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Voluntary Public

Date: 3/15/2017

GAIN Report Number: TR7008

Turkey

Post: Ankara

Turkey Planting Seeds Sector Overview

Report Categories:

Planting Seeds
Grain and Feed
Vegetables

Approved By:

Elizabeth Leonardi, Agricultural Attaché

Prepared By:

Kubilay Karabina, Agricultural Specialist

Report Highlights:

The seed sector in Turkey has grown rapidly since the new seed law entered into force in 2006. Certified seed production has increased about threefold in last ten years due to Ministry of Food, Agriculture, and Livestock's (MinFAL) encouragement of certified seed usage. Turkey will start to implement a new subsidy program for agricultural products in 2017 in which they will encourage the use of domestically produced certified seed. To meet this demand, the seed sector in Turkey will likely need to nearly double certified wheat and barley seed production in the coming year. The top imported seeds to Turkey are vegetables, and top seed exports from Turkey are hybrid corn and sunflower seed. Wheat and barley are the prominent crops in Turkey, and seeds for these crops are produced domestically.

Turkey Planting Seeds Sector Overview

Production

Turkey applied prominent changes to its basic policies related to the seed industry at the beginning of the 1980s, and made a transition from a public-based seed industry to a seed industry based on private enterprises with seed production based in Turkey. Turkish seed policy is based on government-supported plant breeding and also private breeding. Turkey maintains a large plant breeding program as part of the Ministry of Food, Agriculture, and Livestock (MinFAL).

The seed sector in Turkey has grown rapidly since the new seed law entered into force in 2006. Both the government and private sectors' production capacity has increased with the help of government policies supporting certified seed usage and domestic seed production. Certified seed production has increased about threefold in last ten years. Also, the share of private sector involvement in seed production has been growing. The private sector was providing 47 percent of total production in 2006, and it reached about 80 percent in 2015. Since 2010, the private sector has supplied almost all hybrid sunflower, hybrid corn, potato, cotton and vegetable seeds. Although total estimated planting seed usage is more than two million metric tons, certified seed production is estimated at around one million metric tons in 2016, and was 896,000 MT in 2015.

Table 1: Certified Seed Production by Government and Private Sector (Metric Tons)

Year	Producer	Wheat	Barley	Corn	Sunflower	Cotton	Soybean	Vegetables	Forage Crops
2006	Government	169,116	22,050	126	0	2542	0	2	1857
	Private Sector	41,672	6,145	15,981	7,670	16,314	4	2,281	2,040
	Total	210,788	28,195	16,107	7,670	18,856	4	2,283	3,897
	PS Share %	20%	22%	99%	100%	87%	100%	100%	52%
2015	Government	176,588	21,124	168	0.1	13	168	3	1017
	Private Sector	307,616	103,895	56,503	17,494	8,870	56,503	2,779	1,764
	Total	484,204	125,019	56,671	17,494	8,883	56,671	2,782	2,781
	PS Share %	64%	83%	100%	100%	100%	100%	100%	63%
	2015 Total Domestic Seed Usage (certified and non-certified) *	1,500,000*	550,000*	16,000*	10,000*	19,000*	3,500*	-	-

Data Source: MinFAL

*Estimated figures based on last three years of data, as official data is not available yet

Turkish farmers have been using fewer and fewer saved seeds for the following years' planting season for all crops, but still saved seeds represent the majority of seed sources for wheat and barley production. Although total wheat and barley seed used each year is about 2 MMT, only 600,000 MT of that is certified seed. The most produced certified seed in 2015 was wheat, as it is the most widely grown crop in Turkey. Certified wheat seed production has increased 130 percent since 2006. Total certified corn and sunflower seeds production was around 75,000 MT in 2015, with 30 percent of that production exported.

Domestic seed producers have contracts with international seed technology companies and produce seed for them in Turkey. This seed is then sold to farmers in Turkey for that year's crop production, and because it was produced domestically, it qualifies both the seed producer and the farmer for subsidies.

As seen in the table below, MinFAL has implemented a subsidy program to farmers for domestically produced certified seed usage since 2005. Also MinFAL has given subsidies to seed producers for certified seed production in Turkey. In 2013, the last year of official data on this, the equivalent of around US\$57 million was paid in total to farmers and around US\$17 to seed producers (using 2013 exchange rate 2 Turkish Lira (TL) to US\$1).

Table 2: Subsidy Program Expenditures to Farmers and Seed Producers (Thousand TL)

Years	Total Subsidies to Farmers for Domestically Produced Certified Seed Usage (1000 TL)		To Seed Producers producing certified seed in Turkey
	Seed Users	Seedling/Sapling Users	
2005	16,494	1,206	0
2006	24,991	77,666	0
2007	40,132	79,831	0
2008	27,252	17,004	0
2009	46,712	28,467	10,992
2010	63,515	19,040	16,936
2011	80,265	18,510	20,536
2012	84,205	16,413	34,470
2013	114,280	17,980	33,829
2014*	82,000	48,000	40,000
2015*	130,000	26,000	40,000

Source:MinFAL; Note * are estimated figures as official data is not available

Table three shows the subsidy amount for farmers who used domestic certified seed in 2016. For instance, a farmer who planted domestically produced certified wheat seed is allowed to receive 85 TL per hectare. For example, with a wheat farm size of around six hectares in Turkey, which is the average, a farmer could receive around the equivalent of US\$144 to help offset the cost of using certified seed.

Table 3: Subsidy Amount for Farmers who Use Domestic Certified Seed in 2016

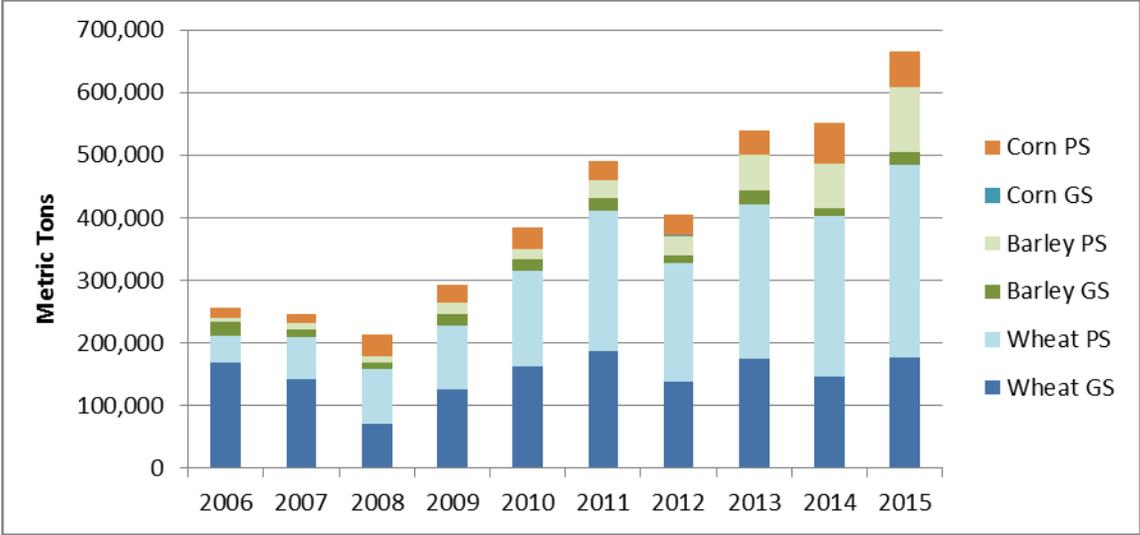
Domestic Certified Seed	TL/decare
Wheat, Barley	8.5
Alfalfa, Nuts	15
Rye, Oats	6
Paddy rice	8
Chickpea, Bean, Lentil, Soybean	20
Sesame, Canola, Safflower	4
Potato	80

Source: MinFAL

For further information regarding agricultural support implemented in 2016, please see Official Gazette dated: 5/5/2016, No: 8791 [here](#).

Figure 1: Certified Seed Quantity Produced in Turkey (MT) 2006-2015

Data breakdown by crop and producing entity: Government Sector (GS) vs Private Sector (PS)



Source:MinFAL

Government certified seed production has remained relatively constant for wheat and barley, but the private sector’s role in certified seed production in Turkey has increased substantially over the past ten years.

Trade

Seed import and export is subject to the permission of the Turkish Ministry of Food, Agriculture, and Livestock. Imported seeds must conform to domestic seed standards. Imports are allowed for certified seeds of registered varieties in Turkey by companies which are registered with the Turkish government as seed producers. The list of registered varieties can be viewed [here](#), and companies authorized for import are [here](#). Universities, research agencies, and international bodies such CIMMYT, ICARDA can also import seed.

According to the Turkish government’s Seed Import Implementation Circular (2016), only forage crops, grass and vegetable seeds (including sweet corn and popcorn seed) are allowed to be imported for trade/commercial purposes (i.e. for direct planting, as opposed to reproduction). Most planting seeds (by quantity) such wheat, barley, corn, sunflower are allowed to imported for only reproducing and breeding purposes by authorized seed companies. Vegetables are far and away the most imported seed by value.

Domestic companies, as well as many foreign and multinational companies, are doing business in Turkey. Companies which have a prominent market share in the world market carry out seed production, breeding and marketing activities in Turkey due to its favorable weather conditions and geographic advantages.

Turkey imported 56,585 MT of planting seed in 2015, valued at \$202 million, which increased from \$188 million in 2014. The main seed types imported in 2015 were tomato (\$52.5 million), potato (\$24.1 million), sugar beet (\$13.9 million), corn (\$12.3 million), grass (\$8.7 million), and forage crops (\$8.5

million). Turkey's extensive vegetable production targeting export markets in Europe and the Middle East is the driving force of the imported seed demand within Turkey. Turkey's vegetable seed imports in 2015 were valued at \$115 million. Though grains are the prominent crop in Turkey, Turkey imports grain seeds only for the purpose of breeding and reproducing.

Table 4: Tomato Seed Import to Turkey by Countries in 2015

Counties	Amount (Kg)	Value (\$)
Israel	441	8,563,739
Holland	627	6,799,768
China	2,284	6,014,760
Thailand	858	4,578,645
France	281	4,088,960
Kenya	95	2,998,880
Guatemala	192	2,334,309
Peru	517	11,503,969
Chile	480	1,241,250
USA	879	1,129,671
Other	800	3,230,246
Total	7,456	52,484,418

Source: Turkish State Institute of Statistics

Turkey exported 26,708 MT of planting seed in 2015, with a value of \$103 million. Major seed exports are sunflower, valued at \$48.8 million, and corn, valued at \$30.7 million; of these, a considerable amount is hybrid seed. Import tariff rates (see Table 9) vary by origin country and type of seed. Imported seeds may be subject to different tariff rates according to purpose of use, import for production or import for trade. Latest import tariffs can be found in the Official Gazette here: [1 sayili liste](#).

Table 9: Tariff Table

Seed Types	EU	Bosnia Herzegovina	S. Korea	Others
Wheat	0	0	0	0
Barley	0	0	0	0
Corn	0	0	0	0
Rice	13	0	15	15
Potato	11.7	0	11.7	11.7
Tomato	17.3	0	14	19.3
Pulses	17.3	0	14	19.3
Grass	17.3	0	14	19.3

Source: Ministry of Economy

Policy

Turkey will start to implement a new subsidy program for agricultural products in 2017, called the National Agriculture Project. Ministry of Food, Agriculture, and Livestock (MinFAL) has announced they will encourage certified seed usage within the scope of the project. In his speech in December

2016, the Minister stated that producers who do not use certified seeds in 2018 will not benefit from government subsidies. It is estimated that the seed sector in Turkey will need to produce at least 500,000 MT more wheat and barley certified seed, or nearly double what they produced in 2016, to meet the increased demand resulting from the new support program which will be effective in 2018.

Legal Framework of Seed Sector in Turkey

Turkey became a member of ISTA (International Seed Testing Association) in 1963 and OECD (Organization for Economic Cooperation and Development) Certification System (in the arable crops and forage crops categories) in 1968. Then, in 1989, Turkey started initial steps towards equivalence with Europe and accepted some of the varieties of seeds which had been approved there. The Variety Registration and Seed Certification Center was established in Ankara in 2001 and was included amongst the accredited labs by ISTA.

Seed legislation and regulations present in Turkey are largely similar with legal and administrative approaches in other developed countries. Turkey's Main Seed Law, which has been in force since 1963, was amended by the national assembly with a new law number 5553, in 2006.

The seed industry in Turkey is mainly regulated by the following legislation:

- Law No 5488 Agriculture Law issued on 18 April 2006,
- Law No 5042 Law on Protection of Breeder's Rights of New Plant Varieties issued on 8 January 2004,
- Law No 5977 Biosafety Law issued on 18 March 2010
- Law No 5996 Veterinary Services, Plant Health, Food and Feed Law issued on 11 June 2010.

Besides the laws mentioned above, regulations on the following are also in place which have an impact on the sector: Authorization and Inspection in the Seed Business Sector, Protection of Breeders' Rights of New Plant Varieties, Registration of Plant Varieties, Transfer of Authority in Seed Services, Genetically Modified Organisms (GMO) and GMO Products, Working Principles of the Biosafety Board and the Committee.

The Seed Law required all seed production enterprises operating in Turkey to gather under a professional public institution. According to Article 16 of the Seed Law:

Sub-unions are the professional associations, which have public institution quality and legal entity, are established according to their subjects by at least seven natural or legal persons who are plant breeders, seed industrialists and producers, seedling producers, sapling producers, seed breeders, seed distributors, ornamental plant producers or deal with other issues of seed, in order to facilitate professional activities, to provide the protection of the economic and social rights of those dealing with seed activities and to fulfill the duties determined with the legislation by improving the sector and providing the professional solidarity among real and legal persons operating in this sector.

The main professional organization of the sector is Turkish Union of Seed Producers ([TURKTOB](#)) and it has seven sub-unions. Natural or legal persons operating in the field of seedlings have to affiliate with the sub-union related with their activity fields. Sub-Association of Seed Industrialist and Producers

(TSUAB) was established in 2008 and the companies operating in the seed industry are legally required to be a part of this organization. Their member list is located [here](#).

The Ministry of Food, Agriculture, and Livestock (MinFAL) is the main authority supervising the crop seed industry. The departments of the Ministry dealing with the seed industry are:

- General Directorate of Plant Production (BUGEM), which is in charge of seed industry policies, incentives, subsidies, production, supply, import, export, registrations, certifications, inspections and protection of new plant varieties,
- General Directorate of Agricultural Research and Policies (TAGEM), which is in charge of variety development and breeding,
- General Directorate of Food and Control (GKGM), which is in charge of sanitary and phytosanitary standards and quarantine services.

Unofficial Translation of the Turkish Seed Law

Seed Registration, Production and Certification Rules are also regulated by the Seed Law. According to Article 4-7:

Article 4- Registration of plant varieties, production permission, standard seed registration, and registration of the genetic resources into the inventory are conducted by the Ministry. Improved varieties are registered by determination of distinctiveness, uniformity and stability and/or biological and technologic traits, and agronomic attributes. Genetic resources are registered by morphologic or molecular characterization. Registration is not a condition for ornamental plants and flower seeds. Issues concerning registration, duration in inventory, deregistration, deletion from inventory, granting of continuity, and formation of catalogs of varieties of agricultural plant species are regulated by secondary legislation. Furthermore, procedures and principles for plant groups concerning registration, production permission and standard seed registration are regulated by a secondary legislation.

Article 5- Seed Production

Seed production of only registered varieties based on their botanical and agricultural attributes shall be authorized by the Ministry. Characteristics of special production areas for seed production, and rules to be obeyed in these areas by natural or legal persons who grow seed or any agricultural plant are regulated by secondary legislation. Within the boundaries of special production areas, prohibited seeds or agricultural plants (deemed prohibited by the Ministry) cannot be produced. Under the condition of investment within the country, seed sector can benefit from subsidies and supports determined by the Ministry in order to improve compliance of the sector with European Union standards and international competition. Support procedures and principles are regulated by official communications issued by the Ministry.

Article 6- Seed Certification

Seeds, which are grown and produced based on seed categories, and which are produced domestically from registered or with production permission varieties according to Article 4, and which are produced and grown according to the seedling classes, shall be subjected to certification. Seeds certified as compliant with seed standards by field inspection and laboratory controls shall be appropriately packed and labeled. Seed certification principles and the rules to be applied to packing and labeling according to plant groups shall be established by secondary legislation.

Article 7- Trade of Seeds

Inside the country (domestic), seeds of only recorded varieties shall be traded. These seeds which conform to quality and standards established by the Ministry, and certified and recorded in the inventory or as standard seed, must be in sold as packaged and labeled. Seed import and export shall be subject to the permission of the Ministry. Seeds to be imported must conform to domestic seed standards. The procedures and principles for seed import and export shall be set up by the Ministry after considering ideas of relevant institutions and bodies.

Article 8- Market Inspection

The natural and legal persons which grow, process, and prepare to sell, distribute and sell seeds shall be authorized and inspected by the Ministry. The procedures and principles for authorization and inspection shall be established by secondary legislation. Inspection of conformity of standards for supplied seeds, and the accuracy of package and label information shall be inspected by the Ministry.

Article 14- Exemption

Registration shall not be sought for seeds or propagating material which is imported and produced for the purpose of exportation. Trade of propagating material in the frame of this article shall be regulated in accordance with procedures and principles determined by the Ministry. Furthermore, exchange of seeds among farmers, and seeds for experiments and tests, provided that they shall not be subject to trade and amount shall be limited to personal needs, and that the amount shall be decided by the Ministry, shall be exempted from convention of this law.

Article 15- Authorization

Ministry may partly or fully authorize union, public institutions and bodies, private legal persons or universities for the activities mentioned in Articles 5,6,7,and 8, provided that the terms shall be specified, for temporary or indefinite time in cases Ministry considers necessary. Given authorization shall be ceased if authorized party fails to conform to established conditions. If it is verified that authorized party intentionally violated official control rules, certificates issued shall be cancelled with the exception of those certificates which meet defined seed standards. Temporary authorization may be ceased or extended with the same conditions after defined period. Conditions of authorization, and union, public institutions and bodies, private legal persons or universities to be authorized, and the principles and procedures concerning the technical and physical conditions, and procedures for withdrawal of authorization shall be regulated by secondary legislation.

For full Seed Law in Turkish please click [here](#).

Registration Process

New varieties must be registered at MinFAL before they can be imported or exported or distributed in Turkey:

To be registered, a variety must be recorded in an official log book by MinFAL. The department under General Directorate of Vegetative Production (BUGEM) in charge of registration is the Variety Registration and Certification Center of MinFAL (TTSM, website: <http://www.tarim.gov.tr/BUGEM/TTSM>). To be registered, varieties must be tested by the Turkish

government for distinctiveness, uniformity and stability and, for some crops, value for cultivation and use. Tests are also carried out by TTSM, in trials over a minimum two-year period during the registration process.

Import of seeds requires import permission from MinFAL. Import is allowed for certified seeds of registered varieties in Turkey. Import permits are granted by the General Directorate of Vegetative Production. A production permit (temporary registration) may be granted for a limited period before the variety is registered, to enable commercialization (import, export, produce and distribution) of the variety during the registration process.

Table 5: Maximum Annual Seed Import Quantity for Testing, Research, & Demonstration

Type	Testing and Research Material Quantity (Kg)	Demonstration Material Quantity (Kg)
Hybrid Corn	50	150
Hybrid Sunflower	20	100
Soybean	50	500
Wheat	200	1000
Barley	200	1000
Potato	250	2000
Grass	5	30
Alfalfa	10	20
Cotton	10	50
Canola	5	10
Paddy Rice	50	200
Nuts	50	500
Chickpea	10	100
Lentil	10	100
Sugar Beet(genetic monogerm)	50	250
Opium	1	1

Source: MinFAL

According to the Turkish government’s Seed Import Implementation Circular, the above table shows the permission limits for each variety in order to complete testing, research and demonstration for seed companies without a production permit. These import limits do not include amounts which will be used for testing for genetic engineered content in seeds – these amounts can be found by contacting the Turkish government.

Intellectual Property Rights (Plant Variety Protection/Plant Patents)

Turkey acceded to the UPOV Convention and its revisions in 1972, 1978, and 1991, on November 18, 2007. The General Directorate of Plant Production is the authority in charge of Plant Variety Rights (PVR) administration. [Law No 5042](#) on Protection of Breeder's Rights of New Plant Varieties and its Regulation applies. The protection under this Law shall be provided to persons who are the nationals of Republic of Turkey or natural or legal persons having their residences or offices within the territory of Republic of Turkey or those having the right to apply within the scope of the UPOV Convention.

Biotechnology

The Biosafety Law does not allow the production/cultivation of genetically engineered (GE) crops in Turkey, therefore import of GE seeds is not allowed. Control Certificates indicating whether or not the product is eligible for import are required for seeds. For further information on other certification and testing requirements; please see GAIN report date: 4/11/2016 No: TR6017 or [here](#).

Import and Export figures for Corn and Sunflower

Table 5: Turkey Import Statistics,100510, Corn (Maize) Seed, Certified, Excluding Sweet Corn

Year Ending: August						
Partner Country	2013/2014		2014/2015		2015/2016	
	USD	MT	USD	MT	USD	MT
France	5,114,517	574	5,640,954	760	7,071,448	1,268
Romania	1,592	0	0	0	3,214,440	939
New Zealand	145,242	6	140,902	6	2,402,449	335
Italy	2,395,852	524	3,124,335	720	1,646,633	424
United States	1,212,827	121	1,874,452	320	739,443	61
Other	2,060,244	226	1,555,654	134	1,303,075	153

Total	10,930,274	1,453	12,336,297	1,938	16,377,488	3,181
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Source of Data: State Institute of Statistics

Table 6: Turkey Export Statistics; 100510, Corn (Maize) Seed, Certified, Excluding Sweet Corn

Year Ending: August						
Partner Country	2013/2014		2014/2015		2015/2016	
	USD	MT	USD	MT	USD	MT
France	14,108,169	4,383	5,733,268	2,166	11,237,206	4,232
Germany	3,722,116	1,598	5,766,275	2,434	5,139,991	2,485
Italy	18,205,328	6,196	13,806,914	5,333	5,135,801	2,260
Iran	599,302	168	3,269,285	1,084	2,761,269	958
Pakistan	762,666	231	219,518	70	1,545,472	574
Hungary	929,391	338	921,783	384	1,457,024	628
Syria	629,393	131	422,005	97	1,070,357	307
Spain	3,278,604	1,252	1,981,537	974	997,254	494
Azerbaijan	669,645	204	520,010	126	709,842	231
Other	9,379,577	2,134	5,648,992	2,036	4,700,447	1,610
Total	52,284,190	16,633	38,289,590	14,705	34,754,664	13,779

Source of Data: State Institute of Statistics

Table 7: Turkey Import Statistics Commodity: 12060010, Sunflower Seeds For Sowing

Year Ending: August						
Partner Country	2013/2014		2014/2015		2015/2016	
	USD	MT	USD	MT	USD	MT
France	3,221,148	43	1,869,776	55	3,287,307	226
Spain	906,828	21	541,569	19	2,295,147	132
Sudan	0	0	0	0	3,239,335	454
Chile	1,169,456	31	484,856	61	2,151,342	312
United States	1,297,347	112	1,456,521	195	1,490,962	175
Romania	12,081	0	571	0	591,491	48
Russia	1,793	0	2,216	0	180,695	29
Serbia	17,595	0	159	0	148,661	26
Ukraine	180,830	30	64,160	19	121,227	25

Other	721,748	56	502,817	43	150,772	35
Total	7,528,826	295	4,922,645	393	13,656,939	1,437

Source of Data: Turkish State Institute of Statistics

Table 8: Turkey Export Statistics' Commodity: 12060010, Sunflower Seeds For Sowing

Year Ending: August						
Partner Country	2013/2014		2014/2015		2015/2016	
	USD	MT	USD	MT	USD	MT
Ukraine	15,383,712	3,094	14,404,492	2,964	22,835,523	5,301
Russia	27,553,292	5,283	11,358,537	2,454	10,278,322	2,208
Sudan	850,998	99	2,285,924	329	7,843,457	734
Romania	9,226,353	2,207	5,303,404	1,151	7,443,559	1,710
Hungary	2,323,502	577	4,309,284	1,005	7,343,235	1,982
France	3,754,287	925	2,373,128	479	2,608,649	684
Kazakhstan	2,285,724	511	1,604,544	284	2,082,233	390
Austria	7,119,155	1,782	81,519	16	1,572,232	481
Other	2,968,417	574	3,958,341	823	2,440,679	504
Total	71,465,441	15,053	45,679,171	9,504	64,447,891	13,995

Source of Data: Turkish State Institute of Statistics