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The economic situation of rice in Turkey

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I – Rice Production In Turkey

The statistics has been recorded since 1928, stated that rough rice production was 50 000 tonnes in the first years, and then it reached over 100 000 ton. The highest rough rice production was obtained in the first part of 1980 (Table 1).

The rice production continually decreased due to drought and low imported rice price after mid of 1980. However, the rice production started to increase again 1995. The reasons for this increase were¹; an increase recorded in rainfall over the previous years², new modern rice growing technology was transferred from abroad to compete with low imported rice price.

Rice yield Per hectare has been increased up to 1990. It remained constant around 5 t/ha in the last years. Rice growing area has been fluctuated in similar way as it was seen in the rice production.

Table 1. Rice production in Turkey

Year	Production Area ('000 ha)	Rough rice production ('000 tonnes)	Milled rice Production ('000 tonnes)	Rough rice Yield (tonnes/ha)
1928-29	18.9	50.8	30.5	2.7
1930-34	27.0	75.7	45.4	2.8
1935-39	29.9	99.4	59.6	3.3
1940-44	26.8	88.6	53.1	3.3
1945-49	22.5	81.8	49.1	3.6
1950-54	40.0	143.4	86.0	3.6
1955-59	49.0	159.7	95.8	3.3
1960-64	54.5	215.0	129.0	3.9
1965-69	55.4	223.2	134.0	4.0
1970-74	60.0	255.4	153.2	4.3
1975-79	62.4	296.0	177.6	4.7
1980-84	67.2	302.6	181.6	4.5
1985-89	57.0	282.6	169.6	5.0
1990-94	44.5	214.0	128.8	5.0
1995	50.0	250.0	150.0	5.0
1996	54.9	280.0	168.0	5.1
1997	55.0	275.0	165.0	5.0
1998	60.0	315.0	189.0	5.3

Kaynak:

¹ World Rice Statistics-IRRI, 1995.

² State Statistic Institute, rice import data, 1998

II – Rice production in the regions

Turkey has seven geographical regions and rice can be cultivated in all of these (Table 2). However, the main rice-growing regions comprise the northwestern (Marmara-Thrace) and northern part of the country (the Black Sea region). The southeast Anatolia follows them. The share of regions in rice production varied year by year in the last 30 years. The rice production decreased in the Mediterranean, Central Anatolia, and Aegean regions.

Table 2. Rice production in the geographical regions

Region	1969		1981		Years		1989		1998		Aver. Yield kg/ha	
	Produc. ('000 t)	%	Aver. Yield ('000 t) kg/ha	%	Aver. Yield ('000 t) kg/ha	%	Aver. Yied ('000 t) kg/ha	%				
Marmara- Thrace	59.6	28.1	3 590	141.5	41.4	5 870	167.8	50.2	5 300	207.7	58.8	6 110
Black Sea	76.0	36.0	4 110	103.6	30.3	4 630	121.9	36.5	5 000	127.1	36.1	5 740
Central Anatolia	13.5	6.4	4 040	6.6	1.9	3 660	4.1	1.2	3 900	4.2	1.2	4 870
South-eastern Anatolia	9.4	4.4	2 480	19.6	5.7	3 100	8.0	2.4	3 300	7.9	2.2	3 620
Mediterranean	45.0	21.3	3 800	22.2	6.5	3 090	29.7	8.9	5 000	3.6	1.0	3 920
East Anatolia	4.9	2.3	3 130	2.8	0.8	2 790	2.0	0.6	3 800	1.7	0.5	3 660
Aegean	3.3	1.5	4 020	45.3	13.3	5 110	0.7	0.2	4 200	0.8	0.2	7 000
TOPLAM	211.7	100.0	3 690	341.4	100.0	4 770	334.2	100.0	5 070	353.0	100.0	5 810

The main rice growing provinces are; Edirne, Samsun, Çorum, Balıkesir, Çanakkale, Sinop, Kastamonu, and Diyarbakır (Table 3). Edirne has the largest production area, Samsun and Çorum follow it.

Table 3. Rice area and production of the main rice produced provinces in 1969, 1981, 1989, and 1998

Province	Planting area (ha)				Rough rice production ('000 tonnes)			
	1969	1981	1989	1998	1969	1981	1989	1998
Edirne	8 801	18 055	24 994	26 711	27.6	108.4	128.7	154.1
Samsun	9 800	9 943	10 640	8 407	38.9	45.1	47.2	47.2
Çorum	4 215	4 995	5 924	5 996	16.9	24.3	33.8	36.3
Balıkesir	1 150	2 143	1 819	3 465	5.6	13.8	11.5	27.5
Çanakkale	1 524	931	887	2 545	6.2	5.1	5.4	19.8
Sinop	2 465	4 780	3 549	4 527	10.7	21.9	21.2	27.5
Kastamonu	1 785	1 492	2 303	1 729	6.6	7.7	11.4	7.7
Diyarbakır	1 454	5 260	3 898	1 390	4.3	18.1	12.1	4.8

III – Socio-economic characteristics of rice production

Although rice has not planting area in Turkey as much as the other cereals, it provides income for many families. The number of rice producing villages in the main rice growing provinces was 412 and the number of rice farmers was 18 193 in 1996 (Table 4). If the other rice producing provinces' data are included to these, these figures will increase more. This situation explains well the socio-economic importance of rice cultivation in Turkey.

As for, the farm size, it seems that the average rice farm size is very small. When it compared with Italy, there were 6 367 rice farms in 237 551 hectare area in 1996, however, there were 18 193 farmers in around 50 000 hectare area of main rice growing regions in Turkey in the same year. This comparison shows that the farm size is too small in Turkey.

Table 4. The number of rice growing villages and farmers and average farm size in 1996

Province	N° Village	N° Farmer	Average farm size (ha)
Edirne	79	8 017	2.9
Balıkesir	45	1 564	1.9
Çanakkale	33	513	2.8
Bursa	8	140	5.1
Samsun	109	2 480	4.1
Çorum	58	3 708	1.5
Sinop	56	821	4.7
Kastamonu	24	950	1.8
Total	412	18 193	3.1

Source: Gaytancıoğlu, 1997

One of the other economic importance of rice cultivation is rice milling industry. There were 59 rice processing plants in main rice growing regions in 1996. Annually, they have total 823 500 tonnes rough rice processing capacity. But, they do not work at full capacity and they could only use 29.7% of total capacity in 1996 (Table 5). Also, there are many rice millers in the other regions. This industry creates job for some workers and supplies income for national economy.

The rice production cost is higher in Turkey than in some other countries, especially, the countries which rice is imported to Turkey, such as United States, Australia, and Thailand (Table 6). On the other hand, Egypt, an other rice exporter country, has higher production cost than Turkey. But, they subsidise rice exportation to Turkey. The imported rice affects the domestic production and it makes difficult to compete with low imported rice cost.

Table 5. The number of rice milling factory in the main rice growing regions in 1996

Region	N° Milling plant	Annual Milling capacity ('000 tonnes)	Annual Utilized capacity ('000 tonnes)	Used capacity %
Marmara-Thrace	38	570.6	178.4	31.3
Black Sea	21	252.9	66.1	26.1
Total	59	823.5	244.5	29.7

Source: Gaytancıoğlu, 1997

Table 6. The rice production costs of some countries (1987-89)

Country	Rough rice yield (kg/ha)	Production cost (US \$/kg)
Australia	8 000	0.10
Italy	5 870	0.42
Japan	6 510	1.73
Portugal	5 600	0.40
USA	6 270	0.16
Egypt	6 126	0.57
Korea Rep.	4 630	1.43
Thailand	3 780	0.14
Turkey	5 150	0.36

Source: World Rice Statistics-IRRI, 1995.

IV – Rice import

Since 1950, Turkey has been imported rice to meet her domestic consumption need. Before 1980, it was around 30 00 tonnes. However, it increased after mid of 1980, it has been more than 200 000 tonnes in the last years (Table 7).

While the money paid for rice import was around 10 million US dollars before 1980, and it reached 100 million US dollars in the last years.

As it seen in Table 8, the highest amount of rice imported from United States in 1996 and 1997. This country had the largest market share and 60% of rice importation was supplied from the United States in the same years. Egypt had the second largest market share. Rice was imported from Australia, Italy, and Russian Federation as well.

Table 7. The milled rice imports and the money paid

Year	Milled rice imports (‘000 tonnes)	The money paid for rice import (million US \$ CIF)
1950-54	0.5	-
1955-59	3.0	-
1960-64	2.0	0.3
1965-69	5.0	0.9
1970-74	18.0	6.1
1975-79	37.0	13.8
1980-84	29.6	11.5
1985-89	128.4	38.3
1990-94	191.7	63.9
1995	295.0	109.3
1996	199.2	81.8
1997	265.8	94.7
1998	250.8	96.5

Table 8. The countries which rice imported to Turkey and their market shares

Country	1996		1997		1998(x)	
	Milled rice imports ('000 tonnes)	The share In import (%)	Milled rice imports ('000 tonnes)	The share In import (%)	Milled rice imports ('000 tonnes)	The share In Import (%)
USA	126 492	63.5	163 413	61.5	58 013	38.5
Egypt	48 667	24.4	32 579	12.5	59 699	39.6
Australia	5 906	3.0	28 983	10.9	200	0.1
Italy	2 933	1.5	16 151	6.0	21 893	14.5
Russia Federation	6 597	3.3	6 385	2.4	946	0.6
Taiwan	3 200	1.6	2 233	0.8	-	-
Pakistan	2 228	1.1	-	-	150	0.1
India	1 183	0.6	464	0.2	218	0.1
Thailand	862	0.4	2 306	0.9	544	0.4
Spain	369	0.2	3 102	1.1	1 192	0.8
China	758	0.4	4 065	2.3	6 867	4.6
The other	758	0.4	4 065	1.5	1 055	0.7
Total	199 200	100.0	265 847	100.0	150 781	100.0

Source:
State Statistic Institute, rice import data, 1998
(x): The preliminary data.

Rice was also imported from some Asian countries, such as Thailand, China, Pakistan and India. However, the Turkish Consumers prefer Japonica or Japonica x Indica cross type varieties. Generally, these countries export indica type rice, therefore, they could not have large share in the rice market of Turkey.

Turkey paid the highest amount of money to the United States for rice import in 1996 and 1997. Egypt followed this country. American rice imported to Turkey was more expensive than Egyptian rice (Table 9).

Table 9. The money paid for rice import to each country and the rice costs of the countries in 1996, 1997, and 1998

Country	1996		1997		1998 (x)	
	The money Paid (million US \$)	The price (US \$/t)	The money Paid (million US \$)	The price (US \$/t)	The money Paid (million US \$)	The price (US \$/t)
USA	57.7	456.0	61.3	375.4	22.80	393.4
Egypt	16.1	330.5	10.5	321.6	18.30	306.1
Australia	2.5	426.2	9.2	317.6	0.06	300.0
Italy	1.2	411.7	6.1	377.8	9.80	445.7
Russia Federation	1.4	215.5	1.4	215.0	0.20	233.0
Taiwan	0.7	281.5	0.6	280.3	-	-
Pakistan	0.7	333.5	-	-	0.05	346.6
India	0.4	317.8	0.2	481.5	0.08	361.0
Thailand	0.5	529.9	0.9	397.1	0.20	435.0
Spain	0.2	447.5	1.1	346.0	0.50	383.7
China	-	-	1.8	294.5	1.90	277.9
The others	0.3	383.3	1.6	389.6	0.50	44.7
Total	81.7	410.8	94.7	356.4	54.30	360.4

Source: Rice import data of State Statistics Institute, 1998.
(x): The preliminary data

Even though, the rice prices of some Asian countries are cheaper, due to consumer preference, Turkey imports rice from temperate areas where Japonica and Japonica x Indica cross types are cultivated.

V – Rice export

Turkey exports a little amount of rice every year. Much of them was exported to Germany and Russian Federation in 1996 and 1997 (Table 10). Rice exported to Germany is consumed by the Turkish people in that country. The other countries rice exported from Turkey were Northern Cyprus, Irak, Libya, Turkmenistan, Kazakistan, and Azerbaican, etc. It seems that Turkey may export easily rice to neighbouring countries, if she produces rice more than her need.

Table 10. The countries imported rice from Turkey in 1996, 1997, and 1998

Country	1996	Milled rice imports (tonnes)	
		1997	1998(x)
Germany	294	65.0	18
Russia Federation	224	36.0	21
Northern Cyprus	104	83.0	51
Azerbaican	90	27.0	19
Irak	196	-	-
Gorgiao	132	2.4	45
Libya	50	66.0	14
Turkmenistan	47	46.0	23
Romania	24	2.5	-
Kazakistan	20	72.0	33
Iran	-	68.0	-
Bulgaria	-	-	44
The others	173	122.0	78
Total	1 355	589.0	345

Source: Rice export data of State Statistics Institute, 1998.
(x): The preliminary data

VI – Rice consumption

Domestic milled rice production in Turkey varies between 150 000 and 200 000 tonnes year by year. Total domestic milled rice consumption is between 350 000 and 400 000 tonnes. Thus, the domestic production is not enough for consumption. This means that some milled rice has to be imported from abroad every year (Table 11).

Rice consumption Per capita was between 5 and 6 kg before mid of 1990. However, it slightly increased in the last years and it became more than 6 kg Per capita.

Table 11. Rice consumption in Turkey

Year	Domestic milled rice Production ('000 tonnes)	Milled rice imports ('000 person)	Total milled consumption ('000 tonnes)	Population ('000 tonnes)	Rice consumption Per capita (kg/person)
1928-29	30.5	-	30.5	13 998	2.2
1930-34	45.4	-	45.4	15 077	3.0
1935-39	59.6	-	59.6	16 663	3.6
1945-44	53.1	-	53.1	18 138	2.9
1945-49	49.1	-	49.1	19 502	2.5
1950-54	87.2	0.4	87.6	22 006	3.9
1955-59	95.6	3.0	98.6	26 735	3.9
1960-64	129.0	2.2	131.2	28 944	4.5
1965-69	134.0	4.6	138.6	32 722	4.2
1970-74	153.2	18.4	172.8	37 212	4.6
1975-79	177.6	37.4	215.0	41 786	5.7
1980-84	181.6	29.6	211.2	46 720	4.5
1985-89	169.6	128.4	298.0	52 882	5.6
1990-94	128.8	191.7	320.1	58 192	5.5
1995-98	168.0	252.7	420.7	62 218	6.7

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