are El-Beheira, Kafr El-Sheikh, El-Dakahlia, El-Gharbia, and El-Sharkia.

Greater fluctuations are observed in areas assigned to cotton varieties in the period 1990 to 1997. **Table 2-10** records, for example, the dramatic decline of Giza-75 from 454,000 feddan in 1994 to 198,000 in 1997 and its complete disappearance in 1998. Some other distinguished varieties have disappeared, including Giza-81 and Dandara. Giza-85 was introduced in 1993 and has steadily gained in area. Two recent introductions, Giza-86 in 1995 and Giza-89 in 1996 have also made significant inroads in the current mix of varieties. Giza-87 and Giza-88 are two promising experimental varieties being considered for commercial cultivation, but we have not included them in the body of this study because their planted area were too small and results were inconclusive.

Table 2-9. Areas Planted to Cotton, by Governorate, 1990 to 1998. (feddans)

Governorate	1990	1991	1992	1993	1994	1995	1996	1997	1998
Alexandria	564	847	1,272	2,611	2,057	1,570	3,217	3,521	3,419
Assyout	67,887	46,698	45,011	36,538	25,285	27,287	43,748	47,440	34,500
Beny Suef	54,020	47,874	51,138	54,663	45,775	44,764	54,594	61,541	43,878
Damietta	11,323	9,513	11,177	13,036	10,728	9,728	13,957	12,685	17,506
El-Behera	131,173	131,341	137,037	167,158	146,957	146,816	170,370	160,420	155,904
El-Dakahlia	158,623	126,526	122,008	124,811	109,657	94,062	130,271	112,697	119,651
El-Fayoum	36,197	32,995	30,776	36,282	34,152	39,721	44,770	42,951	26,653
El-Gharbia	103,608	86,400	84,156	87,150	66,854	61,429	79,112	67,903	67,936
El-Giza	23	18	18	18		16	14	14	15
El-Ismailia		41	29	116	298	375	1,247	1,883	1,262
El-Kalioubia	13,824	11,300	11,038	11,002	8,032	6,294	9,759	11,422	10,372
El-Menia	79,783	70,249	66,231	67,652	50,309	58,854	72,646	71,231	57,727
El-Menoufia	46,557	38,223	36,627	41,438	28,379	27,881	32,872	34,506	36,547
El-Sharkia	124,426	109,009	102,639	99,074	85,386	82,647	107,707	99,218	86,299
El-Wadi El-Gedid							21	57	399
Kafr El-Sheikh	114,734	102,027	106,467	114,519	93,875	98,116	135,475	109,863	115,139
Kena							34	8	15
Port Said					351	378	573	539	513
Souhag	50,305	38,222	34,672	28,242	12,348	10,269	20,524	21,356	11,075
Totals	**993,047**	**851,283**	**840,296**	**884,310**	**720,443**	**710,207**	**920,911**	**859,255**	**788,810**

Source: MALR, Central Administration for Agricultural Economics. 1999.

Table 2-10. Areas Planted to Cotton, by Variety, 1990 to 1999. (feddans)

Variety	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999 (est)
G 45	11,631	8,940	10,322	13,161	6,308	5,848	2,931	5,265	9,731	1,500
G 76	19,339	27,098	27,157	21,404	12,422	8,749	15,165	13,034	6,916	0
G 70	86,945	86,075	90,146	148,681	56,491	65,320	102,705	119,931	159,584	66,523
G 77	134,983	130,432	71,134	80,771	14,270	22,169	39,196	34,485	26,259	0
G 86						4,652	42,488	120,435	249,818	166,529
G 75	482,531	392,936	434,970	399,617	453,860	418,986	378,009	198,226	0	0
G 81	57,639	50,284	29,491	21,808	15,089				0	0
G 89							775	9,718	63,223	171,869
G 85				6,626	18,221	42,833	146,634	156,342	98,752	138,626
G 84				4,936	8,929				0	0
G 87							340	94	65	0
G 88								78	73	0
G 80	101,032	69,203	94,902	122,199	96,028	111,017	147,702	153,976	70,009	66,998
G 83	997	1,178	6,265	17,420	15,015	27,329	43,818	47,649	104,230	75,612
Dandara	97,925	84,920	74,613	47,476	22,689	2,828			0	0
Others	25	217	1,296	211	1,121	476	1,148	22	150	0
Totals	**993,047**	**851,283**	**840,296**	**884,310**	**720,443**	**710,207**	**920,911**	**859,255**	**788,810**	**687,657**

Source: MALR. Central Administration for Agricultural Economics. 1999.

Chapter 3

SELECTING VARIETIES TO MAXIMIZE FARMERS REVENUE FROM COTTON

From the perspective of the Ministry of Agriculture, the principal criteria for selecting and assigning cotton varieties to different regions is to generate the highest possible revenue for Egyptian farmers. Cotton is grown purely as a cash crop. Farmers seek to get the most value for it. Other national goals such as national employment in textile industry or the financial health of state-owned spinning and weaving companies are also legitimate goals to pursue. In this chapter, however, we examine the problem from the narrow perspective of Egyptian farmers welfare.

Cotton Variety Prices. Each cotton variety has specific agronomic characteristics that make them best suitable to produce under certain soil and climatic conditions. Varieties also have distinct fibre properties that make them suitable to produce certain types of yarns. Market prices for each variety should reflect the demand by spinners for fibers with certain properties. Spinners' demand in turn should respond to the demand for fabrics and textiles made of yarns of certain specifications. In a market situation, prices for different varieties reflect not only demand of spinners but also the relative abundance of each variety in the market at the time.

Farmers themselves are likely not aware of the structure of textile demand in terms of yarn types and shifts in the market. They perceive market demand mainly in terms of the relative prices for each variety.

Cotton authorities at MALR assume responsibility for selecting cotton varieties on behalf of farmers. Cotton authorities therefore need information about the relative prices of each variety.

Unfortunately, prevailing prices for different cotton varieties in Egypt are not, strictly speaking, free market prices. Rather, these are administrative prices set by official agencies, particularly by the Alexandria Cotton Exporters Association (Alcotexa).

Export Prices and Farm Prices. Farmer-level prices for cotton are derived from indicative export prices set by Alcotexa at the beginning of the marketing season in September of each year. Alcotexa tries to set those prices according to their collective and subjective perceptions of world market conditions, the relative spinnability of different varieties, and the grade classification for each variety. **Table 3-1** presents the

current set of export prices as determined by Alcotexa, and prevailing in June 1999. Prices are specified in cents per libra, FOB Alexandria. The equivalent farm level prices are derived for a 50 kg kentar of cotton lint, in Egyptian currency, after due allowances for ginning, handling, transport, storage, finance costs, and "fobing" charges.

Table 3-1. Export and Farmers' Prices of Egyptian Cotton Varieties, 1998/99

Variety	Export cents/libra	Farmers' LE/kentar
G-45	220	778
G-70	116	389
G-76	119	400
G-77	112	374
G-75	96	314
G-80	88	284
G-83	86	277
G-85	94	307
G-86	102	337
G-87	128	434
G-89	96	314

Source: ALCOTEXA

Cotton Revenue per Feddan. Once prices per kentar are known for each variety, and given the data on average yields for each variety in each Governorate in 1996 and 1997, it becomes possible to generate a table of farmers expected income per feddan of cotton, for each cotton variety in each Governorate. Such information appears in **Table 3-2.**

Much variation exists among the incomes farmers earn from cotton. There are low values such as LE 1,266 for Giza-85 in El-Ismailia and LE 1,061 for Giza-76 in Kafr El Sheikh. On the other hand, some fortunate farmers got high incomes from growing Giza-70 in El-Beheira and earning LE 3,209 per feddan or growing Giza-83 in Assyout and earning LE 3,006 per feddan. At current prices, the expected average income per feddan of cotton in Egypt is LE 2,483, assuming the same variety distribution prevailing in 1996 and 1997.

Absence of Future Prices. The income estimates per feddan of each variety above are based on prices for the current 1998/99 season. However, for deciding the variety mix for the 2000/01 season we need to anticipate the prices that will prevail during that season. Unfortunately, cotton authorities do not have any place to turn to for that information. There is no future's market for cotton in Egypt. There are no forward contracts in Egypt. Alcotexa decides on export prices at harvest time, not before planting. Neither Alcotexa nor any other organization can provide the Ministry of Agriculture advance information on anticipated prices for next year's cotton season.

Table 3-2. Revenue per feddan for Cotton Varieties, by Governorate, based on 1996&97 Yields and 1998/99 Prices

Prices LE/LK	778	389	404	374	314	284	277	307	337	434	314	370	
Giza Variety >>>	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	G-88	Average
ALEXANDRIA		2,162		1,491				546					2,109
BEHEIRA	3,690	3,209	2,413		2,719					1,904			3,014
GHARBIA	4,455			3,141	2,285						2,645		2,382
KAFR EL-SHEIKH	2,095	2,352	1,061	2,846	2,107			1,587	2,044	1,935	1,681	2,533	2,276
PORT SAID					1,489			1,887					1,682
DAMIETTA	3,862				1,868			3,777	2,464				2,462
DAKAHLIA					1,734			1,964	2,400				2,178
MENOUFIA					2,603						2,493		2,586
SHARKIA								2,445					2,445
ISMAILIA								1,266					1,266
KALIOUBIA								2,683					2,683
FAYOUM					1,906			2,070					1,999
BENY SUEF						2,275							2,275
MENIA						2,344	1,950						2,344
ASSYOUT							3,006						3,006
SOUHAG						2,674							2,674
KENA						1,563							1,563
FARAFRA							1,437						1,437
Average	3,362	3,178	2,389	2,908	2,225	2,363	3,003	2,355	2,402	1,911	2,486	2,533	2,483

Source: MALR, Central Administration for Agricultural Economics. 1999

Decision Table. A blank format table is provided to illustrate the type of exercise that is required to decide on which varieties and how many feddans for each variety to assign to each Governorate (See **Table 3-3**), if the objective is to maximize farmers incomes. Most of the table has been shaded, leaving blank only the cells corresponding to variety/Governorate combinations for which we have yield data from 1996 and 1997. Cotton authorities need only to fill the blank cells with the proposed number of feddans for each variety and Governorate. The totals for each variety and Governorate are computed at margins.

Limits in Areas per Governorate. Minimum and maximum areas are specified for each Governorate in Table 3-3, computed at 50 percent below and 50 percent above the average area planted to cotton in 1996 and 1997 in that Governorate.

Agro-climatic factors and the overall cropping pattern of farmers in the region limit adjustments in cotton areas from one year to another. In certain zones of a given governorate, soil and climatic conditions might be less or more suitable to the cultivation of cotton, and of certain varieties in particular. Most farmers grow cotton as an integral part of a two-year pattern of crop rotation with bersim, wheat, and rice or maize. It would take several years to introduce major adjustments in cropping pattern.

The central Government decisions on cotton variety allocations concern which varieties are grown in which districts. Farmers decide on how much an area to plant to that cotton variety, but not the variety itself. Government decides on where a variety a grown, but not how much an area is planted. Of course, cotton authorities have fairly good ideas how much cotton will likely be planted by farmers in a district in a given year. Seed preparation plans to satisfy those requirements are made on the basis of such estimates.

Cotton areas allocated to governorates are also probably politically sensitive decisions. Authorities must be able to specify minimum and maximum areas for each governorate taking into account the local imperatives of the moment. Within the limits imposed by these real-life considerations, it should be possible to select the variety mapping which generates the most expected income to cotton farmers in the country.

Table 3-3. Format for Assigning Areas of Cotton Varieties, by Governorate. (feddans)

Governorate	G-45	G-70	G-76	G-77	G-75	G-80	G-83	G-85	G-86	G-87	G-89	G-88	Total	Minimum	Maximum
ALEXANDRIA														2,981	3,577
BEHEIRA														135,912	163,094
GHARBIA														59,224	71,069
KAFR EL-SHEIKH														100,374	120,449
PORT SAID														447	537
DAMIETTA														15,261	18,313
DAKAHLIA														104,308	125,169
MENOUFIA														31,860	38,232
SHARKIA														75,232	90,279
ISMAILIA														1,100	1,320
KALIOUBIA														9,042	10,850
FAYOUM														23,235	27,882
BENY SUEF														38,251	45,902
MENIA														50,324	60,389
ASSYOUT														30,076	36,091
SOUHAG														9,655	11,586
KENA														13	16
FARAFRA														348	417
Total														687,644	700,000

Total Area to Plant to Cotton. Another estimate needed by cotton officials to determine the best possible variety mix is the total area that farmers might choose to plant in cotton nation-wide in the coming year. Farmers planting intentions will be closely related to price expectations and the experience from the previous year. In the past few years actual total areas planted by cotton farmers have agreed rather closely with the targets estimated by the Ministry of Agriculture.

The existence of large stocks of unsold cotton in Government warehouses accumulated over previous seasons makes it more difficult to make forecasts of total cotton area. Fortunately, in the past three years Egypt has made good progress in reducing accumulated stocks of LS cotton. As of September 1999 the carry-over stock is estimated at about 2 million kentars, the bulk of which is ELS varieties, Giza-70 and 77. Present expectations are that the current stock of ELS at the end of the 1998/99 season will be disposed of during the 1999/2000 marketing season that starts in September 1999. This permits us to frame the problem of deciding the variety mix for the 2000/01 season based on the assumption that unsold inventories will not significantly affect the market.

Egyptian farmers reduced drastically the areas planted to cotton in 1998 and 1999. In 1998 only 788,000 feddans were planted according to official estimates, and in 1999 less than 650,000 feddans are reported planted. The low area in 1999 can be attributed to several factors:

- the low prices received by farmers in 1998/99, and expectations of even lower prices in 1999/2000;
- a 30 percent drop in yields of most varieties during that same season;
- the looming presence of a large carry-over still in Government hands; and
- poor expectations about the health of the textile industry worldwide.

In the absence of better estimates of farmers' planting intentions, we shall use in this exercise alternative hypothetical values of total cotton area.

Alternative Scenarios. For purposes of this exercise, we take three alternative scenarios for total cotton area in the 2000/01 season, namely, an optimistic one for 900,000 feddans, a pessimistic one for only 700,000 feddans, and an intermediate one of 800,000 feddans. We need to predict how the total area planted to cotton might affect the choice of varieties.

Given the current estimate of area planted to cotton in 1999/2000 of barely 650,000 feddans, most of the following discussion is based on an arbitrary total level of 700,00 feddans of cotton. Alternative totals are also explored when needed.

Variety Mix Spreadsheet Program. With few varieties and Governorates it would be possible to use manual procedures to approximate the most beneficial variety mix, that is, the mix that generates the highest revenue for cotton farmers. However, given the complexity of the Egyptian cotton situation and the need to introduce restrictions constraining the area assigned to each Governorate within a narrow range, it is far more effective to use spreadsheets to keep track of the necessary computations.

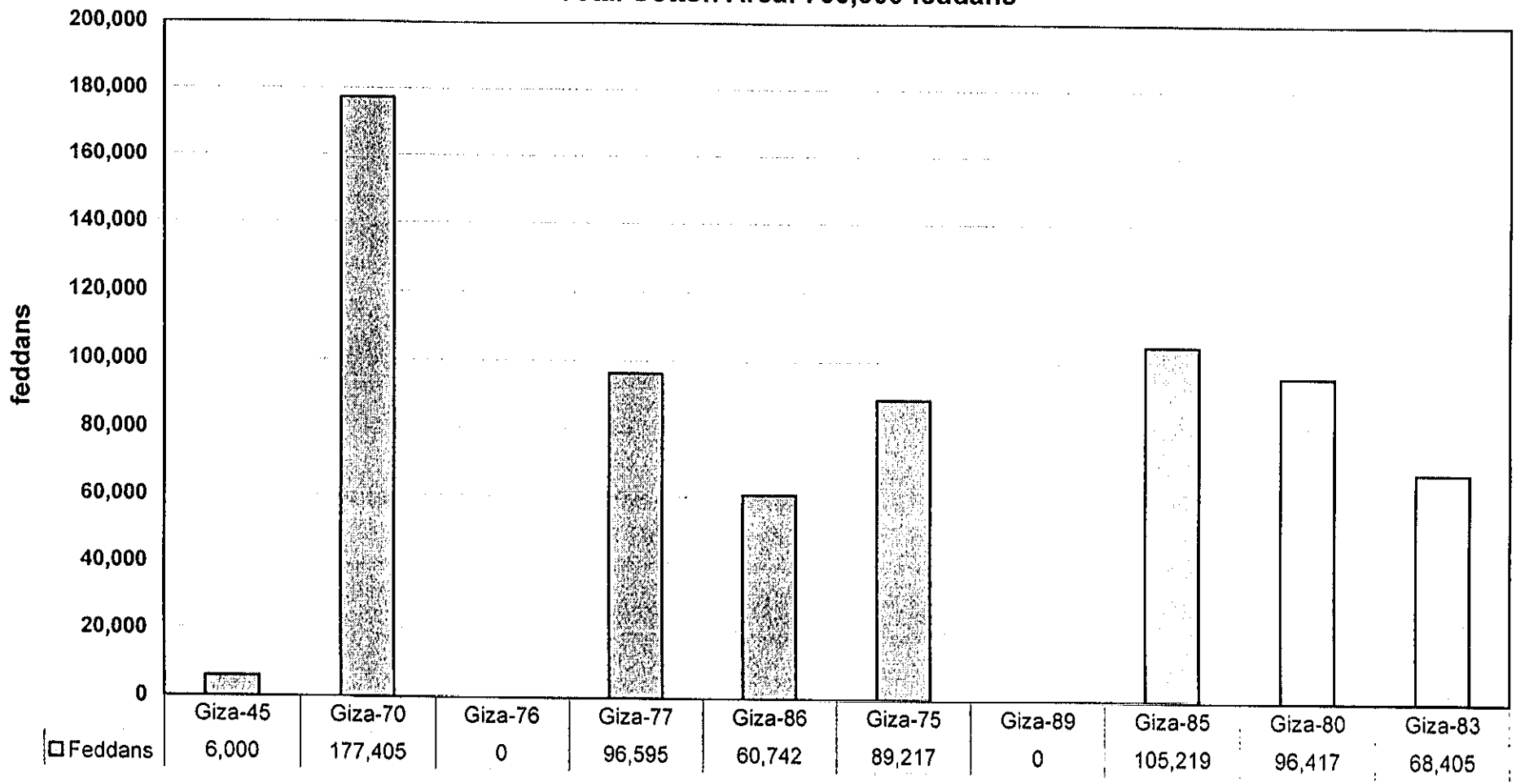
We took advantage of the "Solver" procedures available in Windows Excel to develop a spreadsheet framework that generates automatically the 'revenue-maximizing' variety mix. The main inputs into the spreadsheet program are the data described above in terms of yields per feddan, per variety, per Governorate and a set of variety prices. We shall refer to this spreadsheet as the *Var-Mix* program.

Sample Solution. The following figures present the outcomes from the Var-Mix spreadsheet program for three alternative situations. **Figure 3-1** shows the variety mix with the highest cotton farm revenue for a total national area of 700,000 feddans, assuming that Giza-75 can still be produced, and allowing for 50 percent change in Governorate areas up or down from their 1996-97 averages.

Giza-70 appears as the main variety with 177,405 feddans. Giza-77, 75, 85 and 80 appear roughly with the same area, around 100,000 feddans each. Giza-86 occupies 60,742 feddans and Giza-83 68,405 feddans. No production of Giza-76 or Giza-89 enter in this variety mix. (Giza-45 has been arbitrarily restricted to 6,000 because its high price, 220 c/lb fob, restricts sales to a few hundred tons).

Figure 3-1. Proposed Cotton Variety Areas for 2000/01 Season

{Restrictions: Maximum change in area per Governorate: 50 %; Giza-75 = Yes }
Total Cotton Area: 700,000 feddans



Variety mix with full-adjustment freedom. The following graph, in **Figure 3-2**, depicts the variety mix that would give the most income to farmers, if we were free to shift acreage from one Governorate to others and from one variety to others. Three dominant varieties take over the cotton sector: Giza-75 with 251,140 feddans, Giza-77 with 145,612 feddans, and Giza-70 with 128,388 feddans. Smaller areas are produced of Giza-83 (91,188 feddans), Giza-80 (41,880 feddans), and Giza-85 (53,793 feddans).

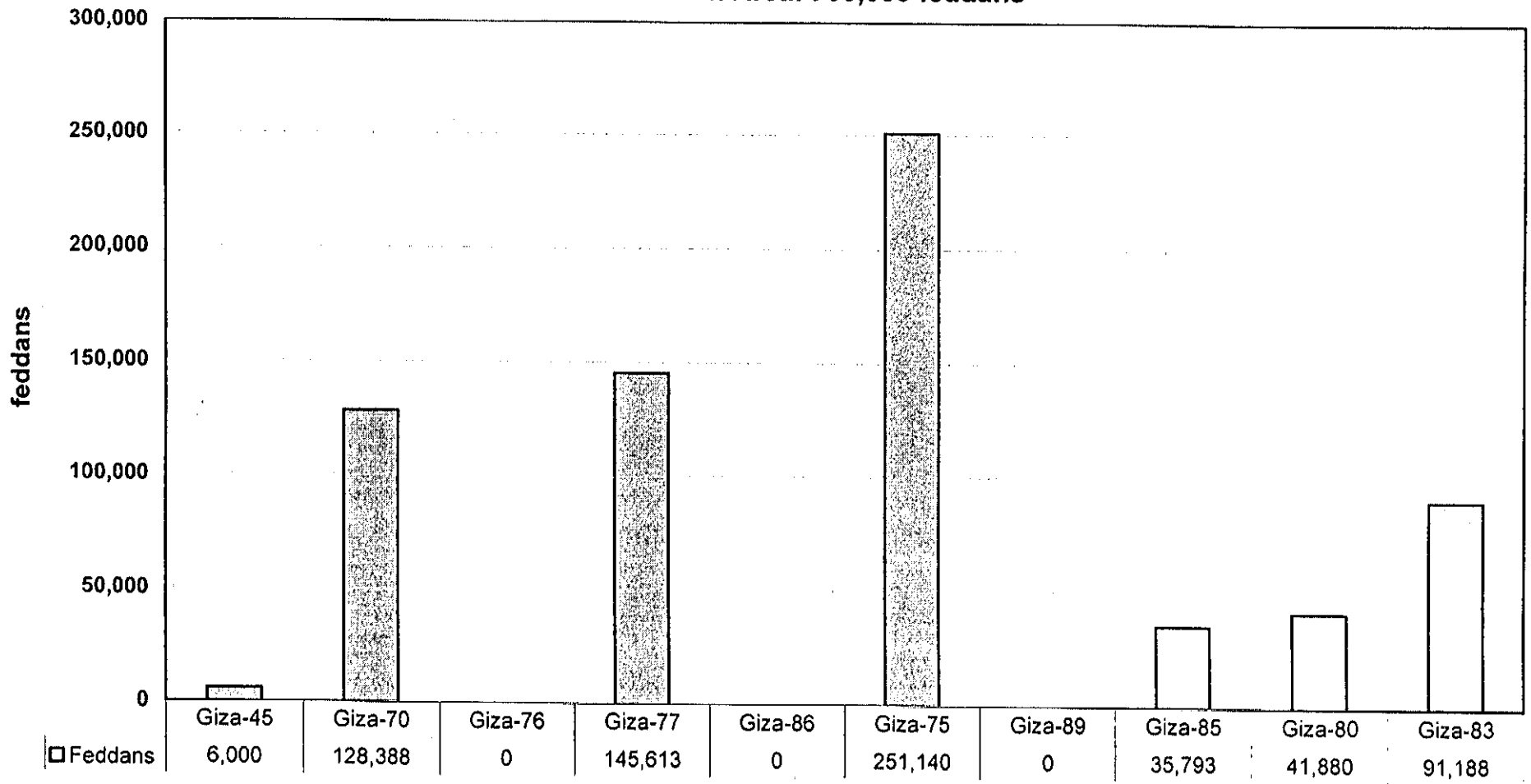
Spurious Precision. The detailed figures given above for feddans assigned to each area should not be construed as precise recommendations from the Var-Mix program. Rather, we should view these results as conveying relative orders of magnitude of variety areas. There are too many factors and considerations that are not taken into account in the spreadsheet. For this reason, in future references to areas we round-up to the nearest thousand feddans to avoid spurious precision in the discussion.

Absence of Key Varieties. Once again, it is remarkable that neither Giza-86 nor Giza-89 appears in the Var-Mix solution in **Figure 3-2**. These two varieties have been developed by cotton breeders in recent years, and selected for their superior fibre characteristics over Giza-75 and Giza-85, and because they produced higher yields in experimental station trials. Giza-86 has been well received by foreign spinners for its fibre qualities in the last couple of years, and its current price, 102 c/lb, reflects this superiority over Giza-75 priced at only 96 c/lb. Despite this significant price disadvantage, Giza-75 still offers cotton farmers in Egypt strong returns according to these calculations on account of its higher yields under farm conditions compared with lower yields for G-86.

Strength of Giza-75. The strong showing of Giza-75 in the unconstrained situation reflects its demonstrated yield performance in different Governorates. We have actual data on Giza-75 in eight Governorates, while Giza-86 has been planted commercially in only three governorates. In some Governorates Giza-75 has not performed that well either. Of course, the Var-Mix program only selects for Giza-75 those Governorates where it has performed best. Farmers by now know well what agronomic practices are best suited to that variety. In contrast, Giza-86, being new, its on-farm performance remains far below its experimental station potential. It is essential to determine what accounts for the Giza-86 yield gap between breeder's trials and actual farmers' fields.

Figure 3-2. Proposed Cotton Variety Areas for 2000/01 Season

{Restrictions: Maximum change in area per Governorate: 100 %; Giza-75 = Yes }
Total Cotton Area: 700,000 feddans



Two Strong ELS Varieties. Two ELS varieties, Giza-70 and Giza-77 also enter strongly in the mix solution identified by Var-Mix in **Figure 3-2.** A third ELS variety, Giza-76, is absent from this solution and from practically all revenue maximizing variety mixes that Var-Mix identifies. Cotton authorities decided to suspend production of Giza-76, and in 1998/99; only remaining stock from prior years is available for sale. This decision seems warranted, even though there were clamors from several foreign spinners that Giza-76 has such special characteristics that it was worth preserving.

Abandonment of Giza-77. Agricultural authorities also decided to terminate production of Giza-77 beginning in 1999/2000. In their view the fibre properties of Giza-77 were very close to those of Giza-70, and the creamier color of Giza-77 puts it at a slight disadvantage with spinners. The lower price of Giza-77, 112 c/lb, reflects that. Nevertheless, Giza 77 appears strongly in the Var-Mix solution because it out-performs other varieties in some Governorates. For example, in Kafr El Sheik most varieties fail to perform satisfactorily, but Giza-77 manages to produce 7.61 kentars/feddan, the best in that Governorate, and significantly above the 6.05 yield of Giza-70. Moreover, Giza-77 had a yield of 8.40 kentars/feddan in Gharbeya, higher than the 7.28 obtained by Giza-75. For these and other reasons Giza-77 comes into the Var-Mix solution as strong contributor to cotton revenue, even though its fibre properties are close to those of Giza-70.

These results raise concerns that the abandonment of both Giza-75 and Giza-77 in recent years are detrimental to the cotton sector, for it deprives cotton authorities of two of the strongest performing Egyptian varieties.

Unsold Stocks and Wrong Prices. The main justification for abandoning Giza 75 and 77 was the fact that large inventories of both varieties had accumulated over the past few years. These inventories were interpreted as indicators of quality deterioration, instead of as indicators of uncompetitive prices assigned to those varieties. Issues of pricing of cotton varieties will be examined later in a separate section of this study.

The current rise in carry-over stocks of ELS and LS varieties recalls a similar phenomenon in the early 1990's, and for the same reasons, namely, overpricing. However, when this happened in the early 1990's cotton authorities did not suspend plantings of the affected varieties.

The Promise of Giza-70. Production of Giza-70 was also nearly suspended in the 1999/2000 season because of very large inventories of

unsold cotton, estimated at 70,000 tons. This amount is equivalent to several years of exports at current low volumes. It is also suspected here that the large stocks of Giza-70 are the obvious consequence of unrealistically high export prices assigned to it by Alcotexa.

Abandonment of Giza-76, 77, and 70 would have meant that Egypt had forsaken production of ELS cotton and by default left the ELS market for American Pima to enjoy alone. Fortunately, cotton authorities reconsidered and at the last minute increased the Giza-70 area to nearly 70,000 feddans to ensure that sufficient seed will be available should Government decide to increase area of Giza-70 in 2000/01 season. With this decision, Egypt will be able to re-start full commercial production of ELS cotton next year with Giza-70, perhaps the most competitive variety that Egypt currently has in its arsenal.

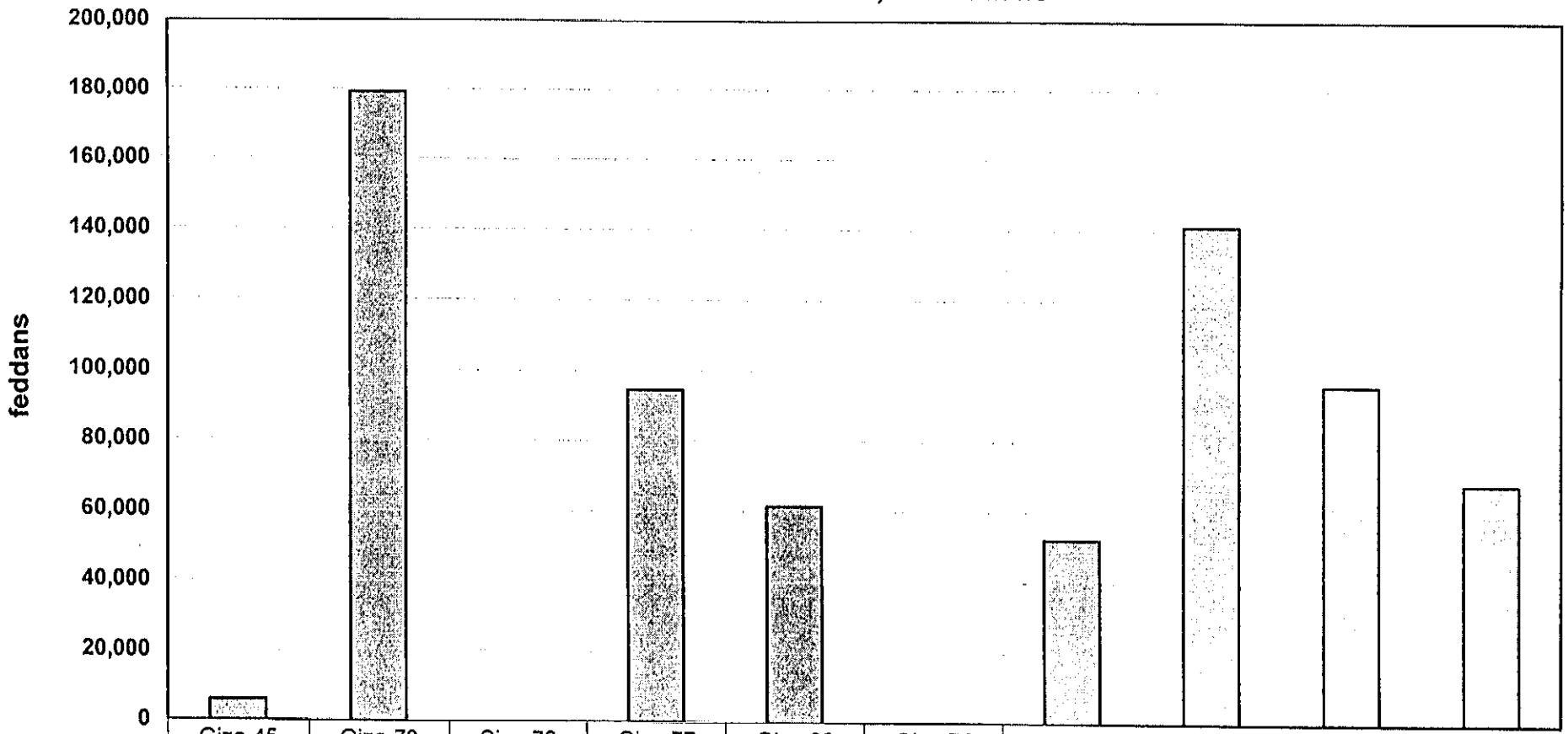
Accepting Reality: No Giza-75. The last graph, **Figure 3-3**, represents the variety mix for the crop 2000/01 in the face of the total abandonment of Giza-75. (A small quantity of Giza-75 is still available, safeguarded by cotton authorities, but it is insufficient for large-scale commercial purposes). If it were possible to adjust cotton areas in Governorates up or down 50 percent, but without the benefit of having Giza-75, the maximum-income solution would consist mainly of Giza-70 (179,000 feddans), Giza-77 (95,000 feddans) and Giza-85 (141,000 feddans), and Giza-80 (96,000 feddans). Modest contributions of over 50,000 feddans from Giza-86, 89, and 83 also enter in the solution.

Giza-76 does not appear in this revenue-maximizing variety mix. The combined area of Giza-70 and Giza-77 is 274,000 feddans, because we imposed an arbitrary restriction that ELS varieties, including Giza-45, should not exceed 40 percent of the total area, or 280,000 feddans. Were it not for this restriction the areas of Giza-70 and Giza-77 would be even larger.

Moreover, Giza-86 enters with 62,000 feddans, but it does not increase its presence when Giza-75 is taken out of the contest. That is probably because Giza-89 and Giza-85 displace Giza-75 from the Governorates where it was grown. Giza-86 does not have a performance track record in most of those Governorates. This again reinforces the need to test Giza-86 in more Governorates and to find out what accounts for the low yields of Giza-86 on farmers' fields.

Figure 3-3. Proposed Cotton Variety Areas for 2000/01 Season

{Restrictions: Maximum change in area per Governorate: 50 %; Giza-75 = No }
Total Cotton Area: 700,000 feddans



	Giza-45	Giza-70	Giza-76	Giza-77	Giza-86	Giza-75	Giza-89	Giza-85	Giza-80	Giza-83
Feddans	6,000	179,269	0	94,731	61,515	0	52,217	141,447	96,417	68,405

Adjustment in Areas by Governorate. During the decade of the 1990's, cotton farmers have practically kept unchanged the relative shares of cotton areas of each Governorate. Although the total cotton area has adjusted up and down from year to year, the percentage shares of each governorate have remained nearly constant. **See Table 3-4.** Thus, for example, the percentage of El-Sharkia fluctuated between a low of 11.2 % to a high of 12.8%, and for Karf El-Sheikh from 11.6 to 14.7 percent.

The reasons for the constancy of governorate shares are not obvious. Cotton yields in some governorates are consistently above or below the national average. In the long run we would expect that governorates with the highest yields and/or revenues per feddan would gradually increase their percentage of cotton area. Conversely, in those governorates where cotton yields are revenues per feddan are consistently below national averages their shares of cotton area would be expected to decline over time.

Perhaps the most likely rationale for the regularity of cotton shares by governorate is that crop rotation patterns limit the degree of adjustment that farmers are able to make from one year to the next. Cotton enters the cropping pattern in varying proportions across regions in the country but those proportions seem to remain stable over time. This could imply that cotton areas in all governorates indeed adjust only slightly or that they expand or contract in roughly the same proportions. The proposed variety mixes that emerge from the *Var-Mix* program can then identify which governorates and varieties should be emphasized, and where extension efforts would be most effective.

Table 3-4. Areas Planted to Cotton, by Governorate, 1990 to 1998. (percent)

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Alexandria	0.1	0.1	0.2	0.3	0.3	0.2	0.3	0.4	0.4
Assyout	6.8	5.5	5.4	4.1	3.5	3.8	4.8	5.5	4.4
Beny Suef	5.4	5.6	6.1	6.2	6.4	6.3	5.9	7.2	5.6
Damietta	1.1	1.1	1.3	1.5	1.5	1.4	1.5	1.5	2.2
El-Behera	13.2	15.4	16.3	18.9	20.4	20.7	18.5	18.7	19.8
El-Dakahlia	16.0	14.9	14.5	14.1	15.2	13.2	14.1	13.1	15.2
El-Fayoum	3.6	3.9	3.7	4.1	4.7	5.6	4.9	5.0	3.4
El-Gharbia	10.4	10.1	10.0	9.9	9.3	8.6	8.6	7.9	8.6
El-Giza	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
El-Ismailia	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2
El-Kalioubia	1.4	1.3	1.3	1.2	1.1	0.9	1.1	1.3	1.3
El-Menia	8.0	8.3	7.9	7.7	7.0	8.3	7.9	8.3	7.3
El-Menoufia	4.7	4.5	4.4	4.7	3.9	3.9	3.6	4.0	4.6
El-Sharkia	12.5	12.8	12.2	11.2	11.9	11.6	11.7	11.5	10.9
El-Wadi El-Gedid	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Kafr El-Sheikh	11.6	12.0	12.7	13.0	13.0	13.8	14.7	12.8	14.6
Kena	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Port Said	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Souhag	5.1	4.5	4.1	3.2	1.7	1.4	2.2	2.5	1.4
Totals	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: MALR, Central Administration for Agricultural Economics. 1999.

Baseline Area Shares: 1996, 1997. Baseline area for each Governorate adopted for this exercise is the simple average percentage share of area cultivated in cotton in the 1996/97 and 1997/98 seasons. These are the last two years for which we have production data, and represent relatively normal levels of production for the past decade.

The average national cotton area in those two years was 889,000 feddans, considerably more than the 788,000 feddans planted in 1998 and the 650,000 feddans reported in 1999. Three alternative values for total cotton area are considered for the 2000/01 season, a low of 700,000 feddans and a high of 900,000. For each Governorate, the baseline area specified in Var-Mix is calculated to maintain its average percent share in 1997-98. Thus, instead of the average cotton area for each Governorate in those two years, we take instead the percent share of the total national cotton area.

In the following tables (**Table 3-5, 3-6, and 3-7**) we tried a range of possible adjustment allowed in the baseline area for each Governorate, between zero and 30 percent. Those values represent the percentage change -- up or down -- from the baseline Governorate area share in the variety mix that generates the highest total farm income from cotton. Each column represents a different best variety mix obtained for the conditions specified in the first three shaded rows. The first row represents the national total cotton area envisaged and the second indicates whether Giza-75 is allowed as part of the solution or not. The adjustment values appear in the third row labeled "*Max Govrt. %,*" meaning the maximum percentage increase or decrease in cotton area share that is permissible in each Governorate.

Table 3-5 and **Figure 3-4** provide the best variety mix simulation results when the total national area for 2000/01 is only 700,000 feddans. Columns A through G give the best mix when Giza-75 is allowed and columns H through N when Giza-75 is ruled out. For example, Column B shows the best mix results when Giza-75 is permitted and governorate areas are allowed to change up to five percent above or below the baseline values.

The presence of Giza-86 in the best variety mix is highly sensitive to the degree of adjustment in Governorate shares. When governorate cotton areas are allowed to adjust 20% up or down, Giza-86 area in variety mix declines from 96,000 feddans to only 68,000 feddans, as shown in columns A and H. The highest levels of Giza-86 appear when changes in governorate shares are not permitted and Giza-75 is not allowed.

Table 3-5. Cotton Variety Mix at Alternative Levels of Flexibility in Governorate Areas when Total Cotton Area is 700,000 feddans

Option	A	B	C	D	E	F	G
Total Area	700,000	700,000	700,000	700,000	700,000	700,000	700,000
Giza-75?	yes	yes	yes	yes	yes	yes	yes
Max Govrt. %	-	5	10	15	20	25	30
kentars (m)	5.7	5.7	5.7	5.7	5.7	5.8	5.8
Farm Rev $m	559	561	563	565	567	569	571
Net Rev $m	349	351	353	355	357	359	361
Giza-45 at 220	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Giza-70 at 116	121,443	123,356	125,269	127,182	129,095	131,008	132,921
Giza-76 at 119	0	0	0	0	0	0	0
Giza-77 at 112	152,557	150,644	148,731	146,818	144,905	142,992	141,079
Giza-86 at 102	95,606	90,825	86,045	81,265	76,485	71,704	66,924
Giza-75 at 96	33,287	39,075	44,863	50,651	56,439	62,227	68,016
Giza-89 at 96	0	0	0	0	0	0	0
Giza-85 at 94	136,428	137,918	139,408	140,898	142,388	143,878	145,368
Giza-80 at 88	118,798	114,506	110,214	105,922	101,630	97,338	93,046
Giza-83 at 86	35,882	37,676	39,470	41,264	43,058	44,852	46,646

Option	H	I	J	K	L	M	N
Total Area	700,000	700,000	700,000	700,000	700,000	700,000	700,000
Giza-75?	no	no	no	no	no	no	no
Max Govrt. %	-	5	10	15	20	25	30
kentars (m)	5.6	5.7	5.7	5.7	5.7	5.7	5.7
$m Revenue	558	559	561	563	564	566	568
$m Net Farm	348	349	351	353	354	356	358
Giza-45 at 220	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Giza-70 at 116	128,217	134,592	140,968	147,344	153,719	160,095	166,470
Giza-76 at 119	0	0	0	0	0	0	0
Giza-77 at 112	145,783	139,408	133,032	126,656	120,281	113,905	107,530
Giza-86 at 102	100,697	98,666	96,636	94,605	92,575	90,544	88,514
Giza-75 at 96	-	-	-	-	-	-	-
Giza-89 at 96	28,196	29,521	30,847	32,173	33,498	34,824	36,149
Giza-85 at 94	136,428	139,630	142,833	146,036	149,239	152,441	155,644
Giza-80 at 88	118,798	114,506	110,214	105,922	101,630	97,338	93,046
Giza-83 at 86	35,882	37,676	39,470	41,264	43,058	44,852	46,646

Figure 3.4. Cotton variety areas when Governorate shares are flexible

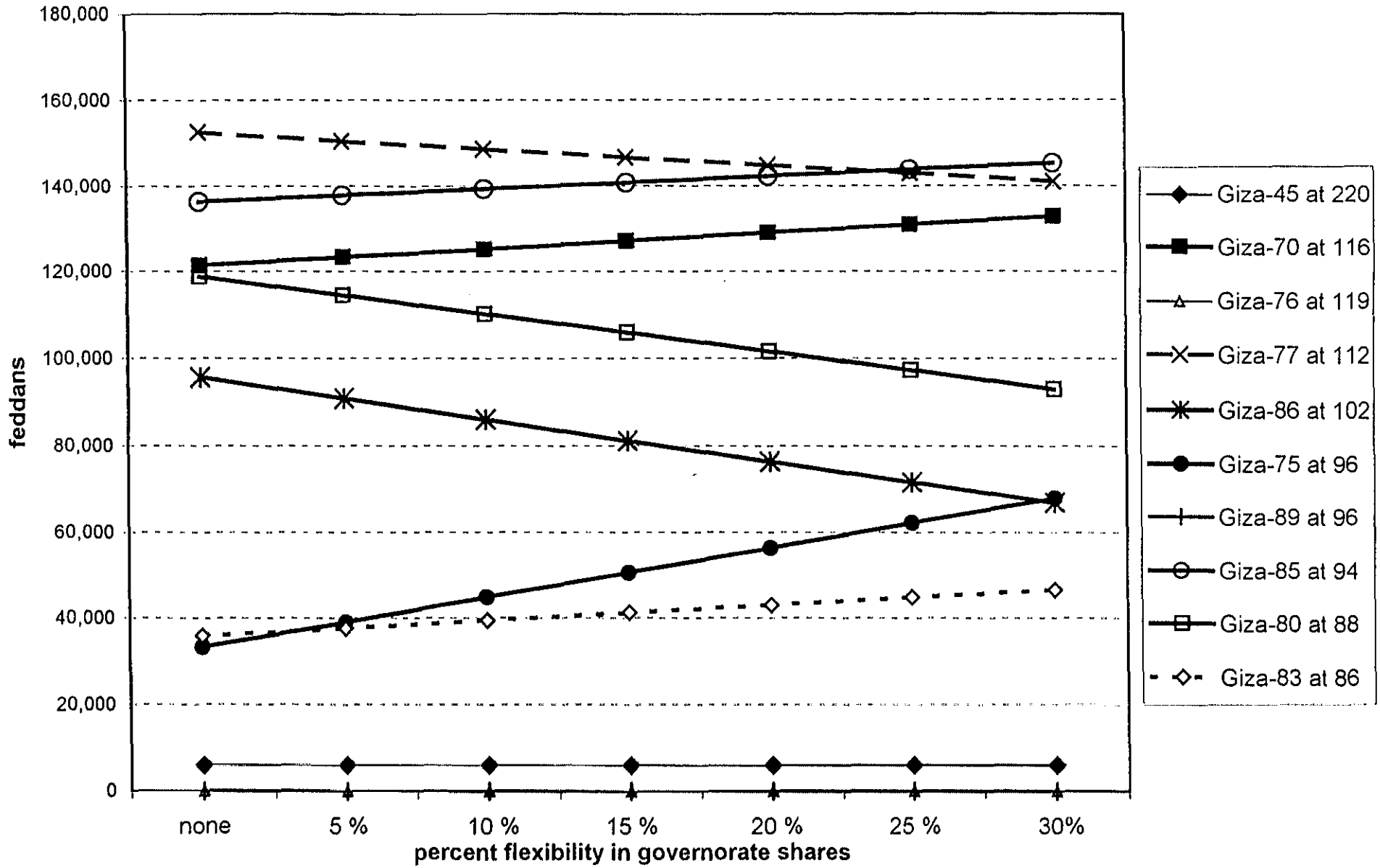


Figure 3.5. Cotton variety areas when governorate shares are flexible and Giza-75 is not available

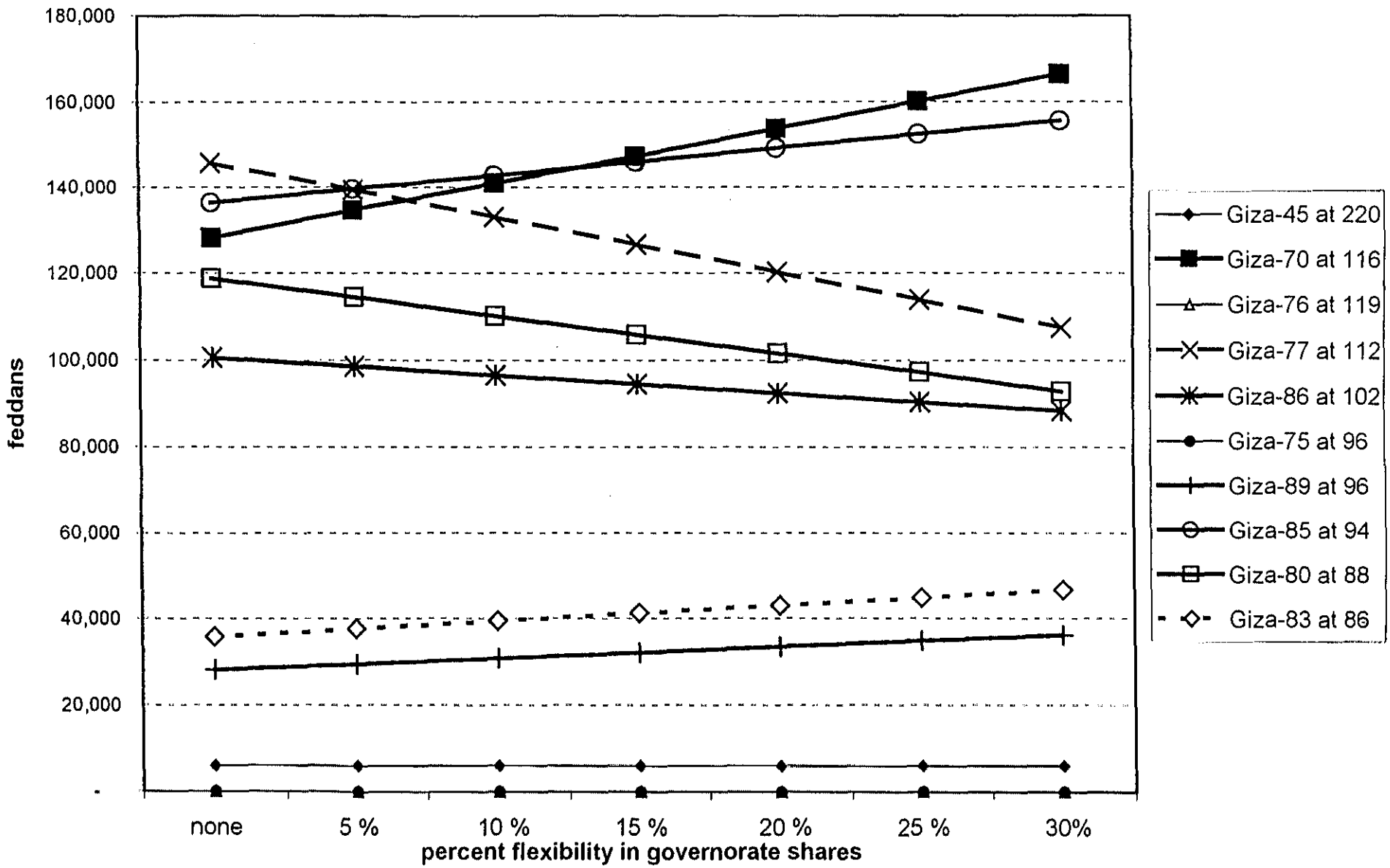


Table 3-6. Cotton Variety Mix at Alternative Levels of Flexibility in Governorate Areas when Total Cotton Area is 800,000 feddans							
Option	A	B	C	D	E	F	G
Total Area	800,000	800,000	800,000	800,000	800,000	800,000	800,000
Giza-75?	yes	yes	yes	yes	yes	yes	yes
Max Govrt. %	-	5	10	15	20	25	30
kentars (m)	6.5	6.5	6.5	6.5	6.6	6.6	6.6
Farm Rev $m	639	641	643	646	648	650	652
Net Rev $m	399	401	403	406	408	410	412
Giza-45 at 220	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Giza-70 at 116	139,449	141,635	143,821	146,008	148,194	150,380	152,567
Giza-76 at 119	0	0	0	0	0	0	-
Giza-77 at 112	174,551	172,365	170,179	167,992	165,806	163,620	161,433
Giza-86 at 102	109,264	103,801	98,337	92,874	87,411	81,948	76,485
Giza-75 at 96	38,042	44,657	51,272	57,887	64,502	71,482	78,696
Giza-89 at 96	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Giza-85 at 94	155,917	157,620	159,323	161,026	162,729	164,067	165,171
Giza-80 at 88	135,769	130,864	125,959	121,054	116,149	111,244	106,339
Giza-83 at 86	41,008	43,058	45,108	47,159	49,209	51,260	53,310

Option	H	I	J	K	L	M	N
Total Area	800,000	800,000	800,000	800,000	800,000	800,000	800,000
Giza-75?	no	no	no	no	no	no	no
Max Govrt. %	-	5	10	15	20	25	30
kentars (m)	6.4	6.5	6.5	6.5	6.5	6.5	6.5
$m Revenue	637	639	641	643	645	647	648
$m Net Farm	397	399	401	403	405	407	408
Giza-45 at 220	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Giza-70 at 116	147,190	154,477	161,763	169,049	176,336	183,987	191,872
Giza-76 at 119	0	0	0	0	0	0	-
Giza-77 at 112	166,810	159,523	152,237	144,951	137,664	130,013	122,128
Giza-86 at 102	115,322	113,002	110,681	108,361	106,040	104,085	102,363
Giza-75 at 96	-	-	-	-	-	-	-
Giza-89 at 96	31,983	33,498	35,013	36,528	38,043	39,558	41,073
Giza-85 at 94	155,917	159,578	163,238	166,898	170,558	173,854	176,915
Giza-80 at 88	135,769	130,864	125,959	121,054	116,149	111,244	106,339
Giza-83 at 86	41,008	43,058	45,108	47,159	49,209	51,260	53,310

Table 3-7. Cotton Variety Mix at Alternative Levels of Flexibility in Governorate Areas when Total Cotton Area is 900,000 feddans

Option	A	B	C	D	E	F	G
Total Area	900,000	900,000	900,000	900,000	900,000	900,000	900,000
Giza-75?	yes	yes	yes	yes	yes	yes	yes
Max Govrt. %	-	5	10	15	20	25	30
kentars (m)	7.3	7.3	7.3	7.4	7.4	7.4	7.4
Farm Rev $m	718	721	723	726	728	731	733
Net Rev $m	448	451	453	456	458	461	463
Giza-45 at 220	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Giza-70 at 116	157,454	159,914	162,374	164,833	167,293	169,753	172,212
Giza-76 at 119	-	0	0	-	0	0	-
Giza-77 at 112	196,546	194,086	191,626	189,167	186,707	184,247	181,788
Giza-86 at 102	122,922	116,776	110,630	104,483	98,337	92,191	86,045
Giza-75 at 96	42,797	50,239	57,896	66,012	74,128	82,243	90,359
Giza-89 at 96	0	-	(0)	(0)	(0)	(0)	(0)
Giza-85 at 94	175,407	177,323	179,024	180,265	181,507	182,749	183,991
Giza-80 at 88	152,740	147,222	141,704	136,186	130,668	125,149	119,631
Giza-83 at 86	46,134	48,440	50,747	53,054	55,360	57,667	59,974

Option	H	I	J	K	L	M	N
Total Area	900,000	900,000	900,000	900,000	900,000	900,000	900,000
Giza-75?	no	no	no	no	no	no	no
Max Govrt. %	-	5	10	15	20	25	30
kentars (m)	7.3	7.3	7.3	7.3	7.3	7.3	7.4
$m Revenue	717	719	721	723	725	727	728
$m Net Farm	447	449	451	453	455	457	458
Giza-45 at 220	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Giza-70 at 116	166,164	174,361	182,773	191,644	200,515	209,386	218,258
Giza-76 at 119	-	0	0	-	0	0	-
Giza-77 at 112	187,836	179,639	171,227	162,356	153,485	144,614	135,742
Giza-86 at 102	129,948	127,338	124,942	123,005	121,069	119,132	117,195
Giza-75 at 96	-	-	-	-	-	-	-
Giza-89 at 96	35,771	37,475	39,179	40,884	42,588	44,293	45,997
Giza-85 at 94	175,407	179,525	183,428	186,871	190,315	193,759	197,203
Giza-80 at 88	152,740	147,222	141,704	136,186	130,668	125,149	119,631
Giza-83 at 86	46,134	48,440	50,747	53,054	55,360	57,667	59,974

Giza-75 and Giza-70 are the main beneficiaries of greater flexibility in governorate share adjustments: Giza-75 goes from 33,000 feddans to 68,000 when the governorate areas can adjust from zero to . In the absence of Giza-75, it is Giza-70 that gains the most from greater flexibility: It increases from 128,000 to 166,000 feddans when area change is relaxed from zero to 20%. Other varieties whose presence in the best mix rise with increased flexibility in area adjustment are Giza-85 and Giza-83. By contrast, Giza-80's presence declines with increased flexibility, being replaced by Giza-83 in Upper Egypt, both when Giza-75 is present or absent.

Table 3-6 and **Table 3-7** present similar simulations using the Var-Mix program to arrive at the best variety mix when the national total cotton area is held at 800,000 feddans and 900,000 feddans, respectively. The pictures that emerge in both tables are basically consistent with the findings from Table 3-5. Some of those findings can be summarized below.

Giza-75 increases rapidly with higher flexibility in adjustments of governorate areas.

Giza-86 decreases rapidly as we allow increased flexibility in governorate area adjustments.

Giza-70 expands rapidly in the absence of Giza-75 as we allow greater flexibility in governorate area adjustments.

The overall stronger varieties in the best variety mix are Giza-70, Giza-77, Giza-85, and Giza-80.

The constraint keeping the combined areas of ELS varieties below 40 percent of total area, prevents Giza-70 and Giza-77 from taking even greater shares in the best variety mix. This is an arbitrary constraint imposed because we felt that cotton authorities are not yet willing to contemplate a higher percent of ELS varieties at this time.

The loss of Giza-75 significantly affects the composition of the best variety mix and reduces farmers' income from cotton.

The MLS varieties Giza-80 and Giza-83 consistently appear in the best variety mix because they have high yields and have no substitutes in Upper Egypt governorates.

Giza-76 never enters the best variety mix under the range of conditions considered here. Suspension of its production is justified and allows farmers to shift to more remunerative varieties.

Variety Prices and Variety Mix. Best variety mix results are based so far on the premise that the current set of variety prices will also prevail during the 2000/01 season. Such a premise is hypothetical. We have little basis for adopting another set of prices, though many expert market observers believe the current prices charged for ELS varieties are too high and uncompetitive.

If prices of all varieties were to increase or decrease by roughly the same amount, the composition of the best variety mix will not change significantly. However, if the **relative** prices of some varieties change vis a vis other varieties the *Var-Mix* program could generate a very different result for the best variety mix. We need therefore to examine whether the findings so far about the relative strengths of cotton varieties are affected by changes in relative prices.

To test the price sensitivity of the best variety mix, **Table 3-8** summarizes results when prices of ELS varieties are reduced by 10 percent while prices of LS and MLS varieties are kept at current levels. Thus, the price of Giza-70 was reduced from 116 c/lb to 104 c/lb, only 2 cents above the price of Giza-86 which is kept at 102 c/lb. Similarly, Giza-77 was reduced 10% to 101 c/lb, below the price of Giza-86, and the price of Giza-76 was dropped to 107 c/lb.

Best variety mixes are not greatly affected by the 10 percent reduction in ELS prices, according to the results presented in **Table 3-8.** Adjustments of up to 20 percent in governorate shares from the average baseline years (96 and 97) were considered in generating this table. The main results from that table can be summarized below.

Giza-70, Giza-77, Giza-85, and Giza 80 are by far the strongest varieties in the best-variety mix when cotton area shares are allowed greater flexibility. The greater the flexibility, the stronger the combined presence of these varieties becomes.

Giza-76 does not enter at all in any of the variety mixes for the set of conditions and new prices in Table 3-8.

Table 3-8. Cotton Variety Areas when Prices of ELS Varieties are Reduced by 10 percent. (feddans)

Option >>>	A	B	C	D	E	F
Total Area (feddans)	700,000	700,000	700,000	700,000	700,000	700,000
Giza 75?		yes			no	
Max Govrt. %	0	10	20	0	10	20
kentars (million)	5.7	5.7	5.7	5.6	5.7	5.7
Farm Rev (million $)	531	534	538	529	532	535
Net Rev (million $)	321	324	328	319	322	325
Giza-45 at 198 c/lb	6,000	6,000	6,000	6,000	6,000	6,000
Giza-70 at 104 c/lb	121,443	112,410	129,095	128,217	138,522	153,719
Giza-76 at 107c/lb	0	0	0	0	0	0
Giza-77 at 101c/lb	152,557	161,590	144,905	145,783	135,478	120,281
Giza-86 at 102 c/lb	95,606	86,045	76,485	100,697	96,636	92,575
Giza-75 at 96 c/lb	33,287	57,722	56,439	0	0	0
Giza-89 at 96 c/lb	0	0	0	28,196	30,847	33,498
Giza-85 at 94 c/lb	136,428	126,549	142,388	136,428	142,833	149,239
Giza-80 at 88 c/lb	118,798	110,214	101,630	118,798	110,214	101,630
Giza-83 at 86 c/lb	35,882	39,470	43,058	35,882	39,470	43,058

Giza-86 enters in moderate amounts, under 100,000 feddans or less than 16 percent of total area, in best variety mixes for the range of conditions explored.

Giza-89 does not enter when Giza-75 is allowed to be present, but when Giza-75 is removed from the variety set, then modest amounts (34,000 feddans) of Giza-89 enter in the solution.

Areas assigned to MLS varieties Giza-80 and Giza-83, in the best variety mix are nearly constant because they have high yields and there are no substitutes for them in Upper Egypt.

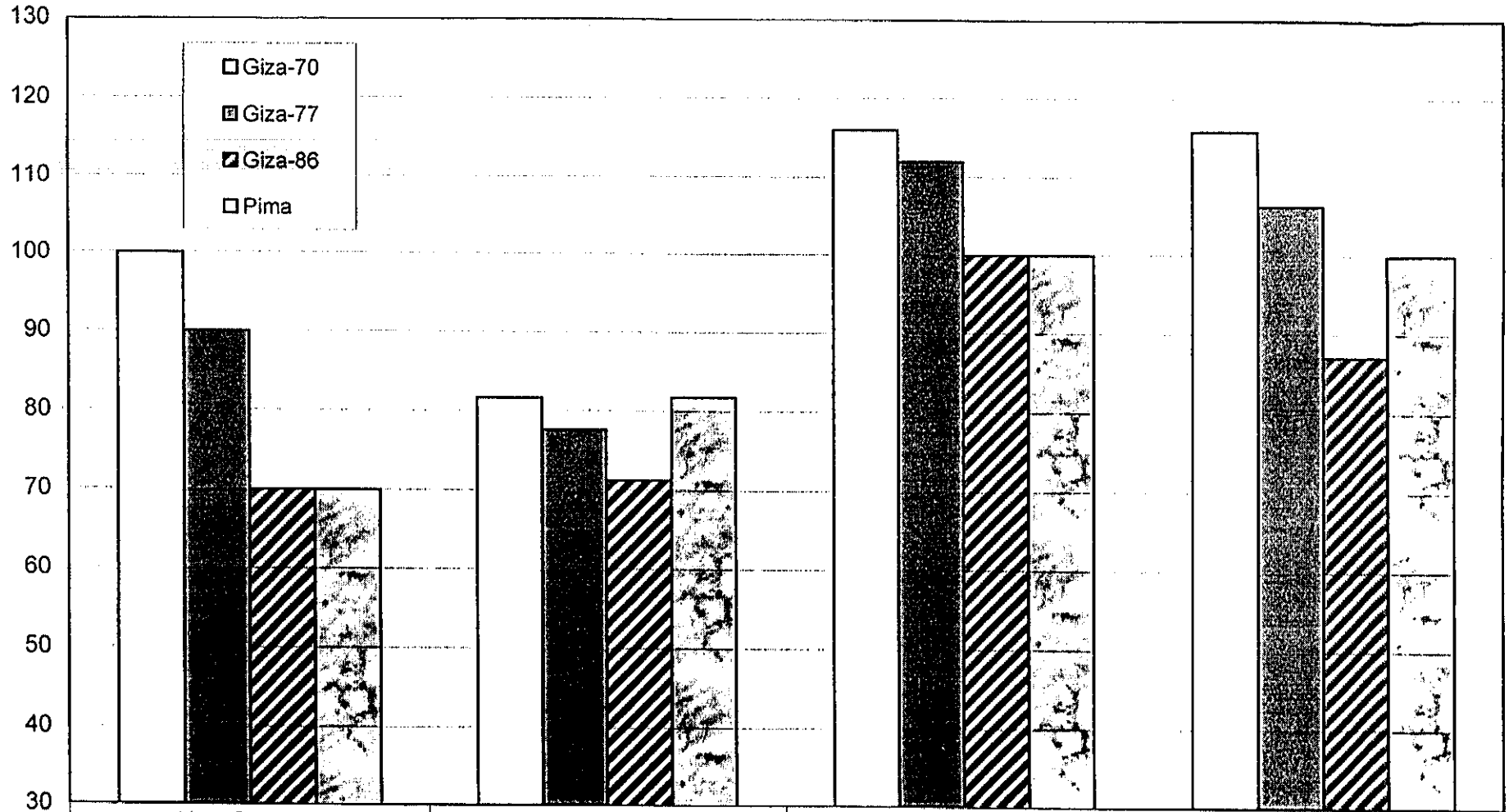
When Giza-75 is kept out of the list of variety available for 2000/01, the areas of Giza-89 and Giza 86 increase to fill the void.

The combined areas of Giza-70 and Giza-77 are constrained to a maximum of 40 percent of total area in ELS varieties, otherwise they would take over an even larger proportion of total national cotton area, even at prices that are roughly equal to those of Giza-86. This arbitrary restriction can be relaxed if cotton authorities were willing to accept a higher percent of area on ELS varieties.

Comparative Farm Income from Egyptian Cotton Varieties. In the following graph, **Figure 3-6,** we attempt to summarize and illustrate the comparison that emerges between the two ELS high-yielding varieties – Giza-70 and Giza-77 – and the promising new variety, Giza-86. American Pima is added to provide a wider market background. Spinnability of these varieties is compared in the first group of bars in the graph. Both ELS varieties (Giza-70 and Giza-77) can be used to spin fine count yarns of up to Ne 100 and Ne 90 English count, while Giza-86 is limited to about Ne 70, the same as for American Pima.

The second set of bars in Figure 3-6 depicts the relative yields of the three varieties in 10 feddans. Giza-70 and Pima have comparable yields -- 82 kentars – and Giza-77 is not far behind, but Giza-86 comes short at 71 kentars. Relative prices of the varieties are shown in the third set of graphs, expressed in cents per libra. Giza-86 is the lowest at 100 c/lb and Giza-70 the highest at 117 c/lb. Pima was priced at 104 c/lb in early 1999.

Figure 3-6, Comparative Performance of Egyptian Varieties and US Pima



	Yarn Count Ne	kentars/10 feddans	cents/libra	Revenue Index
Giza-70	100	81.7	116	116
Giza-77	90	77.7	112	106
Giza-86	70	71.3	100	87
Pima	70	81.8	100	100

Index bars scaled to represent relative incomes per feddan are shown in the right hand group of bars, with Pima being set at 100. Giza-86 is significantly lower at 84 and Giza-70 reaches 112 and Giza-77 102. Clearly then, Giza-70 seems the most competitive of the three Egyptian varieties when compared with Pima. Even after allowing for significant price reductions for Giza-70 and Giza-77 farmers' income per feddan will still exceed that from Giza-86.

Summary of Overall Findings

Abandoning production of Giza-75 has taken away one of the most competitive varieties Egypt had in its cotton arsenal, one that consistently gave good yields and high revenues to farmers, and that was loved by spinners worldwide as one of the most user-friendly.

Two ELS varieties, Giza-70 and Giza-77, remain at present the most remunerative varieties for Egyptian farmers, even when priced at prices comparable to Giza-86.

Removal of Giza-76 as a commercial variety was justified by its failure to appear on best variety mixes under a wide range of circumstances.

Giza-80 and Giza-83 always appear in the best variety mix, despite their lower prices, because of their high yields and lack of substitutes in Upper Egypt.

Giza-85 provides a reliable source of high-yielding and low-cost cotton for the local market, and it can be grown profitably both in Delta governorates and in Upper Egypt.

Giza-89 is a moderately promising variety and a likely substitute for Giza-75 in a few selected governorates. It is not yet widely accepted in international market and in revenue per feddan it remains below Giza-70 and 77.

Suspension of production of Giza-77 in 1998/99 was understandable in view of the sizeable stocks on hand at the time. However, permanent abandonment of Giza-77 could deal a major blow to income of Egyptian farmers. Giza-77 remains competitive against other varieties even when priced below Giza-86.

AGRICULTURAL POLICY REFORM PROJECT

Reform Design and Implementation Unit

Problems Selecting a Cotton Variety Mix for Egypt

Annex A

Cotton Production Statistics, by Variety, and by Governorate and District, 1990 to 1998

Central Administration for Agricultural Economics

Ministry of Agriculture and Land Reclamation

MALR - CAAE

Cairo, Egypt

June 1999

FOREWORD

The attached statistical series of cotton production by variety and by administrative unit have been compiled and produced by the Central Administration for Agricultural Economics of the Ministry of Agriculture and Land Reclamation, under the direction of **Dr. Mohamed Shahed**, and direct supervision of **Mr. Ibrahim Labib**.

This Annex is integral part of an effort by the Agricultural Policy Reform Project, Research Design and Implementation Unit – APRP/RDI, to assemble the necessary information for agricultural authorities in the cotton sector to make better informed decisions regarding what varieties of cotton to produce in Egypt.

Wide differences appear to exist between the relative performance of varieties in experimental station trials and the performance in actual farmers' fields. There are also significant differences between yields of the same variety in different Governorates, and among different districts in the same Governorate.

Actual production in farmers' fields provides more realistic basis for cotton officials to base expectations about future yields and production of varieties when grown in different zones. These expectations are essential for Government programs in cotton support prices, farmers' incomes, zonal allocations by variety, and deciding how much an area to assign to each variety.

Given the importance of these types of production data for policy makers and researchers in current and future situations, the APRP/RDI deems necessary to disseminate this information as a separate Annex to the main report on ***Problems Selecting a Cotton Variety Mix for Egypt***.

Dr. Ibrahim Siddik,
Dr. Edgar Ariza-Nino,
APRP/RDI

June 1999

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1990		El-Amria	G 70	550	5.62	3093	6.43	3535
1990		Khorshed	Others	14	5.93	83	6.00	84
1990	Alexandria		Total	564	5.63	3176	6.42	3619
1990		Abou-Hommos	G 70	28054	6.86	192430	7.84	219921
1990		Etay El-Baroud	G 70	13224	6.37	84223	7.28	96255
1990		Damanhour	G 70	22240	7.43	165268	8.49	188879
1990		Shobra-Kheit	G 70	7275	7.27	52878	8.31	60432
1990		Kafr El-Dawar	G 70	12624	7.74	97739	8.85	111702
1990		Edco	G 70	2108	6.67	14051	7.62	16059
1990		Rashid	G 70					
1990		El-Mahmoudia	G 76	11947	6.95	83008	7.84	93675
1990		El-Rahmania	G 76	6966	7.68	53492	8.67	60367
1990		Abou El-Matamir	G 75	4900	9.71	47597	11.34	55587
1990		Hosh Eisa	G 75	4405	9.73	42842	11.36	50034
1990		El-Delengat	G 75	11119	6.65	73969	7.77	86385
1990		Janaklis	G 75	288	9.09	2619	10.62	3059
1990		Kom Hamada	G 75	6013	7.04	42355	8.23	49464
1990		Wadi El-Natroun	G 75	10	4.90	49	5.80	58
1990	El-Behera		Total	131173	7.26	952520	8.32	1091877
1990		Bassyoun	G 77	10153	5.97	60615	6.48	65834
1990		Kotour	G 77	13463	4.98	67047	5.41	72820
1990		Kafr El-Zayat	G 77	378	5.46	2065	5.93	2243
1990		Kafr El-Zayat	G 75	5922	6.60	39080	7.50	44422
1990		Kafr El-Zayat	Total	6300	6.53	41145	7.41	46665
1990		El-Mehalla El-Kobra	G 77	52	4.96	258	5.40	281
1990		El-Mehalla El-Kobra	G 75	24460	5.07	124120	5.77	141086
1990		El-Mehalla El-Kobra	Total	24512	5.07	124378	5.77	141367
1990		Zefta	G 75	10958	5.02	54962	5.70	62475
1990		Samannoud	G 75	6174	5.22	32202	5.93	36603
1990		El-Santa	G 75	13327	4.99	66461	5.67	75545
1990		Tanta	G 75	18721	5.01	93836	5.70	106662
1990	El-Gharbia		Total	103608	5.22	540646	5.87	607971
1990		El-Hamoul	G 77	25551	3.94	100664	4.40	112397
1990		El-Borollos	G 77	621	4.71	2927	5.26	3268
1990		Beila	G 77	11904	4.38	52173	4.89	58254
1990		Desouk	G 77	16640	7.23	120236	8.07	134251
1990		Sidi Salem	G 77	16303	4.76	77653	5.32	86704
1990		Foua	G 77	3781	7.42	28058	8.29	31329
1990		Kallin	G 70	278	2.92	812	3.30	918
1990		Kallin	G 77	9261	6.22	57590	6.94	64303
1990		Kallin	G 81	219	3.78	828	4.54	995
1990		Kallin	Total	9758	6.07	59230	6.79	66216
1990		Kafr El-Sheikh	G 45	308	1.56	481	1.56	481
1990		Kafr El-Sheikh	G 70	592	5.06	2993	5.72	3384
1990		Kafr El-Sheikh	G 76	426	4.21	1795	4.70	2002
1990		Kafr El-Sheikh	G 77	13522	5.33	72059	5.95	80458
1990		Kafr El-Sheikh	G 75	1584	4.62	7316	5.31	8409
1990		Kafr El-Sheikh	G 81	390	3.21	1251	3.86	1504
1990		Kafr El-Sheikh	Total	16822	5.11	85895	5.72	96238
1990		Metobes	G 77	3628	6.21	22525	6.93	25151
1990		El-Riad	G 77	9726	4.23	41113	4.72	45906
1990	Kafr El-Sheikh		Total	114734	5.15	590474	5.75	659714

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1990		Ehnasia city	G 75	13114	4.25	55674	5.01	65712
1990		Beba	G 75	3866	4.51	17418	5.32	20558
1990		Beba	G 80	1656	4.68	7752	5.66	9377
1990		Beba	Total	5522	4.56	25170	5.42	29935
1990		Beny Suef	G 75	7491	6.00	44973	7.09	53082
1990		Bosh	G 75	6614	5.11	33804	6.03	39899
1990		Semesta El-Wakf	G 75	5779	4.77	27560	5.63	32529
1990		Semesta El-Wakf	G 80	323	4.38	1416	5.31	1714
1990		Semesta El-Wakf	Total	6102	4.75	28976	5.61	34243
1990		El-Fashen	G 75	8781	4.03	35348	4.75	41722
1990		El-Wasta	G 75	6396	6.00	38368	7.08	45287
1990	Beny Suef		Total	54020	4.86	262313	5.74	309880
1990		Ebshway	G 75	5189	5.10	26474	6.02	31239
1990		Etsa	G 75	9902	5.05	49994	5.96	58993
1990		Senoures	G 75	5317	6.26	33291	7.39	39283
1990		Tamia	G 75	6097	5.19	31630	6.12	37324
1990		El-Fayoum	G 75	9692	5.65	54746	6.67	64600
1990	El-Fayoum		Total	36197	5.42	196135	6.39	231439
1990		Abou Korkas	G 80	10724	5.23	56117	6.27	67291
1990		Beny Mazar	G 80	8523	5.51	46985	6.61	56342
1990		Deir Mouas	G 80	7534	3.69	27796	4.42	33331
1990		Samalout	G 80	13167	4.52	59508	5.42	71359
1990		El-Edoua	G 80	8608	4.98	42866	5.97	51402
1990		Matay	G 80	6333	5.72	36248	6.86	43466
1990		Maghagha	G 80	7938	5.05	40123	6.06	48113
1990		Mallawy	G 80	8875	4.16	36886	4.98	44231
1990		Mallawy	G 83	997	4.35	4338	5.53	5509
1990		Mallawy	Total	9872	4.18	41224	5.04	49740
1990		El-Menia	G 80	7084	5.45	38580	6.53	46263
1990	El-Menia		Total	79783	4.88	389447	5.86	467307
1990		Abnoub	Dandara	6175	4.66	28797	5.17	31901
1990		Abou tig	Dandara	8132	3.89	31611	4.31	35018
1990		Assyout	Dandara	8701	4.33	37704	4.80	41767
1990		El-Badary	Dandara	2260	4.47	10112	4.96	11202
1990		Sahel Selim	Dandara	1243	5.54	6891	6.14	7634
1990		Sedfa	Dandara	4515	3.99	18000	4.42	19939
1990		Manfalout	Dandara	9645	4.90	47276	5.43	52371
1990		El-Ghanayem	Dandara	2749	4.95	13609	5.48	15076
1990		El-Fath	Dandara	4200	5.55	23312	6.15	25824
1990		Dayrout	G 80	9988	3.48	34797	4.05	40469
1990		El-Kousia	G 80	10279	4.11	42211	4.78	49091
1990	Assyout		Total	67887	4.34	294320	4.87	330292
1990		Akhmim	Dandara	850	5.16	4387	5.69	4839
1990		Dar El-salam	Dandara	6120	5.16	31585	5.69	34840
1990		El-Balyana	Dandara	3157	4.88	15392	5.38	16978
1990		Gerga	Dandara	2250	4.90	11028	5.41	12164
1990		Sakolta	Dandara	2550	5.05	12869	5.57	14195
1990		Souhag	Dandara	8022	4.82	38630	5.31	42610
1990		Tema	Dandara	8400	3.44	28908	3.80	31886
1990		Tahta	Dandara	6247	3.55	22173	3.91	24457
1990		El-maragha	Dandara	5941	4.93	29272	5.43	32288
1990		El-monshaa	Dandara	4268	5.75	24527	6.34	27054
1990		Gahina	Dandara	2500	3.98	9957	4.39	10983
1990	Souhag		Total	50305	4.55	228728	5.02	252294

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1990		Aga	G 75	9001	4.57	41159	5.20	46816
1990		Belkas	G 75	35969	5.30	190628	6.03	216829
1990		Dekernes	G 75	5320	5.24	27880	5.96	31712
1990		Mit Souid	G 75	13840	5.06	69988	5.75	79608
1990		El-Senbellawen	G 75	14236	3.35	47715	3.81	54273
1990		Tami El-Amdid	G 75	8495	3.91	33183	4.44	37743
1990		Sherbin	G 75	12345	6.01	74214	6.84	84414
1990		Talkha	G 75	16716	5.20	86910	5.91	98855
1990		El-Manzala	G 75	12564	4.64	58259	5.27	66266
1990		El-Mansoura	G 75	14705	5.37	78993	6.11	89850
1990		Mit Ghamr	G 75	4784	4.36	20852	4.96	23719
1990		Meniet El-Nasr	G 75	10648	4.81	51259	5.48	58304
1990	El-Dakahlia		Total	158623	4.92	781040	5.60	888389
1990		Faraskour	G 45	372	2.25	836	2.33	867
1990		Kafr Saad	G 45	10141	2.91	29482	3.01	30557
1990		El-Zarka	G 45	810	3.10	2513	3.22	2605
1990	Damietta		Total	11323	2.90	32831	3.01	34029
1990		El-Hessenia	G 75	22601	3.97	89677	4.48	101278
1990		Diarb Negm	G 75	14511	3.66	53098	4.13	59967
1990		Diarb Negm	G 81	59	3.98	235	4.68	276
1990		Diarb Negm	Total	14570	3.66	53333	4.13	60243
1990		Fakous	G 75	9906	4.82	47781	5.45	53962
1990		Kafr Sakr	G 75	8918	5.27	47036	5.96	53121
1990		Awlad Sakr	G 75	11460	5.55	63554	6.26	71775
1990		Abou Hammad	G 81	3772	4.24	15992	4.98	18776
1990		Abou Kebir	G 81	8313	4.41	36627	5.17	43002
1990		Belbeis	G 81	8071	4.82	38929	5.66	45705
1990		El-Zakazik	G 81	10844	4.17	45208	4.89	53077
1990		El-Ibrahimia	G 81	4382	4.54	19907	5.33	23372
1990		Menia El-Kamh	G 81	12213	4.69	57335	5.51	67314
1990		Hehia	G 81	5424	5.07	27473	5.95	32256
1990		Mashtoul El-souk	G 81	2266	4.28	9689	5.02	11375
1990		El-Kanayat	G 81	1686	3.84	6478	4.51	7605
1990	El-Sharkia		Total	124426	4.49	559019	5.17	642861
1990		Ashmoun	G 75	4155	5.10	21193	6.05	25136
1990		El-Bagour	G 75	2460	5.05	12426	5.99	14738
1990		Berket El-Sabee	G 75	6646	5.62	37328	6.66	44273
1990		Tala	G 75	8413	6.32	53191	7.50	63086
1990		Shebin El-kom	G 75	6704	5.26	35236	6.23	41791
1990		El-Shohada	G 75	5522	6.90	38110	8.19	45200
1990		Kwesna	G 75	8796	4.87	42799	5.77	50761
1990		Menouf	G 75	3861	5.77	22296	6.85	26444
1990	El-Menoufia		Total	46557	5.64	262579	6.69	311429
1990		Benha	G 75	4822	5.08	24511	5.89	28415
1990		Kafr Shokr	G 75	1118	6.88	7697	7.98	8923
1990		El-Khanka	G 75	322	5.46	1759	6.33	2039
1990		Shebin El-Kanater	G 75	1695	4.64	7872	5.38	9126
1990		Toukh	G 75	4399	5.69	25044	6.60	29033
1990		Kalioub	G 75	853	5.87	5010	6.81	5807
1990		El-Kanater El-Khayria	G 75	615	6.09	3746	7.06	4343
1990	El-Kalioubia		Total	13824	5.47	75639	6.34	87686
1990		El-Giza	G 75	12	3.50	42	4.17	50
1990		El-Giza	Others	11	4.45	49	4.64	51
1990	El-Giza		Total	23	3.96	91	4.39	101

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1990	General Total		G 45	11631	2.86	33312	2.97	34510
1990			G 70	86945	7.06	613487	8.06	701085
1990			G 76	19339	7.15	138295	8.07	156044
1990			G 77	134983	5.22	704983	5.80	783199
1990			G 75	482531	5.18	2497134	5.96	2877674
1990			Dandara	97925	4.55	446040	5.03	493026
1990			G 80	101032	4.66	471285	5.57	562449
1990			G 81	57639	4.51	259952	5.30	305257
1990			G 83	997	4.35	4338	5.53	5509
1990			Others	25	5.28	132	5.40	135
1990			Total	993047	5.21	5168958	5.96	5918888

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1991		El-Amria	G 70	830	6.80	5640	7.69	6382
1991		Khorshed	Others	17	6.47	110	7.24	123
1991	Alexandria		Total	847	6.79	5750	7.68	6505
1991		Abou-Hommos	G 70	27768	7.87	218411	8.90	247119
1991		Etay El-Baroud	G 70	12552	6.91	86755	7.82	98158
1991		Damanhour	G 70	21795	7.57	165002	8.57	186690
1991		Shobra-Kheit	G 70	6912	7.84	54157	8.87	61275
1991		Kafr El-Dawar	G 70	13702	8.82	120850	9.98	136735
1991		Edco	G 70	2360	7.59	17909	8.59	20263
1991		Rashid	G 70	22	7.27	160	8.23	181
1991		Rashid	G 76	28	6.29	176	6.86	192
1991		Rashid	Total	50	6.72	336	7.46	373
1991		El-Mahmoudia	G 76	12250	7.63	93493	8.35	102307
1991		El-Rahmania	G 76	7040	7.71	54246	8.43	59359
1991		Abou El-Matamir	G 75	5385	10.15	54657	11.96	64381
1991		Hosh Eisa	G 75	5140	8.32	42762	9.80	50369
1991		El-Delengat	G 75	10027	7.80	78210	9.19	92123
1991		Janaklis	G 75	510	7.69	3922	9.06	4620
1991		Kom Hamada	G 75	5848	6.67	38977	7.85	45911
1991		Wadi El-Natroun	G 75	2	3.50	7	4.00	8
1991	El-Behera		Total	131341	7.84	1029694	8.91	1169691
1991		Bassyoun	G 77	8013	6.24	49995	6.83	54695
1991		Kotour	G 75	10800	6.59	71144	7.60	82125
1991		Kafr El-Zayat	G 77	5803	5.62	32600	6.15	35664
1991		El-Mehalla El-Kobra	G 77	48	4.46	214	4.90	235
1991		El-Mehalla El-Kobra	G 75	21630	6.72	145264	7.75	167688
1991		El-Mehalla El-Kobra	Total	21678	6.71	145478	7.75	167923
1991		Zefta	G 75	9010	5.06	45610	5.84	52651
1991		Samannoud	G 75	4711	6.06	28547	7.00	32954
1991		El-Santa	G 75	11027	4.99	55013	5.76	63504
1991		Tanta	G 77	15358	4.68	71818	5.12	78569
1991	El-Gharbia		Total	86400	5.79	500205	6.58	568085
1991		El-Hamoul	G 77	23841	4.55	108543	5.01	119474
1991		El-Borollos	G 77	398	6.07	2414	6.68	2657
1991		Beila	G 77	8885	5.84	51900	6.43	57126
1991		Desouk	G 77	15654	7.08	110862	7.80	122026
1991		Sidi Salem	G 77	15405	5.79	89254	6.38	98242
1991		Foua	G 76	4248	7.52	31928	8.56	36342
1991		Kallin	G 70	65	3.40	221	3.72	242
1991		Kallin	G 77	7663	6.61	50682	7.28	55785
1991		Kallin	G 81	123	5.54	681	6.80	836
1991		Kallin	Total	7851	6.57	51584	7.24	56863
1991		Kafr El-Sheikh	G 45	205	2.20	450	2.26	463
1991		Kafr El-Sheikh	G 70	69	3.51	242	3.86	266
1991		Kafr El-Sheikh	G 76	46	5.57	256	6.35	292
1991		Kafr El-Sheikh	G 77	12529	6.19	77595	6.82	85410
1991		Kafr El-Sheikh	G 75	55	4.22	232	4.96	273
1991		Kafr El-Sheikh	Others (G68)	174	7.34	1278	8.41	1463
1991		Kafr El-Sheikh	Total	13078	6.12	80053	6.74	88167
1991		Metobes	G 76	3465	7.15	24791	8.14	28217
1991		El-Riad	G 77	9202	5.28	48567	5.81	53459
1991	Kafr El-Sheikh		Total	102027	5.88	599896	6.49	662573

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1991		Aga	G 75	6392	5.62	35944	6.50	41519
1991		Belkas	G 45	10	2.00	20	2.00	20
1991		Belkas	G 76	11	4.09	45	4.64	51
1991		Belkas	G 75	29624	6.71	198631	7.75	229439
1991		Belkas	Others (G 67, G 68)	11	6.09	67	6.91	76
1991		Belkas	Total	29656	6.70	198763	7.74	229586
1991		Dekernes	G 75	4031	6.18	24926	7.14	28792
1991		Mit Souid	G 75	12816	5.51	70584	6.36	81531
1991		El-Senbellawen	G 75	7192	4.95	35620	5.72	41145
1991		El-Senbellawen	Others (G 67, G 68)	2	5.50	11	6.00	12
1991		El-Senbellawen	Total	7194	4.95	35631	5.72	41157
1991		Tami El-Amdid	G 75	5051	5.08	25644	5.86	29622
1991		Sherbin	G 75	11253	5.97	67150	6.89	77565
1991		Talkha	G 75	15701	6.28	98663	7.26	113966
1991		El-Manzala	G 75	11231	4.79	53766	5.53	62106
1991		El-Mansoura	G 75	12551	5.40	67729	6.23	78233
1991		Mit Ghamr	G 75	2476	5.21	12897	6.02	14897
1991		Meniet El-Nasr	G 75	8171	4.99	40744	5.76	47064
1991		Meniet El-Nasr	Others	3	2.67	8	3.00	9
1991		Meniet El-Nasr	Total	8174	4.99	40752	5.76	47073
1991	El-Dakahlia		Total	126526	5.79	732449	6.69	846047
1991		Faraskour	G 75	204	5.16	1052	5.96	1215
1991		Kafr Saad	G 45	8725	3.66	31912	3.71	32342
1991		Kafr Saad	G 76	10	4.60	46	5.20	52
1991		Kafr Saad	Total	8735	3.66	31958	3.71	32394
1991		El-Zarka	G 75	574	5.01	2877	5.79	3324
1991	Damietta		Total	9513	3.77	35887	3.88	36933
1991		San El-Hagar	G 75	12301	3.72	45707	4.24	52172
1991		El-Hessenia	G 75	8439	4.37	36890	4.99	42107
1991		Diarb Negm	G 75	10505	4.85	50933	5.53	58136
1991		Diarb Negm	G 81	35	5.69	199	6.71	235
1991		Diarb Negm	Total	10540	4.85	51132	5.54	58371
1991		Fakous	G 75	8685	5.36	46584	6.12	53172
1991		Kafr Sakr	G 75	8066	6.00	48421	6.85	55268
1991		Awlad Sakr	G 75	10852	6.38	69200	7.28	78987
1991		Abou Hammad	G 81	2975	5.14	15295	6.08	18081
1991		Abou Kebir	G 81	7965	4.73	37644	5.59	44499
1991		Belbeis	G 81	7390	4.65	34327	5.49	40578
1991		El-Zakazik	G 81	8954	5.61	50236	6.63	59385
1991		El-Ibrahimia	G 81	3811	6.05	23071	7.16	27272
1991		Menia El-Kamh	G 81	10535	4.18	44047	4.94	52068
1991		Hehia	G 81	5047	6.09	30719	7.20	36314
1991		Mashtoul El-souk	G 81	1964	4.44	8712	5.24	10298
1991		El-Kanayat	G 81	1485	5.10	7570	6.03	8949
1991	El-Sharkia		Total	109009	5.04	549555	5.85	637521
1991		El-Kantara West	G 75	41	2.32	95	2.63	108
1991	El-Ismailia		Total	41	2.32	95	2.63	108
1991		Ashmoun	G 75	2992	5.55	16619	6.65	19885
1991		El-Bagour	G 75	1892	5.20	9842	6.22	11776
1991		Berket El-Sabee	G 75	5292	5.63	29798	6.74	35653
1991		Tala	G 77	7633	4.72	36060	5.24	39998
1991		Shebin El-kom	G 75	5885	4.49	26447	5.38	31644
1991		El-Shohada	G 75	4882	6.58	32100	7.87	38408
1991		Kwesna	G 75	6816	4.65	31669	5.56	37892
1991		Menouf	G 75	2831	4.99	14116	5.97	16889
1991	El-Menoufia		Total	38223	5.14	196651	6.07	232145

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1991		Benha	G 75	3800	5.20	19746	6.23	23686
1991		Kafr Shokr	G 75	1015	6.31	6402	7.57	7680
1991		El-Khanka	G 75	218	5.10	1112	6.12	1334
1991		Shebin El-Kanater	G 75	1195	4.92	5879	5.90	7051
1991		Toukh	G 75	3887	5.77	22416	6.92	26889
1991		Kalioub	G 75	695	6.45	4485	7.74	5380
1991		El-Kanater El-Khayria	G 75	490	6.43	3150	7.71	3778
1991	El-Kalioubia		Total	11300	5.59	63190	6.71	75798
1991		El-Giza	G 75	8	3.50	28	4.25	34
1991		El-Giza	Others	10	3.90	39	4.50	45
1991	El-Giza		Total	18	3.72	67	4.39	79
1991		Ehnasia city	G 75	12087	4.26	51456	5.13	61946
1991		Beba	G 75	3974	4.87	19360	5.86	23307
1991		Beba	G 80	132	7.13	941	9.30	1227
1991		Beba	Total	4106	4.94	20301	5.98	24534
1991		Beny Suef	G 75	6946	5.56	38603	6.69	46472
1991		Bosh	G 75	5635	5.60	31550	6.74	37981
1991		Semesta El-Wakf	G 75	5065	4.87	24648	5.86	29672
1991		El-Fashen	G 75	7274	5.27	38367	6.35	46188
1991		El-Wasta	G 75	6761	6.94	46952	8.36	56523
1991	Beny Suef		Total	47874	5.26	251877	6.34	303316
1991		Ebshway	G 75	4635	6.08	28161	7.30	33847
1991		Etsa	G 75	8670	5.15	44644	6.19	53658
1991		Senoures	G 75	4980	7.05	35086	8.47	42171
1991		Tamia	G 75	6040	5.68	34328	6.83	41260
1991		El-Fayoum	G 75	8670	6.59	57099	7.92	68628
1991	El-Fayoum		Total	32995	6.04	199318	7.26	239564
1991		Abou Korkas	G 80	9855	5.20	51289	6.54	64406
1991		Beny Mazar	G 80	8956	5.52	49409	6.93	62045
1991		Deir Mouas	G 80	5085	4.85	24647	6.09	30951
1991		Samalout	G 80	11841	6.36	75310	7.99	94571
1991		El-Edoua	G 80	6998	5.92	41436	7.44	52034
1991		Matay	G 80	5741	6.51	37347	8.17	46899
1991		Maghagha	G 80	7212	6.03	43508	7.58	54635
1991		Mallawy	G 80	6749	5.20	35109	6.53	44088
1991		Mallawy	G 83	1178	5.97	7030	7.79	9177
1991		Mallawy	Total	7927	5.32	42139	6.72	53265
1991		El-Menia	G 80	6634	6.35	42151	7.98	52931
1991	El-Menia		Total	70249	5.80	407236	7.28	511737
1991		Abnoub	Dandara	4811	5.35	25720	6.37	30631
1991		Abou tig	Dandara	4806	4.81	23113	5.73	27526
1991		Assyout	Dandara	6550	5.58	36572	6.65	43555
1991		El-Badary	Dandara	1560	3.07	4786	3.65	5700
1991		Sahel Selim	Dandara	1064	5.01	5328	5.96	6346
1991		Sedfa	Dandara	2775	4.47	12409	5.33	14779
1991		Manfalout	Dandara	7301	5.23	38202	6.23	45497
1991		El-Ghanayem	Dandara	1721	4.75	8175	5.66	9736
1991		El-Fath	Dandara	2850	5.00	14245	5.95	16964
1991		Dayrout	Dandara	5885	4.65	27368	5.54	32594
1991		El-Kousia	Dandara	7375	5.00	36871	5.95	43911
1991	Assyout		Total	46698	4.98	232789	5.94	277239

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1991		Akhmim	Dandara	786	5.17	4063	6.14	4826
1991		Dar El-salam	Dandara	5038	4.84	24395	5.75	28982
1991		El-Balyana	Dandara	1892	5.82	11012	6.91	13083
1991		Gerga	Dandara	1226	7.15	8766	8.49	10414
1991		Sakolta	Dandara	2120	5.19	11006	6.17	13076
1991		Souhag	Dandara	6692	5.71	38195	6.78	45377
1991		Tema	Dandara	6412	5.64	36188	6.71	42993
1991		Tahta	Dandara	4290	5.48	23514	6.51	27935
1991		El-maragha	Dandara	4902	6.34	31103	7.54	36951
1991		El-monshaa	Dandara	2982	6.31	18819	7.50	22358
1991		Gahina	Dandara	1882	5.89	11084	7.00	13168
1991	Souhag		Total	38222	5.71	218145	6.78	259163
1991			G 45	8940	3.62	32382	3.67	32825
1991			G 70	86075	7.78	669347	8.80	757311
1991			G 76	27098	7.56	204981	8.37	226812
1991			G 77	130432	5.60	730504	6.16	803340
1991			G 75	392936	5.78	2272465	6.76	2656607
1991		General Total	Dandara	84920	5.31	450934	6.32	536402
1991			G 80	69203	5.80	401147	7.28	503787
1991			G 81	50284	5.02	252501	5.94	298515
1991			G 83	1178	5.97	7030	7.79	9177
1991			Others	217	6.97	1513	7.96	1728
1991			Total	851283	5.90	5022804	6.84	5826504

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1992	Alexandria	El-Amria	G 70	1272	5.81	7393	6.78	8625
1992			Total	1272	5.81	7393	6.78	8625
1992		Abou-Hommos	G 70	26734	9.64	257812	11.25	300792
1992		Etay El-Baroud	G 70	11401	8.63	98379	10.07	114779
1992		Damanhour	G 70	21699	9.19	199497	10.73	232755
1992		Shobra-Kheit	G 70	7552	9.48	71595	11.06	83530
1992		Kafr El-Dawar	G 70	18665	9.45	176317	11.02	205711
1992		Edco	G 70	2593	8.97	23265	10.47	27143
1992		Rashid	G 70	160	8.61	1377	10.04	1606
1992		El-Mahmoudia	G 76	12546	9.02	113134	10.24	128476
1992		El-Rahmania	G 76	6588	8.86	58382	10.06	66300
1992		Abou El-Matamir	G 75	7580	9.99	75736	11.99	90892
1992		Hosh Eisa	G 75	5219	10.26	53552	12.31	64269
1992		El-Delengat	G 75	10416	8.95	93174	10.74	111820
1992		Janaklis	G 75	690	9.20	6345	11.04	7615
1992		Kom Hamada	G 75	5194	9.43	48980	11.32	58781
1992		El-Behera	G 70	88804	9.33	828242	10.88	966316
1992			G 76	19134	8.96	171516	10.18	194776
1992			G 75	29099	9.55	277787	11.46	333377
1992			Total	137037	9.32	1277545	10.91	1494469
1992		Bassyoun	G 77	8198	7.86	64434	8.82	72338
1992		Kotour	G 75	11300	8.50	96022	10.21	115321
1992		Kafr El-Zayat	G 75	5652	7.22	40826	8.68	49032
1992		El-Mehalla El-Kobra	G 75	22155	8.30	183822	9.96	220769
1992		Zefta	G 75	8121	7.68	62365	9.22	74900
1992		Samannoud	G 75	4752	7.23	34340	8.68	41243
1992		El-Santa	G 75	9420	7.35	69234	8.83	83150
1992		Tanta	G 75	14558	7.03	102402	8.45	122985
1992		El-Gharbia	G 77	8198	7.86	64434	8.82	72338
1992			G 75	75958	7.75	589011	9.31	707400
1992			Total	84156	7.76	653445	9.27	779738
1992		El-Hamoul	G 75	24092	6.27	151122	7.52	181222
1992		El-Borollos	G 75	800	7.65	6121	9.18	7340
1992		Beila	G 75	9244	7.44	68784	8.92	82484
1992		Desouk	G 77	15922	7.78	123827	8.81	140350
1992		Sidi Salem	G 77	17241	6.28	108332	7.12	122787
1992		Foua	G 76	3876	7.51	29093	8.55	33145
1992		Foua	Others (G 68)	635	7.71	4897	8.97	5694
1992		Foua	Total	4511	7.53	33990	8.61	38839
1992		Kallin	G 77	8024	7.63	61263	8.65	69438
1992		Kallin	G 81	215	3.61	777	4.29	922
1992		Kallin	Total	8239	7.53	62040	8.54	70360
1992		Kafr El-Sheikh	G 45	86	1.26	108	1.28	110
1992		Kafr El-Sheikh	G 70	70	4.07	285	4.29	300
1992		Kafr El-Sheikh	G 76	147	1.49	219	1.70	250
1992		Kafr El-Sheikh	G 77	12768	6.57	83929	7.45	95128
1992		Kafr El-Sheikh	G 75	165	2.13	351	2.55	421
1992		Kafr El-Sheikh	Others (G 67, G68)	201	3.00	602	3.48	700
1992		Kafr El-Sheikh	Total	13437	6.36	85494	7.21	96909
1992		Metobes	G 76	4000	7.43	29720	8.46	33858
1992		El-Riad	G 77	8981	5.82	52282	6.60	59258
1992		Kafr El-Sheikh	G 45	86	1.26	108	1.28	110
1992			G 70	70	4.07	285	4.29	300
1992			G 76	8023	7.36	59032	8.38	67253
1992			G 77	62936	6.83	429633	7.74	486961
1992			G 75	34301	6.60	226378	7.91	271467
1992			G 81	215	3.61	777	4.29	922
1992			Others	836	6.58	5499	7.65	6394
1992			Total	106467	6.78	721712	7.83	833407

AREA AND PRODUCTION
FOR COTTON VARIETIES

ear	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1992		Aga	G 75	4754	8.48	40337	10.01	47588
992		Belkas	G 75	34163	7.22	246521	8.51	290835
992		Dekernes	G 75	3878	6.01	23291	7.09	27477
1992		Mit Souid	G 75	11513	6.40	73724	7.55	86977
992		El-Senbellawen	G 75	6170	7.14	44056	8.42	51975
992		Tami El-Amdid	G 75	5996	6.59	39531	7.78	46637
1992		Sherbin	G 75	9799	7.70	75446	9.08	89007
992		Talkha	G 75	15608	7.31	114037	8.62	134536
992		El-Manzala	G 75	10748	5.91	63515	6.97	74933
1992		El-Mansoura	G 75	10464	6.78	70954	8.00	83709
992		Mit Ghamr	G 75	2420	6.73	16296	7.94	19225
992		Meniet El-Nasr	G 75	6495	6.08	39468	7.17	46563
1992	El-Dakahlia		Total	122008	6.94	847176	8.19	999462
992		Faraskour	G 75	256	5.56	1424	6.55	1676
992		Kafr Saad	G 45	10236	4.49	45999	4.45	45557
1992		El-Zarka	G 75	685	5.73	3926	6.74	4619
992	Damietta		G 75	941	5.69	5350	6.69	6295
992			G 45	10236	4.49	45999	4.45	45557
1992			Total	11177	4.59	51349	4.64	51852
992		El-Hessenia	G 75	7578	6.00	45462	7.08	53635
992		Diarb Negm	G 81	50	6.98	349	8.46	423
1992		Diarb Negm	G 75	9401	7.16	67292	8.44	79390
1992		Diarb Negm	Total	9451	7.16	67641	8.44	79813
992		Fakous	G 75	8756	6.64	58143	7.83	68596
992		Kafr Sakr	G 75	7579	7.39	56005	8.72	66074
1992		Awlad Sakr	G 75	10613	7.26	77000	8.56	90844
992		Abou Hammad	G 81	2964	6.97	20667	8.44	25011
992		Abou Kebir	G 75	7575	7.09	53671	8.36	63321
1992		San El-Hagar	G 75	13246	4.22	55920	4.98	65974
992		Belbeis	G 81	5961	6.66	39718	8.06	48064
992		El-Zakazik	G 81	8836	7.44	65751	9.00	79567
1992		El-Ibrahimia	G 81	3512	7.64	26822	9.24	32458
992		Menia El-Kamh	G 75	8615	7.62	65622	8.99	77419
992		Hehia	G 81	4825	7.38	35630	8.94	43118
1992		Mashtoul El-souk	G 81	1533	5.95	9120	7.20	11037
992		El-Kanayat	G 81	1595	7.15	11397	8.65	13791
992	El-Sharkia		G 75	73363	6.53	479115	7.70	565253
1992			G 81	29276	7.15	209454	8.66	253469
992			Total	102639	6.71	688569	7.98	818722
992		El-Kantara West	G 75	29	3.69	107	4.34	126
1992	El-Ismailia		Total	29	3.69	107	4.34	126
992		Ashmoun	G 75	2582	8.28	21386	10.03	25889
992		El-Bagour	G 75	2181	7.30	15917	8.83	19269
1992		Berket El-Sabee	G 75	5592	7.52	42072	9.11	50930
992		Tala	G 75	6670	7.14	47632	8.64	57661
992		Shebin El-kom	G 75	5053	7.11	35951	8.61	43520
1992		El-Shohada	G 75	4778	9.18	43858	11.11	53092
992		Kwesna	G 75	7197	7.26	52271	8.79	63276
992		Menouf	G 75	2574	7.44	19156	9.01	23190
1992	El-Menoufia		Total	36627	7.60	278243	9.20	336827

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1992		Benha	G 75	3907	6.50	25384	7.85	30664
1992		Kafr Shokr	G 75	1000	8.89	8886	10.73	10734
1992		El-Khanka	G 75	224	6.21	1391	7.50	1681
1992		Shebin El-Kanater	G 75	1108	5.83	6465	7.05	7810
1992		Toukh	G 75	3365	6.95	23383	8.39	28247
1992		Toukh	Others (G 67)	442	8.42	3721	9.79	4329
1992		Toukh	Total	3807	7.12	27104	8.56	32576
1992		Kalioub	G 75	540	6.26	3380	7.56	4084
1992		El-Kanater El-Khayria	G 75	452	7.70	3482	9.31	4206
1992		El-Kalioubia	G 75	10596	6.83	72371	8.25	87426
1992			Others	442	8.42	3721	9.79	4329
1992			Total	11038	6.89	76092	8.31	91755
1992		El-Giza	Others	18	3.72	67	4.39	79
1992	El-Giza		Total	18	3.72	67	4.39	79
1992		Ehnasia city	G 80	10796	6.58	71086	8.38	90474
1992		Beba	G 80	4852	6.28	30455	7.99	38765
1992		Beny Suef	G 75	7026	7.32	51437	8.81	61902
1992		Bosh	G 75	6528	7.00	45719	8.43	55021
1992		Semesta El-Wakf	G 80	5271	6.98	36790	8.88	46829
1992		El-Fashen	G 80	8947	6.91	61827	8.80	78698
1992		El-Wasta	G 75	7718	8.12	62651	9.77	75397
1992		Beny Suef	G 80	29866	6.70	200158	8.53	254766
1992			G 75	21272	7.51	159807	9.04	192320
1992			Total	51138	7.04	359965	8.74	447086
1992		Ebshway	G 75	4235	7.01	29705	8.41	35615
1992		Etsa	G 75	6667	7.55	50307	9.05	60316
1992		Senoures	G 75	4677	7.57	35426	9.08	42473
1992		Tamia	G 75	5976	7.14	42666	8.56	51155
1992		El-Fayoum	G 75	9221	7.18	66211	8.61	79383
1992	El-Fayoum		Total	30776	7.29	224315	8.74	268942
1992		Abou Korkas	G 80	9000	4.79	43070	6.23	56095
1992		Beny Mazar	G 80	9200	5.85	53842	7.62	70125
1992		Deir Mouas	G 80	3000	4.13	12380	5.37	16124
1992		Samalout	G 80	11701	6.13	71771	7.99	93477
1992		El-Edoua	G 80	6700	7.29	48861	9.50	63638
1992		Matay	G 80	5900	6.60	38969	8.60	50755
1992		Maghagha	G 80	7000	6.20	43420	8.08	56552
1992		Mallawy	G 80	5635	4.13	23250	5.37	30282
1992		Mallawy	G 83	1195	3.85	4597	4.96	5930
1992		Mallawy	Total	6830	4.08	27847	5.30	36212
1992		El-Menia	G 80	6900	5.73	39556	7.47	51518
1992	El-Menia		Total	66231	5.73	379716	7.47	494496
1992		Abnoub	G 83	5070	5.71	28969	7.38	37411
1992		Abou tig	Dandara	5478	4.95	27091	5.90	32306
1992		Assyout	Dandara	6959	5.49	38204	6.55	45559
1992		El-Badary	Dandara	1254	4.54	5692	5.41	6788
1992		Sahel Selim	Dandara	1300	4.62	6007	5.51	7164
1992		Sedfa	Dandara	2300	5.09	11701	6.07	13953
1992		Manfalout	Dandara	6790	5.39	36588	6.43	43633
1992		El-Ghanayem	Dandara	1400	5.51	7712	6.57	9197
1992		El-Fath	Dandara	2735	5.35	14638	6.38	17456
1992		Dayrout	Dandara	4809	4.49	21599	5.36	25757
1992		El-Kousia	Dandara	6916	4.82	33360	5.75	39782
1992	Assyout		Total	45011	5.14	231561	6.20	279006

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1992		Akhmim	Dandara	700	7.26	5082	8.44	5905
1992		Dar El-salam	Dandara	4641	4.70	21801	5.46	25330
1992		El-Balyana	Dandara	1546	6.62	10229	7.69	11885
1992		Gerga	Dandara	1050	9.17	9626	10.65	11185
1992		Sakolta	Dandara	1924	6.88	13239	7.99	15382
1992		Souhag	Dandara	6000	5.68	34065	6.60	39580
1992		Tema	Dandara	5150	5.47	28177	6.36	32738
1992		Tahta	Dandara	4414	5.98	26383	6.94	30653
1992		El-maragha	Dandara	4511	5.95	26843	6.91	31188
1992		El-monshaa	Dandara	3083	7.48	23063	8.69	26796
1992		Gahina	Dandara	1653	6.39	10564	7.43	12274
1992	Souhag		Total	34672	6.03	209072	7.01	242916
1992			G 45	10322	4.47	46107	4.42	45667
1992			G 70	90146	9.27	835920	10.82	975241
1992			G 76	27157	8.49	230548	9.65	262029
1992			G 77	71134	6.95	494067	7.86	559299
1992			G 75	434970	7.26	3159660	8.66	3768895
1992		General Total	Dandara	74613	5.52	411664	6.49	484511
1992			G 80	94902	6.06	575277	7.83	743332
1992			G 81	29491	7.13	210231	8.63	254391
1992			G 83	6265	5.36	33566	6.92	43341
1992			Others	1296	7.17	9287	8.33	10802
1992			Total	840296	7.15	6006327	8.51	7147508

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1993		El-Amria	G 70	2589	5.70	14754	6.73	17417
1993		Khorshed	Others	22	5.86	129	6.86	151
1993	Alexandria		Total	2611	5.70	14883	6.73	17568
1993		Abou-Hommos	G 70	29758	8.68	258296	10.27	305516
1993		Etay El-Baroud	G 70	13704	8.67	118837	10.26	140563
1993		Damanhour	G 70	22044	9.88	217856	11.69	257684
1993		Shobra-Kheit	G 70	9263	8.35	77341	9.88	91481
1993		Kafr El-Dawar	G 70	25805	8.12	209447	9.60	247738
1993		Edco	G 70	3771	7.43	28012	8.79	33133
1993		Rashid	G 70	962	12.35	11883	14.61	14055
1993		El-Mahmoudia	G 76	13932	8.38	116776	9.52	132635
1993		El-Rahmania	G 76	7341	8.46	62073	9.60	70503
1993		Abou El-Matamir	G 70	9805	7.88	77312	9.33	91445
1993		Hosh Eisa	G 70	7652	7.38	56478	8.73	66803
1993		El-Delengat	G 70	12460	7.66	95442	9.06	112891
1993		Janaklis	G 70	1410	7.36	10375	8.70	12272
1993		Kom Hamada	G 70	9246	6.92	63950	8.18	75642
1993		Wadi El-Natroun	G 70	5	3.00	15	3.60	18
1993			G 70	145885	8.40	1225244	9.93	1449241
1993		El-Behera	G 76	21273	8.41	178849	9.55	203138
1993			Total	167158	8.40	1404093	9.89	1652379
1993		Bassyoun	G 77	7862	8.34	65546	9.75	76643
1993		Kotour	G 75	12500	8.17	102104	9.90	123751
1993		Kafr El-Zayat	G 75	5851	9.49	55535	11.50	67309
1993		El-Mehalla El-Kobra	G 75	22750	8.11	184559	9.83	223688
1993		Zefta	G 75	8375	7.58	63506	9.19	76971
1993		Samannoud	G 75	5037	7.40	37291	8.97	45197
1993		El-Santa	G 75	9207	8.56	78815	10.38	95525
1993		Tanta	G 75	15568	8.02	124879	9.72	151356
1993			G 75	79288	8.16	646689	9.89	783797
1993		El-Gharbia	G 77	7862	8.34	65546	9.75	76643
1993			Total	87150	8.17	712235	9.87	860440
1993		El-Hamoul	G 75	25102	6.90	173136	8.35	209514
1993		El-Borollos	G 77	1434	5.92	8483	6.96	9985
1993		Beila	G 75	10056	7.56	76019	9.15	91991
1993		Desouk	G 77	16062	7.69	123448	9.05	145297
1993		Sidi Salem	G 77	18775	6.31	118498	7.43	139471
1993		Foua	G 84	4695	8.23	38640	9.18	43085
1993		Kallin	G 77	8810	7.95	70038	9.36	82434
1993		Kallin	G 45	125	2.73	341	2.93	366
1993		Kallin	Others	18	7.72	139	9.17	165
1993		Kallin	Total	8953	7.88	70518	9.27	82965
1993		Kafr El-Sheikh	G 77	12808	7.35	94094	8.65	110749
1993		Kafr El-Sheikh	G 75	476	6.03	2870	7.29	3472
1993		Kafr El-Sheikh	G 76	131	4.13	541	4.76	624
1993		Kafr El-Sheikh	G 70	207	4.37	905	5.06	1047
1993		Kafr El-Sheikh	G 81	189	6.48	1225	8.02	1515
1993		Kafr El-Sheikh	G 85	205	6.66	1366	8.46	1735
1993		Kafr El-Sheikh	G 84	241	5.68	1370	6.34	1527
1993		Kafr El-Sheikh	Others	165	6.64	1095	7.88	1301
1993		Kafr El-Sheikh	Total	14422	7.17	103466	8.46	121970
1993		Metobes	G 77	4500	9.02	40594	10.62	47779
1993		El-Riad	G 77	10520	5.80	61011	6.83	71810
1993			G 45	125	2.73	341	2.93	366
1993			G 70	207	4.37	905	5.06	1047
1993			G 76	131	4.13	541	4.76	624
1993			G 77	72909	7.08	516166	8.33	607525
1993		Kafr El-Sheikh	G 75	35634	7.07	252025	8.56	304977
1993			G 81	189	6.48	1225	8.02	1515
1993			G 85	205	6.66	1366	8.46	1735
1993			G 84	4936	8.11	40010	9.04	44612
1993			Others	183	6.74	1234	8.01	1466
1993			Total	114519	7.11	813813	8.42	963867

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1993		Aga	G 75	5829	7.68	44739	9.31	54260
1993		Belkas	G 75	34655	7.53	260790	9.13	316292
1993		Dekernes	G 75	2753	6.67	18370	8.09	22280
1993		Mit Souid	G 75	10662	7.05	75190	8.55	91192
1993		El-Senbellawen	G 75	8153	7.25	59120	8.79	71703
1993		Tami El-Amdid	G 75	6099	7.30	44515	8.85	53988
1993		Sherbin	G 75	11803	7.56	89177	9.16	108155
1993		Talkha	G 75	15516	7.04	109175	8.53	132409
1993		El-Manzala	G 75	9142	8.74	79876	10.60	96876
1993		El-Mansoura	G 75	11203	6.15	68898	7.46	83561
1993		Mit Ghamr	G 75	3076	7.63	23458	9.25	28450
1993		Meniet El-Nasr	G 75	5920	6.64	39316	8.05	47683
1993	El-Dakahlia		Total	124811	7.31	912624	8.87	1106849
1993		Faraskour	G 45	250	5.00	1250	5.19	1297
1993		Kafr Saad	G 45	12049	4.36	52586	4.53	54541
1993		El-Zarka	G 45	737	4.43	3265	4.59	3386
1993	Damietta		Total	13036	4.38	57101	4.54	59224
1993		El-Hessenia	G 75	6017	7.50	45149	9.14	55000
1993		Diarb Negm	G 75	10140	8.77	88973	10.69	108388
1993		Diarb Negm	G 81	35	8.43	295	10.51	368
1993		Diarb Negm	Total	10175	8.77	89268	10.69	108756
1993		Fakous	G 75	8740	8.17	71426	9.96	87011
1993		Kafr Sakr	G 75	7434	8.55	63535	10.41	77399
1993		Awlad Sakr	G 75	9914	8.33	82535	10.14	100544
1993		Abou Hammad	G 81	2988	7.17	21435	8.94	26727
1993		Abou Kebir	G 75	7387	8.23	60797	10.03	74063
1993		Belbeis	G 75	6124	7.55	46259	9.20	56354
1993		San El-Hagar	G 75	11266	5.76	64940	7.02	79110
1993		El-Zakazik	G 81	8515	7.70	65573	9.60	81762
1993		El-Ibrahimia	G 81	3483	8.16	28434	10.18	35453
1993		Menia El-Kamh	G 75	9125	9.15	83501	11.15	101721
1993		Hehia	G 81	4759	7.99	38021	9.96	47407
1993		Mashtoul El-souk	G 75	1330	8.35	11101	10.17	13524
1993		El-Kanayat	G 81	1817	8.24	14974	10.28	18670
1993			G 75	77477	7.98	618216	9.72	753114
1993		El-Sharkia	G 81	21597	7.81	168732	9.74	210387
1993			Total	99074	7.94	786948	9.73	963501
1993		El-Kantara West	G 75	94	3.69	347	4.50	423
1993		El-Ismailia	G 81	22	4.77	105	5.95	131
1993	El-Ismailia		Total	116	3.90	452	4.78	554
1993		Ashmoun	G 75	2845	8.41	23938	10.24	29140
1993		El-Bagour	G 75	2590	7.67	19876	9.34	24195
1993		Berket El-Sabee	G 75	5840	8.06	47085	9.81	57317
1993		Tala	G 75	8003	7.89	63181	9.61	76911
1993		Shebin El-kom	G 75	5371	7.33	39351	8.92	47903
1993		El-Shohada	G 75	5857	9.44	55281	11.49	67294
1993		Kwesna	G 75	7968	6.91	55067	8.41	67034
1993		Menouf	G 75	2964	7.77	23045	9.46	28052
1993	El-Menoufia		Total	41438	7.89	326824	9.60	397846
1993		Benha	G 75	3331	6.86	22864	8.40	27967
1993		Benha	G 85	177	8.01	1417	9.99	1769
1993		Benha	Total	3508	6.92	24281	8.48	29736
1993		Kafr Shokr	G 75	1030	7.92	8160	9.69	9982
1993		El-Khanka	G 75	220	6.67	1467	8.15	1794
1993		Shebin El-Kanater	G 85	1020	7.16	7303	8.94	9114
1993		Toukh	G 85	3924	7.42	29103	9.25	36316
1993		Kalioub	G 85	700	8.80	6160	10.98	7686
1993		El-Kanater El-Khayria	G 85	600	9.27	5564	11.57	6943
1993			G 75	4581	7.09	32491	8.68	39743
1993		El-Kalioubia	G 85	6421	7.72	49547	9.63	61828
1993			Total	11002	7.46	82038	9.23	101571

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1993		El-Giza	G 75	12	3.50	42	4.25	51
1993		El-Giza	Others	6	3.67	22	4.67	28
1993	El-Giza		Total	18	3.56	64	4.39	79
1993		Ehnasia city	G 80	10690	7.68	82097	9.79	104623
1993		Beba	G 80	5600	6.98	39099	8.90	49828
1993		Beny Suef	G 80	7326	7.72	56568	9.84	72089
1993		Bosh	G 80	6651	7.88	52399	10.04	66776
1993		Semesta El-Wakf	G 80	6060	6.76	40979	8.62	52223
1993		El-Fashen	G 80	10163	7.70	78291	9.82	99772
1993		El-Wasta	G 80	8173	8.73	71317	11.12	90885
1993	Beny Suef		Total	54663	7.70	420750	9.81	536196
1993		Ebshway	G 75	5039	7.22	36370	8.67	43681
1993		Etsa	G 75	9012	8.60	77546	10.33	93136
1993		Senoures	G 75	5626	7.17	40341	8.61	48451
1993		Tamia	G 75	6605	7.07	46722	8.50	56115
1993		El-Fayoum	G 75	10000	8.74	87430	10.50	105006
1993	El-Fayoum		Total	36282	7.95	288409	9.55	346389
1993		Abou Korkas	G 80	7699	8.37	64478	10.76	82850
1993		Beny Mazar	G 80	9427	8.33	78485	10.70	100848
1993		Deir Mouas	G 80	2892	6.89	19916	8.85	25590
1993		Samalout	G 80	12752	8.64	110118	11.10	141496
1993		El-Edoua	G 80	7737	8.40	65002	10.80	83524
1993		Matay	G 80	6997	9.31	65169	11.97	83739
1993		Maghagha	G 80	7698	7.97	61385	10.25	78876
1993		Mallawy	G 80	4506	7.67	34541	9.85	44383
1993		Mallawy	G 83	116	5.78	670	7.34	851
1993		Mallawy	Total	4622	7.62	35211	9.79	45234
1993		El-Menia	G 80	7828	6.92	54144	8.89	69572
1993			G 80	67536	8.19	553238	10.53	710878
1993		El-Menia	G 83	116	5.78	670	7.34	851
1993			Total	67652	8.19	553908	10.52	711729
1993		Abnoub	G 83	5556	7.13	39623	8.91	49530
1993		Abou tig	Dandara	4119	5.80	23884	6.79	27969
1993		Assyout	G 83	5048	7.32	36947	9.15	46185
1993		El-Badary	Dandara	1175	5.68	6675	6.65	7817
1993		Sahel Selim	Dandara	1226	6.53	8003	7.64	9372
1993		Sedfa	Dandara	2155	5.89	12689	6.90	14859
1993		Manfalout	G 83	3970	8.52	33809	10.65	42261
1993		El-Ghanayem	Dandara	1726	6.25	10790	7.32	12635
1993		El-Fath	G 83	2730	8.04	21952	10.05	27440
1993		Dayrout	Dandara	3560	6.10	21717	7.14	25431
1993		El-Kousia	Dandara	5273	7.75	40889	9.08	47881
1993			Dandara	19234	6.48	124647	7.59	145964
1993		Assyout	G 83	17304	7.65	132331	9.56	165416
1993			Total	36538	7.03	256978	8.52	311380
1993		Akhmim	Dandara	750	9.47	7099	10.90	8177
1993		Dar El-salam	Dandara	2810	7.46	20960	8.59	24146
1993		El-Balyana	Dandara	1350	9.16	12363	10.55	14242
1993		Gerga	Dandara	1425	10.27	14638	11.83	16863
1993		Sakolta	Dandara	1853	9.16	16979	10.56	19559
1993		Souhag	Dandara	4425	8.14	36006	9.37	41478
1993		Tema	Dandara	3800	8.96	34050	10.32	39224
1993		Tahta	Dandara	3610	8.16	29459	9.40	33936
1993		El-maragha	Dandara	3500	9.15	32033	10.54	36901
1993		El-monshaa	Dandara	3015	9.59	28919	11.05	33314
1993		Gahina	Dandara	1704	8.54	14544	9.83	16754
1993	Souhag		Total	28242	8.75	247050	10.08	284594

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1993	General Total		G 45	13161	4.36	57442	4.53	59590
1993			G 70	148681	8.35	1240903	9.87	1467705
1993			G 76	21404	8.38	179390	9.52	203762
1993			G 77	80771	7.20	581712	8.47	684168
1993			G 75	399617	7.70	3077667	9.34	3733189
1993			Dandara	47476	7.83	371697	9.07	430558
1993			G 80	122199	7.97	973988	10.21	1247074
1993			G 81	21808	7.80	170062	9.72	212033
1993			G 83	17420	7.63	133001	9.54	166267
1993			G 84	4936	8.11	40010	9.04	44612
1993			G 85	6626	7.68	50913	9.59	63563
1993			Others	211	6.56	1385	7.80	1645
1993			Total	884310	7.78	6878170	9.40	8314166

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1994		El-Amria	G 70	2043	3.85	7860	4.23	8637
1994		Khorshed	Others	14	4.36	61	4.79	67
1994	Alexandria		Total	2057	3.85	7921	4.23	8704
1994		Abou-Hommos	G 70	25062	6.69	167748	7.35	184321
1994		Etay El-Baroud	G 75	14648	6.53	95605	7.64	111922
1994		Damanhour	G 75	21544	7.16	154228	8.38	180550
1994		Shobra-Kheit	G 75	7251	7.74	56102	9.06	65676
1994		Kafr El-Dawar	G 70	23047	6.47	149160	7.11	163898
1994		Edco	G 70	3384	7.20	24370	7.91	26778
1994		Rashid	G 70	2540	7.76	19716	8.53	21664
1994		El-Mahmoudia	G 76	12221	5.32	65047	5.67	69282
1994		El-Rahmania	G 45	6002	5.26	31582	5.53	33180
1994		Abou El-Matamir	G 75	8035	7.18	57696	8.41	67542
1994		Hosh Eisa	G 75	6370	6.78	43184	7.94	50555
1994		El-Delengat	G 75	9823	6.58	64673	7.71	75710
1994		Janaklis	G 75	1200	7.02	8419	8.21	9856
1994		Kom Hamada	G 75	5820	6.36	37027	7.45	43346
1994		Wadi El-Natroun	G 75	10	2.50	25	2.90	29
1994			G 75	74701	6.92	516959	8.10	605186
1994			G 70	54033	6.68	360994	7.34	396661
1994		El-Behera	G 76	12221	5.32	65047	5.67	69282
1994			G 45	6002	5.26	31582	5.53	33180
1994			Total	146957	6.63	974582	7.51	1104309
1994		Bassyoun	G 75	6903	5.73	39520	6.63	45792
1994		Kotour	G 75	11103	5.25	58261	6.08	67507
1994		Kafr El-Zayat	G 75	4300	5.18	22256	6.00	25788
1994		El-Mehalla El-Kobra	G 75	20395	4.82	98270	5.58	113866
1994		Zefta	G 75	5390	5.10	27512	5.91	31878
1994		Samannoud	G 75	3202	5.07	16230	5.87	18805
1994		El-Santa	G 75	5950	5.07	30159	5.87	34945
1994		Tanta	G 75	9611	4.46	42883	5.17	49689
1994	El-Gharbia		Total	66854	5.01	335091	5.81	388270
1994		El-Hamoul	G 75	20951	4.98	104350	5.79	121228
1994		El-Borollos	G 75	1420	4.54	6440	5.27	7481
1994		Beila	G 75	7071	6.35	44884	7.37	52144
1994		Desouk	G 77	13805	4.69	64707	5.27	72733
1994		Sidi Salem	G 75	12765	5.73	73147	6.66	84978
1994		Foua	G 84	4420	5.35	23642	5.68	25089
1994		Kallin	G 77	338	3.08	1040	3.46	1169
1994		Kallin	G 75	7102	6.24	44297	7.25	51462
1994		Kallin	G 70	292	1.81	529	1.89	553
1994		Kallin	Total	7732	5.93	45866	6.88	53184
1994		Kafr El-Sheikh	G 75	11391	5.89	67098	6.84	77951
1994		Kafr El-Sheikh	G 77	127	5.63	715	6.32	803
1994		Kafr El-Sheikh	G 76	201	2.95	592	3.05	614
1994		Kafr El-Sheikh	G 70	123	2.82	347	2.96	364
1994		Kafr El-Sheikh	G 45	306	3.02	923	3.10	948
1994		Kafr El-Sheikh	G 81	342	4.18	1428	4.77	1632
1994		Kafr El-Sheikh	G 84	209	2.86	597	3.03	633
1994		Kafr El-Sheikh	G 85	292	3.73	1088	4.48	1308
1994		Kafr El-Sheikh	Others	448	3.91	1753	4.30	1925
1994		Kafr El-Sheikh	Total	13439	5.55	74541	6.41	86178
1994		Metobes	G 84	4300	5.43	23341	5.76	24771
1994		El-Riad	G 75	7972	5.80	46220	6.74	53696
1994			G 45	306	3.02	923	3.10	948
1994			G 70	415	2.11	876	2.21	917
1994			G 76	201	2.95	592	3.05	614
1994			G 77	14270	4.66	66462	5.24	74705
1994		Kafr El-Sheikh	G 75	68672	5.63	386436	6.54	448940
1994			G 81	342	4.18	1428	4.77	1632
1994			G 84	8929	5.33	47580	5.65	50493
1994			G 85	292	3.73	1088	4.48	1308
1994			Others	448	3.91	1753	4.30	1925
1994			Total	93875	5.40	507138	6.19	581482
1994		Port Said	G 75	351	2.28	800	2.64	926

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1994		Aga	G 75	5558	5.62	31257	6.52	36253
1994		Belkas	G 75	26394	5.26	138714	6.10	160884
1994		Dekernes	G 75	1652	4.61	7613	5.35	8830
1994		Mit Souid	G 75	9626	4.88	46984	5.66	54493
1994		El-Senbellawen	G 75	8852	5.27	46650	6.11	54106
1994		El-Senbellawen	Others	659	4.55	2997	5.04	3322
1994		El-Senbellawen	Total	9511	5.22	49647	6.04	57428
1994		Tami El-Amdid	G 75	6301	4.93	31038	5.71	35999
1994		Sherbin	G 75	9894	5.55	54896	6.44	63670
1994		Talkha	G 75	14212	5.27	74916	6.11	86890
1994		El-Manzala	G 75	9874	5.29	52280	6.14	60636
1994		El-Mansoura	G 75	8086	5.25	42442	6.09	49226
1994		Mit Ghamr	G 75	2851	6.04	17234	7.01	19988
1994		Meniet El-Nasr	G 75	5698	5.98	34058	6.93	39501
1994			G 75	108998	5.30	578082	6.15	670476
1994		El-Dakahlia	Others	659	4.55	2997	5.04	3322
1994			Total	109657	5.30	581079	6.14	673798
1994		Faraskour	G 75	244	2.38	580	2.76	673
1994		Kafr Saad	G 75	9849	2.58	25373	2.99	29434
1994		El-Zarka	G 75	635	2.00	1272	2.32	1475
1994	Damietta		Total	10728	2.54	27225	2.94	31582
1994		San El-Hagar	G 75	10815	3.54	38289	4.10	44393
1994		El-Hessenia	G 75	3980	4.78	19023	5.54	22055
1994		Diarb Negm	G 75	7121	5.31	37816	6.16	43845
1994		Diarb Negm	G 81	25	4.96	124	5.80	145
1994		Diarb Negm	Total	7146	5.31	37940	6.16	43990
1994		Fakous	G 75	7758	4.96	38453	5.75	44583
1994		Kafr Sakr	G 75	6973	5.66	39499	6.57	45796
1994		Awlad Sakr	G 75	9972	5.77	57547	6.69	66721
1994		Abou Hammad	G 75	2196	4.78	10496	5.54	12169
1994		Abou Kebir	G 75	6994	5.31	37142	6.16	43063
1994		Belbeis	G 75	4930	3.53	17393	4.09	20165
1994		El-Zakazik	G 81	6375	4.77	30428	5.57	35525
1994		El-Ibrahimia	G 81	2800	4.77	13365	5.57	15603
1994		Menia El-Kamh	G 75	8600	5.13	44149	5.95	51187
1994		Hehia	G 81	4172	4.77	19913	5.57	23249
1994		Mashtoul El-souk	G 75	1300	5.38	6996	6.24	8111
1994		El-Kanayat	G 81	1375	4.61	6337	5.38	7398
1994			G 75	70639	4.91	346803	5.69	402088
1994		El-Sharkia	G 81	14747	4.76	70167	5.56	81920
1994			Total	85386	4.88	416970	5.67	484008
1994		El-Kantara West	G 75	215	2.34	503	2.71	582
1994		El-Ismailia	G 75	68	1.37	93	1.59	108
1994		El-Ismailia	G 83	15	1.07	16	1.33	20
1994		El-Ismailia	Total	83	1.31	109	1.54	128
1994			G 75	283	2.11	596	2.44	690
1994		El-Ismailia	G 83	15	1.07	16	1.33	20
1994			Total	298	2.05	612	2.38	710
1994		Ashmoun	G 85	1402	6.65	9330	8.46	11863
1994		El-Bagour	G 85	1801	5.31	9559	6.75	12155
1994		Berket El-Sabee	G 75	2923	7.36	21520	8.57	25053
1994		Tala	G 75	6383	4.15	26512	4.84	30864
1994		Shebin El-kom	G 75	4150	4.70	19514	5.47	22717
1994		El-Shohada	G 85	4641	5.77	26762	7.33	34028
1994		Kwesna	G 75	5026	4.31	21662	5.02	25218
1994		Menouf	G 85	2053	5.95	12214	7.57	15531
1994			G 75	18482	4.83	89208	5.62	103852
1994		El-Menoufia	G 85	9897	5.85	57865	7.43	73577
1994			Total	28379	5.18	147073	6.25	177429

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1994		Benha	G 85	2622	6.18	16210	7.78	20388
1994		Kafr Shokr	G 85	850	7.02	5964	8.82	7501
1994		El-Khanka	G 85	140	5.45	763	6.85	959
1994		Shebin El-Kanater	G 85	840	6.22	5225	7.82	6572
1994		Toukh	G 85	2430	6.34	15400	7.97	19369
1994		Kalioub	G 85	610	6.28	3828	7.89	4815
1994		El-Kanater El-Khayria	G 85	540	6.54	3529	8.22	4438
1994	El-Kalioubia		Total	8032	6.34	50919	7.97	64042
1994		Ehnasia city	G 80	9405	6.72	63162	8.61	80985
1994		Beba	G 80	5235	6.18	32328	7.92	41450
1994		Beny Suef	G 80	7090	6.69	47425	8.58	60807
1994		Bosh	G 80	5380	7.22	38819	9.25	49772
1994		Semesta El-Wakf	G 80	5055	5.23	26443	6.71	33905
1994		El-Fashen	G 80	7470	6.45	48148	8.26	61734
1994		El-Wasta	G 80	6140	8.63	52994	11.07	67947
1994	Beny Suef		Total	45775	6.76	309319	8.66	396600
1994		Ebshway	G 75	4480	6.45	28915	7.75	34716
1994		Etsa	G 75	9438	6.72	63385	8.06	76102
1994		Senoures	G 75	4738	6.57	31124	7.89	37367
1994		Tamia	G 75	5993	6.43	38556	7.72	46291
1994		El-Fayoum	G 75	9503	6.71	63805	8.06	76605
1994	El-Fayoum		Total	34152	6.61	225785	7.94	271081
1994		Abou Korkas	G 80	4537	9.56	43354	12.18	55247
1994		Beny Mazar	G 80	8374	8.25	69046	10.51	87988
1994		Deir Mouas	G 80	2404	8.25	19821	10.51	25259
1994		Samalout	G 80	9325	8.09	75436	10.31	96131
1994		El-Edoua	G 80	6459	9.15	59089	11.66	75299
1994		Matay	G 80	5128	9.82	50381	12.52	64202
1994		Maghagha	G 80	5895	7.88	46441	10.04	59181
1994		Mallawy	G 80	3336	8.66	28877	11.03	36799
1994		Mallawy	G 83	56	4.43	248	5.18	290
1994		Mallawy	Total	3392	8.59	29125	10.93	37089
1994		El-Menia	G 80	4795	8.52	40867	10.86	52078
1994			G 80	50253	8.62	433312	10.99	552184
1994		El-Menia	G 83	56	4.43	248	5.18	290
1994			Total	50309	8.62	433560	10.98	552474
1994		Abnoub	G 83	3703	7.54	27916	9.37	34707
1994		Abou tig	Dandara	2113	5.76	12173	6.85	14472
1994		Assyout	G 83	4251	7.82	33245	9.72	41332
1994		El-Badary	G 83	750	5.30	3977	6.59	4944
1994		Sahel Selim	G 83	742	7.09	5263	8.82	6543
1994		Sedfa	Dandara	1137	6.57	7469	7.81	8879
1994		Manfalout	G 83	3534	11.09	39183	13.78	48714
1994		El-Ghanayem	Dandara	773	5.95	4603	7.08	5473
1994		El-Fath	G 83	1964	9.03	17730	11.22	22043
1994		Dayrout	Dandara	2014	7.92	15959	9.42	18972
1994		El-Kousia	Dandara	4304	8.84	38056	10.51	45243
1994			Dandara	10341	7.57	78260	9.00	93039
1994		Assyout	G 83	14944	8.52	127314	10.59	158283
1994			Total	25285	8.13	205574	9.94	251322

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1994		Akhmim	Dandara	80	8.10	648	9.36	749
1994		Dar El-salam	Dandara	598	6.54	3908	7.56	4518
1994		El-Balyana	Dandara	80	8.73	698	10.08	806
1994		Gerga	Dandara	450	8.27	3723	9.56	4303
1994		Sakolta	Dandara	1361	8.55	11635	9.88	13451
1994		Souhag	Dandara	1039	7.52	7811	8.69	9030
1994		Tema	Dandara	2881	6.33	18243	7.32	21090
1994		Tahta	Dandara	1786	8.32	14852	9.61	17169
1994		El-maragha	Dandara	1500	9.08	13624	10.50	15750
1994		El-monshaa	Dandara	2123	6.72	14260	7.76	16485
1994		Gahina	Dandara	450	9.26	4169	10.71	4820
1994	Souhag		Total	12348	7.58	93571	8.76	108171
1994	General Total		G 45	6308	5.15	32505	5.41	34128
1994			G 70	56491	6.54	369730	7.19	406215
1994			G 76	12422	5.28	65639	5.63	69896
1994			G 77	14270	4.66	66462	5.24	74705
1994			G 75	453860	5.52	2506985	6.44	2923091
1994			Dandara	22689	7.57	171831	8.87	201210
1994			G 80	96028	7.73	742631	9.88	948784
1994			G 81	15089	4.74	71595	5.54	83552
1994			G 83	15015	8.50	127578	10.56	158593
1994			G 84	8929	5.33	47580	5.65	50493
1994			G 85	18221	6.03	109872	7.62	138927
1994			Others	1121	4.29	4811	4.74	5314
1994			Total	720443	5.99	4317219	7.07	5094908

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1995		El-Amria	G 70	1555	2.34	3641	2.68	4167
1995		Khorshed	G 70	15	1.53	23	1.80	27
1995	Alexandria		Total	1570	2.33	3664	2.67	4194
1995		Abou-Hommos	G 70	27772	6.82	189424	7.81	216822
1995		Etay El-Baroud	G 75	11019	6.58	72459	7.81	86063
1995		Damanhour	G 75	24651	6.33	156124	7.52	185435
1995		Shobra-Kheit	G 75	7610	7.80	59330	9.26	70469
1995		Kafr El-Dawar	G 70	25254	6.29	158848	7.20	181824
1995		Edco	G 70	3851	7.34	28258	8.40	32346
1995		Rashid	G 70	2220	8.85	19638	10.13	22478
1995		El-Mahmoudia	G 76	8392	6.15	51646	6.92	58089
1995		El-Mahmoudia	G 70	4340	8.06	34966	9.22	40023
1995		El-Mahmoudia	Total	12732	6.80	86612	7.71	98112
1995		El-Rahmania	G 45	5735	5.06	29039	5.46	31291
1995		Abou El-Matamir	G 75	6792	6.06	41133	7.19	48856
1995		Hosh Eisa	G 75	5494	5.60	30792	6.66	36572
1995		El-Delengat	G 75	9230	6.21	57334	7.38	68098
1995		Janaklis	G 75	763	6.34	4838	7.53	5746
1995		Kom Hamada	G 75	3693	3.77	13922	4.48	16536
1995			G 75	69252	6.29	435932	7.48	517775
1995			G 70	63437	6.80	431134	7.78	493493
1995		El-Behera	G 76	8392	6.15	51646	6.92	58089
1995			G 45	5735	5.06	29039	5.46	31291
1995			Total	146816	6.46	947751	7.50	1100648
1995		Bassyoun	G 75	7014	6.73	47179	7.97	55871
1995		Kotour	G 75	10342	6.25	64613	7.40	76518
1995		Kafr El-Zayat	G 75	3286	6.54	21502	7.75	25464
1995		El-Mehalla El-Kobra	G 75	18778	6.29	118031	7.44	139778
1995		Zefta	G 75	4154	5.62	23356	6.66	27659
1995		Samannoud	G 75	3125	5.61	17523	6.64	20751
1995		El-Santa	G 75	6826	5.63	38422	6.67	45501
1995		Tanta	G 75	7904	5.51	43581	6.53	51611
1995	El-Gharbia		Total	61429	6.09	374207	7.21	443153
1995		El-Hamoul	G 75	23879	5.03	120088	5.97	142588
1995		El-Borollos	G 77	1339	5.23	7003	6.09	8161
1995		Beila	G 75	8376	6.01	50314	7.13	59741
1995		Desouk	G 77	11937	6.65	79345	7.75	92457
1995		Sidi Salem	G 75	15493	6.30	97647	7.48	115943
1995		Foua	G 77	3555	7.84	27861	9.13	32466
1995		Kallin	G 76	328	2.57	844	2.90	951
1995		Kallin	G 77	383	4.14	1584	4.82	1845
1995		Kallin	G 75	6993	6.54	45755	7.77	54328
1995		Kallin	Total	7704	6.25	48183	7.41	57124
1995		Kafr El-Sheikh	G 45	113	3.83	433	4.21	476
1995		Kafr El-Sheikh	G 70	313	4.62	1447	5.35	1676
1995		Kafr El-Sheikh	G 76	29	4.28	124	4.83	140
1995		Kafr El-Sheikh	G 77	115	3.68	423	4.29	493
1995		Kafr El-Sheikh	G 75	11308	5.79	65461	6.87	77727
1995		Kafr El-Sheikh	G 85	235	5.24	1231	6.47	1520
1995		Kafr El-Sheikh	G 86	243	3.20	778	3.97	965
1995		Kafr El-Sheikh	Others	460	2.79	1284	3.20	1472
1995		Kafr El-Sheikh	Total	12816	5.55	71181	6.59	84469
1995		Metobes	G 77	4840	6.36	30806	7.42	35896
1995		El-Riad	G 75	8177	6.73	55063	8.00	65379
1995			G 75	74226	5.85	434328	6.95	515706
1995			G 77	22169	6.63	147022	7.73	171318
1995			G 76	357	2.71	968	3.06	1091
1995			G 45	113	3.83	433	4.21	476
1995		Kafr El-Sheikh	G 70	313	4.62	1447	5.35	1676
1995			G 85	235	5.24	1231	6.47	1520
1995			G 86	243	3.20	778	3.97	965
1995			Others	460	2.79	1284	3.20	1472
1995			Total	98116	5.99	587491	7.08	694224

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1995		Aga	G 75	49	4.53	222	5.35	262
1995		Aga	G 86	4409	7.07	31156	8.66	38186
1995		Aga	Total	4458	7.04	31378	8.62	38448
1995		Belkas	G 75	31004	4.99	154697	5.89	182641
1995		Dekernes	G 75	702	4.69	3294	5.54	3889
1995		Mit Souid	G 75	6886	4.69	32287	5.54	38119
1995		El-Senbellawen	G 75	4933	4.66	23009	5.51	27165
1995		Tami El-Amdid	G 75	2750	4.54	12485	5.36	14740
1995		Sherbin	G 75	9060	5.16	46737	6.09	55180
1995		Talkha	G 75	12924	4.35	56220	5.14	66375
1995		El-Manzala	G 75	13285	4.70	62451	5.55	73732
1995		El-Mansoura	G 75	4060	4.37	17723	5.15	20925
1995		Mit Ghamr	G 75	1468	4.75	6980	5.61	8241
1995		Meniet El-Nasr	G 75	2532	4.87	12330	5.75	14557
1995			G 75	89653	4.78	428435	5.64	505826
1995		El-Dakahlia	G 86	4409	7.07	31156	8.66	38186
1995			Total	94062	4.89	459591	5.78	544012
1995		Faraskour	G 75	153	5.30	811	6.26	958
1995		Kafr Saad	G 75	9345	6.08	56777	7.18	67061
1995		El-Zarka	G 75	230	6.04	1390	7.14	1642
1995	Damietta		Total	9728	6.06	58978	7.16	69661
1995		San El-Hagar	G 75	13365	4.57	61016	5.42	72417
1995		El-Hessenia	G 75	5299	4.70	24900	5.58	29553
1995		Diarb Negm	G 75	6903	5.44	37534	6.45	44547
1995		Fakous	G 75	5728	4.65	26651	5.52	31631
1995		Kafr Sakr	G 75	5979	5.78	34537	6.86	40990
1995		Awlad Sakr	G 75	9069	5.71	51747	6.77	61415
1995		Abou Hammad	G 85	1605	4.27	6856	5.19	8322
1995		Abou Kebir	G 85	6691	4.52	30250	5.49	36723
1995		Belbeis	G 85	4460	4.48	19962	5.43	24233
1995		El-Zakazik	G 85	6736	4.38	29502	5.32	35814
1995		El-Ibrahimia	G 85	3142	4.67	14666	5.67	17804
1995		Menia El-Kamh	G 85	7475	4.35	32527	5.28	39487
1995		Hehia	G 85	4181	4.52	18902	5.49	22947
1995		Mashtoul El-souk	G 85	1310	4.45	5828	5.40	7075
1995		El-Kanayat	G 85	704	4.47	3148	5.43	3821
1995			G 85	36304	4.45	161641	5.41	196226
1995		El-Sharkia	G 75	46343	5.10	236385	6.05	280553
1995			Total	82647	4.82	398026	5.77	476779
1995		El-Kantara West	G 75	266	1.72	457	2.04	542
1995		Abou Soueir	G 75	109	1.73	189	2.06	225
1995	Ismailia		Total	375	1.72	646	2.05	767
1995		Port Said	G 75	378	3.97	1500	4.71	1781
1995	Port Said		Total	378	3.97	1500	4.71	1781
1995		Ashmoun	G 75	1312	5.37	7048	6.40	8393
1995		El-Bagour	G 75	1813	5.56	10081	6.62	12005
1995		Berket El-Sabee	G 75	4540	4.91	22275	5.84	26527
1995		Tala	G 75	5119	3.97	20311	4.72	24187
1995		Shebin El-kom	G 75	3847	3.77	14499	4.49	17267
1995		El-Shohada	G 75	4465	6.34	28287	7.54	33686
1995		Kwesna	G 75	4693	4.85	22747	5.77	27089
1995		Menouf	G 75	2092	5.88	12293	7.00	14640
1995	El-Menoufia		Total	27881	4.93	137541	5.87	163794

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1995		Benha	G 85	1622	5.15	8357	6.25	10142
1995		Kafr Shokr	G 85	780	5.68	4427	6.89	5372
1995		El-Khanka	G 85	160	2.86	458	3.47	555
1995		Shebin El-Kanater	G 85	710	4.69	3333	5.70	4045
1995		Toukh	G 85	2142	4.77	10228	5.79	12412
1995		Kalioub	G 85	560	4.83	2703	5.86	3280
1995		El-Kanater El-Khayria	G 85	320	5.45	1745	6.62	2118
1995	El-Kalioubia		Total	6294	4.97	31251	6.03	37924
1995		El-Giza	Others	16	3.75	60	4.31	69
1995	El-Giza		Total	16	3.75	60	4.31	69
1995		Ehnasia city	G 80	9987	6.10	60932	7.53	75215
1995		Beba	G 80	4282	4.89	20950	6.04	25861
1995		Beny Suef	G 80	6924	6.36	44030	7.85	54350
1995		Nasser	G 80	4659	5.81	27054	7.17	33395
1995		Semesta El-Wakf	G 80	5271	4.92	25907	6.07	31980
1995		El-Fashen	G 80	8163	4.49	36688	5.55	45288
1995		El-Wasta	G 80	5478	6.58	36041	8.12	44490
1995	Beny Suef		Total	44764	5.62	251602	6.94	310579
1995		Ebshway	G 75	5024	3.30	16590	3.87	19442
1995		Etsa	G 75	11828	3.79	44832	4.44	52542
1995		Senoures	G 75	5531	3.62	20020	4.24	23463
1995		Tamia	G 75	6787	3.70	25130	4.34	29452
1995		El-Fayoum	G 75	10551	3.66	38599	4.29	45237
1995	El-Fayoum		Total	39721	3.65	145171	4.28	170136
1995		Abou Korkas	G 80	5139	4.85	24907	5.92	30417
1995		Beny Mazar	G 80	10544	6.06	63889	7.40	78024
1995		Deir Mouas	G 80	2188	6.92	15136	8.45	18485
1995		Samalout	G 80	10755	4.79	51538	5.85	62940
1995		El-Edoua	G 80	7247	7.60	55111	9.29	67303
1995		Matay	G 80	6196	7.13	44171	8.71	53943
1995		Maghagha	G 80	6764	6.78	45881	8.28	56032
1995		Mallawy	G 80	4515	6.30	28425	7.69	34714
1995		Mallawy	G 83	42	7.74	325	9.50	399
1995		Mallawy	Total	4557	6.31	28750	7.71	35113
1995		El-Menia	G 80	5464	5.96	32561	7.28	39765
1995			G 80	58812	6.15	361619	7.51	441623
1995		El-Menia	G 83	42	7.74	325	9.50	399
1995			Total	58854	6.15	361944	7.51	442022
1995		Abnoub	G 83	4730	7.39	34940	9.12	43141
1995		Abou tig	G 83	1700	6.42	10910	7.92	13471
1995		Assyout	G 83	4499	9.51	42778	11.74	52817
1995		El-Badary	G 83	421	5.09	2141	6.28	2644
1995		Sahel Selim	G 83	728	7.67	5587	9.48	6898
1995		Sedfa	G 83	783	7.80	6107	9.63	7541
1995		Manfalout	G 83	4722	9.14	43155	11.28	53283
1995		El-Ghanayem	G 83	882	6.68	5895	8.25	7279
1995		El-Fath	G 83	1995	7.53	15014	9.29	18538
1995		Dayrout	G 83	1823	7.08	12904	8.74	15933
1995		El-Kousia	G 83	5004	7.42	37146	9.17	45863
1995	Assyout		Total	27287	7.94	216577	9.80	267408
1995		Akhmim	G 80	80	7.66	613	9.41	753
1995		Dar El-salam	G 80	143	7.94	1135	9.76	1395
1995		El-Balyana	G 80	100	13.01	1301	16.00	1600
1995		Sakolta	G 80	1450	6.47	9387	7.96	11543
1995		Souhag	Dandara	1298	7.08	9185	7.98	10353
1995		Tema	G 80	2025	8.14	16491	10.01	20277
1995		Tahta	G 80	2010	8.71	17504	10.71	21524
1995		El-maragha	G 80	1310	10.23	13401	12.58	16478
1995		El-monshaa	Dandara	1530	8.02	12264	9.04	13825
1995		Gahina	G 80	323	14.12	4562	17.37	5609
1995			G 80	7441	8.65	64394	10.64	79179
1995		Souhag	Dandara	2828	7.58	21449	8.55	24178
1995			Total	10269	8.36	85843	10.06	103357

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1995	General Total		G 45	5848	5.04	29472	5.43	31767
1995			G 70	65320	6.68	436245	7.64	499363
1995			G 76	8749	6.01	52614	6.76	59180
1995			G 77	22169	6.63	147022	7.73	171318
1995			G 75	418986	5.38	2253123	6.37	2669152
1995			Dandara	2828	7.58	21449	8.55	24178
1995			G 80	111017	6.10	677615	7.49	831381
1995			G 83	27329	7.94	216902	9.80	267807
1995			G 85	42833	4.53	194123	5.50	235670
1995			G 86	4652	6.86	31934	8.42	39151
1995			Others	476	2.82	1344	3.24	1541
1995			Total	710207	5.72	4061843	6.80	4830508

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1996		Borg El-Arab	G 70	175	3.44	602	3.91	684
1996		Khorshed	G 70	40	3.45	138	3.93	157
1996		El-Amria	G 70	2635	3.65	9629	4.16	10955
1996		El-Amria	G 77	245	3.42	839	3.99	977
1996		El-Amria	G 85	122	1.41	172	1.77	216
1996		El-Amria	Total	3002	3.54	10640	4.05	12148
1996	Alexandria		G 70	2850	3.64	10369	4.14	11796
1996			G 77	245	3.42	839	3.99	977
1996			G 85	122	1.41	172	1.77	216
1996			Total	3217	3.54	11380	4.04	12989
1996		Abou-Hommos	G 70	30130	7.60	229095	8.65	260661
1996		Etay El-Baroud	G 75	13479	6.05	81486	7.19	96942
1996		Damanhour	G 70	25905	6.33	163886	7.20	186468
1996		Shobra-Kheit	G 75	9325	7.99	74531	9.51	88667
1996		Kafr El-Dawar	G 70	31163	5.87	182796	6.67	207983
1996		Edco	G 70	4834	5.41	26151	6.16	29754
1996		Rashid	G 45	747	4.48	3350	4.74	3543
1996		Rashid	G 87	340	4.06	1381	4.39	1492
1996		Rashid	Total	1087	4.35	4731	4.63	5035
1996		El-Mahmoudia	G 76	14978	4.92	73617	5.42	81216
1996		El-Rahmania	G 70	7665	6.26	47957	7.12	54565
1996		Abou El-Matamir	G 75	9279	7.28	67580	8.66	80398
1996		Hosh Eisa	G 75	6578	7.14	46982	8.50	55893
1996		El-Delengat	G 75	11110	7.07	78546	8.41	93444
1996		Janaklis	G 75	1300	7.19	9345	8.55	11118
1996		Kom Hamada	G 75	3537	6.97	24648	8.29	29322
1996	El-Behera		G 45	747	4.48	3350	4.74	3543
1996			G 70	99697	6.52	649885	7.42	739431
1996			G 76	14978	4.92	73617	5.42	81216
1996			G 75	54608	7.02	383118	8.35	455784
1996			G 87	340	4.06	1381	4.39	1492
1996			Total	170370	6.52	1111351	7.52	1281466
1996		Bassyoun	G 77	8194	6.45	52855	7.51	61538
1996		Kotour	G 45	55	5.42	298	5.73	315
1996		Kotour	G 75	12463	5.68	70812	6.76	84245
1996		Kotour	Total	12518	5.68	71110	6.76	84560
1996		Kafr El-Zayat	G 75	5611	6.07	34054	7.22	40514
1996		El-Mehalla El-Kobra	G 75	22307	5.75	128362	6.85	152713
1996		Zefta	G 75	6580	5.71	37589	6.80	44720
1996		Samannoud	G 75	4136	5.99	24793	7.13	29496
1996		El-Santa	G 75	8034	5.51	44250	6.55	52645
1996		Tanta	G 75	11732	5.71	67022	6.80	79737
1996	El-Gharbia		G 45	55	5.42	298	5.73	315
1996			G 77	8194	6.45	52855	7.51	61538
1996			G 75	70863	5.74	406882	6.83	484070
1996			Total	79112	5.81	460035	6.90	545923

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1996		El-Hamoul	G 75	30676	4.09	125515	4.83	148307
1996		El-Borollos	G 77	2460	3.70	9113	4.31	10607
1996		Beila	G 75	12246	5.67	69483	6.70	82101
1996		Desouk	G 77	16705	6.11	102149	7.12	118898
1996		Sidi Salem	G 75	22458	6.37	142962	7.52	168923
1996		Foua	G 77	4503	6.45	29060	7.51	33824
1996		Foua	Others	787	5.91	4653	6.81	5362
1996		Foua	Total	5290	6.37	33713	7.41	39186
1996		Kallin	G 75	8787	6.49	57003	7.67	67355
1996		Kallin	G 77	58	3.22	187	3.74	217
1996		Kallin	G 85	310	4.27	1325	5.33	1653
1996		Kallin	Others	34	5.50	187	6.32	215
1996		Kallin	Total	9189	6.39	58702	7.56	69440
1996		Kafr El-Sheikh	G 45	2129	2.59	5520	2.73	5807
1996		Kafr El-Sheikh	G 70	158	2.63	416	2.96	467
1996		Kafr El-Sheikh	G 75	13350	5.59	74582	6.60	88126
1996		Kafr El-Sheikh	G 76	187	1.23	230	1.43	268
1996		Kafr El-Sheikh	G 77	69	5.87	405	6.84	472
1996		Kafr El-Sheikh	G 85	71	3.73	265	4.66	331
1996		Kafr El-Sheikh	G 86	286	3.80	1088	4.80	1373
1996		Kafr El-Sheikh	Others	266	3.59	956	4.14	1101
1996		Kafr El-Sheikh	Total	16516	5.05	83462	5.93	97945
1996		Metobes	G 77	6962	6.17	42925	7.18	49964
1996		El-Riad	G 75	12973	4.81	62409	5.68	73743
1996	Kafr El-Sheikh		G 45	2129	2.59	5520	2.73	5807
1996	Kafr El-Sheikh		G 70	158	2.63	416	2.96	467
1996	Kafr El-Sheikh		G 76	187	1.23	230	1.43	268
1996	Kafr El-Sheikh		G 77	30757	5.98	183839	6.96	213982
1996	Kafr El-Sheikh		G 75	100490	5.29	531954	6.25	628555
1996	Kafr El-Sheikh		G 85	381	4.17	1590	5.21	1984
1996	Kafr El-Sheikh		G 86	286	3.80	1088	4.80	1373
1996	Kafr El-Sheikh		Others	1087	5.33	5796	6.14	6678
1996	Kafr El-Sheikh		Total	135475	5.39	730433	6.34	859114
1996		Port Said	G 75	573	4.09	2345	4.74	2718
1996	Port Said		Total	573	4.09	2345	4.74	2718
1996		Aga	G 86	5964	5.45	32500	6.69	39874
1996		Belkas	G 75	38969	4.58	178310	5.34	207980
1996		Belkas	G 86	13	4.15	54	5.15	67
1996		Belkas	Total	38982	4.58	178364	5.34	208047
1996		Dekernes	G 86	1202	5.09	6115	6.24	7503
1996		Mit Souid	G 86	10874	4.78	52009	5.87	63809
1996		El-Senbellawen	G 86	7699	4.91	37772	6.02	46342
1996		Tami El-Amdid	G 86	5684	4.77	27090	5.85	33236
1996		Sherbin	G 75	14326	5.04	72132	5.87	84134
1996		Talkha	G 75	14705	4.86	71495	5.67	83390
1996		El-Manzala	G 85	20069	5.13	103027	6.40	128393
1996		El-Mansoura	G 86	4614	5.13	23661	6.29	29030
1996		Mit Ghamr	G 86	1300	5.04	6549	6.18	8035
1996		Meniet El-Nasr	G 86	4852	5.01	24318	6.15	29836
1996	El-Dakahlia		G 75	68000	4.73	321937	5.52	375504
1996	El-Dakahlia		G 85	20069	5.13	103027	6.40	128393
1996	El-Dakahlia		G 86	42202	4.98	210068	6.11	257732
1996	El-Dakahlia		Total	130271	4.87	635032	5.85	761629

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AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1996		Faraskour	G 85	297	10.08	2993	12.52	3717
1996		Kafr Saad	G 75	13384	5.13	68693	5.95	79608
1996		El-Zarka	G 85	276	9.72	2684	12.08	3333
1996			G 75	13384	5.13	68693	5.95	79608
1996		Damietta	G 85	573	9.91	5677	12.30	7050
1996			Total	13957	5.33	74370	6.21	86658
1996		El-Hessenia	G 85	5502	7.33	40356	9.21	50649
1996		Diarb Negm	G 85	10133	6.40	64895	8.04	81448
1996		Fakous	G 85	8871	6.97	61836	8.75	77608
1996		Kafr Sakr	G 85	9794	6.42	62889	8.06	78930
1996		Awlad Sakr	G 85	13334	7.09	94573	8.90	118695
1996		Abou Hammad	G 85	2672	6.40	17110	8.04	21474
1996		Abou Kebir	G 85	8248	6.22	51263	7.80	64338
1996		Belbeis	G 85	5284	6.39	33748	8.02	42356
1996		El-Zakazik	G 85	7553	5.96	45029	7.48	56514
1996		El-Ibrahimia	G 85	4051	7.35	29787	9.23	37385
1996		San El-Hagar	G 85	16467	4.35	71551	5.45	89801
1996		Menia El-Kamh	G 85	8342	7.03	58611	8.82	73561
1996		Hehia	G 85	4837	7.12	34441	8.94	43225
1996		Mashtoul El-souk	G 85	1357	6.02	8167	7.55	10251
1996		El-Kanayat	G 85	1262	6.03	7609	7.57	9550
1996	El-Sharkia		Total	107707	6.33	681865	7.95	855785
1996		Ashmoun	G 75	1744	6.49	11315	7.87	13730
1996		El-Bagour	G 75	2490	6.53	16257	7.92	19727
1996		Berket El-Sabee	G 75	5049	7.06	35626	8.56	43230
1996		Tala	G 75	5408	5.84	31576	7.08	38315
1996		Shebin El-kom	G 75	4367	6.56	28651	7.96	34767
1996		El-Shohada	G 75	5323	7.90	42049	9.59	51024
1996		Kwesna	G 75	4927	6.50	32049	7.89	38890
1996		Kwesna	G 89	775	7.06	5470	8.62	6678
1996		Kwesna	Total	5702	6.58	37519	7.99	45568
1996		Menouf	G 75	2789	6.78	18907	8.23	22943
1996			G 75	32097	6.74	216430	8.18	262626
1996		El-Menoufia	G 89	775	7.06	5470	8.62	6678
1996			Total	32872	6.75	221900	8.19	269304
1996		El-Ismailia	G 85	27	2.37	64	3.00	81
1996		El-Tall El-Kebir	G 85	10	2.30	23	2.90	29
1996		El-Kantara West	G 85	802	3.38	2708	4.24	3397
1996		El-Kantara East	G 85	23	2.26	52	2.83	65
1996		El-Kassasin	G 85	78	2.38	186	2.99	233
1996		Abou Soueir	G 85	307	2.35	720	2.94	903
1996	El-Ismailia		Total	1247	3.01	3753	3.78	4708
1996		Benha	G 85	2500	7.32	18290	9.28	23199
1996		Kafr Shokr	G 85	840	7.34	6165	9.31	7819
1996		El-Khanka	G 85	160	4.90	784	6.21	994
1996		Shebin El-Kanater	G 85	1000	7.36	7356	9.33	9330
1996		Toukh	G 85	3359	7.03	23617	8.92	29954
1996		Kalioub	G 85	1100	6.90	7592	8.75	9629
1996		El-Kanater El-Khayria	G 85	800	7.35	5876	9.32	7453
1996	El-Kalioubia		Total	9759	7.14	69680	9.06	88378
1996		El-Giza	Others	14	3.71	52	4.14	58
1996	El-Giza		Total	14	3.71	52	4.14	58

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1996		Ehnasia city	G 80	13477	6.46	87120	7.80	105118
1996		Beba	G 80	4780	8.24	39370	9.94	47503
1996		Beny Suef	G 80	7838	7.60	59564	9.17	71869
1996		Nasser	G 80	6234	7.67	47817	9.26	57696
1996		Semesta El-Wakf	G 80	5206	6.84	35585	8.25	42937
1996		El-Fashen	G 80	9776	7.26	71003	8.76	85671
1996		El-Wasta	G 80	7283	7.63	55572	9.21	67053
1996	Beny Suef		Total	54594	7.25	396031	8.75	477847
1996		Ebshway	G 75	6649	4.96	32987	6.05	40199
1996		Etsa	G 75	12263	4.92	60392	6.00	73596
1996		Senoures	G 85	6776	5.46	36984	6.71	45482
1996		Tamia	G 75	7222	4.76	34395	5.80	41916
1996		El-Fayoum	G 75	11860	5.18	61440	6.31	74874
1996			G 75	37994	4.98	189214	6.07	230585
1996	El-Fayoum		G 85	6776	5.46	36984	6.71	45482
1996			Total	44770	5.05	226198	6.17	276067
1996		Abou Korkas	G 80	7974	6.88	54891	8.36	66673
1996		Beny Mazar	G 80	13339	6.68	89111	8.11	108239
1996		Deir Mouas	G 80	3702	6.85	25345	8.32	30785
1996		Samalout	G 80	11850	7.72	91480	9.38	111116
1996		El-Edoua	G 80	8553	7.78	66547	9.45	80831
1996		Matay	G 80	6525	9.26	60416	11.25	73384
1996		Maghagha	G 80	8217	8.13	66775	9.87	81108
1996		Mallawy	G 80	5606	6.50	36467	7.90	44295
1996		Mallawy	G 83	70	4.80	336	6.06	424
1996		Mallawy	Total	5676	6.48	36803	7.88	44719
1996		El-Menia	G 80	6810	7.24	49323	8.80	59910
1996			G 80	72576	7.45	540355	9.04	656341
1996	El-Menia		G 83	70	4.80	336	6.06	424
1996			Total	72646	7.44	540691	9.04	656765
1996		Abnoub	G 83	6210	8.36	51938	10.46	64926
1996		Abou tig	G 83	4015	8.34	33466	10.42	41834
1996		Assyout	G 83	6875	10.41	71556	13.01	89450
1996		El-Badary	G 83	1197	7.76	9291	9.70	11614
1996		Sahel Selim	G 83	1535	8.68	13318	10.85	16649
1996		Sedfa	G 83	2002	10.10	20214	12.62	25269
1996		Manfalout	G 83	6754	10.11	68262	12.63	85332
1996		El-Ghanayem	G 83	1489	7.66	11402	9.57	14253
1996		El-Fath	G 83	2943	9.96	29302	12.45	36629
1996		Dayrout	G 83	3778	9.49	35867	11.87	44837
1996		El-Kousia	G 83	6950	9.83	68348	12.29	85438
1996	Assyout		Total	43748	9.44	412964	11.80	516231
1996		Akhmim	G 80	509	10.23	5208	12.21	6216
1996		Dar El-salam	G 80	1720	9.56	16444	11.41	19627
1996		El-Balyana	G 80	550	9.25	5087	11.04	6072
1996		Sakolta	G 80	2055	7.45	15320	8.90	18287
1996		Souhag	G 80	2190	9.16	20062	10.93	23946
1996		Tema	G 80	3616	8.60	31103	10.27	37124
1996		Tahta	G 80	3320	8.46	28092	10.10	33529
1996		El-maragha	G 80	2550	11.23	28646	13.41	34192
1996		El-monshaa	G 80	2856	7.61	21734	9.08	25941
1996		Gahina	G 80	1158	9.66	11183	11.53	13348
1996	Souhag		Total	20524	8.91	182879	10.64	218282

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1996		Nagei Hammady	G 80	8	4.38	35	5.38	43
1996		Abou Tesht	Others	26	3.19	83	3.81	99
1996			G 80	8	4.38	35	5.38	43
1996		Kena	Others	26	3.19	83	3.81	99
1996			Total	34	3.47	118	4.18	142
1996		El-Farafra	Others	21	3.29	69	3.67	77
1996	El-Wadi El-Gedid		Total	21	3.29	69	3.67	77
1996			G 45	2931	3.13	9168	3.30	9665
1996			G 70	102705	6.43	660670	7.32	751694
1996			G 76	15165	4.87	73847	5.37	81484
1996			G 77	39196	6.06	237533	7.05	276497
1996			G 75	378009	5.61	2120573	6.67	2519450
1996			G 80	147702	7.58	1119300	9.16	1352513
1996		General Total	G 83	43818	9.43	413300	11.79	516655
1996			G 85	146634	6.16	902748	7.72	1131996
1996			G 86	42488	4.97	211156	6.10	259105
1996			G 87	340	4.06	1381	4.39	1492
1996			G 89	775	7.06	5470	8.62	6678
1996			Others	1148	5.23	6000	6.02	6912
1996			Total	920911	6.26	5761146	7.51	6914141

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1997		Borg El-Arab	G 70	65	6.92	450	8.00	520
1997		Khorshed	G 70	20	5.80	116	6.70	134
1997		El-Maamoura	G 70	58	6.57	381	7.59	440
1997		El-Amria	G 70	3378	5.77	19497	6.67	22527
1997	Alexandria		Total	3521	5.81	20444	6.71	23621
1997		Abou-Hommos	G 70	30805	8.43	259769	9.74	300136
1997		Etay El-Baroud	G 70	11525	6.59	75969	7.62	87775
1997		Damanhour	G 70	23602	8.14	192033	9.40	221874
1997		Shobra-Kheit	G 70	8231	8.51	70039	9.83	80923
1997		Kafr El-Dawar	G 70	27255	7.23	197114	8.36	227745
1997		Edco	G 70	4344	6.60	28678	7.63	33134
1997		Rashid	G 70	3541	7.38	26127	8.52	30187
1997		El-Mahmoudia	G 76	12733	5.91	75294	6.62	84263
1997		El-Rahmania	G 70	6905	7.50	51767	8.66	59811
1997		Abou El-Matamir	G 75	9890	8.34	82435	9.80	96971
1997		Hosh Eisa	G 75	6550	7.95	52059	9.35	61239
1997		El-Delengat	G 75	9534	7.51	71600	8.83	84225
1997		Janaklis	G 75	1890	8.26	15620	9.72	18374
1997		Kom Hamada	G 75	3615	6.78	24501	7.97	28821
1997			G 70	116208	7.76	901496	8.96	1041585
1997		El-Behera	G 76	12733	5.91	75294	6.62	84263
1997			G 75	31479	7.82	246215	9.20	289630
1997			Total	160420	7.62	1223005	8.82	1415478
1997		Bassyoun	G 77	7912	8.14	64406	9.33	73823
1997		Kotour	G 77	68	7.90	537	9.06	616
1997		Kotour	G 75	10304	7.52	77439	8.85	91156
1997		Kotour	G 89	66	7.12	470	8.42	556
1997		Kotour	Total	10438	7.52	78446	8.85	92328
1997		Kafr El-Zayat	G 77	330	6.93	2287	7.94	2621
1997		Kafr El-Zayat	G 75	4868	7.03	34219	8.27	40280
1997		Kafr El-Zayat	Total	5198	7.02	36506	8.25	42901
1997		El-Mehalla El-Kobra	G 75	18529	6.79	125824	7.99	148111
1997		Zefta	G 75	6080	5.72	34793	6.74	40956
1997		Samannoud	G 75	3055	6.94	21209	8.17	24965
1997		El-Santa	G 75	6766	5.69	38503	6.70	45323
1997		Tanta	G 75	9925	6.35	63013	7.47	74175
1997			G 77	8310	8.09	67230	9.27	77060
1997		El-Gharbia	G 75	59527	6.64	395000	7.81	464966
1997			G 89	66	7.12	470	8.42	556
1997			Total	67903	6.81	462700	7.99	542582

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1997		El-Hamoul	G 75	24568	5.56	136499	6.53	160498
1997		El-Borollos	G 77	2418	4.79	11590	5.53	13377
1997		Beila	G 75	9740	6.39	62205	7.51	73142
1997		Desouk	G 77	14678	7.71	113218	8.90	130673
1997		Sidi Salem	G 75	18783	5.99	112471	7.04	132245
1997		Foua	G 77	4380	8.48	37135	9.79	42860
1997		Kallin	G 77	97	4.85	470	5.59	542
1997		Kallin	G 75	7510	7.87	59084	9.25	69473
1997		Kallin	Total	7607	7.83	59554	9.20	70015
1997		Kafr El-Sheikh	G 45	135	1.98	267	2.15	290
1997		Kafr El-Sheikh	G 70	202	7.38	1491	8.46	1708
1997		Kafr El-Sheikh	G 76	301	2.97	893	3.37	1013
1997		Kafr El-Sheikh	G 75	10830	7.10	76933	8.35	90459
1997		Kafr El-Sheikh	G 85	329	4.14	1363	5.13	1687
1997		Kafr El-Sheikh	G 86	183	6.45	1181	8.04	1472
1997		Kafr El-Sheikh	G 87	94	4.37	411	4.46	419
1997		Kafr El-Sheikh	G 88	78	5.95	464	6.85	534
1997		Kafr El-Sheikh	G 89	102	4.58	467	5.35	546
1997		Kafr El-Sheikh	Total	12254	6.81	83470	8.01	98128
1997		Metobes	G 77	4602	5.99	27586	6.92	31839
1997		El-Riad	G 75	10833	5.66	61305	6.65	72084
1997			G 45	135	1.98	267	2.15	290
1997			G 70	202	7.38	1491	8.46	1708
1997			G 76	301	2.97	893	3.37	1013
1997			G 77	26175	7.26	189999	8.38	219291
1997			G 75	82264	6.18	508497	7.27	597901
1997		Kafr El-Sheikh	G 85	329	4.14	1363	5.13	1687
1997			G 86	183	6.45	1181	8.04	1472
1997			G 87	94	4.37	411	4.46	419
1997			G 88	78	5.95	464	6.85	534
1997			G 89	102	4.58	467	5.35	546
1997			Total	109863	6.42	705033	7.51	824861
1997		Aga	G 86	5522	7.30	40301	8.86	48911
1997		Belkas	G 86	32489	6.61	214847	8.03	260752
1997		Dekernes	G 86	1465	5.92	8670	7.18	10523
1997		Mit Souid	G 86	9194	6.71	61664	8.14	74840
1997		El-Senbellawen	G 86	5193	6.44	33448	7.82	40595
1997		Tami El-Amdid	G 86	3270	5.68	18559	6.89	22524
1997		Sherbin	G 86	12191	6.38	77731	7.74	94339
1997		Talkha	G 86	13616	5.12	69757	6.22	84661
1997		El-Manzala	G 86	20528	5.79	118857	7.03	144252
1997		El-Mansoura	G 86	3083	4.48	13817	5.44	16769
1997		Mit Ghamr	G 86	1086	5.91	6419	7.17	7790
1997		Meniet El-Nasr	G 86	5060	6.44	32593	7.82	39557
1997	El-Dakahlia		Total	112697	6.18	696663	7.50	845513
1997		Faraskour	G 86	314	8.39	2636	10.19	3199
1997		Kafr Saad	G 45	5130	4.78	24525	4.96	25467
1997		Kafr Saad	G 86	6937	5.86	40653	7.11	49340
1997		Kafr Saad	Total	12067	5.40	65178	6.20	74807
1997		El-Zarka	G 86	304	7.31	2221	8.87	2695
1997			G 45	5130	4.78	24525	4.96	25467
1997		Damietta	G 86	7555	6.02	45510	7.31	55234
1997			Total	12685	5.52	70035	6.36	80701

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1997		El-Hessenia	G 85	7037	7.03	49479	8.68	61062
1997		Diarb Negm	G 85	8003	7.14	57113	8.81	70482
1997		Fakous	G 85	9881	7.09	70061	8.75	86462
1997		Kafr Sakr	G 85	7819	7.06	55218	8.72	68145
1997		Awlad Sakr	G 85	7066	7.51	53093	9.27	65522
1997		Abou Hammad	G 85	2533	6.69	16946	8.26	20913
1997		Abou Kebir	G 85	7729	4.94	38143	6.09	47071
1997		Belbeis	G 85	4732	6.64	31413	8.19	38767
1997		El-Zakazik	G 85	6609	6.22	41081	7.67	50698
1997		El-Ibrahimia	G 85	3554	6.48	23030	8.00	28421
1997		Menia El-Kamh	G 85	7905	7.05	55769	8.71	68824
1997		Hehia	G 85	4329	6.46	27958	7.97	34503
1997		Kassasin El-Azhar	G 85	4348	9.86	42891	12.17	52931
1997		San El-Hagar	G 85	15246	4.29	65480	5.30	80809
1997		El-Saleheya El-Gedida	G 85	103	3.29	339	4.06	418
1997		Mashtoul El-souk	G 85	1319	5.95	7843	7.34	9679
1997		El-Kanayat	G 85	1005	6.16	6190	7.60	7639
1997	El-Sharkia		Total	99218	6.47	642047	7.99	792346
1997		El-Ismailia	G 85	56	3.45	193	4.25	238
1997		El-Tall El-Kebir	G 85	61	3.77	230	4.66	284
1997		El-Kantara West	G 85	1247	3.94	4919	4.87	6072
1997		El-Kantara East	G 85	93	1.88	175	2.33	217
1997		Abou Soueir	G 85	275	2.70	742	3.33	916
1997		El-Kassasin	G 85	151	2.54	383	3.13	472
1997	El-Ismailia		Total	1883	3.53	6642	4.35	8199
1997		Port Said	G 85	539	4.98	2684	6.15	3313
1997	Port Said		Total	539	4.98	2684	6.15	3313
1997		Ashmoun	G 75	1262	6.48	8181	7.64	9642
1997		El-Bagour	G 75	2626	6.46	16973	7.62	20003
1997		Berket El-Sabee	G 75	3408	6.50	22150	7.66	26104
1997		Berket El-Sabee	G 89	2453	6.06	14859	7.16	17568
1997		Berket El-Sabee	Total	5861	6.31	37009	7.45	43672
1997		Tala	G 75	5251	7.08	37160	8.34	43794
1997		Shebin El-kom	G 75	4214	7.11	29960	8.38	35309
1997		El-Shohada	G 75	5530	7.99	44176	9.41	52063
1997		Kwesna	G 89	7097	6.88	48831	8.13	57734
1997		Menouf	G 75	2665	7.46	19891	8.80	23443
1997			G 75	24956	7.15	178491	8.43	210358
1997	El-Menoufia		G 89	9550	6.67	63690	7.89	75302
1997			Total	34506	7.02	242181	8.28	285660
1997		Benha	G 85	2900	6.20	17969	7.53	21841
1997		Kafr Shokr	G 85	867	6.93	6011	8.43	7307
1997		El-Khanka	G 85	90	5.69	512	6.91	622
1997		Shebin El-Kanater	G 85	1300	7.14	9283	8.68	11284
1997		Toukh	G 85	4050	7.27	29453	8.84	35800
1997		Kalioub	G 85	1352	7.47	10093	9.07	12269
1997		El-Kanater El-Khayria	G 85	863	7.28	6285	8.85	7639
1997	El-Kalioubia		Total	11422	6.97	79606	8.47	96762
1997		El-Giza	Others	14	3.71	52	4.14	58
1997	El-Giza		Total	14	3.71	52	4.14	58
1997		Ehnasia city	G 80	15617	6.16	96260	6.73	105069
1997		Beba	G 80	5602	6.96	38969	7.59	42535
1997		Beny Suef	G 80	8548	6.71	57317	7.32	62563
1997		Nasser	G 80	6789	7.46	50669	8.15	55306
1997		Semesta El-Wakf	G 80	5728	7.76	44446	8.47	48513
1997		El-Fashen	G 80	11292	6.03	68129	6.59	74364
1997		El-Wasta	G 80	7965	7.29	58077	7.96	63393
1997	Beny Suef		Total	61541	6.73	413867	7.34	451743

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1997		Ebshway	G 85	6027	4.93	29731	5.95	35836
1997		Etsa	G 85	11805	5.53	65259	6.66	78659
1997		Senoures	G 85	6681	5.99	40000	7.22	48213
1997		Tamia	G 85	7266	5.56	40428	6.71	48729
1997		El-Fayoum	G 85	11172	5.82	65053	7.02	78411
1997	El-Fayoum		Total	42951	5.60	240471	6.75	289848
1997		Abou Korkas	G 80	7574	5.96	45150	6.69	50681
1997		Beny Mazar	G 80	12640	6.23	78751	6.99	88399
1997		Deir Mouas	G 80	4187	5.76	24130	6.47	27086
1997		Samalout	G 80	10590	6.73	71262	7.55	79992
1997		El-Edoua	G 80	8763	7.39	64735	8.29	72666
1997		Matay	G 80	6891	7.82	53884	8.78	60486
1997		Maghagha	G 80	8557	6.89	58940	7.73	66161
1997		Mallawy	G 80	5380	6.58	35405	7.39	39743
1997		Mallawy	G 83	152	6.34	963	7.50	1140
1997		Mallawy	Total	5532	6.57	36368	7.39	40883
1997		El-Menia	G 80	6497	5.92	38471	6.65	43184
1997			G 80	71079	6.62	470728	7.43	528398
1997		El-Menia	G 83	152	6.34	963	7.50	1140
1997			Total	71231	6.62	471691	7.43	529538
1997		Abnoub	G 83	5994	8.52	51086	9.98	59815
1997		Abou tig	G 83	4755	7.99	37972	9.35	44460
1997		Assyout	G 83	7423	9.39	69714	11.00	81626
1997		El-Badary	G 83	1417	7.38	10459	8.64	12246
1997		Sahel Selim	G 83	1484	8.73	12956	10.22	15169
1997		Sedfa	G 83	2332	9.57	22308	11.20	26120
1997		Manfalout	G 83	6934	8.82	61141	10.32	71588
1997		El-Ghanayem	G 83	1809	6.83	12351	7.99	14461
1997		El-Fath	G 83	2860	8.80	25174	10.31	29476
1997		Dayrout	G 83	4618	9.02	41658	10.56	48776
1997		El-Kousia	G 83	7814	7.72	60318	9.04	70625
1997	Assyout		Total	47440	8.54	405137	10.00	474362
1997		Akhmim	G 80	765	8.07	6174	8.91	6816
1997		Dar El-salam	G 80	2325	6.63	15420	7.32	17025
1997		El-Balyana	G 80	765	7.40	5662	8.17	6251
1997		Sakolta	G 80	2031	6.56	13317	7.24	14702
1997		Souhag	G 80	2530	7.47	18909	8.25	20876
1997		Tema	G 80	4050	7.55	30594	8.34	33777
1997		Tahta	G 80	2950	7.22	21312	7.98	23528
1997		El-maragha	G 80	2240	8.19	18337	9.04	20244
1997		El-monshaa	G 80	2500	7.91	19763	8.73	21819
1997		Gahina	G 80	1200	8.02	9629	8.86	10631
1997	Souhag		Total	21356	7.45	159117	8.23	175669
1997		Esna	Others	8	5.00	40	5.63	45
1997	Kena		Total	8	5.00	40	5.63	45
1997		El-Farafra	G 83	57	4.40	251	5.19	296
1997	El-Wadi El-Gedid		Total	57	4.40	251	5.19	296
1997			G 45	5265	4.71	24792	4.89	25757
1997			G 70	119931	7.70	923431	8.90	1066914
1997			G 76	13034	5.85	76187	6.54	85276
1997			G 77	34485	7.46	257229	8.59	296351
1997			G 75	198226	6.70	1328203	7.88	1562855
1997			G 80	153976	6.78	1043712	7.51	1155810
1997			G 83	47649	8.53	406351	9.99	475798
1997		General Total	G 85	156342	6.22	972813	7.63	1192155
1997			G 86	120435	6.17	743354	7.49	902219
1997			G 87	94	4.37	411	4.46	419
1997			G 88	78	5.95	464	6.85	534
1997			G 89	9718	6.65	64627	7.86	76404
1997			Others	22	4.18	92	4.68	103
1997			Total	859255	6.80	5841666	7.96	6840595

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AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1998		Borg El-Arab	G 70	140	2.39	334	2.64	370
1998		El-Maamoura	G 70	54	2.39	129	2.65	143
1998		El-Amria	G 70	3225	2.76	8886	3.05	9849
1998	Alexandria		Total	3419	2.73	9349	3.03	10362
1998		Abou-Hommos	G 70	29848	6.86	204786	7.60	226741
1998		Etay El-Baroud	G 70	10599	3.88	41173	4.30	45587
1998		Damanhour	G 70	22377	5.79	129610	6.41	143505
1998		Shobra-Kheit	G 70	8060	4.89	39425	5.42	43651
1998		Kafr El-Dawar	G 70	26307	6.80	178997	7.53	198186
1998		Edco	G 70	3280	4.64	15204	5.13	16834
1998		Rashid	G 70	4141	4.67	19330	5.17	21402
1998		El-Mahmoudia	G 70	12651	4.19	53038	4.64	58724
1998		El-Rahmania	G 70	7000	4.62	32332	5.11	35798
1998		Abou El-Matamir	G 70	9630	4.25	40951	4.71	45341
1998		Hosh Eisa	G 70	6084	5.93	36052	6.56	39917
1998		El-Delengat	G 70	9195	4.35	40019	4.82	44309
1998		Janaklis	G 70	2440	3.43	8363	3.80	9260
1998		Kom Hamada	G 70	4292	4.29	18416	4.75	20390
1998	El-Behera		Total	155904	5.50	857696	6.09	949645
1998		Bassyoun	G 86	8799	6.18	54338	7.26	63857
1998		Kotour	G 45	16	3.06	49	2.94	47
1998		Kotour	G 70	154	5.35	824	5.90	909
1998		Kotour	G 86	11062	4.94	54637	5.80	64209
1998		Kotour	Total	11232	4.94	55510	5.80	65165
1998		Kafr El-Zayat	G 86	473	4.66	2205	5.48	2592
1998		Kafr El-Zayat	G 89	4776	4.92	23494	5.88	28062
1998		Kafr El-Zayat	Total	5249	4.90	25699	5.84	30654
1998		El-Mehalla El-Kobra	G 77	117	3.62	423	3.92	459
1998		El-Mehalla El-Kobra	G 86	18151	5.45	98905	6.40	116233
1998		El-Mehalla El-Kobra	Total	18268	5.44	99328	6.39	116692
1998		Zefta	G 89	5580	3.48	19425	4.16	23201
1998		Samannoud	G 86	2852	5.27	15025	6.19	17658
1998		El-Santa	G 89	6010	3.88	23322	4.64	27857
1998		Tanta	G 89	9946	3.68	36587	4.39	43701
1998			G 45	16	3.06	49	2.94	47
1998			G 70	154	5.35	824	5.90	909
1998			G 77	117	3.62	423	3.92	459
1998		El-Gharbia	G 86	41337	5.45	225110	6.40	264549
1998			G 89	26312	3.91	102828	4.67	122821
1998			Total	67936	4.85	329234	5.72	388785

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AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (.....)	Seed cotton Production (.....k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1998		El-Hamoul	G 86	26530	3.52	93507	4.15	110085
1998		El-Borollos	G 86	3097	4.43	13710	5.21	16141
1998		Beila	G 86	10051	4.75	47733	5.59	56195
1998		Desouk	G 77	15336	5.13	78639	5.56	85316
1998		Sidi Salem	G 86	18073	4.98	90093	5.87	106066
1998		Foua	G 77	4877	4.89	23831	5.30	25855
1998		Kallin	G 86	7908	5.44	43007	6.40	50632
1998		Kallin	G 89	181	9.06	1639	10.73	1942
1998		Kallin	Total	8089	5.52	44646	6.50	52574
1998		Kafr El-Sheikh	G 45	154	3.21	495	3.21	494
1998		Kafr El-Sheikh	G 70	107	4.42	473	4.82	516
1998		Kafr El-Sheikh	G 76	15	4.27	64	4.53	68
1998		Kafr El-Sheikh	G 77	287	4.59	1318	4.98	1430
1998		Kafr El-Sheikh	G 85	306	5.27	1613	6.35	1944
1998		Kafr El-Sheikh	G 86	11106	5.26	58372	6.19	68721
1998		Kafr El-Sheikh	G 87	65	2.82	183	2.65	172
1998		Kafr El-Sheikh	G 88	73	3.52	257	4.15	303
1998		Kafr El-Sheikh	G 89	183	9.43	1725	11.17	2044
1998		Kafr El-Sheikh	Others	127	0.98	125	1.15	146
1998		Kafr El-Sheikh	Total	12423	5.20	64625	6.10	75838
1998		Metobes	G 77	5642	3.57	20151	3.87	21862
1998		El-Riad	G 86	11021	4.25	46869	5.01	55178
1998			G 45	154	3.21	495	3.21	494
1998			G 70	107	4.42	473	4.82	516
1998			G 76	15	4.27	64	4.53	68
1998			G 77	26142	4.74	123939	5.14	134463
1998			G 85	306	5.27	1613	6.35	1944
1998		Kafr El-Sheikh	G 86	87786	4.48	393291	5.27	463018
1998			G 87	65	2.82	183	2.65	172
1998			G 88	73	3.52	257	4.15	303
1998			G 89	364	9.24	3364	10.95	3986
1998			Others	127	0.98	125	1.15	146
1998			Total	115139	4.55	523804	5.26	605110
1998		Aga	G 86	5767	4.76	27436	5.57	32107
1998		Belkas	G 86	35928	4.05	145390	4.74	170143
1998		Dekernes	G 86	1390	3.22	4478	3.77	5240
1998		Mit Souid	G 86	10987	3.53	38779	4.13	45381
1998		El-Senbellawen	G 86	5328	3.21	17122	3.76	20037
1998		Tami El-Amdid	G 86	4108	3.17	13027	3.71	15245
1998		Sherbin	G 86	13404	3.85	51671	4.51	60468
1998		Talkha	G 86	12501	3.12	38964	3.65	45597
1998		El-Manzala	G 86	19929	3.85	76817	4.51	89895
1998		El-Mansoura	G 86	3041	3.24	9841	3.79	11517
1998		Mit Ghamr	G 86	1553	3.90	6058	4.57	7091
1998		Meniet El-Nasr	G 86	5715	3.75	21407	4.38	25052
1998	El-Dakahlia		Total	119651	3.77	450990	4.41	527773
1998		Faraskour	G 86	519	5.06	2626	5.92	3071
1998		Kafr Saad	G 45	9561	3.03	29011	2.96	28282
1998		Kafr Saad	G 76	6901	2.69	18591	2.71	18714
1998		Kafr Saad	Total	16462	2.89	47602	2.85	46996
1998		El-Zarka	G 86	525	4.93	2588	5.77	3028
1998			G 45	9561	3.03	29011	2.96	28282
1998		Damietta	G 76	6901	2.69	18591	2.71	18714
1998			G 86	1044	4.99	5214	5.84	6099
1998			Total	17506	3.02	52816	3.03	53095

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton		Lint cotton	
					Yield (m.k.)	Production (m.k.)	Yield (m.k.)	Production (m.k.)
1998		El-Hessenia	G 85	6456	5.00	32272	6.09	39286
1998		Diarb Negm	G 85	8101	4.94	40047	6.02	48751
1998		Fakous	G 85	7589	5.24	39803	6.38	48455
1998		Kafr Sakr	G 85	6957	5.69	39614	6.93	48224
1998		Awlad Sakr	G 85	5170	5.10	26375	6.21	32108
1998		Abou Hammad	G 85	1717	4.84	8304	5.89	10109
1998		Abou Kebir	G 85	5947	3.46	20559	4.21	25028
1998		Belbeis	G 85	4114	5.41	22270	6.59	27110
1998		El-Zakazik	G 85	5790	5.03	29103	6.12	35429
1998		El-Ibrahimia	G 85	3233	4.03	13040	4.91	15874
1998		Menia El-Kamh	G 85	5976	6.56	39199	7.99	47720
1998		Hehia	G 85	3266	4.35	14196	5.29	17281
1998		Kassasin El-Azhar	G 85	3926	4.63	18169	5.63	22118
1998		San El-Hagar	G 85	14966	2.38	35662	2.90	43413
1998		El-Saleheya	G 85	8	2.75	22	3.38	27
1998		Mashtoul El-souk	G 85	1161	6.04	7015	7.36	8540
1998		Telrak	G 85	1035	5.69	5890	6.93	7170
1998		El-Kareen	G 85	84	2.80	235	3.42	287
1998		El-Kanayat	G 85	803	4.83	3880	5.88	4723
1998	El-Sharkia		Total	86299	4.58	395655	5.58	481653
1998		El-Ismailia	G 85	23	2.09	48	2.52	58
1998		El-Tall El-Kebir	G 85	9	2.56	23	3.11	28
1998		El-Kantara West	G 85	867	3.14	2725	3.82	3315
1998		El-Kantara East	G 85	27	2.74	74	3.33	90
1998		Abou Soueir	G 85	161	2.66	429	3.24	522
1998		El-Kassasin	G 85	175	3.10	542	3.77	659
1998	El-Ismailia		Total	1262	3.04	3841	3.70	4672
1998		Port Said	G 85	513	4.57	2345	5.56	2852
1998	Port Said		Total	513	4.57	2345	5.56	2852
1998		Ashmoun	G 89	1102	6.59	7257	7.91	8715
1998		El-Bagour	G 89	2496	6.52	16272	7.83	19540
1998		Berket El-Sabee	G 89	5685	5.85	33267	7.03	39948
1998		Tala	G 89	6798	6.05	41136	7.27	49398
1998		Shebin El-kom	G 89	4520	5.65	25547	6.79	30678
1998		El-Shohada	G 89	6074	5.72	34741	6.87	41718
1998		Kwesna	G 89	7011	6.19	43420	7.44	52139
1998		Menouf	G 89	2861	6.11	17481	7.34	20991
1998	El-Menoufia		Total	36547	6.00	219121	7.20	263127
1998		Banha	G 85	3084	6.08	18761	7.44	22951
1998		Kafr Shokr	G 85	660	6.36	4199	7.78	5137
1998		shebin El-kanater	G 85	1200	5.92	7108	7.25	8696
1998		El-Khanka	G 85	40	5.80	232	7.10	284
1998		Toukh	G 85	3388	6.15	20842	7.53	25497
1998		Kalioub	G 85	1400	5.88	8225	7.19	10062
1998		El-Kanater El-Khayria	G 85	600	5.93	3559	7.26	4355
1998	El-Kalioubia		Total	10372	6.07	62926	7.42	76982
1998			G 45	9731	3.04	29555	2.96	28823
1998			G 70	159584	5.44	868342	6.02	961432
1998			G 76	6916	2.70	18655	2.72	18782
1998			G 77	26259	4.74	124362	5.14	134922
1998			G 85	98752	4.72	466380	5.75	568103
1998		Total Lower Egypt	G 86	249818	4.30	1074605	5.05	1261439
1998			G 87	65	2.82	183	2.65	172
1998			G 88	73	3.52	257	4.15	303
1998			G 89	63223	5.15	325313	6.17	389934
1998			Others	127	0.98	125	1.15	146
1998			TOTAL	614548	4.73	2907777	5.47	3364056

AREA AND PRODUCTION
FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1998		El-Giza	Others	15	3.67	55	4.20	63
1998	El-Giza		Total	15	3.67	55	4.20	63
1998		Ehnasia city	G 80	10346	4.39	45371	4.98	51545
1998		Beba	G 80	4708	5.51	25956	6.26	29488
1998		Beny Suef	G 80	6171	5.34	32958	6.07	37443
1998		Naser	G 80	5081	5.03	25552	5.71	29029
1998		Semesta El-Wakf	G 80	4581	5.96	27298	6.77	31012
1998		El-Fashen	G 80	8153	4.72	38476	5.36	43712
1998		El-Wasta	G 80	4838	5.25	25391	5.96	28845
1998	Beny Suef		Total	43878	5.04	221002	5.72	251074
1998		Ebshway	G 83	4075	6.17	25134	7.15	29121
1998		Etsa	G 83	6733	7.32	49279	8.48	57097
1998		Senoures	G 83	4248	7.37	31322	8.54	36292
1998		Tamia	G 83	5133	6.78	34786	7.85	40304
1998		El-Fayoum	G 83	6464	6.92	44724	8.02	51819
1998	El-Fayoum		TOTAL	26653	6.95	185245	8.05	214633
1998		Abou Korkas	G 83	5715	5.54	31661	6.22	35542
1998		Beny Mazar	G 80	10411	4.53	47203	4.88	50817
1998		Deir Mouas	G 83	2472	5.04	12451	5.65	13977
1998		Samalout	G 83	8348	5.63	47020	6.32	52783
1998		El-Edoua	G 80	8145	5.70	46409	6.13	49962
1998		Matay	G 83	6210	6.26	38875	7.03	43640
1998		Maghagha	G 80	7575	6.32	47881	6.80	51547
1998		Mallawy	G 83	4550	5.71	25976	6.41	29159
1998		El-Menia	G 83	4301	6.00	25801	6.73	28963
1998			G 80	26131	5.41	141493	5.83	152326
1998		El-Menia	G 83	31596	5.75	181784	6.46	204064
1998			Total	57727	5.60	323277	6.17	356390
1998			G 80	70009	5.18	362495	5.76	403400
1998		Total Middle Egypt	G 83	58249	6.30	367029	7.19	418697
1998			Others	15	3.67	55	4.20	63
1998			TOTAL	128273	5.69	729579	6.41	822160
1998		Abnoub	G 83	4218	8.82	37216	10.45	44082
1998		Abou tig	G 83	2585	7.70	19902	9.12	23573
1998		Assyout	G 83	5444	8.32	45316	9.86	53676
1998		El-Badary	G 83	975	6.95	6781	8.24	8032
1998		Sahel Selim	G 83	1098	8.24	9053	9.77	10723
1998		Sedfa	G 83	1840	6.21	11427	7.36	13535
1998		Manfalout	G 83	5042	8.87	44714	10.50	52962
1998		El-Ghanayem	G 83	781	7.29	5693	8.63	6743
1998		El-Fath	G 83	2300	8.37	19248	9.91	22798
1998		Dayrout	G 83	4052	6.40	25933	7.58	30717
1998		El-Kousia	G 83	6165	6.52	40214	7.73	47632
1998	Assyout		TOTAL	34500	7.70	265497	9.12	314473
1998		Akhmim	G 83	270	8.53	2303	9.60	2593
1998		Dar El-salam	G 83	1450	8.07	11701	9.08	13171
1998		El-Balyana	G 83	500	6.53	3266	7.35	3677
1998		Sakolta	G 83	1125	7.21	8111	8.12	9130
1998		Souhag	G 83	820	7.21	5916	8.12	6660
1998		Tema	G 83	2300	5.62	12932	6.33	14557
1998		Tahta	G 83	1500	6.98	10470	7.86	11785
1998		El-maragha	G 83	1350	7.94	10721	8.94	12068
1998		El-monshaa	G 83	1170	9.43	11034	10.62	12421
1998		Gahina	G 83	590	7.08	4179	7.97	4704
1998	Souhag		Total	11075	7.28	80633	8.20	90766

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AREA AND PRODUCTION FOR COTTON VARIETIES

Year	Governorate	District	Variety	Area (feddan)	Seed cotton Yield (m.k.)	Seed cotton Production (m.k.)	Lint cotton Yield (m.k.)	Lint cotton Production (m.k.)
1998		Arment	Others	3	5.00	15	5.67	17
1998		Esna	Others	3	5.00	15	5.67	17
1998		Qous	G 83	7	5.00	35	5.71	40
1998		Qous	Others	2	5.00	10	6.00	12
1998		Qous	Total	9	5.00	45	5.78	52
1998		Kena	G 83	7	5.00	35	5.71	40
1998			Others	8	5.00	40	5.75	46
1998			Total	15	5.00	75	5.73	86
1998	Total Upper Egypt		G 83	45582	7.59	346165	8.89	405279
1998			Others	8	5.00	40	5.75	46
1998			Total	45590	7.59	346205	8.89	405325
1998		El-Kharga	G 83	7	3.00	21	3.57	25
1998		El-Farafra	G 83	151	4.60	695	5.52	834
1998		East Ewaynat	G 83	235	4.48	1053	5.37	1263
1998		El-Dakhla	G 83	6	4.50	27	5.33	32
1998	New Valley		Total	399	4.50	1796	5.40	2154
1998	General Total		G 45	9731	3.04	29555	2.96	28823
1998			G 70	159584	5.44	868342	6.02	961432
1998			G 76	6916	2.70	18655	2.72	18782
1998			G 77	26259	4.74	124362	5.14	134922
1998			G 80	70009	5.18	362495	5.76	403400
1998			G 83	104230	6.86	714990	7.93	826130
1998			G 85	98752	4.72	466380	5.75	568103
1998			G 86	249818	4.30	1074605	5.05	1261439
1998			G 87	65	2.82	183	2.65	172
1998			G 88	73	3.52	257	4.15	303
1998			G 89	63223	5.15	325313	6.17	389934
1998			Others	150	1.47	220	1.70	255
1998			Total	788810	5.05	3985357	5.82	4593695