

## Egyptian policies for rice development

Sabaa M.F., Sharaf M.F.

*in*

Chataigner J. (ed.).

Future of water management for rice in Mediterranean climate areas: Proceedings of the Workshops

Montpellier : CIHEAM

Cahiers Options Méditerranéennes; n. 40

1999

pages 25-36

Article available on line / Article disponible en ligne à l'adresse :

<http://om.ciheam.org/article.php?IDPDF=CI020441>

To cite this article / Pour citer cet article

Sabaa M.F., Sharaf M.F. **Egyptian policies for rice development**. In : Chataigner J. (ed.). *Future of water management for rice in Mediterranean climate areas: Proceedings of the Workshops*. Montpellier : CIHEAM, 1999. p. 25-36 (Cahiers Options Méditerranéennes; n. 40)



<http://www.ciheam.org/>  
<http://om.ciheam.org/>

# Egyptian policies for rice development

Mounir Foda Sabaa, Mohamed F. Sharaf

Agricultural Economics Research Institute, ARC, MOA (Egypt)

**Abstract.** A study was initiated to review and analyse the changes in policies that affect development of rice economy in Egypt. The study depends on both descriptive and quantitative approaches. This study presents and discusses the following topics:

- Overview on agricultural development policy in Egypt.
- Characteristics and constituents of the economic reform program in the agricultural sector.
- Main policy issues concerning development of rice economy. The latest topic had dealt with liberalisation and privatisation policies which affect: rice production, rice Marketing, rice pricing, rice processing, rice foreign trade and rice consumption.

The study revealed that:

- The implementation of the economic reform program affected largely the agricultural sector since the crop production, area allocation, crop marketing and pricing were liberalised and input subsidy was phased out.
- Rice marketing system changed from the governmental cooperative marketing to the free market. Forced quota delivery regime was phased out.
- Private sector was allowed to export and import rice and to play a large role in the rice domestic trade.
- Liberalisation of rice prices had a positive impact on farmers return. Under the government intervention, farmers net return was low because the farmgate prices were very close and - in some years - below the cost per unit, whereas under liberalisation the margin between the cost per unit and the floor prices which are determined by the government has increased.
- During the last few years, the percentage of rice quantities received by the public sector mills to the total production decreased. Presently the government has a plan for privatising the public sector mills.
- Rice foreign trade was liberalised and consequently the quantities of rice exports increased during the last few years. The Ministry of Trade and Supply has a plan for developing the rice exports.
- For rice consumption, the liberalisation of domestic rice market affects significantly the total and per capita rice consumption since free transportation of rice among governorates was allowed.

**Résumé.** On a lancé une étude pour examiner et analyser les changements de politiques qui touchent le développement de l'économie rizicole en Egypte, en se fondant sur des méthodes à la fois descriptive et quantitative. L'étude présente et étudie les sujets suivants :

- Aperçu de la politique de développement agricole en Egypte ;
- Caractéristiques et éléments du programme de réforme économique dans le secteur agricole;
- Principales questions de politique concernant le développement de l'économie rizicole. Ce dernier aspect englobe les politiques de libéralisation et de privatisation qui dans le cas du riz ont une incidence sur: la production, la commercialisation, les prix, le traitement, les échanges internationaux et la consommation.

L'étude a montré que:

- L'application du programme de réforme économique a eu des effets considérables sur le secteur agricole étant donné que la production des cultures, l'attribution des superficies, la commercialisation des récoltes et les prix ont été libéralisés et les subventions des intrants progressivement supprimées
- La commercialisation du riz est passée d'un système coopératif gouvernemental à un système de marché libre. Le régime des livraisons de quotas imposé a été supprimé.
- Le secteur privé a été autorisé à exporter et importer du riz et à jouer un rôle important dans le commerce national.
- La libéralisation des prix du riz a eu une incidence positive sur les profits des agriculteurs. A l'époque où le gouvernement intervenait, les profits nets des agriculteurs étaient faibles parce que les prix départ exploitation étaient très proches des coûts unitaires et, certaines années inférieurs à ceux-ci, alors que depuis la libéralisation la marge entre le coût unitaire et le prix plancher qui sont déterminés par le gouvernement a augmenté.
- Au cours des quelques dernières années, le pourcentage des quantités de riz livrées aux rizeries du secteur public par rapport à la production totale a diminué. Le gouvernement projette actuellement de privatiser ces rizeries.
- Le commerce international du riz a été libéralisé et par conséquent les quantités de riz exportées ont augmenté au cours des quelques dernières années. Le Ministre du commerce et de l'approvisionnement prévoit de développer davantage les exportations.
- Au niveau de la consommation, la libéralisation du marché rizicole national a un impact important sur la consommation de riz totale et par habitant depuis que le transport libre du riz a été autorisé entre gouvernorats.

## Introduction

Egypt has continuous and well organized programs for developing activities in the agricultural sector. The agricultural development strategy includes both horizontal and vertical development programs. However, implementation of the economic reform program is a fundamental policy change which has dramatically affected the agricultural sector.

The reform program which includes several consecutive steps has started in mid 1980s, towards liberalization of the agricultural sector by abolishing the state's intervention in production, pricing, marketing and foreign trade. Hence, decisions related to such activities are entrusted with the private sector and market forces.

Rice is an important cereal crop in Egypt. It occupies about 590 thousand hectares which represent about 10% of the total cropped area. More attention has been given to rice development especially during the last ten years. Therefore, increase in the rice area during the 1990s is a response to the increase in farmers' net returns (due to the increase in both yield and output price) compared to other crops.

Because rice is considered an essential food commodity preferred by a large segment of the population than any other carbohydrates, domestic consumption of rice increased to reach about 3 million metric tons of milled rice in 1994/95. However, during the last few years, Egypt has attained a considerable surplus of rice for export.

The objective of this paper is to review and analyze the policies related to rice development and the changes in agricultural policies and its impact on the rice economy in Egypt.

## I – Agricultural Development policy in Egypt

The Egyptian agricultural development strategy depends on two main dimensions; the horizontal development and the vertical development.

### 1. Horizontal development

This dimension depends on a number of large programs and projects, designed for reclamation and cultivation of desert land. This is the only means to reduce the pressure of population density in the old land of the Delta and Nile Valley. Moreover, these projects contribute to increasing the agricultural production and generate new job opportunities.

More than 1.2 million feddans (500 thousand hectare) were reclaimed since 1952. At present, the large project at «Toshki» aims at reclaiming more than 200 thousand hectares in the short run and about 0.57 million hectares in the long run. Land reclamation projects in Sinai aims at reclaiming about 0.168 million hectares. In addition about 130 thousand hectares will be reclaimed in the New Valley.

### 2. Vertical development

This dimension aims at increasing agricultural production from the same acreage depending on the following measures:

- planting of high yielding, disease resistance varieties ;
- distribution of certified seeds and encouraging the private sector to produce high quality seeds ;
- practicing of agricultural intensification ;

- adoption of the latest and up-to-date technology available used in crop production including the use of machinery ;
- improving the quality of soils and increasing its fertility ;
- using of advanced irrigation methods ;
- improving and supporting the agricultural extension system.

## II – Economic Reform Program of the Agricultural Sector

Egypt has been moving gradually towards a market based economy since 1986. Liberalization and privatization are the two main elements of the economic reform program.

Nassar S. and Rizk, F., 1993, summarized the major components of the agricultural economic reform policy in Egypt as follows:

- Abolition of crop area control: Crop area allocations and rotational crop sequencing were phased out
- Phasing out subsidies to production inputs and reducing subsidies to consumer goods.
- Phasing out subsidies to agricultural credit interest rates and introducing gradual institutional reforms to PBDAC's function, transforming it from monopolizing input trade at prices and quotas regulated by the MOA, into a credit bank.
- Abolition of government constraints on the private sector in the field of production, marketing and importation of inputs. Cooperatives and private companies are encouraged to act as intermediaries between producers, consumers and exporters.
- Liberalizing procurement prices of major field crops and production inputs, in line with the world prices.
- Abolishing the forced delivery system for all crops. Crop delivery has become optional at floor price.
- Eliminating constraints on foreign trade through the private sector.
- Liberalizing exchange rate for the importation of production inputs The local currency was re-valuated to reflect its real value in import/export trade.

Considering the aforementioned policies, these revolutionary changes allow Egyptian farmers full freedom in the decision making for their cropping program.

## III – Some Policy Issues Concerning Development of Rice Economy

This part of the study presents policy issues and changes and its impact on the development of rice economy in Egypt. Discussion deals with different areas of rice production, marketing, prices, processing, foreign trade and rice consumption.

### 1. Rice production

#### A. Constraints

Despite the large optimistic land reclamation projects, the potential for increasing the area planted to crop is limited. For rice, a variety of factors determine the area devoted to rice, the most important factor is the availability of irrigation water, as rice is one of the most water consuming crops.

The average annual rice area reached about 583 thousand hectares (1.4 million feddans) during 1994-1996. However, the long-term policy of Ministry of Public Work and Water Resources (MPWWR) recommend that rice area should not exceed about 300 thousand hectares (700 thousand feddans) in

order to balance the future expected water supply and requirements. Therefore, the only way for developing rice production in Egypt will be through the vertical expansion programs.

### **B. Policies**

The governmental policy elements which have been used for developing rice production include:

- indicative allocation of areas to ensure availability of irrigation water and to cultivate varieties best suitable to each type of soil ;
- providing high-yielding rice varieties and the latest modern technology cultivation and farm husbandry including the use of mechanization ;
- supporting adaptive research aiming to improve yield and quality of rice ;
- provision of quality extension and supporting technology transfer programs ;
- intensive and sustainable training for all parties concerned with rice improvement, namely; researchers, extension staff and rice growers ;
- ensure availability of farm inputs quantitatively and qualitatively.

In addition to the previous policies, rice production affected by the changes in agricultural policy after the implementation of the economic reform program.

### **C. Impact of policy changes**

Table 1 shows some criteria to assess the impact of policy changes. A comparison is made between two periods, 1985-1990 (before liberalization) and 1991-1996 (after liberalization). The following results could be obtained:

- the average annual rice area, yield, production and cost of production had increased by about 34%, 26%, 70% and 146% respectively ;
- the average net return per hectare increased from LE 817 to LE 2051(151% increase) ;
- the average benefit/cost ratio increased slightly by about 2.5%.

Moreover, Abd El-Fattah, 1997 pointed out that the economic reform program caused not only increase in cost of rice production but also in the relative importance of the cost items. Comparing the two periods 1989-90 and 1994-95, the relative importance of labor cost, seed, chemical fertilizers and land rent changed from about 41%, 9.9%, 7.35% and 11% to 30.5%, 13%, 21% and 23% respectively.

**Table 1. Rice area, yield, production, cost of production, net return and return to capital during the period 1985-1996**

Year	Area Hectare	Yield Ton/hect	Production (000)mt	Cost of production	Net Return Le/hect.	B/C Ratio Le/hect.
1985	388 223	5.95	2 310	821	524	0.64
1986	423 443	5.77	2 444	907	624	0.69
1987	412 210	5.83	2 404	1 009	300	0.30
1988	351 702	6.06	2 131	1 054	602	0.57
1989	412 813	6.48	2 676	1 131	1 323	1.17
1990	435 439	7.27	166	1 242	1 528	1.23
<b>Average</b>	<b>403 971</b>	<b>6.23</b>	<b>2522</b>	<b>1027</b>	<b>817</b>	<b>0.79</b>
1991	462 042	7.46	3 446	1 652	1 711	1.04
1992	510 305	7.66	3 909	1 994	1 590	0.80
1993	538 567	7.72	4 159	2 649	1 390	0.52
1994	574 671	7.92	4 551	2 792	2 159	0.77
1995	582 542	8.1	4 755	2 993	2 533	0.85
1996	590 336	8.35	4 929	3 112	2 920	0.94
<b>Average</b>	<b>543 077</b>	<b>7.88</b>	<b>4 292</b>	<b>2 532</b>	<b>2 051</b>	<b>0.81</b>
<b>Change %</b>	<b>34</b>	<b>26</b>	<b>70</b>	<b>146</b>	<b>151</b>	<b>2.5</b>

Source: MOA, Central Administration of Agricultural Economics, Dept. of Statistics.

## 2. Rice marketing

### A. Policies

For many years prior to the implementation of the economic reform program, governmental cooperatives were used to play a significant role in domestic rice marketing. In addition, public sector rice milling companies used to handle most of the produce.

Forced delivery system was applied through the agricultural cooperatives. Each rice grower was required to turn over 1.5 tons per feddan (3.57tons/ha) to the government at a fixed price. The forced delivery quota represented about 65% of the average yield per unit area at that time.

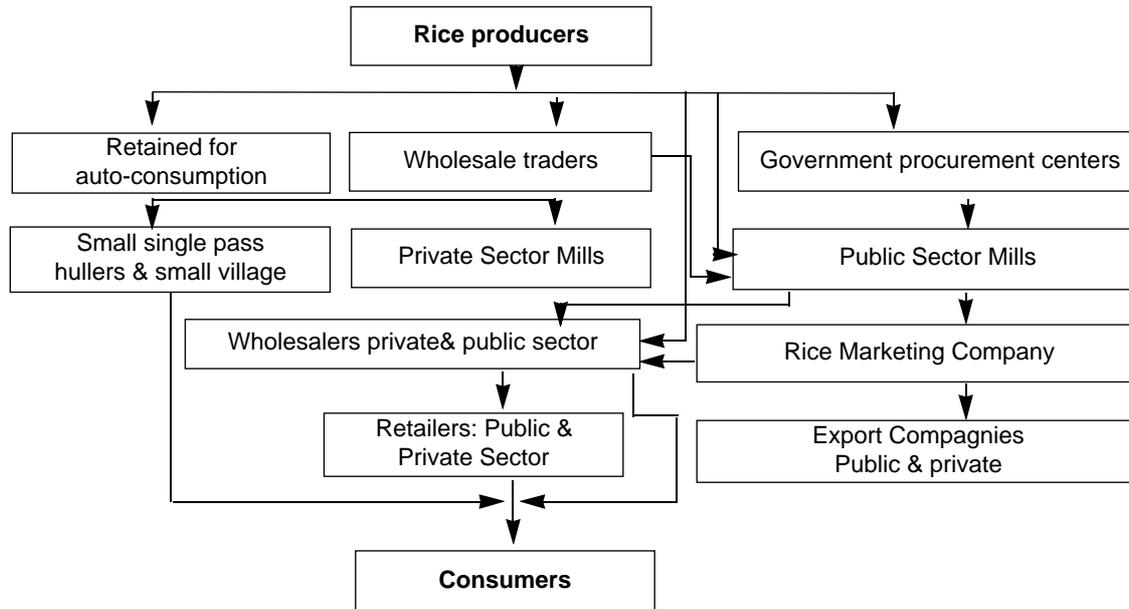
Moreover, under the government control system private sector companies and traders were not allowed to transfer rice between governorates or to export and/or import rice.

Since 1991, the rice marketing system had changed. These changes could be summarized as follows:

- alteration of the marketing system from the governmental cooperative marketing to the free market system. As of 1991/92 season, rice producers were able to sell their production in the free market ;
- cancelling of the forced quota delivery regime ;
- free rice storage and transportation of rice among governorates ;
- private sector was allowed to play the largest role in rice marketing.

Figure 1 is a diagram showing the current rice marketing system (after liberalization).

Figure 1. Rice marketing system after liberalization



## B. Impact

As a result of liberalizing the rice market, the relative importance of the public sector mills as a rice buyer decreased compared to the private sector. Table (2) shows the quantity of paddy rice received and the white rice produced by the public sector mills during the period 1989/90 - 1995/96. The percentage of rice quantities received by the public sector mills to the total production decreased from 42% in 1989/90 to 7% only in 1995/96. Therefore, the quantities of white rice produced by the public sector mills decreased from 680 thousand tons in 1989/90 to 378 thousand tons in 1995/96 (44% decline) (the impact of market liberalization on rice prices will be discussed later).

**Table 2. Quantity of paddy rice received and white rice produced by the public sector mills (000 tons) during 1989/90-1995/96**

Year	Total rice Production	Quantities received by the public sector mills	%	white rice produced by the mills	Index
1989/90	2 676	1 132	42	680	100
1990/91	3 166	1 021	32	652	96
1991/92	3 446	886	26	601	88
1992/93	3 909	923	24	590	87
1993/94	4 159	572	14	468	69
1994/95	4 551	579	13	363	53
1995/96	4 755	338	7	378	56

\* Include some quantities of white rice bought from the private mills and retreated in the public mills.  
Source: Holding Company for Rice & Flour Mills, Annual Reports

## 3. Rice prices

### A. Policies

Under the government controlled system, the forced delivery prices were determined by the Ministry of Supply for the quota procured. Farmers were free to sell the remainder of their production at the free market or retain it for personal consumption.

After the liberalization policy had taken place the rice price was determined through supply and demand forces. To avoid the expected market unstability especially at the beginning of the liberalization period, the government decided to, indirectly, interfere the rice market as a buyer and announced a floor price to insure farmers an equitable price and to lessen the degree of risk in the rice farmgate prices. As the new free market system becomes operational, floor prices set by the government are expected to disappear.

## B. Impact

To analyze the price trend, changes and the effects of rice price policy

changes, table (3) shows the average rice farmgate price, forced delivery and floor price, compared to the cost of production per unit during the period 1980 -1996. The following issues could be observed:

- During the period 1981-1985, the average forced delivery prices were below the average cost per unit, which means that rice farmers used to achieve losses during this period.
- When liberalization started gradually after the mid-1980s, the government had increased the forced delivery price. Therefore, producer margin had continuously increased during 1985-1990.
- Since 1991, farmgate prices, optional delivery prices and cost of production per unit appear to run parallel leaving a reasonable margin to the rice producer.
- Considering the constant value of prices and costs of production, Figure (3) shows a negative trend during the period 1985-1993. Generally, the constant value of farmgate price, optional delivery prices and cost of production per unit were more stable during 1991-1996 compared to 1980-1990.

**Table 3. Year Farmgate prices, Forced delivery or floor Prices Cost per Unit**

	Current prices		Constant prices		Current prices		Constant prices		Current prices		Constant prices	
	LE/ton	Index	LE/ton	Index	LE/ton	Index	LE/ton	Index	LE/ton	Index	LE/ton	Index
1980	81	100	81	100	75	100	75	100	66	100	66	100
1981	99	122	91	113	85	113	78	104	84	127	78	118
1982	130	160	110	136	95	127	80	107	100	152	84	128
1983	126	156	92	113	105	140	77	103	109	165	80	120
1984	140	173	93	114	105	140	69	92	143	217	95	143
1985	272	336	159	196	125	167	73	97	138	209	81	122
1986	319	394	159	196	165	220	82	109	157	238	78	119
1987	251	310	110	136	200	267	88	117	173	262	76	115
1988	306	378	106	131	200	267	69	92	174	263	60	92
1989	413	510	113	139	275	367	75	100	174	264	48	72
1990	401	495	94	116	275	367	64	85	171	259	40	61
1991	435	537	86	106	400	533	79	105	221	335	44	66
1992	451	557	80	98	400	533	71	95	260	394	46	70
1993	504	622	82	101	350	467	57	76	261	395	43	64
1994	605	747	93	115	450	600	69	92	352	533	54	82
1995	656	810	97	120	550	733	81	108	368	557	55	83
1996	702	867	93	115	550	733	73	97	376	570	50	75

(1) Forced delivery during 1980-1990 and floor price during 1991-1996.

(2) Deflated by the whole sale index number (19X0 = 100).

Source: Calculated from MOA, Central Administration of Agricultural Economics, Dept. of Statistics.

Figure 2. Prices and cost (LE/ton)

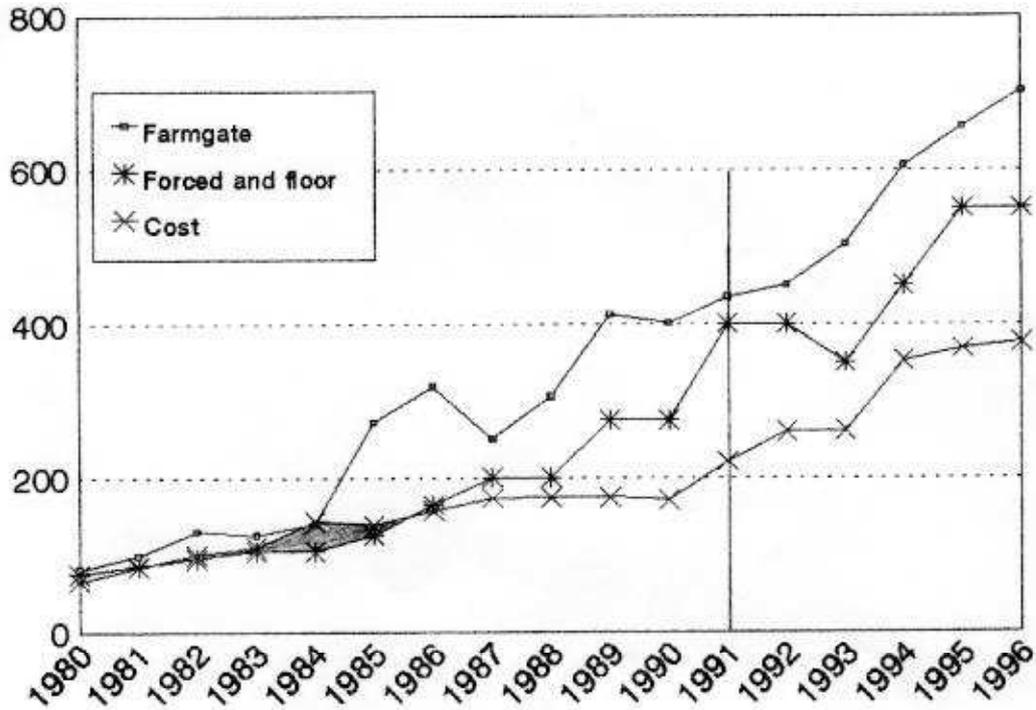
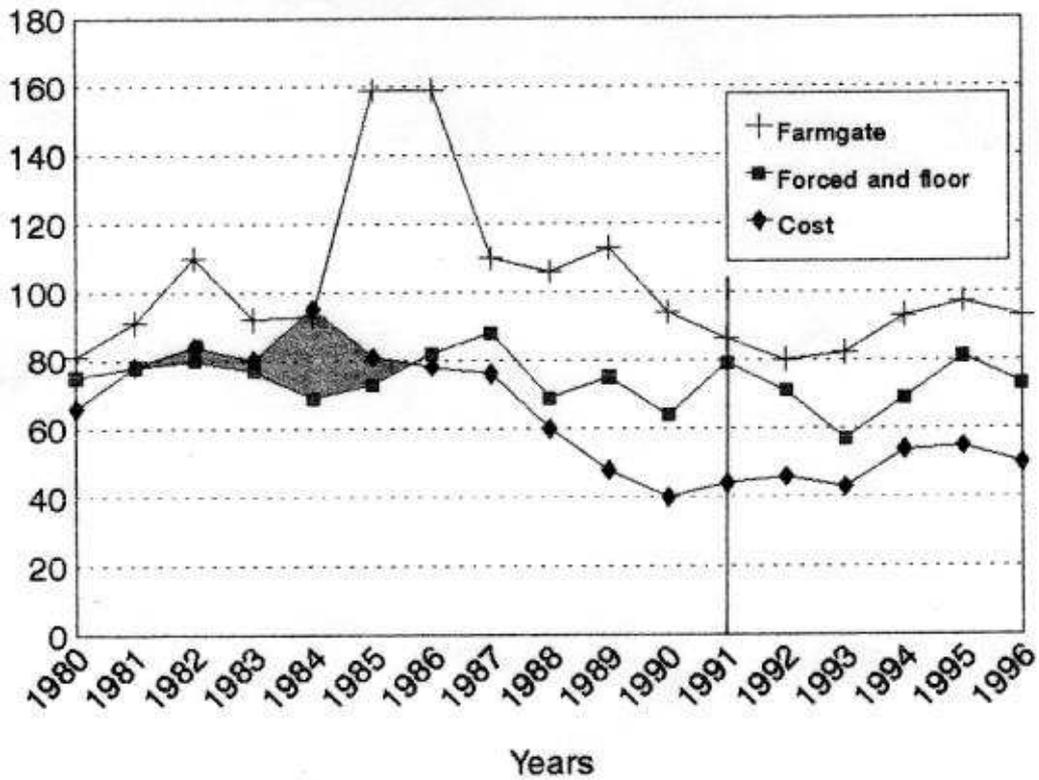


Figure 3. Rice farmgate prices, forced delivery prices and cost of production (current prices)

Prices and cost (LE/ton)



## 4. Rice processing

### A. Policies

Egypt has enough milling capacity for its rice production. The total rice milling capacity is estimated at 4.2 million metric tons per year. Over half of that capacity (2.7 million MT) is in some 3,000 small privately owned village stone mills. Before 1990 there were three types of rice mills, public sector mills, commercial mills and the small village mills. One of the milling problems is that many of these mills do not produce a highly polished rice. Much of the bran remains with the milled rice.

The public sector mills had upgraded their techniques to reduce broken kernels and to mill longer grain rice. Some mills have installed rubber rollers to mill longer grain rice varieties with less breakage.

Since 1990, a fourth type of mills which is the new commercial rice mills was added to the milling capacity in Egypt. According to «El Amir et al. 1996» a comparative analysis of rice mill types was made and pointed out that:

- ❑ The milling structure includes a large number of small village one-pass mills with the lowest milling rates. Most of Egypt's rice is milled by this type of mill. These mills operate at a relatively low level of efficiency.
- ❑ The highest estimated milling margin is reported for the older commercial mills. This is because of reasonable capacity utilization, lower milling costs, relatively low prices paid for paddy rice.
- ❑ The new commercial rice mills are reported to be the least profitable. While they are the most technically efficient with a milling rate of 71 percent and capacity utilization of 93 percent, but they pay the highest prices for paddy rice and sell their white rice at the lowest rate. This may be due to that these firms have not established their markets.

### B. Impact

The public rice mills have faced problems immediately following the market liberalization because of high milling costs due to redundant labor and the reduction in rice quantity received by the public mills. However, the public mills are in good position to procure paddy directly from the farmers. The public mills have the equipment to clean and sort in order to improve the quality of the milled rice sufficient that they can obtain reasonable milled rice prices.

Harrison 1995, pointed out that the rapid shift toward private sector dominance in trading, milling and exporting has putting strong competitive pressure on the government procurement and milling component of the system. He added that the public sector approach is no more viable since the collection of paddy through the «cooperative» system face many problems and proved to be inefficient.

Therefore, the government has initiated programs to privatize its rice mills. On the other side the private merchants have quickly established themselves as the dominant buyers of paddy. They have also indicated a strong preference for using private mills.

## 5. Rice foreign trade

### A. Policies

One of the important policy changes, is the liberalization of rice foreign trade. The public sector mills are the major source for exporting quality rice. Moreover, the private exporters, who can either purchase milled rice or have their own paddy custom milled at private or public mills, have been allowed to play more important role after cancelling the government exporting monopoly.

Abd El-Fattah, 1997, classified the targeted markets for Egyptian rice into four groups. The Arab group includes Syria, Libya, Jordan, Lebanon, Sudan, Saudi Arabia and the United Arab Emirates. West Europe

group includes Italy, UK, Spain and Austria. East Europe group involves Romania and Albania. African group includes Cameroon, Zaire, Liberia and Kenya. Israel and Cyprus are two additional rice importers. Export price competition is an important criterion in foreign trade analysis. El-Amir et al., 1996, used the California medium grain price as a world reference price in the comparison between the Egyptian rice export price and the international prices for the 1994/95 marketing year. The estimated average export price for Egyptian rice was higher at about \$ 24/mt than the world reference price. In other words, Egypt's price levels at the borders were approximately 5 percent above the reference medium grain border price in 1994/95.

### B. Impact

Table 4 shows the Egyptian rice exports during the period 1985-1996. It is noticed that the average annual rice exports increased and reached to 156.6 thousand tons during the period 1991-1996 (after liberalization) compared to 56.2 thousand tons during the period 1985-1990 (before liberalization).

Public sector mills are still the major source of export quality rice. Private exporters have become more important after the lifting of the government exporting monopoly.

**Table 4. Egyptian rice exports during the period 1980-1996**

Years	Quantity (000 mt)	Value million LE	Year	Quantity (000 mt, milled)	Value million LE
1985	16.6	3,8	1991	110.3	137.0
1986	40.0	11,2	1992	186.8	180.0
1987	100.8	27,8	1993	129.9	135.2
1988	71.4	19,6	1994	113.9	123.8
1989	32.9	18.0	1995	156.8	192.3
1990	75.7	54.9	1996	242.0	(NA)
<b>Average</b>	<b>56.2</b>	<b>22.55</b>	<b>Average</b>	<b>156.6</b>	<b>153.66</b>

Source: Abd El-Fatah, Samia Mohamed. «The effect of the free economic policy on the economics of the rice crop in A.R.E.» MS Thesis, Department of Agricultural Economics, Faculty of Agriculture, Ain Shams University, Cairo, 1997.

The future development of the Egyptian rice exports could be achieved through coordinating the entire process from procurement to export. Exporters could arrange for activities which contribute to make cost reduction and make rice price more competitive. Such activities might be: contract for high quality paddy, efficient transport, using the least cost mills, impose milling quality control, efficient transport to the nearest and most efficient port and contract for efficient sea freight to market destinations. Generally, the increase in the rice exports will be a function of the increase in marketing and processing efficient and reduction in its costs.

## 6. Rice consumption

### A. Changes in policies

Since rice could not be cultivated in all Egypt, there are six governorates which have rice surplus, while twenty two governorates have rice deficit. Before implementation of the economic reform program most of the rice used for food was distributed through the government outlets. The distribution system was based on a monthly quota of rice to each governorate. Rice and other subsidized commodities were distributed by means of rationing cards so as to guarantee a minimum amount of such commodities for each consumer.

After the implementation of the economic reform program, the Ministry of Supply abolished quota distribution system for all commodities, except for ordinary and patent flour no. (2), sugar and edible oil which are still distributed through rationing cards.

Free rice storage and movement among governorates are important policy changes which allow the private sector traders to deal in rice within all governorates.

### B. Impact of policy changes on rice consumption

Table 5 shows the total and per capita domestic rice consumption during the period 1985/86 - 1994/95. The total rice consumption increased generally due to the rapid growth in population. However, it is noted that before adopting the economic reform policies total rice consumption increased from 1625 thousand tons in 1985/86 to 2073 thousand tons in 1989/90 (28% increase), whereas, after following the economic reform policies it increased from 2291 thousand tons in 1990/91 to 3137 thousand tons in 1994/95 (37% increase).

Nassar and Rizk, 1993 mentioned that per capita consumption of white rice before adopting the economic reform policies, was tending downward due both to population growth and unchanged production. They added that after adopting the reform policies, per capita consumption of white rice began to rise tangibly. This increase is basically attributed to the production increase, with no similar increase in exports.

Data presented in Table 5 shows progressive increase in total and per capita rice consumption during the period 1989/90-1994/95 compared to the previous years.

**Table 5. Total and per capita rice consumption in Egypt during the period 1985/86-1994/95**

Year	Total consumption		Per capita		Year	Total consumption		Per capita	
	M/Tons	Index	Kg	Index		M/Tons	Index	Kg	Index
1985/86	1 625	100	31.4	100	1990/91	2 291	141	38.6	123
1986/87	1 587	98	29.9	95	1991/92	2 542	156	41.7	133
1987/88	1 390	86	25.4	81	1992/93	2 694	166	43.0	137
1988/89	1 785	110	31.8	101	1993/94	3 077	189	48.8	155
1989/90	2 073	128	36.0	115	1994/95	3 137	193	48.4	154

Source: MOA, Central Administration of Agricultural Economics, Dept. of Statistics.

## Conclusion

The development of rice economy has been affected by several policy changes resulting from the implementation of the economic reform program. This reform program is principally based on, liberalization and privatization of the agricultural activities. The implementation of the program in the agricultural sector has affected rice production, marketing, prices, processing, foreign trade and consumption of rice.

The changes in agricultural policies include the following:

- Liberalization of crop production through cancellation of area allotment and phasing out of input subsidy.
- The forced quota delivery system was phased out and rice marketing became free. The private sector was allowed to play a big role in the rice domestic trade in addition to the foreign trade of rice. As a result rice prices were liberalized and the pricing system is no longer existent and
- Subsidy for rice consumers was phased out.

The following are some of the impact of policy changes on the rice economy in Egypt:

- Comparing the two periods 1985-1990 and 1991-1996, there was an increase in the area cultivated to rice by about 34%, increase of yield by 26% and of production by about 70%. Cost of production has

also increased by about 146%. Changes in all these variables have resulted in an increase in farmers' net return per hectare by about 151% in addition to improving the benefit cost ratio by 2.5%.

- ❑ The share of the public sector mills in marketing of paddy rice has decreased from about 42% in 1989/90 to 7% only in 1995/96. On the other hand, the share of the private sector mills has increased.
- ❑ Farmgate prices of rice, announced floor prices and cost of production appear to run parallel after liberalization leaving a reasonable margin to the rice producer.
- ❑ Public sector mills have faced problems because of high milling costs and the reduction in its received quantities. These public mills are targeted for privatization.
- ❑ The annual rice exports have increased from 56.2 thousand tons (average of 1985-1990) to about 156.6 thousand tons (average of 1991-1996); an increase of about 179 and
- ❑ Total domestic and per capita rice consumption have increased tangibly during the period 1991-1996.

## References

- **Abd El-Fattah, S.M.** (1997).- *The effect of the free economic policy on the economics of rice crop in A.R.E.*. MS Thesis, Department of Agricultural Economics, Faculty of Agriculture, Ain-Shams University.
- **El-Amir, M.R et al.** (1996).- *Analysis of Egypt's Rice Marketing System*. DATEXinc, A Report Submitted to USAID/Cairo, March.
- **Eric Wailes, et al.** (1995).- *Impacts of Agricultural Policy reform on Rice Production, Milling, Marketing, and Trade in Egypt*. USAID Project No. 263-0202-3-91/48, University of Arkansas - USAID/Cairo, March.
- **Harrison, K.** (1995).- *Privatization and Costs and Efficiency of Marketing, Processing and International Trade*. Agricultural Policy Conference, MOALR, PBDAC, APCP, USAID, Cairo, March.
- **Holding Company for Rice & Flour Mills.**- *Annual Reports*.
- **MOALR.**- *Central Administration of Agricultural Economics*, Dept.of Statistics.
- **Nassar, S. and Rizk, F.** (1993).- Impacts of the Economic Reform Policies on Food Production in Egypt. In: *Egyptian Contemporary, Egyptian Society for Political Economics, Statistics and Legislation*, Vol. 432, April.
- **Nassar S. and Rizk, F.** (1993).- Impacts of Economic Reform Policies on Food Consumption in Egypt. In: *Egyptian Contemporary, Egyptian Society for Political Economics, Statistics and Legislation*, Vol. 433-434, July-October.

