

THIS REPORT CONTAINS ASSESSMENTS OF COMMODITY AND TRADE ISSUES MADE BY  
USDA STAFF AND NOT NECESSARILY STATEMENTS OF OFFICIAL U.S. GOVERNMENT  
POLICY

Required Report - public distribution

**Date:** 4/5/2017

**GAIN Report Number:** TR7014

## Turkey

### Grain and Feed Annual

### Turkey Grain and Feed Annual Report

**Approved By:**

Elizabeth Leonardi, Agricultural Attaché

**Prepared By:**

Kubilay Karabina, Agricultural Specialist

**Report Highlights:**

Post forecasts 18 MMT of wheat production and a planting area of 7.82 million ha in MY 2017/18. Post forecasts corn planting area at 550,000 ha and production at 5.5 MMT for MY 2017/18. Wheat flour exports are anticipated to decrease for the upcoming marketing year if the country restriction on importing in scope of the Inward Processing Regime (IPR) remains in place. According to the new budget, the government of Turkey (GOT) plans to grant 12.8 billion TL (\$3.5 billion) in agricultural subsidies to producers in 2017, up 10.2 percent compared to 2016.

## **Executive Summary:**

Post forecasts 18 MMT of wheat production and a planting area of 7.82 million ha in MY2017/18. The slight area increase was due to crop rotation issues and new government subsidy program.

Post forecasts barley production at 5.5 MMT in MY 2017/18. Barley prices have reached a record level do to shortages in the domestic market. High prices led some wheat farmers to grow barley instead of wheat in unirrigated areas. Yields are likely to be affected by winter drought, especially in Central Anatolia.

Post forecasts corn planting area at 550,000 ha and production at 5.5 MMT for MY 2017/18. High returns for cotton and oilseeds, as well as a significant increase in the production support payment for oilseeds are affecting planting decision of farmers.

Paddy rice production is forecast at 780,000 MT, with a slight increase in planting area in MY 2017/18. New rice varieties becoming more popular among farmers.

The year 2016 has been very difficult for Turkey's grain market sector due to political, security, and economic instability. The Turkish Lira (TL) has declined considerably against the U.S. dollar and other currencies in recent years, thereby increasing the costs of imported goods. One U.S. dollar bought 2.34 TL on January 1, 2015, 3.50 TL on January 1, 2017, and is now over 3.60 in March 2017. The volatility affects investments as well as trade. Apparently the private sector is reluctant to grow their stocks in an uncertain economic environment, which is reflected by low ending stocks of all commodities.

Another event possibly majorly impacting the grain and feed sector is that exporters report they are no longer allowed to import wheat, corn and some other products from Russia under the scope of the Inward Processing Regime as of March 2017. It is unclear how long this “ban” will last or how much it will impact the grain and feed sector at this stage, but it is causing a lot of concern in the industry. According to market sources, flour exporters, who are currently importing more than 3 million MMT of wheat per year, are worried about finding a price equivalent substitute for high protein Russian wheat. Wheat flour exports are anticipated to decrease for the upcoming marketing year if the country restriction on importing in scope of the Inward Processing Regime (IPR) remains in place. Undoubtedly, also corn, rice and some oilseeds trade will be directly affected as well as wheat products and other by-products if the country restriction is not removed.

Turkey will start to implement a new subsidy program for agricultural products in 2017, called the National Agriculture Project. The project aims to diversify Turkey’s agricultural production, increase productivity and reduce the planted area of water-intensive crops such as rice and corn in drought-prone areas. It is projected to see outcomes of the project in 2018. According to new budget, GOT plans to grant 12.8 billion TL (US\$3.5 billion) in agricultural subsidies to producers in 2017 including for livestock, up 10.2 percent compared to 2016.

## **Production**

### **Wheat**

Wheat production for 2017/18 is forecast at 18 MMT assuming sufficient rain and favorable conditions from April to June. Wheat planting area is slightly increased compared to last year. The increase was mainly due to crop rotation issues and new government subsidy program.

Throughout all of Turkey’s geographic regions there has been a winter drought. Rainfall in MY 2016/17 was significantly lower than the previous year throughout the whole country. Average rainfall in Turkey from October 2016 through February 2017 was 236.2 millimeters (mm). During the same period the previous year, rainfall was 298.7 mm. This is 28.3 percent lower than the national historical average and 20.9 percent lower than last year.

The areas with the greatest decrease in rainfall were the Central Anatolia region, followed by the Southeast and East Anatolia regions. As can be seen Table 1, the cumulative rainfall from October to January in the Central Anatolia region was 123.6 mm, while the average level for that region is 204.1 mm. This amount of rainfall is 39.5 percent lower than the national historical average for Central Anatolia, is it and 29.3 percent lower than last year.

**Table 1: Cumulative Rainfall in Turkey**

<b>Turkey: Recent Rainfall Levels</b>				
<b>Region</b>	<b>Oct 2015- Feb 2016 (mm)</b>	<b>Oct 2016- Feb 2017 (mm)</b>	<b>Normal (mm)</b>	<b>2016 deviation from normal</b>
Thrace	382.4	352.7	396.7	-11.6 %
Aegean	321.2	280.0	386.5	-27.6 %
Mediterranean	261.0	296.5	446.5	-33.6 %
Central Anatolia	174.7	123.6	204.1	-39.5 %
Black Sea	401.7	307.3	348.3	-11.8 %
East Anatolia	312.9	180.8	289.4	-37.5 %
South East Anatolia	303.5	230.4	356.0	-35.3 %
Turkey Total	298.7	236.2	329.6	-28.3 %

*Source: Turkish State Meteorological Service*

Planting of the 2017/18 winter barley and wheat crops started in mid-September and concluded in early December. An autumn drought was reported across the major producing area, following a lack of significant precipitation between the end of September and early November 2016. The amount of rainfall in November 2016 was 75 percent lower than last year. Some farmers in Thrace and the Mediterranean region had to delay planting by two weeks. Another reason for the planting delay in Thrace region was to avoid yellow rust which was widely seen last year. Dry weather in October and November 2016 in Central Anatolian and Southeast Anatolia caused a small amount of damage to the crop, forcing some farmers to have to re-plant wheat. Late February and March saw fairly heavy rainfall throughout most of the country. Dormant crops rely on winter precipitation for spring emergence and establishment.

Winter wheat planting, which finished in October 2016, was nearly 10,000 ha above the previous year, mainly due to normal crop rotation patterns and the government's new subsidy system. Although it is still early to reliably forecast MY 2017/18 wheat production, wheat production is forecast at 18 MMT in MY 2017/18, assuming sufficient rain and favorable conditions from April to June.

In order to increase the quality of the wheat crop, the Turkish government supports (by providing 85 Turkish Lira TL/ha) usage of domestically produced certified wheat seed. In 2016, Turkey produced more than 500,000 MT of certified wheat seed, as compared with 210,000 MT in 2006. Turkish Grain Board (TMO) protein-based procurement policy also led farmers to increase their use of certified seed. Farmers can get up to 7 percent higher prices according to quality (bugs ratio and protein).

Central Anatolia is the main grain supplier of Turkey. So far in MY 2017/18, rainfall in the region is below normal levels. Total wheat area in Central Anatolia is 3,000,000 ha and the average yield is about 2 MT/ha. Nearly half of the fields are unirrigated and yields are directly linked to rainfall. Fields were affected by the winter drought, especially the area between Konya and Eskisehir.

According to the first announcement of the new subsidy system in November 2016, corn was not on the subsidy list in some counties in Konya. But about one month later, the list was updated. This event affected some farmers' decision, and they planted wheat instead of corn. Farmers in Turkey like to try new technology to try to increase the yields. Nowadays, organic-mineral fertilizers are becoming popular among the farmers after some restrictions were put in place by the government on the sales of ammonium nitrate based fertilizer. Pehlivan, Sonmez and Esperia seeds are still popular among the farmers in the region.

Of the total 5.4 MMT of wheat produced in Central Anatolia in MY 2016/17, 1.1 MMT was durum wheat. Durum wheat gained some land from barley in some unirrigated area like Kirsehir, Yozgat and Kiriklale. But for MY 2017/18, farmers planted barley again due to good returns last year.

Although some traders are optimistic for spring rainfall, Post has observed problems with crop growth, as seen last year also. The major problem in Central Anatolia is late germination of around a month. In some areas, there was weak root development. The application of extra fertilizer and irrigation, where possible, has already increased the cost of wheat production in the region.

The Cukurova region has 260,000 ha of wheat planted in MY 2017/18, which is same with last year. So far, wheat development is good in irrigated fields. It is projected that the second crop will be cotton and wheat instead of soybeans in the plains of Adana. Average wheat yield in the region is 4.5 MT/ha. The Cukurova region is expected to produce 1.2 MMT of wheat in MY 2017/18.

In the Thrace region, the wheat area will decrease due to crop rotation patterns and better returns on other alternatives like sunflower. Cotton plant development is favorable as of March 15. The Thrace region is expected to produce 3 MMT of wheat in MY 2017/18.

**Table 2: Turkish Wheat Production by Region**

Regions	MY 2015	MY 2016	Long term	Harvest Time	MY 2015/16		MY 2016/17		MY 2017/18	
	Avg. yield	Avg. yield	Avg. yield		Harvested Area (ha)	Production (MT)	Harvested Area (ha)	Production (MT)	Harvested Area (ha)	Production (MT)

	(MT/H A)	(MT/H A)	(MT/H A)							
Çukurova region	3.5-4.5	4.5-5	4.5-5.5	May10- June10	265,000	1,300,000	260,000	1,175,000	260,000	1,200,000
Hatay region	3	4.7	5-5.5	May25- June25	86,000	260,000	86,000	200,000	86,000	220,000
Southeast region	2	2.9	3-3.5	May15- June25	953,000	2,950,000	933,000	2,705,000	928,000	2,655,000
Central Anatolia	2	2.38	1.5-2	June25- July25	3,000,000	6,550,000	2,990,000	5,000,000	3,000,000	5,000,000
Polatli	2.8-3	3.4	3.3	June15- July20	130,000	400,000	130,000	300,000	130,000	300,000
Aegean region	2-2.5	3	3	May25- June25	500,000	1,800,000	500,000	1,700,000	500,000	1,700,000
Aydin region	4.5	4	4	May20- June10	6,000	50,000	6,000	50,000	6,000	50,000
Thrace	3.5	4.1	4.1	June15- July15	600,000	2,500,000	620,000	3,000,000	615,000	2,900,000
Other regions	1.3	1.4	1.5	June15- July15	2,320,000	3,690,000	2,290,000	3,120,000	2,300,000	3,300,000
Total	2.12	2.3	2.3	May15- July15	7,860,000	19,500,000	7,815,000	17,250,000	7,825,000	18,000,000

In MY 2017/18, wheat area in Southeast Anatolia decreased 1%, about 5,000 ha, due to good returns on cotton. Especially in Harran, cotton has been gaining area from corn and wheat for the last two years. Farmers are optimistic for upcoming harvest due to very favorable weather conditions in March. Late germination and soil moisture levels are the main problems in the region.

Southeast Anatolia has 260,000 ha of durum wheat. There will be about than 1.3 MMT of durum wheat production in Southeast Anatolia, assuming sufficient rain and favorable conditions until the harvest. Of the total 18 MMT of wheat produced in Turkey in MY 2017/18, 2.4 MMT is durum wheat.

The government of Turkey (GOT) continues to support wheat production with production premium programs. According to 2016 production bonus announcements, the wheat premium remained at 50 TL/MT (equivalent to \$17/MT). The GOT is continuing to provide different benefits to farmers under the umbrella of soil analysis, diesel, and fertilizer support.

Fertilizer prices in Turkey are stable compared to last year after the government dropped the valued-added tax from 18 percent to one percent in early January 2016. Although fertilizer price decreased to 1300 TL/MT in summer, the price leveled out at about 1600 TL/MT in 2017. According to the fertilizer industry, farmers in Turkey use about 5.5 MMT of chemical fertilizer in a year, which the industry thinks should be at 8.5 MMT. Organic matter component of soil is about 1.5 percent, which they think should be 3.5 percent.

**Table 3: Government support program for wheat (TL/MT)**

Turkey: Government support for wheat producers					
Year	Certified seed (TL/ha)	Premium (TL/Ton)	Soil analysis (TL/ha)	Diesel (TL/ha)	Fertilizer (TL/ha)
2009	50	45	22.5	29.3	38.3
2010	50	50	25	32.5	42.5
2011	60	50	25	37.5	47.5
2012	60	50	25	40	50
2013	75	50	25	43	55
2014	75	50	25	46	60
2015	85	50	25	48.5	66
2016	85	50	110		

Source: Turkish Official Gazette

The Turkish Grain Board (TMO) was an active player in the wheat market in MY 2016/17. TMO announced 2016 grain intervention prices on June 28, 2016. TMO has procured grain in different ways like at commodity exchanges and licensed warehouses with its own branches spread across different points in Turkey. They announced the intervention price for Anatolian Hard Red Milling (AKS) Wheat at 910 TL/MT (\$314/MT), and 1000 TL/MT (\$346/MT) for durum wheat. Prices which are given in the table below differed up to 7 percent more, according to quality, since 2015. TMO procured 2.6 MMT of wheat in MY 2016/17, which was 3.3 MMT in 2015/16.

**Table 4: TMO Grain procurement between June 2016 and February 2017**

TMO Grain procurement from June 2016 to February 2017							
Type of Grain	Durum Wheat	Milling Wheat	Barley	Rye	Oat	Corn	Paddy Rice
Quantity (MT)	982,000	1,665,000	-	-	-	1,757,000	77,000

Also, the GOT gives supports for fertilizer, gasoline, certified seed usage, and soil analysis. Premium and support together reach 121 TL per ton, which was 127 TL per ton last year. So with the intervention price, plus the premium and input subsidies, a farmer can receive 1,031 TL per ton (910 TL+121 TL, which is the equivalent of \$356)\* for milling wheat.

**Table 5: Historic TMO Wheat intervention price and premiums**

Turkey: TMO milling wheat intervention prices and wheat premiums (TL/MT)		
Year	Intervention price	Premium
2007	425	45
2008	500	45

2009	500	45
2010	550	50
2011	605	50
2012	665	50
2013	720	50
2014	-	50
2015	862	50
2016	910	50
	\$314*	\$17*

\*convert to dollars as date of June 2016

## Barley

Barley production for MY2016/17 is estimated at 4.75 MMT. Drought in Central Anatolia and part of Southeastern Anatolia greatly reduced barley yields in MY 2016/17. Barley production for 2017/18 is forecast at 5.5 MMT, assuming sufficient rain and favorable conditions from April to June. The barley area increased slightly in the Central Anatolia region. A high barley price enticed farmers to plant barley instead of wheat. Post forecasts barley area at 3.4 million ha. Barley fields are generally unirrigated and yields are directly linked to rainfall. Fields were generally affected from winter drought, especially area between Polatli and Yunak. The government announced a premium of 50 TL/MT for barley, rye, and oat growers in MY 2016/17.

## Corn

Corn area is estimated at 570,000 ha for MY 2016/17 and forecast at 550,000 ha for MY 2017/18. High returns for cotton and oilseeds, as well as a significant increase in the production support payment for oilseeds are affecting planting decisions. Some corn producers are expected to plant cotton and soybeans instead of corn. Less than desired returns on corn are another reason, and this will lead to a decrease in the area planted of corn in MY 2017/18.

Corn production is estimated at 5.5 MMT for MY 2016/17 and forecast at 5.5 MMT for MY 2017/18 assuming sufficient rain and favorable conditions, similar with the long term yield average. The yields for winter and summer crops in Turkey are dependent on the rains during the spring and summer.

First crop corn planting is common in the Cukurova, Aegean, and Marmara regions. First crop corn was planted in February 2017. The high returns for cotton and other oilseeds led corn farmers to plant these instead of corn; hence there will be a 3 percent decrease in corn area in Cukurova. Cotton also will gain area from corn in the Aegean region.

Second crop corn is a common product in Southeast Anatolia, especially in Sanliurfa and Mardin regions. Cukurova farmers also grow corn as a second crop. There will be 10% decrease in the second crop corn plantation in MY 2017/18, mainly because of the decrease in wheat production as some acreage was switched to cotton this year (corn is normally planted following wheat harvest). Total planting decrease is projected at about 20,000 ha in MY2017/18.

## **Rice**

Rice planting will start at the end of April 2017 and finish by the end of the next month. According to government rules, farmers need to have permission to grow paddy rice. Each county should establish a paddy rice commission and farmers must apply to the commission and receive permission to grow paddy rice. Application time is generally in the month of January. It is expected that the planting area will not decrease, according to permission requests to grow paddy rice so far in the main planting areas such as Edirne and Gonen. Also after some consolidation of fields in Kizilirmak region, it is projected planting area will increase in that region. But the exact numbers will be clear after May. Rice yields depend on rainfall at the end of August and early September. The harvest normally begins in September and ends in October. Post forecasts paddy rice production at 780,000 MT in MY 2017/18 with 99,000 ha planted area.

Edirne region produces more than 50 percent of country's paddy rice production. Cankiri and Corum region produce nearly a quarter of Turkey's paddy rice production. Osmancik and Baldo varieties are the well-known varieties among farmers and consumers, and have dominated the region for many years. However, new varieties such as Cammeo, Galileo, Ronaldo, and Luna are catching farmers' attention in term of high yields and high milling rates and are becoming more popular. According to market sources in 2017/18, it will be first time that new varieties have exceeded 35 percent of all planted area.

## **Consumption**

### **Wheat**

The majority of wheat is utilized for human consumption as flour and pasta (some of which is exported), the rest of the wheat is used as feed. Turkish domestic wheat consumption is estimated at 17.6 MMT in MY2016/17, down 400,000 MT from the 2015/16 marketing year. Food, seed, and industrial consumption remain the same, so the decrease in consumption is in the feed and residual use sector, which typically varies inversely to the amount of wheat produced; in high production years, there is abundant low-quality feed wheat. Wheat consumption is forecast at 17.6 MMT in MY2017/18, in line with the current marketing year.

Bread, an iconic symbol of nourishment, is the staple food for daily life of the general population. Turkey produces about 100 million 250-gram loaves of fresh bread every day. For reference, the population of the country is around 78 million. Therefore, self-sufficiency in wheat production and stability of bread prices are always hot topics and indicators among politicians for performance of agricultural policies. Because of political importance, from farm to fork, bread is directly affected by government intervention. As a first step, the government announces production supports for wheat, and protects the market with 130 percent import tariff, to provide sustainability in production. After harvest, the government announces an intervention price and buys wheat from farmers in order to set a fair price in the market to address producers' interests. Then, in order to address consumers' interests, all across the country there are bread factories, owned by municipalities, which aim to supply consumers with low priced bread. According to estimates, municipalities produce around 10 million loaves every day in Turkey, which is about ten percent of total bread production.

The largest municipal bread factories are in Istanbul and Ankara. The Istanbul Municipality Bread Factory (IHA) produces 1.7 million loaves every day with its three bread production factories in Istanbul. In terms of daily production, they are the biggest bread producer in Europe. The price of a normal white bread loaf at IHA (0.75 TL/300 grams) is lower than the market price (1.25 TL/300 grams). The Ankara Municipality bread factory (AHA) is the second largest municipal bread factory with a production of 1 million 300-gram loaves daily. The price of a normal basic white bread loaf at AHA (0.75 TL/300 grams) is lower than the market price (1 TL/300 grams). The marketing strategy of municipality bread companies is to franchise into very small bakery shops which are privately owned.

With these circumstances, flour millers in Turkey struggle with several issues from procurement to marketing. The milling sector for the domestic Turkish market is stuck sourcing from a very protected market which leads to high domestic prices, and government-supported bread factories which bring down the bread price. Another hot topic is Bosnian origin wheat flour. Despite the small share in total trade (just 66,000 MT in 2016), Bosnian flour has been gaining market share in Turkey in recent years with its competitive price through the help of a free trade agreement. There are 710 active flour factories in Turkey with a total of 22 MMT/year production capacity. Capacity use rate is around 60 percent.

Turkey, with its 78 million person population, is currently hosting more than three million refugees. On the other hand, the year 2016 has been a difficult one for Turkey's tourism sector due to regional, political, and economic instability. According to Turkey's Ministry of Culture and Tourism, the number of foreigners visiting Turkey dropped about 30 percent, to 25 million in 2016, from 36 million in 2015. The tourism sector is not expected to get better in 2017, according to booking statistics. According to figures from the Antalya tourism sector, in the first two months of 2017, package tour sales decreased by 26% over same period from last year from 143,000 to 106,000. In terms of food consumption, declining demand for bread from the tourism sector will be compensated by increases in consumption of new refugees.

Although the wheat flour price increased 5 percent compared to last year, the bread price has remained stable. Due to other rising costs like transportation and wages, bakeries intend to increase bread prices before Ramadan, which will start May 27, 2017. \

According to the Turkish pasta manufacturing industry, pasta consumption was about 8 kg/person in 2016. Durum wheat demand has been very strong due to high levels of exports of pasta products. There are 23 active pasta factories in Turkey with more than 2 MMT/year production capacity total. Capacity use rate is over 70 percent.

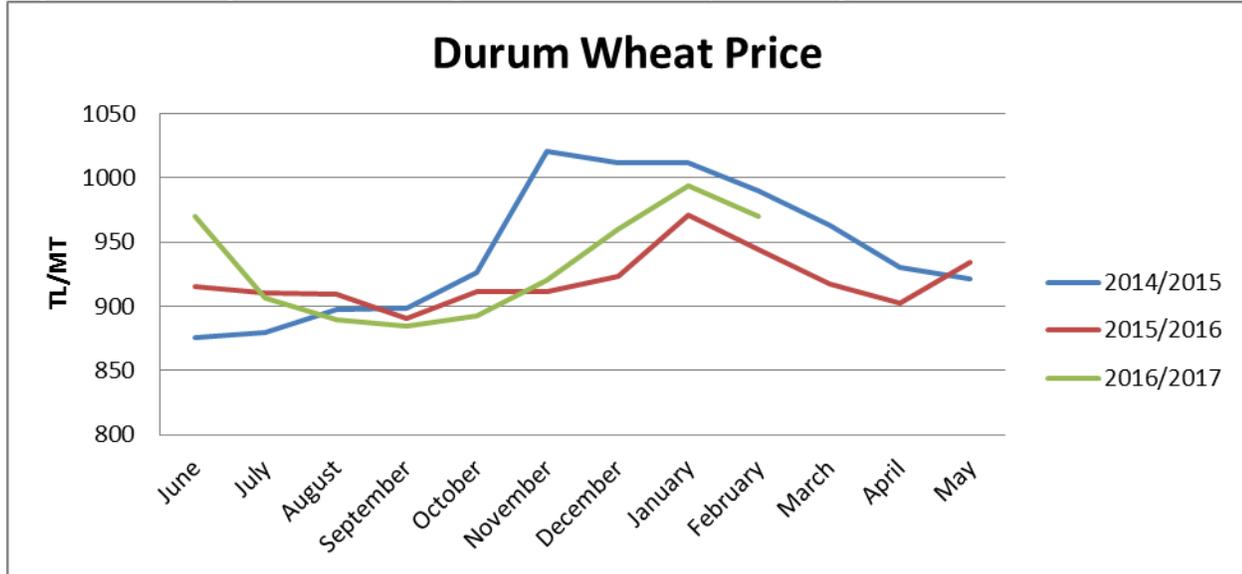
**Table 6: Average wheat flour price at the Bandırma Commodity Exchange**

<b>WHEAT FLOUR PRICE MY2016/17 (TL/50 kg)</b>											
Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
64.1	63.4	63.8	63.8	65.1	64.6	65.4	69.1	66.1	65.8	67.4	67.5
5	5	1	9	1	1	0	2	9	3	8	3

Due to competitive international price and delivery of imported durum wheat from Mexico and Canada just after the harvest, durum wheat price in the domestic market was in decline until September 2016.

Appreciation of dollar, quality issues in exporting countries, and a narrowing of domestic supply have caused a price increase in the domestic market, compared to last year. Durum wheat on the Konya CME was 970 TL/MT (\$262/MT) in February 2017, compared to 944 TL/MT (\$325/MT) in February 2016. (1 US\$=3.7 TL February, 2017 and 1 US\$=2.9 TL February, 2016)

**Figure 1: Average durum wheat price at Commodity Exchange**



Source: Price average from multiple commodity exchanges in Turkey

The Polatli CME is the main commodity market exchange for red milling wheat in Turkey. High quality red milling wheat on the Polatli CME was 953 TL/MT (\$328/MT) in March, 2016 and was 1,020 TL/MT (US\$276/MT) in March, 2017.

Turkish wheat prices can be followed by using the major Commodity Exchanges' websites:

<http://www.polatliborsa.org.tr/>

<http://www.ktb.org.tr>

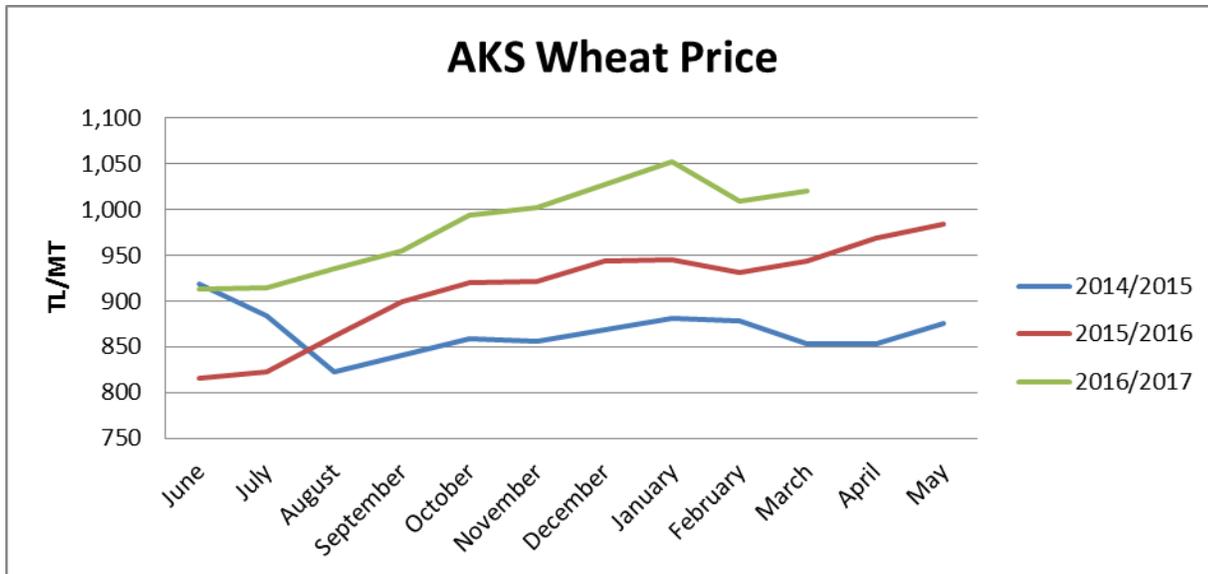
<http://www.adanatb.org.tr/>

<http://www.esktb.org.tr/>

Also TMO's Daily Market and Commodity Exchange Prices Bulletin states recent commodity prices.

Due to quality issues, decreased gluten index, as well as hectoliter and energy values of milling wheat in the 2016/17 crop, the domestic price is increasing. In order to supply high quality wheat to domestic market, TMO opened two tenders in early 2017 to import 230,000 MT of wheat.

**Figure 2: Average red milling wheat price at Commodity Exchange**



Source: Price average from multiple commodity exchanges in Turkey

**Table 7: Turkey Wheat Selling Price of TMO-purchased Grains**

TMO sell price					
Type	Sell Price (TL/MT), (\$USD/MT using exchange rate at the time of price)				
	November '16	December '16	January '17	February '17	March '17
Anatolian Hard White Wheat	855-965	855-965	880-980	880-980	880-980
	\$251-\$284	\$244-\$276	\$238-\$265	\$238-\$265	\$238-\$265
Anatolian Hard Red Wheat	855-965	855-965	880-980	880-980	880-980
	\$251-\$284	\$244-\$276	\$238-\$265	\$238-\$265	\$238-\$265
Other Red And White Wheat	825-935	825-935	850-950	850-950	850-950
	\$243-\$275	\$236-\$267	\$230-\$257	\$230-\$257	\$230-\$257
Durum	980-1050	980-1050	1020-1050	1020-1050	1020-1050
	\$288-\$309	\$280-\$300	\$276-\$284	\$276-\$284	\$276-\$284
Feed Wheat	820	820	845	845	845
	\$241	\$234	\$228	\$228	\$228
Imported Wheat	930-945	930-945	950	950	950
	\$274-\$278	\$266-\$170	\$257	\$257	\$257

Note: This price is valid for non-import certificate holders, which is low percentage of sales compared to the sales under IPR.

TMO has been trying to sell milling wheat, durum wheat, and corn in their stocks to import certificate holders who are flour, cookie, cracker, feed, and poultry exporters under Inward Processing Regime (IPR) since the harvest. The prices which these firms pay (who are planning to export their products) are about equivalent to the world price of that commodity.

Wheat consumption for feed sector forecast to be same with previous year due quality concerns for upcoming harvest.

## **Barley**

Barley consumption in Turkey in MY 2016/17 is estimated at 5.5 MMT tons, down 20 percent from MY 2015/16. The decrease is primarily due to low production resulting in high domestic price. Barley consumption in Turkey in 2017/18 is projected at 5.7 MMT tons, due to a better production forecast. Barley traditionally has been preferred as a feed grain in Turkey, especially for ruminants. Barley consumption for feed use is directly affected by price. Feed companies can compensate easily for any losses in barley availability with residual and waste from the food industries, such as brans. Malting barley consumption, which is estimated at 900,000 MT, has been steady in recent years.

## **Corn**

There are two main users of corn in Turkey: the feed industry and the corn starch industry. Corn consumption moves in line with developments in the domestic feed sector. Despite the recent problems, the Turkish poultry sector has tripled in the past ten years. Corn consumption estimation was 6.55 MMT in MY 2015/16, due to decreasing demand from feed sector. The demand was possibly affected by the availability of cheap feed wheat after a record harvest, availability of other corn products, and slowdown of poultry products export. Due to a high customs duty, corn imports are directly related to poultry exports because exporters can import corn with zero tariffs under the IPR. This export interruption adversely affected the usage for corn in the feed ratios. Corn consumption estimation is 6.95 MMT for MY2016/17.

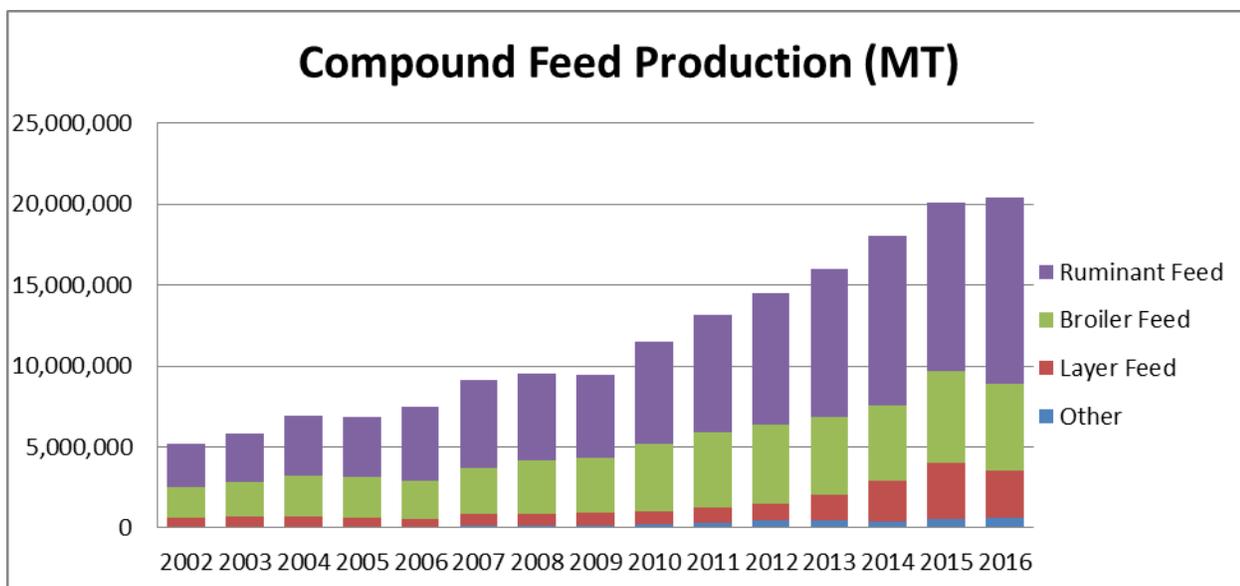
Corn consumption in Turkey in 2017/18 is forecast at 6.95 MMT, the same as the current marketing year, assuming both layer and broiler industries grow moderately in the coming years. For detailed information, please see [Turkey Oilseeds and Products Annual Report](#).

The corn starch industry is controlled by the government through quota allocations. There are six starch companies: three of them are in Adana, two of them are in the Marmara region, and one of them is in the Southeast of Turkey. The total production capacity of the corn starch industry is about 1.5 MMT. The sector uses 900,000 MT of domestic corn.

## **FEED SECTOR**

Turkey is undergoing rapid urbanization, and the rate of urbanization has reached about 80 percent, up from 65 percent in 2000. Although annual growth rate of the population is 1.3 percent, the annual growth rate of the urban population is 1.7 percent. This drives an increase in use of commercial feed as opposed to on-farm feeding. In addition to the movement of people from rural to urban areas at a rapid pace, rising household income has increased the demand for protein-based food in Turkey for many years. Due to the increasing the demand for livestock, poultry, and aquaculture products, the feed industry has been able to quadruple in size over the last 15 years.

### **Figure 3: Composition of Compound Feed Production in Turkey (2002-2016)**



Source: Tuyembir

According to government and industry sources, in 2016 there were 512 feed factories active in Turkey with more than 30 MMT/year production capacity in total. Feed sector has grown on average 10 percent annually since 2010, and now is the first time the growth rate is slowing. Total compound feed production is 20.4 MMT, up just one percent compared to a year ago, due to the decline in poultry feed production, as can be seen in Figure 3.

**Table 8: Compound Feed Production in Turkey by Sectors**

Feed Production	2011	2012	2013	2014	2015	2016 (% change 2015-2016)	
Broiler Feed	4,031,302	4,224,111	4,083,687	3,979,945	4,779,916	4,566,237	-4.5
Layer Feed	953,819	1,058,733	1,602,364	2,480,547	3,417,209	2,958,232	-13.4
Other Broiler Feed	596,270	670,851	684,622	671,766	911,962	784,802	-13.9
Broiler Sector Total	5,581,390	5,953,696	6,370,673	7,132,257	9,109,087	8,309,272	-8.8
Ruminant Feed	7,279,252	8,078,771	9,127,412	10,441,933	10,426,661	11,501,556	10.3
Other Feed	301,698	456,073	463,783	429,425	569,234	591,025	3.8
Total	13,162,340	14,488,539	15,961,867	18,003,616	20,104,983	20,401,852	1.5

Source: Tuyembir

Although in 2016 ruminant feed production increased to 11.5 MMT from 10.4 MMT, total poultry feed production decreased 8.8 percent to 8.30 MMT, from 9.1 MMT last year. Despite a slowdown in 2016, presently the Turkish feed industry is among the world's top twelve producers and in the top five in Europe. The sector is projected to grow in the coming years and reach 30 MMT by 2023.

The Turkish livestock sector has been up and down over the last several years along with local milk and meat price fluctuations. There has been lots of press on food prices and food inflation. The GOT has introduced many incentive programs to increase domestic livestock production and lower local red meat prices with limited success for years. Feed demand from the livestock sector has been increasing consistently during the last seven years. Ruminant feed production increased 11.5 MMT from 10.4 MMT, up 10 percent compared to the previous year.

The year 2016 has been very difficult for Turkey's grain market sector due to political, security, and economic instability. The Turkish Lira (TL) has declined considerably against the U.S. dollar and other currencies in recent years, thereby increasing the costs of imported goods. One U.S. dollar bought 2.34 TL on January 1, 2015, 3.50 TL on January 1, 2017, and is now over 3.60 in March 2017. The volatility affects investments as well as imports. Currency fluctuations have caused serious financial issues, especially in the feed sector where companies import raw materials for feed in U.S. dollars, which they then sell to the sector in Turkish Lira in credit sales. As a result of this, many companies have lost money because of the fluctuation in exchange rates and some poultry companies were acquired by other investors. According to industry sources, Turkish broiler meat production declined about 1.6 percent in 2016 to 1.9 MMT. Despite increased domestic consumption due to population increases, including a large number of Syrian refugees, a decline in exports was the main reason for the last year's lower performance.

**Table 9: Broiler Meat Exports**

<b>QUANTITY OF BROILER MEAT EXPORTED</b>					
Partner Country	Quantity			% Share	% Change
	2014	2015	2016	2016	2016/2015
Iraq	214,232	167,316	165,379	51.83	- 1.16
Hong Kong	44,458	38,190	30,194	9.46	- 20.94
Vietnam	204	2,503	19,787	6.20	690.48
Tajikistan	20,186	17,738	15,672	4.91	- 11.65
Syria	19,386	17,287	12,441	3.90	- 28.04
Libya	11,547	15,983	10,953	3.43	- 31.47
United Arab Emirates	3,210	8,112	10,029	3.14	23.63
Russia	19,945	21,515	0	0.00	- 100.00
Other	71,344	49,479	54,635	17.0	10.0
Total	404,512	338,123	319,090	100.00	- 5.63

Source: GTA

Turkey exported about 16 percent of its broiler production, mostly to neighboring countries. Main destinations were Iraq (165,379 MT), Hong Kong (30,184 MT), Tajikistan (15,672 MT) and Syria (12,441 MT) in 2016. The main market lost in 2016 was Russia, to which Turkey had exported 21,515 MT of boiler meat last year. Turkey's exports dropped to Syria, Libya, and Hong Kong compared to the previous year. Exporters are continuing to struggle with difficulties in logistics due to instability in the border areas of Syria and Iraq. In 2017, however, Turkish broiler meat exports stand a better chance at

the export markets since other exporters to the region had avian influenza cases and so far Turkey has not had any.

Egg production in modern farms has doubled in the last ten years, as a result of increases in both domestic consumption and exports. Although It declined to 17.2 billion pieces (eggs) due to interruption in exports in 2015, total production reached 18.5 billion pieces in 2016. With increasing domestic demand and dynamic export capacity, it is projected to continue to grow in the coming years.

Turkey continues to export about twenty-five percent of its egg and broiler production mostly to neighboring countries. Domestic consumption of eggs was estimated to have increased to 200 pieces per person in 2016. The industry is continuing promotion programs to reach the European average consumption of 250 eggs per year.

**Table 10 : Turkey Egg Production and Export**

<b>Turkey: Egg Production and Export (million)</b>			
<b>YEAR</b>	<b>PRODUCTION</b>	<b>EXPORT</b>	<b>%</b>
2006	8,401	195	2.32
2010	13,980	2,143	15.33
2011	14,000	3,588	25.63
2012	15,677	4,080	26.03
2013	16,707	4,522	27.07
2014	17,600	4,649	26.40
2015	17,200	3,518	20.44
2016	18,500	4,659	24.90

Source: Egg Producers' Union

The GOT dropped the retail tax from 8 percent to 0 percent on feed in January 2016. However, DDGS and corn gluten meal were not included in this decision. The feed sector and farmers still struggled with feed high prices, which are up 20 percent compared to last year, mainly due to the devaluation of the Turkish Lira as the sector partially depends on imported raw materials.

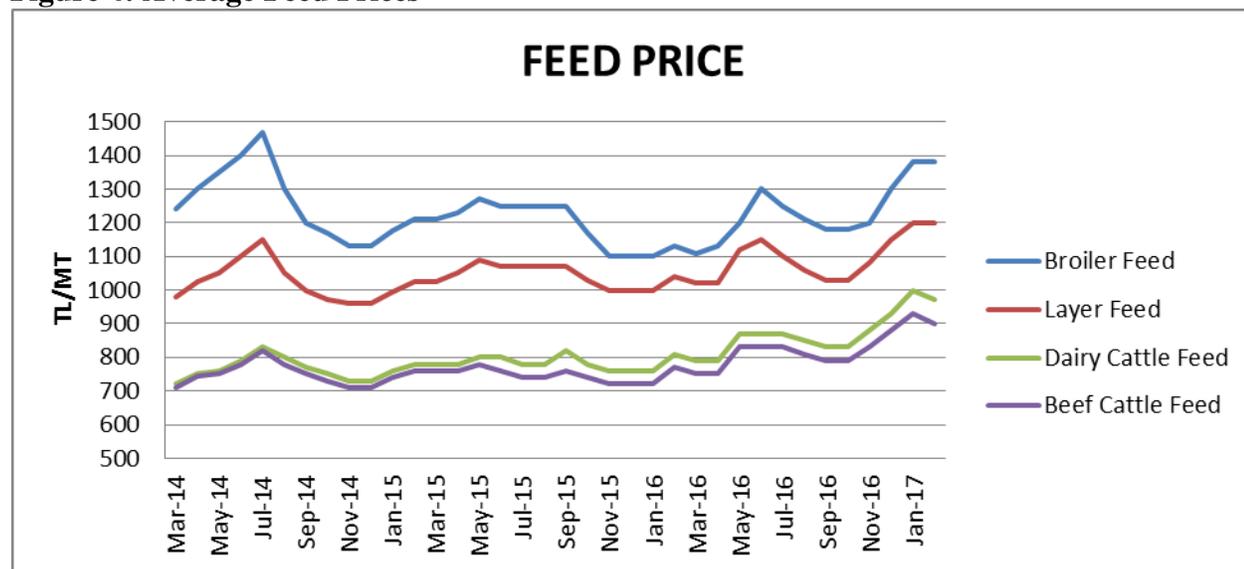
**Table 11: Feed prices in recent months**

<b>Turkey: Feed Price (TL/MT)</b>											
Type of Feed	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17
Broiler Feed	1130	1200	1300	1250	1210	1180	1180	1200	1300	1380	1380
Lay er Feed	1020	1120	1150	1100	1060	1030	1030	1080	1150	1200	1200
Dairy Cattle Feed	790	870	870	870	850	830	830	880	930	1000	970

Beef Cattle Feed	750	830	830	830	810	790	790	830	880	930	900
------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Source: Turkiyembir

**Figure 4: Average Feed Prices**



Source: Turkiyembir

Feed sector always seeks new alternatives for better rations. Commodities under HS code 23, such as meals and brans, are increasingly popular in the feed sector (See Table 15 below) due to high nutritional content, relatively low duty tax, and a competitive price in 2016. For instance, Turkey imported 1.3 MMT of wheat bran which is subject to only 5 percent tariff. Feed companies change their feed ratios to obtain the protein amounts needed in their feed products, and imported residues are becoming more popular as a substitute.

**Table 12: Imports of Wheat Bran to Turkey (USD and MT)**

Partner Country	2014		2015		2016	
	USD	Quantity	USD	Quantity	USD	Quantity
Russia	79,953,193	393,344	96,769,433	603,264	108,169,528	693,782
Ukraine	87,171,619	424,475	69,392,408	435,107	74,988,307	469,185
Other	29,765,433	153,632	20,727,772	135,733	28,595,150	185,951
World	196,890,245	971,451	186,889,613	1,174,104	211,752,985	1,348,918

Source: GTA

**Table 13: Imports of Residues and By-products from Food Industries to Turkey**

HS Commodity: 23, “Residues And Waste From The Food Industries; Prepared Animal Feed”			
Commodity	Description	Quantity (MT)	% Change

		2014	2015	2016	2015-16
2303	Residues Of Starch Mfr Or Sugar Mfr Or Brewing Etc	839,904	944,682	1,676,604	77
2302	Bran, Sharps Etc From Working Cereals & Leg Plants	1,080,841	1,291,415	1,516,107	17
2306	Oilcake Etc Nesoi, From Veg Fats & Oils Nesoi	945,170	950,507	921,336	-3
2304	Soybean Oilcake & Oth Solid Residue, Wh/Not Ground	615,550	417,203	664,401	59
2301	Flour, Meal Etc Of Meat Etc, Not For Human;	103,298	109,703	146,508	34
2309	Preparations Used In Animal Feeding	66,955	75,098	86,964	16
2308	Veg Material, Waste Etc For Feeding Animals Nesoi	125,284	30,373	32,961	9
HS 23 (total)	Food Industry Residues & Waste; Prep Animal Feed	3,777,002	3,818,982	5,047,101	32

Source: GTA

## Rice

The Government of Turkey (GOT) continues to support rice production with production premium programs. According to 2016 production bonus announcements, the paddy rice premium remained at 100 TL/MT (\$28/MT). The GOT is also continuing to provide different benefits to farmers under the umbrella of certified seed, soil analysis, diesel and fertilizer supports which total 190 TL per hectare. These are given to the farmers a year after the harvest.

Rice consumption in Turkey in 2017/18 is forecast at 780,000 tons, and remains the same as the 2016/17 estimate. The sector is very concerned about losses resulting from the decline in the tourism sector. The 30 percent decrease in tourist numbers in 2016 was a major issue, and there continues to be lower than usual demand from the retail and food service sector. According to booking and reservation numbers, expectations are low for the coming year. It is expected that currently the decrease in consumption by foreign visitors will be compensated for by the refugees.

In Turkish cuisine, rice is irreplaceable for making pilaf, one of the most common dishes in Turkey. Turkish consumers prefer the well-known medium grain varieties of Baldo, Osmancik, and Calrose. According to market sources, when Turkish consumers read the names of these varieties on package, they confidently buy it. As mentioned earlier, farmers are taking advantage of opportunities to increase yields, and have begun trying different varieties. Despite similar shapes of grain, the new varieties have different cooking and flavor characteristics. According to market sources, some farmers faced marketing issues with new varieties due to the fact that they have not gained recognition yet by the public.

Other ongoing issue for consumers is blended imported rice. Some rice companies have been blending Indian rice with domestic varieties to have better prices, but this creates some consistency and quality problems. Additionally in the past year, some companies who struggled to sell less known domestically

produced varieties tried to label them as Osmancik. These companies faced fines and were penalized for misrepresenting their products to consumers.

## **TRADE**

The GOT applies high tariffs on grains to protect the domestic market. Despite considerable price differences between domestic and international prices, there is an open door for exporters of value added products to import inputs tariff free. A number of Turkish agricultural exports benefit from Turkey's Inward Processing Regime (IPR) policy.

As has been seen in media, the GOT has banned wheat imports from Russia in the scope of Turkey's IPR since March 15, 2017. Import restrictions under IPR also cover Russian corn, sunflower seed oil, sunflower meal, rice, and peas. Despite the fact that there has not been an official announcement or statement from Turkish officials on this de-facto import ban, there are articles every day in the media regarding it and its potential effects. The main sector affected by the import ban from Russia is the wheat flour sector. Russia is the largest supplier of milling wheat for Turkey. Turkish flour exporters have been benefiting from competitive prices of high quality Russian wheat for years. Despite strong demand from neighboring countries, according to market sources, if this ban remains in place during MY 2017/18, without duty free Russian wheat imports, Turkish flour exporters will likely lose some market share in African and South East Asian countries.

### *Wheat*

According to official figures, during the first eight months of MY 2016/17, total wheat imports were 2.7 MMT. For MY 2016/17, wheat imports into Turkey are expected to reach 4 MMT. Russia is the main supplier of milling wheat to Turkey with 1.7 MMT in MY 2016/17 so far. Mexico supplied 315,000 MT of durum wheat during the same period. According to importers, they can still import wheat from Russia if the bill of lading date was arranged in March. But despite that, some of them are now cancelling their wheat and corn orders from Russia for April due to uncertainty if they will really be allowed under the scope of the IPR.

Post revised the import forecast to 4 MMT of wheat in marketing year 2016/17 due to unstable currency, TMO's strong sales, and a reduced tendency by the private sector to want to grow their stocks in an uncertain economic environment. For MY 2017/18, wheat imports into Turkey are forecast at 4.5 MMT due to ongoing demand for high quality wheat from flour and pasta exporters.

For MY 2016/17, wheat exports (including wheat products, such as flour) from Turkey are revised at 6 MMT from 5.8 MMT, due to strong sales into neighboring countries in the first 8 months of the marketing year. For MY 2017/18, wheat exports from Turkey are forecast at 5 MMT, down 1 MMT from 2016/17, due to possible impacts of import issues from Russia. This is assuming they cannot import Russian wheat under the IPR during the upcoming MY 2017/18.

Turkey has ranked as the top wheat flour exporter in the world in recent years. They have access to comparably cheap wheat from the Black Sea region and a strategic location, where Turkey acts as a hub for trade with neighboring countries. Turkish flour exports have surged, reaching almost \$1 billion in 2014 and surpassing two million metric tons, making Turkey the world's largest exporter of flour with more than 100 destinations in the world.

**Table 14: Turkish Wheat Imports (Origin)**

Countries	MY2013/14	MY2014/15	MY2015/16	MY2016/17*
Russia	3,043,815	4,022,474	2,875,740	1,732,303
Mexico	175,135	302,630	117,043	315,734
Canada	104,224	88,104	168,046	121,841
Ukraine	128,478	246,934	150,768	22,386
Other	677,581	1,122,408	714,269	584,572
<i>Total</i>	<i>4,129,233</i>	<i>5,782,550</i>	<i>4,025,866</i>	<i>2,776,836*</i>

\* June 2016-January 2017

**Table 15: Wheat foreign trade data in MY 2015/16 and MY 2016/17**

TURKEY: WHEAT FOREIGN TRADE (excluding wheat products)				
MONTH	IMPORT	IMPORT	EXPORT	EXPORT
	MY 2015/16	MY 2016/17	MY 2015/16	MY 2016/17
	(MT)	(MT)	(MT)	(MT)
June	302,496	220,390	262	2
July	185,961	284,952	613	3,837
August	231,635	487,917	18,635	7,310
September	335,788	423,165	7,003	8,850
October	419,601	391,201	12,718	6,563
November	456,126	356,392	12,657	1,548
December	399,138	366,647	600	2,817
January	210,993	246,172	0	461
<i>Sub-total (June-Dec.)</i>	<i>2,541,738</i>	<i>2,776,836</i>	<i>52,488</i>	<i>31,388</i>
February	380,783		1,561	
March	407,724		755	
April	411,928		13	
May	283,693		385	
<b>MY TOTAL</b>	<b>4,025,866</b>	<b>4,000,000*</b>	<b>55,202</b>	<b>35,000*</b>

\*forecast

Source: Turkish Statistics Institute, does not include transshipments

The GOT applies a 130 percent tariff on wheat to protect the domestic market. Despite considerable price differences between domestic and international price, there is an open door for flour (and other wheat products) exporters to import tariff-free wheat. A number of Turkish agricultural exports benefit from Turkey's Inward Processing Regime (IPR) policy. The IPR has made it possible for Turkish wheat products, for example, to better compete internationally despite high, protected domestic prices. Flour exporters, as well pasta and biscuits exporters, gain import certificates which allow them to import wheat with zero tariff in order to produce and export flour. Almost all wheat imports in MY2016/17 have been done under the scope of the IPR with zero tariffs by wheat product exporters.

The other advantage for wheat flour exporters is that the by-products of wheat are very valuable in the domestic market. For instance wheat bran is 690 TL/Ton (\$190 per ton) in domestic market as of March 2017, though it is only \$135 in international market. High wheat bran prices in Turkish domestic market due to high demand from feed sector, contributes to the flour exporters' global competitiveness.

Turkish Grain Board (TMO) was very active with their more than 2.5 MMT of wheat stocks in MY2016/17. TMO has been selling the wheat which they hold in stocks to import certificate holders who are flour, pasta, and cookies exporters under IPR since fall. Also TMO opened two tenders in early 2017 for 230,000 MT of wheat in order to supply high quality wheat to domestic market. The wheat was bought under a zero tariff quota sourced from European Union.

Turkey exported 5.5 MMT of wheat products in MY2015/16. For MY 2016/17, it is expected that Turkey will use 6 MMT of wheat for exported flour and wheat products, up 10% from the 2015/16 estimate. New markets in Africa and strong demand from neighboring countries have been the driving force of exports.

**Table 16: Turkish Wheat Flour Exports**

Quantity of Wheat Flour Exports				
MONTH	MY 2014/15	MY 2015/16	MY 2016/17*	% Changes
June	153,575	207,531	243,802	17%
July	158,564	223,666	240,754	8%
August	207,893	267,742	387,856	45%
September	194,012	222,689	304,400	37%
October	189,591	368,382	336,965	-9%
November	197,963	287,158	289,779	1%
December	170,794	243,203	292,410	20%
January	147,508	248,009	288,763	16%
<i>Sub-total (June-Jan.)</i>	<i>1,419,900</i>	<i>2,068,380</i>	<i>2,384,729</i>	<i>15%</i>
February	150,421	349,590		
March	205,254	288,604		
April	218,048	249,111		
May	254,914	302,688		
<i>Total</i>	<i>2,248,537</i>	<i>3,258,373</i>	<i>3,500,000**</i>	

\* June 2016-January 2017

\*\*Forecast

In MY 2015/16, Iraq (840,000 MT), Sudan (320,000 MT), Syria (180,000 MT) and Angola (120,000 MT) are the main consumers of Turkish wheat flour. Neighboring countries are still the largest market with 50 percent market share. In the first eight months of MY 2016/17, Turkey exported 2.4 MMT of flour. Some exporters complain about competition among Turkish exporters for newly entered markets that caused smaller profits despite higher revenue. While the average unit value of exported wheat flour

in MY 2014/15 was \$401.2 per ton, it decreased to \$322.6 per ton in MY 2015/16. It is about \$300 per ton in MY 2016/17, which is related with input costs as well as profit of the sector.

**Table 17: Wheat Flour Export Markets**

Major Wheat Flour Markets of Turkey					
Partner Country	Quantity (MT flour)			% Share	Quantity
	MY2013/14	MY2014/15	MY2015/16	MY2015/16	MY2016/17*
Iraq	1,039,084	1,017,660	1,313,700	40%	968,634
Syria	275,229	226,237	280,637	9%	286,271
Sudan	51,723	219,609	593,351	18%	292,923
Other	991,826	785,031	1,070,685	33%	836,901
TOTAL	2,357,862	2,248,537	3,258,373	100%	2,384,729

\*June 2016-January 2017

Wheat flour and pasta exporters to Iraq and Syria are located in Southern Turkey in the cities of Gaziantep and Mardin, and they are able to transport products by truck. They also have the advantage of being near the domestic supply of wheat from Southeast Anatolia. Trade with these neighboring countries is very much dependent on personal relationships. There is no banking system established for electronic money transactions and most money transfers occur through currency exchange offices and involve high risks. Turkish exporters also face such risks while trading with some African countries.

After flour, pasta production is an important industry in Turkey's wheat products sector. Pasta exporters have been expanding their markets in Africa with the help of a new amendment in 2015 to the IPR. The amendment allows imports of milling wheat up to 30 percent if producers blend milling wheat and durum wheat in order to produce pasta for the African market. They can only sell 100% durum wheat pasta in Turkey.

**Table 18: Quantity of Pasta Exports from Turkey (MT of pasta)**

Quantity of Pasta Exports			
MONTH	MY 2014/15 (MT)	MY 2015/16 (MT)	MY 2016/17 (MT)
June	61,329	63,439	83,946
July	59,198	56,270	61,896
August	55,824	52,115	83,085
September	64,786	51,070	70,984
October	55,987	60,505	69,223
November	53,802	61,965	68,877
December	57,706	71,430	63,929

January	49,191	56,358	74,649
<i>Sub, Total Jun-Jan</i>	<i>457,823</i>	<i>473,152</i>	<i>576,589</i>
February	46,568	62,332	
March	51,692	77,173	
April	53,576	67,556	
May	54,284	66,203	
<b>MY TOTAL</b>	<b>663,943</b>	<b>746,416</b>	<b>850,000*</b>

\*forecast

In MY 2016/17, Benin (73,000 MT), Angola (69,000 MT) and Somalia (40,000 MT) are the main consumers of Turkish pasta. The exporters are continuing to increase exports to markets in Africa.

**Table 19: Quantity of Pasta Exported in MY 2014/15, 2015/16 and 2016/17**

<b>Quantity of Turkish Pasta Exported by Destination Counties (MT)</b>			
Countries	MY 2014/15	MY 2015/16	MY 2016/17* (partial year)
Benin	72,928	88,589	72,879
Angola	71,663	73,879	68,940
Somalia	22,225	62,648	40,528
Iraq	57,672	52,246	35,352
Japan	28,709	44,974	32,886
Togo	37,287	41,822	27,910
Ghana	7,155	22,634	16,093
Other	366,304	359,624	282,001
<b>Total</b>	<b>663,943</b>	<b>746,416</b>	<b>576,589</b>

\*June 2016-January 2017

According to official figures, Turkish pasta export increased to 746,416 MT in MY 2015/16, up about 12 percent compared to MY2014/15. Turkey is forecast to export 750,000 MT of pasta in MY 2016/17.

**Table 20: Total pasta foreign trade**

<b>Pasta Foreign Trade Data</b>				
YEAR	IMPORTS (\$1000)	IMPORTS (MT)	EXPORTS (\$1000)	EXPORTS (MT)
MY2013/14	11,642	4,519	510,457	726,455
MY2014/15	11,866	4,635	453,004	663,943
MY2015/16	8,717	3,881	421,031	746,416
MY2016/17*	4,291	2,165	281,803	576,589

\*June 2016-January 2017

Semolina exports followed the same pattern as pasta exports in MY 2015/16. Unit prices decreased, seen below where although imports decreased by value, quantity remained consistent. During the seven months of MY 2016/17, Turkey exported 20,802 MT of semolina.

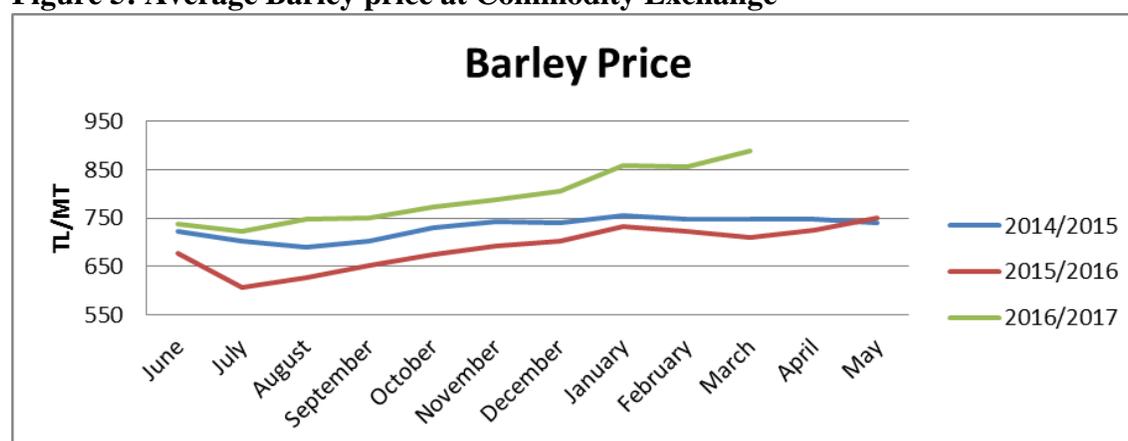
**Table 21: Semolina Exports from Turkey**

Turkish Semolina Exports by Destination Counties						
Countries	2013/14		2014/15		2015/16	
	USD	Quantity	USD	Quantity	USD	Quantity
Saudi Arabia	3,879,732	6,989	3,463,003	6,111	4,329,795	9,574
United States	1,299,944	1,608	8,590,271	9,690	3,446,687	3,808
Senegal	268,049	529	3,695,185	6,799	2,446,186	5,219
Tanzania	0	0	0	0	2,241,199	5,282
Yemen	194,780	420	150,799	271	1,461,730	3,370
Kuwait	829,312	1,561	887,965	1,596	687,829	1,524
Other	7,230,564	12,847	7,662,116	13,202	4,616,864	8,866
Total	13,702,381	23,954	24,449,339	37,669	19,230,290	37,643

### Barley

For MY 2017/18, barley imports into Turkey are forecast at 200,000 MT due to limited domestic supply and high demand from the feed sector. After a tough year, the barley price increased in MY 2016/17. The barley price at the Polatli CME in March was 900 TL/MT (\$245) which was around 700 TL/MT (\$250) a year before. The price of imported barley in March 2017 was CIF Marmara \$190/MT. As seen in the figure, barley prices have been increasing in recent months.

**Figure 5: Average Barley price at Commodity Exchange**



Source: Price average from multiple commodity exchanges in Turkey

Despite a lack of barley stocks, the private sector has hesitated to import barley due to an uncertain economic environment in MY 2016/17. Although TMO did not procure barley in the current marketing year, it started to sell its stocks to the domestic market after autumn 2016 at prices between 700 TL/MT and 760 TL/MT. TMO continues to sell barley to feed producers and feeders at 775 TL/MT in 2017. Its stocks are at about 40,000 MT. TMO received authorization to import 100,000 MT of barley at zero

customs duty through a Cabinet of Ministers Decision published in the Official Gazette on March 10, 2017. TMO quickly completed the barley import tender which was held on March 23, 2017. The average tender price was 700 TL/MT (roughly US\$195/MT) and origins were from EU and Ukraine. Once it arrives, TMO plans to sell this imported barley to the feed sector until the new harvest.

**Table 22: Turkey Barley Trade**

TURKEY: BARLEY FOREIGN TRADE				
MONTH	IMPORT MY2015/16	IMPORT MY2016/17	EXPORT MY2015/16	EXPORT MY2016/17
June	500	3	0	0
July	0	0	0	0
August	0	4,234	0	0
September	0	0	27	0
October	63	53	25	784
November	42	18	25	4615
December	5,500	35	50	174
January	0	14,314	0	8422
<i>Sub, Total June-Jan</i>	<i>763</i>	<i>18,657</i>	<i>127</i>	<i>13,995</i>
February	13,510		0	
March	15,975		0	
April	3,000		0	
May	3,165		0	
MY TOTAL	41,755	200,000*		25,000*

\* *Forecast*

*Source: Turkish Statistics Institute, does not reflect transshipments*

So far, barley import was very limited in MY 2016/17. In the first seven months of MY 2016/17, Denmark (10,234 MT) and France (8,314 MT) were the barley suppliers for Turkey. Turkey also exported about 14,000 MT of barley to the “Turkish Republic of Northern Cyprus”.

## **Corn**

Total corn imports during MY 2015/16 were 567,000 MT, which were very limited compared to the previous year. Record domestic corn harvest, governmental restrictions on imports, TMO’s sales, abundant feed wheat and a decrease in poultry product exports were the main reasons for import shrinkage.

Post revised the import forecast to 1 MMT of corn in marketing year 2016/17 due to unstable currency, TMO’s strong sales, unstable feed sector demand and a reduced tendency by the private sector to want to grow their stocks in an uncertain economic environment. Turkey may face a corn shortage in the last quarter of the marketing year. It is expected that the private sector will meet its corn needs by sourcing from TMO’s large stocks instead of importing, at least until those stocks are gone.

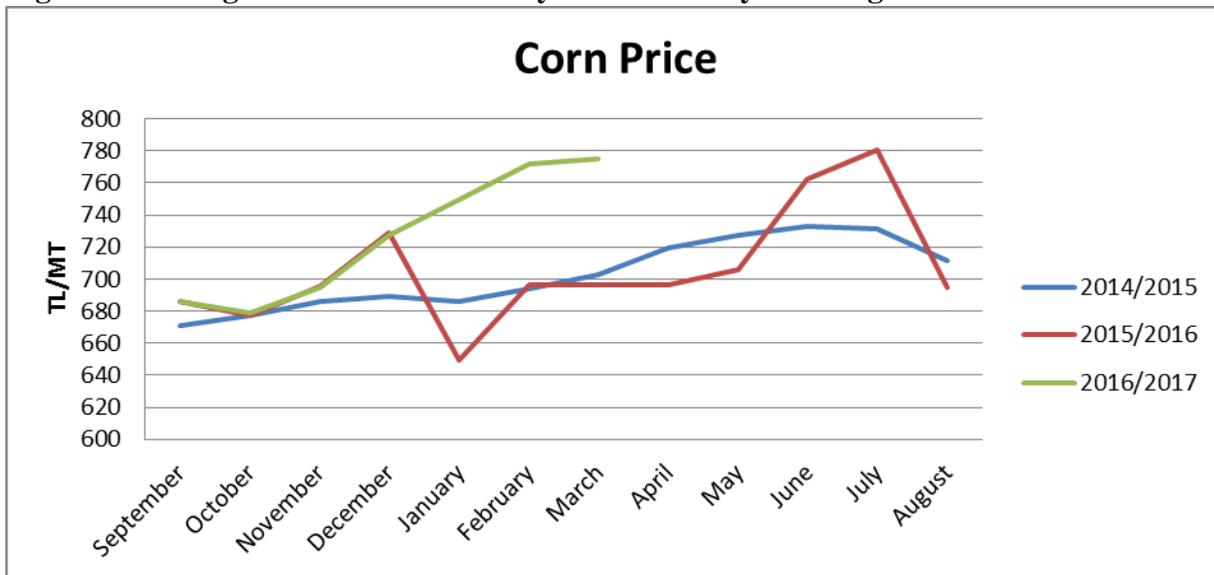
For MY 2017/18, corn imports into Turkey are forecast at 1.5 MMT due to insufficient domestic supply and moderate demand from the feed and starch sector.

The private sector was reluctant to buy corn after the harvest so TMO procured 1.7 MMT of corn in MY 2016/17 and now has very large corn stocks. TMO announced 2016 corn procurement price on August 26, 2016 at 740 TL/MT (\$245/MT). Corn price was about 710-720 TL/MT just before TMO’s announcement in the domestic market. TMO’s selling price was 760-785 TL/MT for domestic market in MY2016/17. After harvest, TMO also sold corn to the import certificate holders who are starch, feed, and poultry exporters in the scope of the IPR. Because of that, corn imports are very limited so far.

Ending stock forecast is at 312,000 MT of corn in MY 2016/17 as TMO is trying to melt down its stocks. The private sector is reluctant to tie up too much in stocks, especially with the unstable currency situation, when TMO will likely be the low cost supplier for the near future.

The Adana CME is the main commodity market exchange for corn in Turkey. Due to tight supply in market, domestic price is going up. Corn price on the Adana CME is about 750 TL/MT (US\$210/MT) in March, 2016 which was 700 TL/MT (US\$250 /MT) a year ago.

**Figure 6: Average Corn Price in Turkey at Commodity Exchange**



Source: Price average from multiple commodity exchanges in Turkey

Transshipments were very active in MY 2015/16. According to market sources, 700,000 MT of corn were transferred to neighboring countries and United States from bonded warehouses in Mersin and Iskenderun. In the first five months of MY2016/17, about 200,000 MT of corn transshipped through Turkey to neighboring countries and United States.

According to official statistics, total corn imports during first months of MY 2016/17 were just 76,000 MT, which were very limited compared to the previous years. As mentioned above, an uncertain economic environment, availability of other corn products and TMO’s strong sales for exporters are main reasons.

**Table 23: Corn foreign trade of Turkey by Month (MT)**

MONTH	IMPORT MY2015/16	IMPORT MY2016/17	EXPORT MY2015/16	EXPORT MY2016/17
September	0	46	18,953	1,972
October	0	540	18,253	13,928
November	10,850	5,829	4,911	2,420
December	49,226	21,219	2,875	3,454
January	66,625	48,353	4,899	17,571
<i>Sub Total Sep-Jan</i>	<i>126,701</i>	<i>75,987</i>	<i>49,891</i>	<i>39,345</i>
February	81,273		6,263	
March	137,621		2,821	
April	120,147		1,667	
May	47,729		3,245	
June	28,727		2,008	
July	17,628		593	
August	7,407		866	
MY TOTAL	567,233	1,000,000*	66,729	*100,000

\*Forecast

Source: Turkish Statistical Institute

Note this chart does not include transshipments through Turkey. It includes corn for seed.

Russia (400,000 MT), Romania (93,500 MT) and Bosnia (33,101 MT) were the largest corn suppliers for Turkey in MY2015/16. As of January 2017, Turkey imported 76,000 MT of corn in MY 2016/17. Russia (47,000 MT) is still the largest supplier with the advantage of low freight cost.

According to Turkish Statistical Institute, From September 2016 to January 2017, Turkey exported 39,345 MT of corn, including as seeds. Main destinations were United States (18,352 MT) and Iraq (12,470 MT). According to market sources, 300,000 MT of corn transshipped to United States through Turkey from Black Sea Region in 2015/16 and 150,000 MT of corn were transshipped to United States through Turkey in the first five months of 2016/17.

**Table 24: Turkey Corn Imports by Country (MT)**

Turkey: Corn Imports, Year Ending: August			
Partner Country	Quantity MT		
	MY2014/15	MY2015/16	MY2016/17*
Russia	1,059,158	402,190	74,146
Romania	286,311	93,506	39,576
Bosnia & Herzegovina	73,598	33,101	3,035
United States	5,065	72	0

Total	1,894,878	567,233	75,987
-------	-----------	---------	--------

\*September 2016-January 2017

**Table 25: Turkey Corn Exports (includes seed corn)**

<b>Turkey: Corn Exports, Year Ending: August</b>			
Partner Country	Quantity MT		
	MY2014/15	MY2015/16	MY2016/17*
United States	22,969	1,102	18,352
Iraq	3,568	44,540	12,470
Germany	2,576	2,817	2,330
Italy	5,333	2,261	1,183
Total	46,382	66,729	39,345

\*September 2016-January 2017

The certified seed sector is very dynamic in Turkey with the help of climatic and labor force advantages. Domestic seed producers have contracts with international seed technology companies and produce seed in Turkey. Turkey exported 13,779 MT of corn seed in MY 2015/16 with EU countries being the main destination. For additional information on Turkey's seed sector, see the [Turkey Planting Seeds Sector Overview Report](#).

**Table 26: Turkey Corn Seed Exports**

Commodity: 100510, Corn (Maize) Seed, Certified, Excluding Sweet Corn			
Partner Country	Quantity		
	2011/14	MY2014/15	MY2015/16
France	4,383	2,166	4,232
Germany	1,598	2,434	2,485
Italy	6,196	5,333	2,260
Iran	168	1,084	958
Hungary	338	384	628
Other	3,950	3,304	3,216
Total	16,633	14,705	13,779

**Table 27: Total Corn Foreign Trade**

<b>Turkey: Corn Foreign Trade Data</b>				
YEAR	IMPORTS (\$1000)	IMPORTS (MT)	EXPORTS (\$1000)	EXPORTS (MT)
MY2014/15	427,435	1,894,878	52,315	46,382
MY2015/16	133,518	567,233	49,654	66,729
MY2016/17*	21,482	75,987	24,066	39,345

\*September 2015-January 2016; Source: Turkish Statistical Institute; Note this chart does not include transshipments through Turkey. It includes corn for seed purposes.

## Rice

For MY 2017/18, rice imports into Turkey are forecast at 310,000 MT, milled equivalent, up 3 percent compared to the previous year, assuming insufficient domestic supply and possible continuation of exports to regional markets.

In the first five months of MY 2016/17, Turkey imported about 90,000 MT of rice. It is forecast for MY 2016/17, rice imports into Turkey will be at 300,000 tons, milled equivalent.

Insufficient domestic supply and exports are the driving force of rice imports. However, there seems to be a reduced tendency by the private sector to want to grow their stocks in the current uncertain economic environment in Turkey. Tariff for paddy rice (HS 100610) is 34 percent and rice (HS 100630) is 45 percent. The GOT encourages importing paddy rice to support domestic paddy millers.

In the first five months of MY 2016/17, Turkey exported about 19,000 MT of rice. Post revised rice export forecast to 75,000 MT in MY 2016/17, due to increased demand from neighboring and African countries. Most of the paddy rice (rice in the husk) imports are done with zero tariff under the inward processing regime (IPR) for export purposes. This IPR process for the paddy rice sector is similar to one used in the wheat sector. Rice exporters gain import certificates, which allow them to import paddy rice with zero tariff in order to produce rice for exports. The main target is to allow Turkey to become the rice miller for the region. Paddy millers are concentrated in the Mersin region where they are closer to Middle Eastern countries. They import paddy rice, mill it, and export it to Middle East and North African countries. According to market sources, 25 percent of the paddy rice imports are done under the IPR for export purposes.

Calrose variety rice is the favorite among Turkish consumers. Turkey imported more than 46,000 MT of paddy rice from United States in MY2015/16, milled equivalent. Paddy rice imported from America is generally used in domestic market due to its high quality and consumer preference. In the first five months of 2016/17, Turkey imported 33,300 MT of rice. According to export sales reporting it will exceed 60,000 MT in the coming months, milled equivalent. The CIF price of Calrose variety paddy rice is \$307/MT, which down 25 percent compared to last year. Paddy rice has a 34 percent tariff.

**Table 28: Rice import; classified by process**

Rice import; classified by process, MT								
	MY 2015/16				MY 2016/17*			
Country	Rice in the Husk	Husked rice (Brown )	Semi-Wholly milled rice	Milled Basis	Rice in the Husk	Husked rice (Brown )	Semi-Wholly milled rice	Milled Basis
U.S	71,698	0	49	50,238	46,860	0	581	33,383

Russia	67,431	0	0	47,202	28,923	0	0	20,246
Portugal	10,401	0	177	184	6,014	0	0	4,210
India	0	0	20,648	20,648	0	0	9,692	9,692
Thailand	0	0	1,846	1,846	0	0	917	917
Brazil	26,343	0	0	18,440	0	0	0	0
Pakistan	0	0	5,636	5,636	0	0	1,638	1,638
Greece	509	2,128	14,939	17,168	0	0	4,182	4,182
Italy	0	0	23,636	23,636	0	0	6,991	6,991
Bulgaria	13,271	9,900	1,837	19,839	272	7,310	0	6,623
Others	14,425	271	5,456	15,792	0	13	1,969	1,980
Total	193,687	12,299	72,387	218,791	82,069	7,323	25,970	89,862

\*September 2015-January 2016

Source: Turkish Statistical Institute

**Table 29: Turkish Milled Rice Foreign Trade (hs: 1006)**

<b>Major Suppliers of Turkey*</b>				
	MY2012/13	MY2013/14	MY2014/15	MY2015/16
United States	64,482	132,961	71,820	50,238
Russia	49,219	27,936	74,538	47,202
Greece	6,285	4,331	17,503	23,636
India	20,596	66,800	61,240	20,648
Italy	41,237	24,692	33,829	10,234
Other	53,319	86,679	58,051	66,833
Total	235,138	343,399	316,981	218,791

\* Statistics are converted to milled equivalent using the factor of 0.7 for paddy rice (100610) and 0.88 for brown rice (100620)

Turkey generally imports paddy rice from United States. Importers are still concerned about the risk of possible rejection from genetically engineered products (of corn or soy dust of GE traits not approved for use in Turkey, which even at unavoidable low levels can cause the shipment to be rejected). Another issue which has impacted imports of United States rice in the past and remains a concern for importers is the white tip nematode on Turkey's pest list. Though this pest is endemic in Turkey, GOT rejects consignments where this pest is present, and they are not allowing mitigation methods.

Turkey imported 218,791 MT of rice in MY 2015/16, milled equivalent. United States (50,000 MT), Russia (47,000 MT), Italy (23,000 MT) and India (20,000 MT) were the main suppliers and continue to be the main rice suppliers for Turkey in MY 2016/17. The most imported rice varieties were medium grain ones. Also some lower price long grain varieties were imported for low income consumers. The

quality of imported rice differs dramatically according to origin and retail prices reflect these differences, some varieties being triple the price of other varieties or origins.

**Table 30: Turkish Milled Rice Foreign Trade (hs: 1006)**

TURKEY: RICE FOREIGN TRADE*				
MONTH	IMPORT MY2015/16	IMPORT MY2016/17	EXPORT MY2015/16	EXPORT MY2016/17
	(MT)	(MT)	(MT)	(MT)
September	23,731	13,286	1,906	3,304
October	11,273	18,672	1,885	3,912
November	9,300	17,024	1,760	4,314
December	17,406	23,968	1,837	3,355
January	19,287	16,911	715	4,118
<i>Sub, Total Sep-Jan</i>	80,996	89,862	8,101	19,001
February	15,436		2,514	
March	22,117		9,825	
April	19,539		8,217	
May	24,025		7,251	
June	25,506		4,484	
July	15,423		4,189	
August	15,749		5,162	
<b>MY TOTAL</b>	218,791	300,000**	49,744	75,000**

\* Statistics are converted to milled equivalent using the factor of 0.7 for paddy rice (100610) and 0.88 for brown rice (100620)

\*\* Forecast

Middle East and Africa countries are the most important markets for Turkish rice millers. Exports to Iraq reached 19,663 MT in MY 2015/16, (were only 6,731 in MY 2014/15) and 2,588 MT in MY 2016/17 (from September - January). Libya (4,818 MT) and Sudan (2,075 MT) are other popular markets for exporters in MY2016/17 so far. Rice exports in MY 2015/16 were 50,000 MT and are forecast at 75,000 MT in MY 2016/17.

According to exporter reports, transshipments to Middle East and North African countries are estimated about 200,000 MT in MY 2016/17. Transshipments typically go through Mersin region and the bonded warehouses in Mersin, as well as Iskenderun Port. Mersin is also a hub for humanitarian aid going to the Middle East. Turkish media has also reported some smuggling events at the Iraq border as in previous years.

**Table 31: Turkey: Rice Exports (MT)**

Turkey: Rice Exports(MT)		
Countries	MY 2015/16	MY 2016/17*
Iraq	19,663	2,588
Libya	3,752	4,818

Sudan	1,715	2,075
Syria	7,453	1,293
Italy	1,392	936
Belgium	4,033	215
FTZ-Mersin	2,829	455
Other	8,907	727
Total	49,744	13,107*

\*September 2016-January 2017

## Stocks

### Wheat

Post revised stock number is now at 748,000 MT due to low import expectations in 2016/17. In 2017/18, stocks are forecast at 648,000 MT, remaining in line with the year before, assuming the uncertain economic environment continues to discourage stocking.

### Barley

TMO completed the 100,000 MT barley import tender which was held on March 23, 2017 in order to sell to feed companies until the new harvest. TMO and the private sector have approximately 386,000 MT of stocks of barley as they enter the new harvest. In 2017/18, stocks are forecast at 366,000 MT, remaining similar with the year before, assuming TMO will be an active player and the low stocking tendency of the private sector continues.

### Corn

Post revised stocks are at 312,000 MT due to low import expectations in 2016/17. In 2017/18, stocks are also forecast at 312,000 MT, remaining in line with the year before, assuming low stocking tendency is continuing due to uncertain economic environment.

TMO was very active in the corn market after the harvest. TMO procured about 1.7 MMT of corn at \$250/MT, which was about 25 percent of total production of Turkey in MY 2016/17. Since then, TMO has been dominating the market with its huge stocks. TMO has about 600,000 MT of corn as of March 2017, which probably will not meet the total demand from domestic market by the end of the marketing year. As mentioned earlier, Turkey may face a corn shortage in the last quarter of the marketing year, but the private sector will likely meet its corn needs by sourcing from TMO's stocks instead of importing, at least until those stocks are gone.

### Rice

In 2017/18, stocks are forecast to at 72,000 MT, similar with the prior year. Even processors and importers have hesitated to keep positions due to risk of currency. Post revised stocks down to 72,000 MT in MY 2016/17 due to an unexpected increase in exports.

**Table 32: Price by varieties in domestic market**

Paddy Rice Varieties	Bulk Price in domestic market, as of March 2017
Baldo	2400-2600 TL/Ton

Cammeo	2100-2200 TL/Ton
Osmancik	2100-2250 TL/Ton
Ronaldo	1700-1750 TL/Ton

TMO announced the procurement price at 1,675 TL/MT for Osmancik and 2,100 TL/MT for Baldo variety for 60 milling rate paddy rice. TMO procured about 77,000 MT of paddy rice in MY 2016/17, which was just 5,500 MT last year. TMO sells Osmancik milled rice variety for 3 TL/kg and Baldo variety at 4 TL/Kg in TMO retail stores. TMO has about 24,000 MT of rice, milled equivalent, in its stocks.

Paddy rice price differs by variety in Turkey. Despite the fact that some varieties have better yield and milling rates, prices are set according to consumer preferences. Paddy rice price increased around 15 percent compared to last year.

## Policy

Turkey will start to implement a new subsidy program for agricultural products in 2017, called the National Agriculture Project. The Project aims to diversify Turkey's agricultural production, increase productivity and reduce the planted area of water-intensive crops such as rice and corn in drought-prone areas. Within the new scheme, Turkey is divided into 941 agricultural basins based on climate and soil categories to subsidize specific crops for each zone. In total, 19 strategic crops, including wheat, barley, corn, rye, oats, triticale, paddy rice and forage crops will be subsidized. Only wheat and forage crops will be subsidized in each basin. MinFAL has announced they will encourage certified seed usage within the scope of the project and that producers who do not use certified seeds in 2018 will not benefit from government subsidies. The GOT also plans to subsidize half of farmers' diesel costs by 2018. According to the new budget, the GOT plans to grant 12.8 billion TL (\$3.5 billion) in agricultural subsidies to producers in 2017 including livestock, which is up 10.2 percent compared to 2016.

Licensed warehouse systems are developing in Turkey. The GOT has supported construction of some licensed warehouses since 2005. Turkey started the receipt warehouse system, which has existed in developed countries for a long time, after 2011 with the LIDAS facility, the first licensed warehouse company, which is a joint venture of TMO and The Union of Chambers and Commodity Exchanges (TOBB). Capacity of the LIDAS facility is 90,000 MT. Total storage capacity of the licensed warehouse system, along with the private sector, is currently 840,000 MT, which was doubled in a year. There are 19 active licensed warehouse operations and 30 new ones are authorized. The goal is to increase storage capacity to 5.4 MMT with new investments in the coming years. The GOT is still working on a well-functioning Licensed Warehousing, Warehouse Receipts System (WHR) transaction process for delivery on agricultural products and futures markets in Turkey with the help of commodity exchanges. Nine commodity exchanges are authorized for making transactions with product certificates by Turkish Ministry of Customs and Trade.

Market access problems as result of Turkey's 2010 biosafety law continue, which does not allow imports of commodities with genetically engineered varieties (events), including at an unavoidable low level presence, that have not been approved for use in Turkey. See FAS GAIN reports on Biotechnology for further information and detail on this policy issue.

The important updates on 2016 subsidies are that the fuel subsidy and fertilizer subsidy were merged into one payment, and the government abolished the soil analysis subsidy, which was previously granted to producers benefiting from the fertilizer subsidy. The GOT granted around 1.5 billion TL to farmers in scope of support for diesel, chemical fertilizer and soil analysis in 2016.

**Table 33: Grain support system Turkey: Grain Support System (TL/ha)**

Types of Support	2013	2014	2015	2016
Diesel Support	43	46	48.5	110
Chemical Fertilizer Support	55	60	66	
Soil Analysis support	25	25	25	

Despite the fact that production premiums have been the same during the last six years, there has been nearly 50 percent devaluation of the Turkish Lira against the dollar during the same period. The GOT paid about 3 billion TL for grain premiums in 2016.

**Table 34: Grain Premiums Turkey: Grain Premiums (TL/MT)**

Grain Premiums Turkey: Grain Premiums (TL/MT)						
Products	2011	2012	2013	2014	2015	2016
Wheat	50	50	50	50	50	50
Barley, Oats, Rye	50	50	50	50	50	50
Paddy Rice	100	100	100	100	100	100
Chick Peas, Lentils, Dry beans	100	100	100	100	200	300
Corn	40	40	40	40	40	20

The feed and livestock industries are concerned about high feed prices. Turkey's livestock sector has had a lot of new investment, including the import of live animals, which has increased the importance of access to forage crops. There is very limited pasture development and forage crop planting. The feed industry is dependent on soybean imports, corn by-products imports and bran from oilseed mills, wheat mills, and the cotton ginning industry.

**Table 35: Turkey Forage Crop Supports**

Forage crop supports (TL/ha)						
Products	2011	2012	2013	2014	2015	2016
Alfalfa (irrigated)	1300	1300	500	500	500	600
Trefoil	900	900	400	400	400	450
Silage corn	550	550	750	750	750	450

**Table 36: Grain Tariff Rate**

Turkey: Grain Tariff Rate
---------------------------

<b>Product group</b>	<b>Products</b>	<b>EU</b>	<b>Bosnia Herzeg.</b>	<b>S. Korea</b>	<b>Others incl US</b>	<b>Notes</b>
<b>Wheat</b>	Spelt, common wheat and meslin (excl. seed)	130	0	130	130	200 USD CIF ref. price
	Durum Wheat	130	0	130	130	300 USD CIF ref price
	Common wheat, Durum wheat and meslin seed	0	0	0	0	-
<b>Barley</b>	Barley Seed	0	0	0	0	
	White Barley (excluding seed)	130	0		130	
	Malting Barley (excluding seed)	130	0	130	130	
<b>Corn</b>	Maize Seed	0	0	0	0	
	Popcorn, Unpopped, (excluding seed)	130	0	130	130	
	Other Corn	130	0		130	270 USD CIF ref price
<b>Rice</b>	Rice in husk for sowing	13	0	15	115	
	Round, medium, long grain rice in husk	34	0	34	34	
	Round, medium, long husked rice	36	0	36	36	
	Semi milled, wholly milled, broken rice	45	0	45	45	

## Production, Supply and Distribution Data

Wheat Market Begin Year	2015/2016		2016/2017		2017/2018	
	Jun 2015		Jun 2016		Jun 2017	
Turkey	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	7860	7860	7815	7815	0	7825
Beginning Stocks	2750	2750	3098	3098	0	748
Production	19500	19500	17250	17250	0	18000
MY Imports	4382	4382	4800	4000	0	4500
TY Imports	4396	4396	4800	4000	0	4500
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	26632	26632	25148	24348	0	22748
MY Exports	5534	5534	5800	6000	0	5000
TY Exports	5609	5609	5800	6000	0	5000
Feed and Residual	1200	1200	800	800	0	800
FSI Consumption	16800	16800	16800	16800	0	16800
Total Consumption	18000	18000	17600	17600	0	17600
Ending Stocks	3098	3098	1748	748	0	648
Total Distribution	26632	26632	25148	24348	0	22748

(1000 HA) ,(1000 MT)

Barley Market Begin Year	2015/2016		2016/2017		2017/2018	
	Jun 2015		Jun 2016		Jun 2017	
Turkey	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	3400	3400	3400	3400	0	3400
Beginning Stocks	332	332	961	961	0	386
Production	7400	7400	4750	4750	0	5500
MY Imports	129	129	200	200	0	200
TY Imports	146	146	150	150	0	200
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	7861	7861	5911	5911	0	6086
MY Exports	0	0	25	25	0	20
TY Exports	0	0	25	25	0	20
Feed and Residual	6000	6000	4600	4600	0	4800
FSI Consumption	900	900	900	900	0	900
Total Consumption	6900	6900	5500	5500	0	5700

<b>Ending Stocks</b>	961	961	386	386	0	366
<b>Total Distribution</b>	7861	7861	5911	5911	0	6086

(1000 HA) ,(1000 MT)

Corn Market Begin Year  Turkey	2015/2016		2016/2017		2017/2018	
	Sep 2015		Sep 2016		Sep 2017	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
<b>Area Harvested</b>	620	620	570	570	0	550
<b>Beginning Stocks</b>	712	712	562	862	0	312
<b>Production</b>	6200	6200	5500	5500	0	5500
<b>MY Imports</b>	567	567	1500	1000	0	1500
<b>TY Imports</b>	567	567	1500	1000	0	1500
<b>TY Imp. from U.S.</b>	0	0	0	0	0	0
<b>Total Supply</b>	7479	7479	7562	7362	0	7312
<b>MY Exports</b>	67	67	50	100	0	50
<b>TY Exports</b>	51	51	50	100	0	50
<b>Feed and Residual</b>	5800	5500	6000	5900	0	5900
<b>FSI Consumption</b>	1050	1050	1050	1050	0	1050
<b>Total Consumption</b>	6850	6550	7050	6950	0	6950
<b>Ending Stocks</b>	562	862	462	312	0	312
<b>Total Distribution</b>	7479	7479	7562	7362	0	7312

(1000 HA) ,(1000 MT)

Rice, Milled Market Begin Year  Turkey	2015/2016		2016/2017		2017/2018	
	Sep 2015		Sep 2016		Sep 2017	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
<b>Area Harvested</b>	98	98	98	98	0	99
<b>Beginning Stocks</b>	217	217	127	127	0	72
<b>Milled Production</b>	500	500	500	500	0	520
<b>Rough Production</b>	746	746	746	746	0	780
<b>Milling Rate (.9999)</b>	6700	6700	6700	6700	0	6700
<b>MY Imports</b>	218	218	300	300	0	310
<b>TY Imports</b>	225	225	300	300	0	310
<b>TY Imp. from U.S.</b>	0	0	0	0	0	0
<b>Total Supply</b>	967	917	927	927	0	902
<b>MY Exports</b>	50	50	25	75	0	50
<b>TY Exports</b>	50	50	25	75	0	50
<b>Consumption and</b>	790	790	780	780	0	780

<b>Residual</b>						
<b>Ending Stocks</b>	127	127	122	72	0	72
<b>Total Distribution</b>	967	917	927	927	0	902
(1000 HA) ,(1000 MT)						