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## Turkey

## Planting Seeds

## Annual Report

1999

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### Report Highlights:

**The Turkish seed industry is expanding, but local seed production still does not meet demand. Seed potatoes, vegetable, hybrid corn, cotton, wheat and fodder crop are among the seeds Turkey will continue to import. Demand is expected to show medium term increases a result of the Meadow Law, the GAP in Southeastern Anatolian, and Livestock Development Project. The GOT is planning to implement a more stringent system of regulating and registering GMOs.**

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Includes PSD changes: No  
Includes Trade Matrix: No  
Annual Report  
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## Executive Summary

The Turkish seed industry has seen significant improvements since the 1980's, but has not reached its desired level of development. The private sector, coordinated through an industry association, is responsible for the industry's development. Government-run companies focus on production of seeds for bulk commodities, while private companies produce seeds for both bulk commodities and higher value crops. Seed production and consumption are both projected to continue to increase in response to growing demand.

Local seed production is not expected to be able to meet demand for the foreseeable future. Seed potatoes, vegetable, hybrid corn, cotton, wheat and fodder crop are among the seeds which will be imported through the medium term. Trade statistics indicate substantial increases in imports of seed potatoes, a slight increase in wheat seed, and decreases in corn, vegetable and alfalfa seeds. The total value increased. All international trade is done by the private sector.

The Meadow Law and the Livestock Development Project, both adopted during the last year, are expected to increase the demand for seeds, if the yare adequately funded. Additionally, seed demand will increase parallel to expansion of the long lasting Southeastern Anatolian Project (GAP).

The GOT supports the use of high quality seeds by subsidizing its production and use. Turkey's Phytosanitary and Quarantine Regulations did not change, with the exception that the restriction for mosaic virus on alfalfa seed was recently removed. Turkey's membership in the UPOV (international seed association) has not been finalized due to delays in adoption of the new Turkish Variety Protection and Control Law.

Trials of GMO were previously covered in a regulation which was issued last year. The Ministry of Agriculture recently circulated new restrictive measures for trials and testing of GMO seeds, and is considering tightening other controls in this area. The Ministry of Agriculture Research Institution, which conducts all seed trials, has started to ask private firms pay USD 20,000 for each GMO trial (one variety in one location). Seed companies and the industry association are trying to get this decision moderated, by lowering the fees and increasing the number of locations/varieties included in each trial.

## Production

Ninety private companies and thirty-one public entities currently produce, import, procure, or distribute seed in Turkey. Ownership of the private companies ranges from totally Turkish-owned to a combination of Turkish and foreign joint ventures and totally foreign-owned and operated companies. Almost all private seed companies share one common characteristic- they have foreign backing for their technological needs.

Most private seed companies are members of the Turkish Seed Industry Association (TURK-TED), which assists member companies with studies on seed production, certification, storage, packaging, distribution and variety breeding. TURK-TED has 45 members, all except one are private companies. TIGEM, the General Directorate of Agricultural Enterprises (state farm enterprise), is the only public member company. TURK-TED's members account for about 90 percent of all private sector seed production. Practically all vegetable, hybrid corn, hybrid sunflower seed and seed potatoes are produced by the TURK-TED's member companies. Additionally about 7 percent of cotton, 27 percent of fodder crops, 3 percent of wheat and 5 percent of barley are produced by the private TURK-TED member.

Public seed companies generally produce seeds for bulk commodities, including cereal, cotton and fodder crops, while private companies produce seeds for both bulk commodities and high value crops. The share of privately produced seeds for fodder crops, especially for alfalfa, has increased significantly in recent years.

Certified seed production data for 1997 (Rev) and 1998 and projections for 1999 follow in Table 1:

Table 1. Certified Seed Production for 1997 and 1998 and Projections for 1999 (MT)

Type of Seed	1997 (1)	1998 (2)	1999 (3)
Wheat	172,295	163,592	296,727
Barley	20,878	21,126	28,835
Corn (hybrid)	8,310	11,215	12,779
Paddy rice	676	1,080	1,594
Chick peas	222	206	206
Dry beans	20	110	93
Sunflower (hybrid)	3,927	4,143	5,070
Sunflower (vinimic)	161	200	375
Potatoes	24,606	32,868	43,407
Soybeans	1,381	1,050	500
Peanuts	0.3	0.1	0.15
Sesame	0.9	0.6	0.25
Cotton	21,712	20,559	21,253
Tobacco	2	2	2
Vegetables	1,022	1,083	1,470
Alfalfa	388	627	705
Sainfoin	28	471	527
Vetch	530	1,658	1,411
Sudan grass	7	53	36
Sorghum x Sudan grass	58	155	1
Fodder beets	41	29	50
Feed rutabaga	0	0	5
Fodder wheat crops	499	353	316

(1) Revised Production (2) Production Estimate (3) Production program

Source: The Ministry of Agriculture and Rural Affairs



For the last fifty years, TIGEM, the State Farm General Directorate, has been the major government organization carrying out seed propagation and distribution. Even though its responsibilities have recently been diminished, TIGEM is still a significant producer of cereal, cotton and fodder crop seeds.

Table 2 provides the total quantities of seed (certified at all levels plus controlled) prepared and distributed by TIGEM by type in 1998.

**Table 2. The Quantities of Seeds Prepared and Distributed by TIGEM in 1998 (MT)**

Type of Seed	Prepared	Distributed
Wheat	156,348	159,291
Barley	19,198	18,643
Cotton	3,091	2,765
Corn	452	437
Paddy rice	235	235
Chick peas	222	53
Dry beans	27	23
Sunflower	205	126
Alfalfa	212	214
Sainfoin	405	524
Vetch	924	815
Sudan grass	40	18
Millet	10	3
Pasture grass	5	19

Source: TIGEM, The General Directorate of Agricultural Enterprises, The Ministry of Agriculture and Rural Affairs

## Consumption

Seed consumption continues to increase in response to the growing demand for vegetables, particularly greenhouse production. In addition, demand for hybrid corn, hybrid sunflower and fodder crop seeds is expected to continue to increase in response to the increased demand for poultry and livestock (especially for silage) and vegetable oil.

## Trade

Local seed production is not expected to increase sufficiently to meet demand in the medium term. Vegetable, hybrid corn, cotton, wheat and fodder crop seeds, as well as seed potatoes, are among the seeds that Turkey is expected to continue to import at significant levels for at least the next three to five years. From time to time and depending upon supply and demand, other seed types may be imported on a temporary basis. For example, some industry sources forecast that Turkey will import significant quantities of pulse seeds during the next few years.

Turkey imported about USD 45 million and exported about USD 20 million worth of seeds in 1998, according to industry sources. (U.S. trade data shows \$14.4 million, compared to \$8.5 million in U.S. seed exports to Turkey in calendar year 1998). Although the overall quantity of seed imports has been decreasing, the value continues to increase. About 90 percent of the corn seed, is imported from the United States. Israel and the Netherlands are the leading exporting countries of vegetable seed for greenhouses. Some vegetable seed for field production is also imported from the United States.

TIGEM, which was the only public company involved with seed imports and exports in recent years, did not import or export any seed in 1998. All international trade was conducted by private sector companies. Turkey's seed imports and exports for 1998 are presented in Table 3 and Table 4, respectively.

**Table 3. 1998 Seed Imports (MT)**

Type of Seed	Public	Private	Total
Wheat	0	1,744	1,744
Barley	0	30	30
Hybrid Corn	0	1,897	1,897
Paddy Rice	0	30	30
Hybrid Sunflower	0	98	98
Potatoes	0	15,080	15,080
Cotton	0	222	222
Vegetables (1)	0	396	369
Alfalfa	0	160	160
Sainfoin	0	100	100
Sorghum x Sudan grass	0	40	40

(1) Dry bean, broad bean and pea seeds are excluded

Source: The Ministry of Agriculture and Rural Affairs

**Table 4. 1998 Seed Exports (MT)**

Type of Seed	Public	Private	Total
Hybrid Corn	0	3,318	3,318
Hybrid Sunflower	0	2,544	2,544
Soy beans	0	172	172
Cotton	0	94	94
Vegetables	0	112	112

Source: The Ministry of Agriculture and Rural Affairs

## Policy

### General Agricultural Policy

The GOT subsidizes agricultural inputs, including seeds, irrigation, fertilizer, and producer credit and also provides production incentives through high procurement prices. Although the GOT recently stated that it is developing a more market oriented agricultural sector, the government, via the Turkish Grain Board (TMO), was again very active in domestic crop procurement in 1998. Elections were held April 18<sup>th</sup> and a new government is expected to be formed late May. The new administration is expected to begin to rein in the price support policy and start to phase in the long-discussed premium system in agriculture.

The GOT continues to work on two major agricultural projects, both of which are expected to have a significant impact on seed demand. The first is the ongoing Southeastern Anatolia Project (GAP), which is forecast to expand irrigated area by about 1.7 million hectares. Although the eventual crop mix is uncertain, sources expect grain, cotton, and fodder will be important crops here. The second is the \$1.3 billion Livestock Development Project, adopted by the previous government to revitalize the moribund livestock sector. The Turkish Parliament has also adopted the Meadow Law which is designed to provide for better use and control of common pasture lands in rural areas. An important element of all of these projects, if they are properly funded, is to improve animal nutrition. As a result, the government is expected to provide additional subsidies to encourage feed and fodder production.

### Seed Production Policy

A 1962 Seed Law (Numbered 308) placed all seed production, importation and pricing under government control. Since 1982 many revisions and amendments have been made to encourage greater privatization, as well as to regulate the importation, production, procurement, certification and distribution of high quality seeds. The GOT supports the use of high quality seeds by subsidizing seed production through credit and lower seed prices through Agricultural Bank programs.



Announcement of seed subsidy levels for 1999 was delayed by political and economic uncertainties during the period preceding the last election. The subsidy levels are expected to be finalized and announced in May.

Table 5 presents seed subsidies for 1998 compared to 1997.

**Table 5. 1997 and 1998 Seed Subsidies by Type**

Type of Seed	1998 Subsidy (TL/KG)	1997 Subsidy (TL/KG)
Sunflower (hybrid) 1/	500,000	250,000
Rice 1/	100,000	50,000
Soybean 1/	70,000	40,000
Cotton 1/	60,000	40,000
Potatoes	15,000	0
Alfalfa 2/	400,000	200,000
Sainfoin 2/	70,000	40,000
Vetch 2/	50,000	30,000
Fodder beets 2/	100,000	60,000
Sudan grass 2/	70,000	40,000
Sorghum x Sudan grass (hybrid)	100,000	60,000

1/ Subsidy available only for locally produced seeds.

2/ Subsidy available for both locally produced or imported seeds.

USD 1.00 is about T L 390,000

Source: Official Gazette dated March 18, 1998

Table 6 provides aggregate subsidy expenditures for 1998 and estimated subsidy expenditures for 1999 by seed type. As indicated, about forty percent of the total expenditure for seed subsidies was for (hybrid) sunflower seeds and about twenty percent was for cotton seeds in 1998. In 1999, seed subsidy expenditures on corn and alfalfa are projected to increase significantly while on sunflower seed is projected to stay stagnant.

**Table 6. Seed Subsidy Payments (TL Million)**

Type of Seed	1998 Subsidy Expenditure (TL Billion)	1999 Subsidy Projection (TL Billion)
Hybrid Sunflower	950	950
Rice	40	198
Soybeans	126	154
Cotton	480	1,320
Potatoes	370	650
Chick peas	0	33.6
Dry beans	0	16
Alfalfa	270	660
Sainfoin	63	80
Vetch	86.8	110
Sudan grass	1.2	3.2
Sorghum x Sudan grass	9	27.5
Feed rutabaga	0	31.5
Fodder beets	6	7.7
TOTAL	2,402	4,241.5

Source: The Ministry of Agriculture and Rural Affairs

## **Plant Health**

There was a significant change in the alfalfa seed phytosanitary requirement last March when the Ministry of Agriculture removed the alfalfa mosaic virus from a list of organisms which was creating obstacles to alfalfa seed imports. Alfalfa seeds can now easily be exported to Turkey from the United States. Additionally, since last year, basic seeds can be imported without opening their original packages. Specialists from the Ministry of Agriculture continue to review Turkey's Phytosanitary and Quarantine Regulation for imports, including seeds. According to the Ministry of Agriculture officials, new regulations will be finalized in 1999. No significant changes are expected for planting seed, with the possible exception of GMOs.

## **Plant Varietal Protection**

On September 28, 1994, the Turkish Government published a Variety Protection and Control Decree to better regulate local seed production, certification and distribution and issued implementing regulations on September 26, 1994.

Although Turkey plans to join the international seed association, UPOV, its membership has been delayed due to discrepancies between the above mentioned Turkish Decree and UPOV Regulations. A study for the new Variety Protection and Control Law was completed by the Ministry of Agriculture and has been distributed to all other relevant Ministries for their comments. Industry sources believe that the new government will do its best to adopt the law within a short period of time.

## **Tariff Changes**

The 1999 Import Regime was announced on February 7, 1999 and is very similar to the 1998 regime. The only differences are reductions in import duties for rapeseed (from 22 percent to 0 percent) and flax fiber seed (from 22 percent to 20 percent). Table 7 presents the current rates of import duties on various seed imports.

**Table 7: Import Duties on Seed Imports**

<b>Type of Seed</b>	<b>EU &amp; EFTA Countries (%)</b>	<b>Other Countries (%)</b>
Cereal seeds (except rice)	0	0
Rice seeds	10	12
Sunflower seeds	0	0
Soybean seeds	0	0
Peanut seeds	20	20
Rapeseed	0	0
All other oil seeds, inc. cotton, sesame, safflower, palm and mustard	4	4
Hemp fibre seeds	4	4
Flax fibre seeds	20	20
Tea seeds	4	4
Sugar beat seeds	2.4	3.9
Flower seeds	4	6
Forest tree seeds	4	6
Fruit tree seeds	4	6
All other planting seeds (12.09), including all vegetable and fodder crop seeds	19	21

Source: Official Gazette on February 7, 1999

Although Table 7 denotes import duties for seeds, since 1993 the Ministry of Agriculture has had the right to suspend import duties, if those seeds are considered necessary. Ministry of Agriculture officials stated that almost all seeds, except flower and ornamental planting seeds, are currently being imported duty free. Flower and ornamental planting seeds for propagation are also being imported with zero duty. Importers who import flower and ornamental planting seeds for commercial purposes (e.g. reselling) have to pay the duties.

## **Non-tariff Issues**

Seed imports are restricted to those companies that produce, procure, and market seeds domestically (including the Farmers' Union, Agricultural Credit Cooperatives and Agricultural Sales Cooperatives). The Ministry of Agriculture justifies this policy as a means of encouraging investments in the domestic seed industry, since most private seed companies have acquired their capital and technical expertise from joint ventures with international firms. Additionally, importers must have an import license from the Ministry of Agriculture. Before seeds may be imported, they must be grown locally on trial plots and approved by the Ministry, as several companies are now doing with the GMO cotton and corn seed.

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### **Genetically Modified Organisms**

The production of transgenic (GMO) seed varieties has been discussed in Turkey since 1996. There are some controversial ideas on this issue in Turkey. Some U.S. seed companies started producing GMO corn and cotton seeds in Turkey in 1996. Two years ago, controversies arose when these companies applied for the to register these varieties. As a result, in 1998 the Ministry of Agriculture issued a regulation which restricted GMO trials and the Ministry of Agriculture started carrying out these trials at its research institutes on behalf of the seed companies. The regulation was revised on March 25, 1999. The Ministry of Agriculture is currently working on two different regulations. The first regulation applies to registration of GMO's and the second applies to distribution and release of GMO's in the environment and market.

During recent discussions, Ministry of Agriculture officials indicated that they plan to adopt a Canadian system model for registration of GMO seeds. The Government has also informed seed companies that, for each trial, it intends to charge USD 20,000 for each variety and location. The cost of the trial and, even more importantly, restricting the trial to only one location is disturbing to the seed companies. They believe that limiting trials' to one location will increase the likelihood of the research being incomplete, which in turn will cause at least another year of delay. TURK-TED, the Turkish Seed Industry Association, has applied to the Ministry of Agriculture to increase the number of locations and to reduce the cost of trials, but as yet they have not yet received a response.

TURK-TED has set up a sub-group within the association to coordinate and support the efforts of its individual members, to influence public opinion and to follow up issues with the Ministry of Agriculture and other related organizations.

### **Export Subsidies**

There is no direct subsidy on seed exports. However, there are indirect subsidies on exported seeds to the extent that their production and processing costs are reduced with the use of subsidized inputs and credit.

## **Market Opportunities**

Several U.S. seed companies, including Novartis, Pioneer, Monsanto (replacing Cargill), DeKalb, Delta Pine, Asgrow, and Dow-Elenco are established in Turkey. These companies generally import parent seed for local propagation with most of the production sold domestically. Depending on local market conditions, surplus production may be exported, usually to Middle Eastern and European markets.

End of report.