

# TEA IN TURKEY

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Turkish State Tea Board (Caykur) Rize Turkey

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Turkey is amongst the world's largest producers of black tea, accounting for some 8% of the world output. National production has expanded rapidly from 96,000 tones in 1980 to 170,000 tones in 1994. Production is undertaken almost entirely by smallholders with an average plot size of 0.42 hectares. Some 82% of tea growers have less than 0.5 hectares plantation. In 1994 there were 202,000 producers cultivating a total area of 76,600 hectares. Per capita consumption of black tea in Turkey is around 2.18kg. per annum. This is high by world standards. Total domestic consumption is currently about 140,000 tones.

## HISTORY

Tea growing started in Turkey in 1924. It enjoyed a continuous development especially since 1939 and now it has a major importance in the Turkish economy. Until 1963 Turkey had been importing tea, but now it has reached a level at which it satisfies local consumption and also exports black tea.

State monopoly on the purchase of green tea, manufacturing and marketing was abolished in 1984.

The Promotion of private enterprise has shown that the tea industry would further expand and develop in the near future also.

## AREA AND GROWING CONDITIONS

Tea culture is carried out in the north-eastern region (Rize) of Turkey, adjoining the Black Sea and near the Georgian border. The plantations have been established with hybrids dominated by the Chinese variety. The seeds had been imported mainly from former USSR.

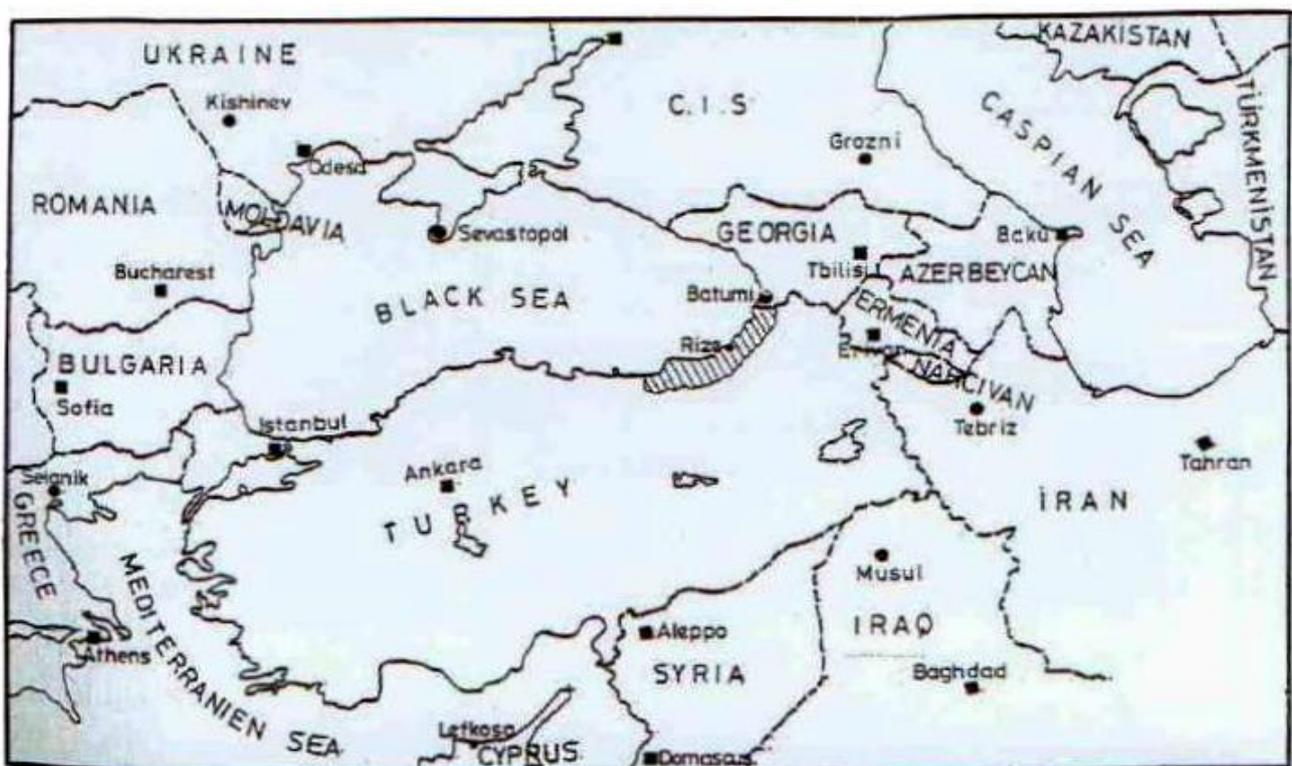


Fig. Area under Tea Plantations in Turkey

In tea culture, the growing conditions, namely climatic factors and the soil characteristics, must be suitable. Maximum, minimum, mean air temperature and minimum soil temperature, averaged for 50 years, are given in table 1.

<b>Table 1. Air and Soil Temperature in Rize</b>				
<b>Months</b>	<b>Air Temp. (°C)</b>		<b>Soil Temp. (°C)</b>	
	<b>Max.</b>	<b>Min.</b>	<b>Mean.</b>	<b>Min.</b>
Jan.	23.4	-6.5	6.7	0.7
Feb.	28.1	-6.0	6.8	1.7
Mar.	31.3	-7.0	7.8	0.9
Apr.	32.5	-1.2	11.2	5.1
May	38.2	4.6	15.8	10.9
Jun.	34.5	7.8	19.9	14.9
Jul.	32.5	12.9	22.2	17.0
Aug.	33.5	13.5	22.3	19.2
Sep.	30.4	7.6	19.4	15.2
Oct.	33.4	2.5	15.6	8.9
Nov.	30.4	-4.8	12.1	5.0
Dec.	26.7	-3.4	8.7	1.9

Source: Kacar, 1984

Precipitation, relative humidity and sunny days, averaged for 50 years, are given in table 2. Monthly rainfall distribution is more or less even throughout the year. Relative humidity is enough but sunny days are very limited for growing tea. A high relative humidity is needed to maintain the freshness and crispness of the product. The moisture significantly improves the quality and facilitates the growth. The pH of soil samples, analysed from tea plantations is given in table 3.

<b>Table 2. Precipitation Relative Humidity and Sunny Days in Rize</b>			
<b>Months</b>	<b>Precipitation (mm)</b>	<b>Relative Humidity %</b>	<b>Sunny days</b>
Jan.	238.0	73	3.4
Feb.	187.6	74	3.3
Mar.	164.6	76	3.7
Apr.	99.6	78	3.6
May.	97.7	80	3.6
Jun.	121.3	77	5.6
Jul.	136.8	79	4.0
Aug.	242.0	80	4.7
Sep.	242.0	80	5.1
Oct.	274.4	80	6.2
Nov.	249.1	76	5.0
Dec.	232.0	72	4.1

Source : Kacar 1984

**Table3. Soil pH in Tea Plantation**

Soil pH	Number of samples	pH distribution%
<4.00	467	39.48
4.00-4.50	350	39.48
4.50-5.00	212	17.93
5.00-5.50	97	8.20
5.50-6.00	45	3.80
6.00-6.50	11	0.92
>6.50	1	0.08
Total	1183	100.00

Source: Sarimehmet ve Ark. 1983

Soil pH is important for growing the tea bush. Also the type of fertilizer to be used depends on the pH of soil. Nitrogen fertilizer, in particular can cause acidity in the soil therefore NPK (25:5:10) fertilizer is used which has replaced straight ammonium sulphate.

## PRODUCTION

The tea plantation area and the number of small holders during 1990-94 showed no correlation (table 4). The total green leaf production, however, increased during this period. The green leaf prices after 1994 were more or less steady.

The tea season begins in May and ends in October. The percentage of seasonal green leaf distribution is shown in table 5. June shows maximum percentage of yield.

## MARKETING

The per capita consumption of black tea in Turkey was around 2.18 kg / head in 1994 (table 8). This is comparatively high by world standards. Total domestic consumption during 1994 was about 135,900 tonnes (table 8). Tea imports are low due to a high protective tariff which currently stands at US 3\$ / kg plus 10% of CIF value. Imports in 1994 were 1,223 tonnes representing only 1% of domestic consumption.

The capability of Turkey to export tea depends on a variety of factors such as structure of the world tea market, establishment of sound marketing and distribution chains and better packaging and preservation methods. The rapid increase in domestic production has resulted in the emergence of a significant export surplus.

The government policy expects Caykur to cover its full costs, including losses and exports. This is primarily the reason tea is exported on cost price. The tea export in 1993 was 34,489 tonnes.

**Table 4. Planted Area (ha of Tea) Number of Smallholders, Green Leaf Price and Green Leaf Production**

Years	Planted Area (ha)	Number of Smallholders	Green Leaf Price (\$/Kg)	Green Leaf Production (Tonne)
1990	90,575	214055	0.35	633500
1991	80,700	215278	0.36	767102
1992	89,345	215388	0.34	879977
1993	89,330	214542	0.35	781600
1994	76,700	201558	0.20	825800

Source : Caykur, 1995

**Table 5. Seasonal Green Leaf Distribution (%)**

Years	May	June	July	Aug.	Sep.	Oct.	Total
1990	17.5	21.7	25.0	14.1	15.7	6.0	100
1991	18.1	21.5	23.5	14.1	16.9	5.9	100
1992	5.4	32.4	17.3	23.3	10.8	10.8	100
1993	4.1	35.4	10.1	29.0	8.2	13.2	100
1994	14.0	20.0	20.0	16.0	17.0	13.0	100
Mean	11.8	26.2	19.2	19.3	13.7	9.8	100

Source : Caykur, 1995

**Table 6. Green Leaf Tea Processing Factories and Daily Capacity (Tonnes)**

Years	Caykur Factories		Private Sectors	
	No.	Cap.	No.	Cap.
1985	44	5900	15	1060
1990	45	6070	104	3800
1991	45	6070	130	5000
1992	45	6100	250	8500
1993	45	6150	312	11089
1994	45	6200	350	12200
1995	45	6600	355	12400

Source : Caykur, 1995

**Table 7. Total Black Tea Production (tonnes) and Share of Sectors (%)**

Years	Caykur		Private		Total
	Tea	%	Tea	%	
1985	132290	96	5500	4	138470
1990	95600	71	40000	29	135600
1991	103749	66	55000	34	158749
1992	123970	69	55000	31	178970
1993	106527	67	53000	33	159527
1994	116547	69	52000	31	168547

Source : Caykur, 1995

**Table 8. Domestic Consumption, per head Consumption, Export, Import of Tea**

Years	Domestic Consumption (Tonne)	Per Haead Consumption (Kg)	Export (Tonnes)	Import (Tonnes)
1990	132500	2.312	28180	150
1991	133066	2.300	1848	1568
1992	133630	2.372	8678	1469
1993	134260	2.207	34489	1048
1994	135900	2.180	4252	1233

Source : Caykur, 1995

**Table 9. Some Pesticide Residues in Turkish Tea (mg/Kg)**

Pesticide	Maximum Limit	Turkish Tea
Tecnazen	0.300	N.
Hexachlorbenzol	0.100	N.
Gesamt-HCH	0.200	N.
Lindane	0.500	N.
Quintozen	0.100	N.
Gesamt-Heptachlor	0.100	N.
Gesamt-Endosulfan	30.000	N.
Gesamt-Dieldrin	0.100	N.
Gesamt-DDT	1.000	N.
Dicofol	2.00	0.030
Endrin	0.100	N.
Methoxychlor	10.000	N.

Source : Fersti, 1995.

### Characteristic of Turkish Tea

Tea is natural beverage in Turkey. Because of climatic conditions, it is not necessary to use any chemicals against pests and diseases for growing tea leaves. Turkish tea contains no pesticide residues.

### CONCLUSION

Turkey lies at the northern limit of tea production. Unlike in other major tea producing countries, which lie within or near the tropics, the plucking of green leaf in Turkey is limited to three short flush periods.

Due to relatively high cost of labour and short harvesting season, green leaf is, therefore, harvested with shears, and the cost of tea is high. For this reason, Turkish black loose tea cannot compete in the world market without subsidy and needs to be protected from imports in the domestic area.

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