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Report Highlights:

With improved weather conditions, wheat, barley, and rice production are forecast to increase in MY 2022/23. In contrast, corn production is forecast down as farmers switch to other more profitable crops. Overall grain production in MY 2022/23 will be influenced by rising input costs, which the Turkish government is trying to offset with higher support payments for fertilizer and diesel. With the exception of barley, imports of other major grains are all forecast to increase in response to strong domestic and re-export demand. Amid rising food inflation, the government may take additional steps to restrict certain agricultural exports to stabilize the domestic market.

Wheat

Production

Wheat production in MY 2022/23 is forecast at 17.0 million metric tons (MMT), which is up year-over-year by 1.0 MMT. Nearly 2.0 MMT of Turkey's total wheat production is forecast as durum wheat. Area harvested is projected to contract by 300,000 hectares (HA) to 6.75 million HA as farmers switch to alternative crops, such as barley and sunflowers. At the same time, improved weather conditions are expected to bump wheat yields higher, which will more than offset production losses from the reduction in area harvested. For MY 2021/22, production is revised slightly downward to 16.0 MMT due to higher-than-expected drought losses.

Turkey primarily grows winter wheat. The major wheat production areas are spread throughout the country in Central Anatolia, Southeastern Anatolia, Thrace, Marmara, the Cukurova region. Except for Southeastern and Eastern Anatolia, moisture levels in these areas are better than the preceding year which was marked by drought.

In recent years, some farmers have stopped growing wheat since the government's market interventions have depressed prices and, thereby, made it less profitable. Among these interventions are government purchases of imported wheat that are sold at a deep discount on the local market, as well as government price controls limiting the fluctuation of domestic wheat and flour prices. Instead of planting wheat, some farmers have switched to alternative row crops or let their fields stand idle.

Farmers are facing skyrocketing input costs, including fertilizer and fuel. Costs have increased because of a weaker Turkish Lira (TL), rising international commodity prices, supply chain issues, and more recently because of the war in Ukraine. For example, diesel prices have more than tripled since October of last year, rising from 7 TL/liter (\$0.82 /LT) to 22 TL/liter (\$1.5 /LT). In response to higher input costs, the government raised the support payments to wheat farmers for fertilizer and diesel from 350 TL/HA (\$50 /HA) to 420 TL/HA (\$29/HA), year to year. In addition, the government provided a one-time, extra payment of 500 TL/HA (\$34.5/HA) to specifically offset higher fertilizer costs. However, wheat farmers don't think these payments are enough to fully cover these higher costs. There is concern that some wheat farmers may reduce fertilizer use to save on cost, which could impact yields and overall production amounts.

Year	Certified seed (TL/HA)	Production Premium (TL/MT)	Diesel and Fertilizer (TL/HA)
2016	85	50	110
2017	85	50	170
2018	85	50	190
2019	85	50	270
2020	160	100	350
2021	240	100	420+500

Source: <https://www.tarimorman.gov.tr/Konular/Tarimsal-Destekler/>

The Turkish Grain Board (TMO), on behalf of the government, buys and sales domestic wheat to stabilize local prices. In 2021, TMO didn't purchase any domestic wheat because of limited supplies due to the drought. The current TMO purchase price for Anatolian Hard Red Milling Wheat (AKS) is 2,250 TL/MT (\$268/MT). AKS is considered the benchmark for milling wheat in Turkey and is comparable to HRW in the United States.

Table 2: TMO's Purchase Price of Domestic Wheat

Year	Intervention price		Date/Exchange Rate
	TL	USD	
2016	910 TL	\$303	(As of July 2016, \$1 USD = 3 TL)
2017	940 TL	\$268	(As of July 2017, \$1 USD = 3.5 TL)
2018	1050 TL	\$233	(As of May 2018, \$1 USD = 4.5 TL)
2019	1350 TL	\$228	(As of May 2019, \$1 USD = 5.9 TL)
2020	1650 TL	\$235	(As of May 2020, \$1 USD = 7 TL)
2021	2250 TL	\$268	(As of May 2021, \$1 USD = 8.4 TL)

Source: Turkish Grain Board (TMO) www.tmo.gov.tr

Consumption

Wheat consumption for MY 2022/23 is forecast at 21.0 MMT, up 200,000 MT from the previous year. This increase assumes growing household demand for wheat-based products, such as bread and pasta. MY 2022/23 will mark the fifth consecutive year of rising wheat consumption.

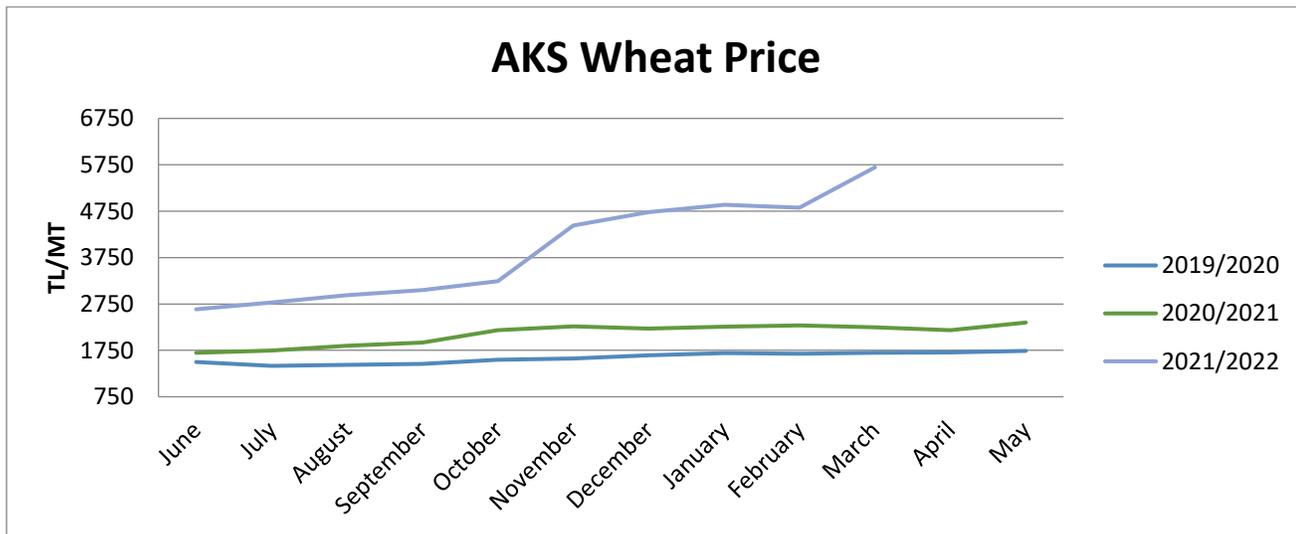
The MY 2021/22 wheat consumption estimate is lowered by 450,000 MT to 20.8 MMT, assuming lower than expected wheat production. This revision is also made to align with historical consumption trends. About 90 percent of wheat is consumed as food, most notably bread, and the remainder as animal feed.

Domestic wheat prices continue to climb higher in parallel with rising international commodity prices and higher input costs on the farm. The AKS price on the Polatli Commodity Exchange, one of the main exchanges in the country, was about 5,700 TL/MT (\$393/MT) in March, up 350 percent from the same month last year.¹ By comparison, TMO is currently selling imported milling wheat for nearly half the price at 3,250 TL/MT (\$196/MT). TMO raised its latest sales price by about 23 percent in late March to keep pace with rising international wheat prices. However, even with this latest increase, TMO's sales price is still half the CIF (cost, insurance, and freight) price for comparable imported wheat.

In parallel with the rising price of domestic wheat, flour prices have climbed higher. In February, domestic flour prices had doubled from the same time a year ago. More expensive flour has translated into higher priced wheat-based food products.

¹ Turkish wheat prices are available on the following Commodity Exchange websites: [Polatli Commodity Exchange](#), [Konya Commodity Exchange](#), [Adana Commodity Exchange](#); and [Eskisehir Commodity Exchange](#). Grain prices are also available on TMO's [Daily Market and Commodity Exchange Prices Bulletin](#).

Figure 1: Average AKS Price on the Polatli Commodity Exchange



Source: Polatli Commodity Exchange

Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21
3,017	3,084	3,093	3,102	3,038	3,170	3,317
Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22
3,573	3,728	3,848	4,197	5,610	6,173	6,171

Source: Konya Commodity Exchange

Turkey produces more than 24 MMT of a wide range of wheat products including flour, pasta, and biscuits, etc. According to market sources, there are 534 active flour factories with an annual milling capacity of about 33 MMT. There are 23 active pasta factories with an annual production capacity of about 2 MMT. There are also more than 140 factories making bulgur, biscuits/cookies/crackers, and semolina. See appendix for industry statistics.

Turkey is considered one of, if not the largest, consumer of bread in the world on a per capita basis. Given its importance in the Turkish diet, the government subsidizes a portion of the country’s bread production using imported wheat. TMO purchases imported wheat and sells it to local millers at a significant discount that is below domestic and international prices. The millers sell the cheap flour to private bakeries that produce and sell bread at a set price; this set price varies from region-to-region and is fixed by the local government.

Notwithstanding this support, the price of 200-gram loaf of subsidized bread in Ankara in March reached 2.75 TL, which is nearly 80 percent higher from the same time last year. The price of subsidized bread has likewise surged and is currently 3 TL/200 gram in Istanbul. The price of subsidized bread across the country will likely climb higher in the coming months in response to TMO’s move in March to raise its sales price of imported wheat by nearly 23 percent.

In addition to private bakeries, there are bread factories, owned by municipalities across the country, which aim to supply consumers with low priced bread. While these municipal factories don't use wheat from TMO, they are still capable of supplying inexpensive bread to the market given their economies of scale over small private bakeries. The largest of these factories are [The Istanbul Municipality Bread Factory \(IHA\)](#) and [The Ankara Municipality Bread Factory \(AHA\)](#). IHA produces 1.8 million 250-gram loaves of basic white bread per day. AHA produces 1 million comparable bread loaves per day. Both factories sell their bread at 2 TL/250 grams, which is below the current price of the TMO subsidized bread in both Ankara and Istanbul.

Amid rising input costs, there is an increasing amount of pasta at varying prices and quality that is being sold on the domestic market. Some pasta producers are concerned that competitors may be adding milling wheat which is against current government standards. Pasta is supposed to be made with 100 percent durum wheat. In the meantime, recognizing the possibility that there may be some unintentional mixing of milling and durum wheat on the farm, the government is considering allowing up to 3 percent milling wheat in domestic pasta.

Trade – Wheat Imports

MY 2022/23 imports of wheat are forecast up year-over-year by 1.0 MMT to 11.0 MMT in response to growing demand for bread and other wheat-based products. In order to stabilize prices, the government has zeroed out import duties on wheat and other grains (except rice) in calendar year 2022.

Imports for MY 2021/22 are projected unchanged at 10.0 MMT. According to the latest Turkish trade data, wheat imports reached 6.95 MMT between June and January of the current marketing year. Most of the wheat imported was from Russia and Ukraine. Imports from Romania and Moldova are also higher. In order to stabilize market conditions and shore up the gap in domestic production, TMO purchased via international public tender more than 3 MMT metric tons of wheat during this same period. TMO's purchase price for this wheat has jumped from \$260/MT this past June to more than \$400/MT in March of this year.

According to market sources, Turkey continues to import wheat from Russia. At the same time, with supply chain uncertainties in both Russia and Ukraine, Turkey appears to be looking for alternative suppliers as a backup. For example, as mentioned, Turkey has increased its imports from Romania and Moldova this year. And, in March of this year, Turkey imported 230,000 metric tons of wheat from Argentina, a less common supplier of wheat to Turkey.

At the same time, Turkey's imports of durum wheat from countries like Canada and Mexico have declined over the last year because of rising international prices for durum wheat. In response to these higher prices, the government implemented a new rule last autumn (2021) that now allows milling wheat to be used to make pasta for export. There have been some complaints that some exported pasta is mislabeled as made from 100 percent durum wheat. Prior to this recent change, pasta exports had to be made from 100 percent durum wheat, except for exports to African countries. Starting in 2015, Turkey allowed pasta exports to Africa to be made from milling wheat.

Countries	MY 2019/20	MY 2020/21	MY 2021/22*
Russia	6,890,934	6,369,723	4,517,578
Ukraine	1,311,863	740,072	1,630,183
Romania	12,903	20	112,650
Canada	960,374	249,224	28,080
Lithuania	266,618	212,039	0
Moldova	26,365	18,334	403,435
Mexico	547,542	166,157	31,244
Other	804,694	376,375	224,109
Total	10,821,293	8,131,944	6,947,279

* June 2021-January 2022

Source: Turkish Statistics Institute

Trade – Wheat Exports

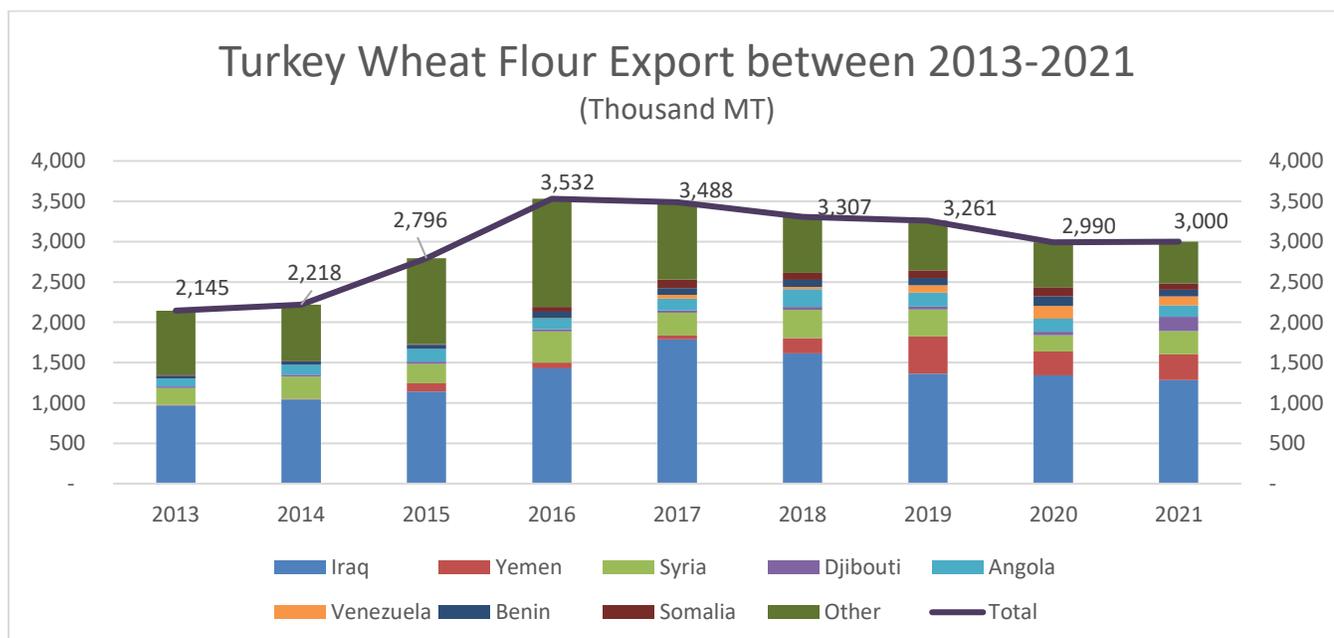
Wheat exports in MY 2022/23 are forecast at 6.65 MMT, up year-over-year by 100,000 MT, assuming available supplies of imported wheat for processing and re-export and growing demand in regional markets. Meantime, for MY 2021/22, wheat exports are estimated slightly higher at 6.55 MMT. Turkey's wheat exports consist of flour, pasta, and bulgur made from imported wheat.

Flour exports are estimated at 3.1 MMT in MY 2021/22, up year-over-year due to stronger than expected export demand. From June through January of MY 2021/22, wheat flour exports reached 2.1 million metric tons. Leading export destinations were Iraq, Syria, and Yemen. Some of Turkey's flour exports are for humanitarian aid purposes which, according to industry sources, reached 300,000 MT in 2021. See annex for trade tables.

Wheat flour is among the products that the Ministry of Agriculture & Forestry (MinAF) may restrict from export in order to stabilize market conditions. MinAF has not imposed restrictions on wheat flour exports at this time. See [GAIN Report](#) for details.

Turkey is the world's largest flour exporter. Iraq has historically been the single largest destination for Turkish flour. However, demand is expected to trend downward in the coming years as Iraq invests in its flour milling capacity. In response, the Turkish industry is looking for new markets in Africa. In 2021, the leading African destination for Turkish flour was Djibouti. Flour imported through Djibouti is reportedly traded throughout the Horn of Africa.

Figure 2: Turkey Wheat Flour Export between 2013-2021, Calendar Year (Thousand MT)



Source: Trade Data Monitor, LLC. Calendar year data: January – December

Turkey is also a major producer and exporter of pasta. Pasta exports for MY 2021/22 are estimated to remain largely unchanged from the previous year at 1.4 MMT. From June through January of MY 2021/22, pasta exports totaled about 935,000 MT. Leading destinations were Somalia, Venezuela, and Ghana. See trade tables in annex. Turkey’s pasta exports have doubled in the last six years, largely due to growing demand from African countries and Venezuela. Pasta exports to Venezuela enjoy preferential tariff treatment under the Turkey-Venezuela Free Trade Agreement. In addition, there have been about 50,000 MT of annual pasta exports to Japan since 2015.

Bulgur exports are estimated at 240,000 MT in MY 2021/22. Bulgur exports were nearly 160,000 MT during June through January of the current marketing year. Iraq, Syria, and other Middle East countries are the main destinations for Turkish bulgur.

Stocks

Stocks for MY 2022/23 are forecast higher at nearly 2.8 MMT, based on the assumption that the government and private sector will hold onto more wheat to avoid any shortfalls due to supply chain uncertainties.

Corn

Production

In MY 2022/23, corn production is forecast to go down 500,000 MT year-over-year to 6.0 MMT, assuming a reduction in area harvested as farmers switch to more profitable row crops, such as cotton. Yields are expected to decrease slightly as planting in Cukurova, one of the main growing areas, was

delayed because of heavy rainfall. Meantime, the corn production estimate for MY 2021/22 remains unchanged at 6.5 MMT.

Farmers are facing skyrocketing input costs, including fertilizer and fuel. Costs have increased because of a weaker Turkish Lira (TL), rising international commodity prices, supply chain issues, and more recently because of the war in Ukraine. For example, diesel prices have more than tripled since October of last year, rising from 7 TL/liter (\$0.82 /LT) to 22 TL/liter (\$1.5 /LT). In response to higher input costs, the government raised the support payments to corn farmers for fertilizer and diesel to 80 TL/HA and 250 TL/HA, respectively. In contrast to wheat and barley farmers, corn growers can more easily handle these higher input costs since they can raise prices and, thereby, pass along higher input costs to end-users. However, there is concern that corn farmers may reduce fertilizer use to save on cost, which could impact yields and overall production amounts.

The primary corn-growing regions are Central Anatolia, Southeast Anatolia, Cukurova, and the Aegean. Except for Southeastern Anatolia, moisture levels in these regions are better than the preceding year which was marked by drought. Planting of the MY2022/23 corn crop is currently underway. Planting was delayed in Cukurova by more than a month because of heavy rainfall. Some farmers in Central Anatolia are considering whether to plant corn or sugar beets, based on expected profitability. Some farmers in Southeast Anatolia have switched from double cropping corn and wheat to growing cotton.

Consumption

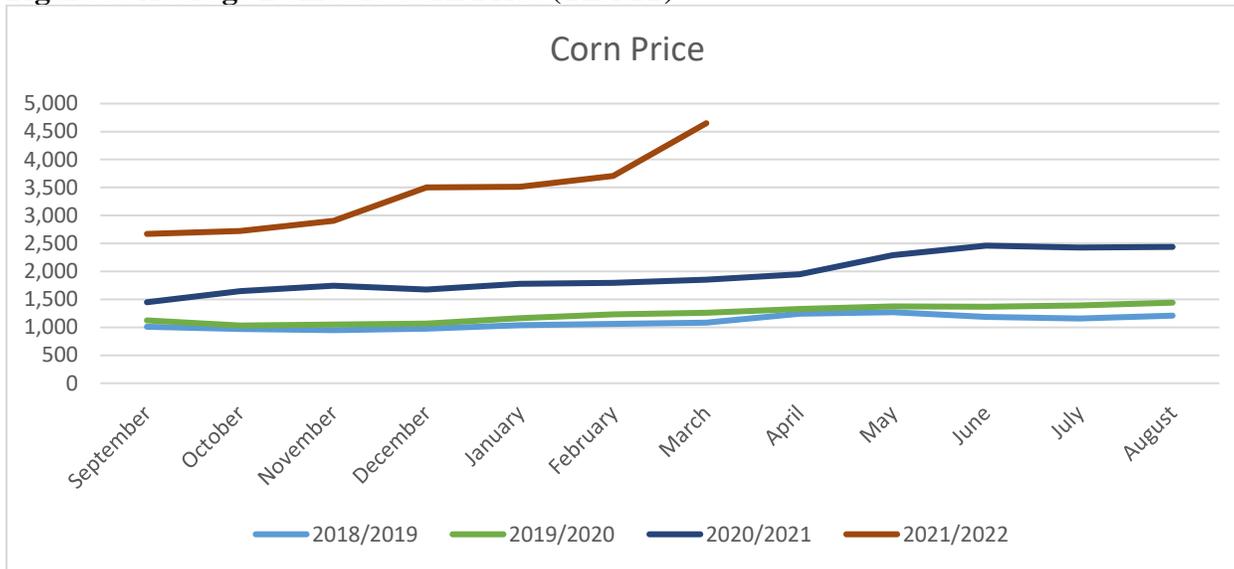
MY 2022/23 consumption is forecast at 8.8 MMT, up 200,000 MT from the previous year based on increased demand from the feed and starch sector. Meantime, the MY 2021/22 consumption estimate is lowered 800,000 MT to 8.6 MMT due to a contraction in feed demand and feed millers substituting imported barley for corn.

Corn is primarily used in manufacturing feed and, to a lesser extent, producing corn starch for food use. With nearly 85 percent of corn used to make animal feed, overall consumption typically parallels trends in the feed sector. At the same time, feed corn consumption is influenced by prices of alternative feed ingredients.

Corn starch-based sugar production is regulated by the government through production quotas; beet sugar production is likewise regulated through quotas. The government announces annual production quotas which are expected to decrease in size this year. Starch producers use about 900,000 MT of domestic corn each year. The industry's annual production capacity is 1.5 MMT.

The average price of domestic corn continues to climb higher. In March, the price was about 4,650 TL/MT (~\$320/MT), up more than 30 percent from a year ago. This increase is in response to rising input costs farmers are having to pay and parallels rising international corn prices. By comparison, TMO is currently selling imported corn at about two-thirds the price at 3,000 TL/MT (\$207/MT). In March, TMO raised its corn selling price by about 12 percent to its current level to keep pace with rising international corn prices.

Figure 3: Average Domestic Corn Price (TL/MT)



Source: Multiple commodity exchanges

Trade

MY 2022/23 corn imports are forecast to increase year-over-year by 600,000 MT to 2.8 MMT. The projected increase is due to lower corn production levels and assumes stable feed demand. In order to stabilize prices, the government has zeroed out import duties on corn and other grains (except rice) in calendar year 2022.

The MY 2021/22 corn import forecast is lowered by 600,000 MT to 2.2 MMT. This downward revision is mainly due to stronger than expected barley imports. Imports of corn from September through January of the current marketing year reached 1.3 MMT, higher than the same period from a year ago. Major sources of imported corn were Ukraine, Russia, and Romania.

Corn exports in MY 2022/23 are forecast unchanged from the previous year at 250,000 MT, based on the assumption that export demand from neighboring countries will remain steady. MY 2021/22 corn exports are estimated at 250,000 MT, assuming that the government will allow some by-product exports to neighboring Iraq despite current export restrictions. In March, the Turkish Ministry of Agriculture & Forestry (MinAF) stopped corn-by product exports to stabilize local market conditions. See trade tables in appendix.

Stocks

In MY 2022/23, corn stocks are forecast lower than the previous year at 489,000 MT, assuming a reduction in production.

Rice

Production

MY 2022/23 rice production is forecast to increase year-over-year by nearly 40,000 MT to 600,000 MT. This projected increase is based on improved yields resulting from favorable weather expectations. Area

planted is forecast to remain largely unchanged at 99,000 HA. Meantime, the MY 2021/22 rice production estimate is revised upward to 561,000 MT due to better yields than expected.

Farmers are facing skyrocketing input costs, including fertilizer and fuel. Costs have increased because of a weaker Turkish Lira (TL), rising international commodity prices, supply chain issues, and more recently because of the war in Ukraine. For example, diesel prices have more than tripled since October of last year, rising from 7 TL/liter (\$0.82 /LT) to 22 TL/liter (\$1.5 /LT). In response to higher input costs, the government raised the support payments to rice farmers for fertilizer and diesel to 80 TL/HA (\$5.5/HA) and 680 TL/HA (\$46.9/HA), respectively. The diesel payment is significantly higher than it is for other row crops. (One possible reason for this difference is the government's interest in expanding domestic rice production and lessening the country's dependence on imported rice.) However, some farmers don't consider this support enough to offset these higher costs. There is concern that some rice farmers may reduce fertilizer use to save on cost, which could impact yields and overall production amounts.

Rice production is concentrated in the Marmara region in northwest Turkey, and Central Anatolia in the middle of the country. Rice planting starts in April and finishes in May. The harvest runs from September to October.

Consumption

Rice consumption in MY 2022/23 is projected marginally higher year-over-year at 790,000 metric tons, assuming increased supplies of domestic and imported rice. The MY 2021/22 rice consumption estimate is lowered by 40,000 MT to 770,000 MT, mainly because of smaller than expected volumes of imported rice and the availability of less expensive substitutes, such as bread, pasta, and bulgur.

TMO procures and later sells domestic paddy rice to stabilize market conditions. Last September, TMO [announced](#) its MY 2021/22 paddy rice procurement price range of 4000-5500 TL/MT (\$276-\$379/MT), which is about 22 percent higher compared to last year. TMO is selling domestic milled rice at its retail stores between 8900 TL/MT (\$614/MT) and 11,500 TL/MT (\$793/MT). By comparison, the retail price of similar quality rice on the open market is about twice the cost. Given this price difference, there often are queues of customers lining up in front of the TMO retail stores to purchase the cheaper rice and other discounted staple foods, like sunflower oil and pulses.

Trade

For MY 2022/23, rice imports are forecast to increase by year-on-year by 60,000 MT to 420,000 MT, assuming stable domestic consumption, and steady volumes of transshipped and re-exported rice. Transshipments of rice average about 100,000 per year.

The MY 2021/22 rice import estimate is lowered by 70,000 MT to 360,000 MT, based on slower than expected imports. In the first five months of MY 2021/22 (September 2021- January 2022), Turkey imported about 69,000 MT of rice. Imports were mostly milled rice and the top supplying countries were China, Italy, Uruguay, and India.

The current tariff for paddy rice (100610) is 34 percent, brown rice (100620) is 36 percent, and milled rice (100610) is 45 percent. Imports of U.S. rice are subject to an additional 25 percent retaliatory tariff

imposed in response to U.S. Section 232 tariffs on Turkish steel and aluminum. Transshipments, re-exported rice, and government imports are not subjects to these tariffs.

MY 2022/23 rice exports are forecast at 230,000 MT, unchanged from the previous year. Exports during the first five months of MY 2021/22 (September 2021- January 2022), were about 114,000 MT. Leading export destinations were Syria, Libya, and Iraq. See trade tables in appendix.

Stocks

In MY 2022/23, rice stocks are forecast at 82,000 MT, unchanged from the new estimate for the previous year.

Barley

Production

Barley production for MY 2022/23 is forecast to partially rebound from pre-drought levels to 7.0 MMT, assuming improved weather conditions and an expansion in area harvested. Area harvested is projected to increase by 100,000 HA to 3.8 million HA as farmers plant more in response to improved returns compared to other row crops, such as wheat.

Barley production in MY 2021/22 estimate remains unchanged at 4.5 MMT, but down year-over-year 3.6 MMT because of crop losses resulting from intense heat and drought in the Southeast and Central Anatolia regions, as previously reported. Barley fields are generally unirrigated, and yields are directly linked to rainfall.

Farmers are facing skyrocketing input costs, including fertilizer and fuel. Costs have increased because of a weaker Turkish Lira (TL), rising international commodity prices, supply chain issues, and more recently because of the war in Ukraine. For example, diesel prices have more than tripled since October of last year, rising from 7 TL/liter (\$0.82 /LT) to 22 TL/liter (\$1.5 /LT). In response to higher input costs, the government raised the support payments to barley farmers for fertilizer and diesel from 350 TL/HA (\$50 /HA) to 420 TL/HA (\$29/HA). In addition, the government provided a one-time, extra payment of 500 TL/HA (\$34.5/HA) to specifically offset higher fertilizer costs. However, farmers don't think these payments are enough to fully cover these higher costs. There is concern that some barley farmers may reduce fertilizer use to save on cost, which could impact yields and overall production amounts.

Consumption

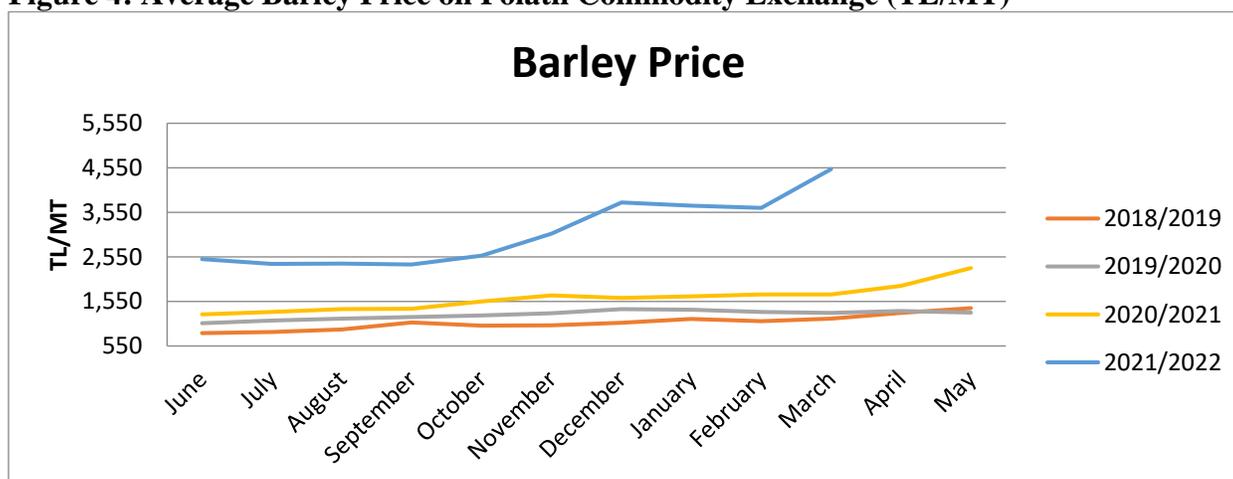
Barley consumption in MY 2022/23 is projected at 7.7 MMT, up 200,000 MT from the previous year's new estimate due to higher domestic production and steady domestic demand from the feed and malting industries.

MY 2021/22 barley consumption is revised slightly upward to 7.5 MMT tons due to stronger than expected domestic demand. About 40 percent of consumption is estimated to consist of imported barley, compared to less than 10 percent the year before. Consumption of imported barley has shot up since there was a shortfall in domestic production due to the drought.

TMO purchased most of the imported barley and sold it at a discount to end users in the feed sector. The discounted barley was sold at 2,050 TL/MT (\$151/MT), far below the spot market and commodity exchange prices. In March of this year, the price of barley on the Polatli Commodity Exchange was 4520 TL/MT (~\$312/MT), up more than 35 percent from the same time a year ago.

Feed manufacturers and, to a lesser extent, the malting and beer industries are the leading end users of barley. Feed use accounts for about 90 percent of total barley consumption and is predominantly used in ruminant feed. Depending on the price and availability of barley, feed makers may decide to switch to alternative ingredients such as wheat bran. Malting barley consumption, which has held steady in recent years, is estimated around 900,000 MT.

Figure 4: Average Barley Price on Polatli Commodity Exchange (TL/MT)



Source: Polatli Commodity Exchange

Trade

For MY 2022/23, barley imports are projected at 1.0 MMT, down by more than 2.0 MMT from the previous year since the domestic barley crop is forecasted to increase. The forecast assumes Turkey can keep sourcing imported barley at a competitive price from Black Sea suppliers; Turkey has historically only imported barley from Black Sea countries. Otherwise, if supplies are limited, the feed sector will use alternative ingredients in animal feed rations. In order to stabilize prices, the government has zeroed out import duties on barley and other grains (except rice) in calendar year 2022.

The barley import estimate for MY 2021/22 is raised to 3.1 MMT based on strong demand to replace domestic shortfalls in local grain production resulting from the drought. Barley imports from June to January of the current marketing year shot up to 2.35 MMT. Leading suppliers were Ukraine, Russia, and Romania. TMO purchased most of the imported barley through a series of international tenders.

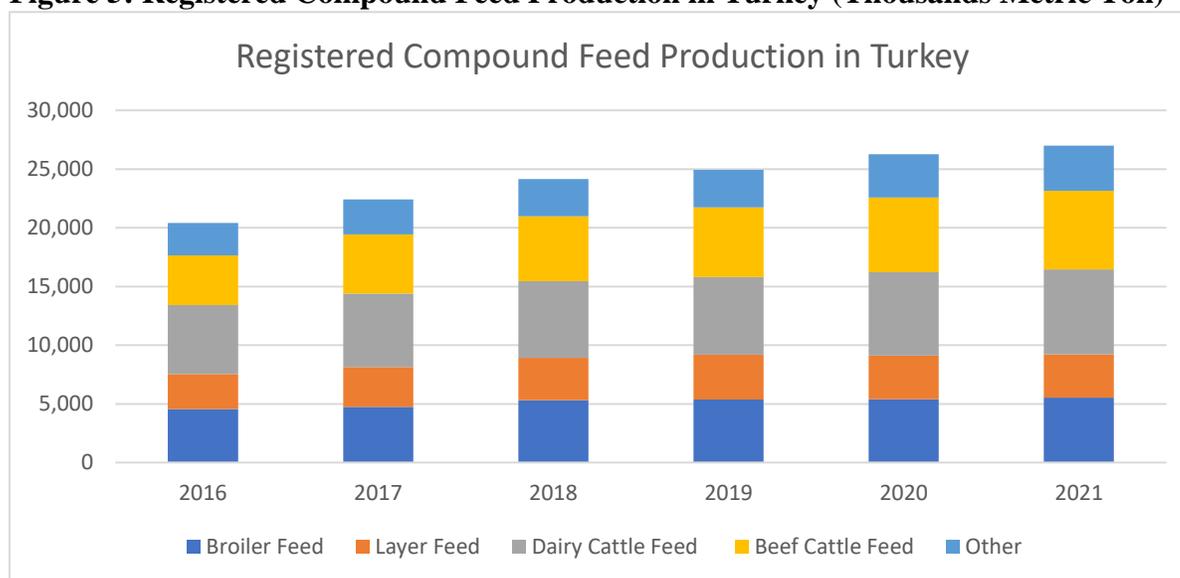
In MY 2022/23, barley exports are forecast at 100,000 MT, assuming continued demand from neighboring countries. The barley export estimate for MY 2021/22 is raised to 150,000 MT based on the latest available trade data. Exports reached a little more than 112,000 metric tons from June through January of MY 2021/22. Major export destinations were Syria and Cyprus. See trade tables in annex.

Animal Feed Production

Production of compound feed at registered facilities continues its upward trend. In calendar year 2021, production increased nearly 3 percent year-over-year to 27 MMT. Dairy cattle feed is the single largest feed category, accounting for about a quarter of total production. Beef cattle feed follows closely behind. The balance is made up of broiler feed and other livestock feed.

According to industry sources, there was a slowdown in compound feed production during the last quarter of 2021 because of depressed demand resulting from the steep depreciation of the Turkish Lira and rising inflation. This slowdown may carry over into early 2022 as farmers are expected to liquidate some of their dairy cows and beef cattle in response to higher input costs and low milk prices. Some industry insiders predict feed production will pick up later in the year as poultry production expands and economic conditions in Turkey improve.

Figure 5: Registered Compound Feed Production in Turkey (Thousands Metric Ton)



Source: Ministry of Agriculture and Forestry

The Turkish feed sector depends on imported raw materials, such as grains and meals derived from imported oilseeds. Given this dependence, the price of feed tends to move in parallel with the FOB price of the raw materials and the USD-Turkish Lira exchange rate. Over the past two years, average feed prices have shot up more than 2.5 times because of rising inflation in Turkey, a weaker Lira, and higher imported commodity prices. In 2021 alone, inflation was up 36 percent year-over-year and the Lira lost more than 44 percent of its value.

Supply chain uncertainties resulting from the war in Ukraine are causing the feed manufacturers to reformulate feed rations based on the available supply of ingredients. Compound feed uses a variety of ingredients, such as soybean meal, sunflower meal, barley, wheat bran, corn, and distillers dried grains.

	Feb-20	May-20	Aug-20	Nov-20	Feb-21	May-21	Aug-21	Nov-21	Dec-21	Feb-22
Broiler Feed	2,300	2,490	2,670	3,400	3,595	4,240	4,320	5,750	7,475	7,670
Layer Feed	1,925	2,070	2,170	2,600	2,510	3,140	3,160	4,180	5,487	5,650
Dairy Cattle Feed	1,490	1,650	1,725	2,210	2,205	2,720	2,670	3,400	4,135	4,100
Beef Cattle Feed	1,390	1,550	1,625	2,030	2,025	2,480	2,480	3,100	3,930	3,835
Price Index in last 24 Months (February 2020 =1)										
Broiler Feed	1.00	1.08	1.16	1.48	1.56	1.84	1.88	2.50	3.25	3.33
Layer Feed	1.00	1.08	1.13	1.35	1.30	1.63	1.64	2.17	2.85	2.94
Dairy Cattle Feed	1.00	1.11	1.16	1.48	1.48	1.83	1.79	2.28	2.78	2.75
Beef Cattle Feed	1.00	1.12	1.17	1.46	1.46	1.78	1.78	2.23	2.83	2.76

Grain & Feed Policy

Turkey is battling record inflation. Domestic and imported grain prices are significantly higher than the previous year. In order to rein in inflation, the government has undertaken various measures. Duties on imported grain were zeroed out, exports of certain agricultural products were restricted, and the value added tax (VAT) on food was cut. TMO has purchased nearly 7 MMT of imported grain – wheat, barley, and corn – since last June and sold it at a discount to local end-users. And, President Erdogan has announced a long-term strategy, dubbed the Flour & Feed Regulation [Action](#), to regulate flour and feed prices. However, inflation continues unabated despite the cumulative impact of these government-backed market interventions.

During the week of March 10, the Ministry of Trade temporarily halted exports of grains, oilseeds, cooking oil, and a few other agricultural commodities from bonded warehouses. The Trade Ministry discontinued the ban after just a few days. Meantime, the Ministry of Agriculture & Forestry (MinAF) has stopped direct exports of corn flour, vegetable oil, bulk olive oil shipments, and a few other lesser food items. These restrictions remain in effect. MinAF was delegated the authority for the rest of this year to temporarily stop exports of certain agricultural exports to stabilize market conditions. Among the products MinAF may restrict in the future are wheat flour, bulgur, and mixed feed. See [GAIN Report](#) for details.

In response to higher input costs, the government raised its support payments to help grain farmers offset rising fuel and fertilizer costs. Farmers don't consider these payments enough to offset rising costs. There is concern that farmers may reduce fertilizer use to save on cost, which could impact grain yields and overall production amounts.

These government payments are part of the administration's larger support program for 21 strategic crops grown in certain geographical "agricultural basins." As announced last November in [the Official Gazette](#), overall support for CY2021 was nearly 25 billion Turkish Lira (\$1.8 billion), like the previous year's amount, but with relatively less purchasing power because of high inflation. CY2021 support payments will be paid out in CY2022.

Table 6: Grain Premiums (TL/MT)

Commodity	2016	2017	2018	2019	2020	2021
Wheat	50	50	50	100	100	100
Barley, Oats, Rye	50	50	50	50	100	100
Paddy Rice	100	100	100	100	100	100
Chick Peas, Lentils, Dry beans	300	300	500	500	500	500
Corn	20	30	30	30	30	30

Source: Official Gazette

Table 7: 2021 Government Support Program for Grain Production (TL/HA)

Commodity	Diesel (TL/ha)	Fertilizer (TL/ha)
Wheat, Barley, Rye, Oats	200	220+500
Rice, Cotton	680	80
Pulses	240	80
Corn	250	80
Soybean	300	80
Soybean, Sunflower	270	80
Canola, safflower, forage plants	200	80

Source: <https://www.tarimorman.gov.tr/Konular/Tarimsal-Destekler/>

Production, Supply and Distribution

Wheat Market Year Begins Turkey	2020/2021		2021/2022		2022/2023	
	Jun 2020		Jun 2021		Jun 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	7100	7100	7050	7050	0	6750
Beginning Stocks (1000 MT)	4468	4468	3730	3781	0	2431
Production (1000 MT)	18250	18250	16250	16000	0	17000
MY Imports (1000 MT)	8081	8132	10000	10000	0	11000
TY Imports (1000 MT)	8051	8132	10000	10000	0	11000
Total Supply (1000 MT)	30799	30850	29980	29781	0	30431
MY Exports (1000 MT)	6469	6469	6250	6550	0	6650
TY Exports (1000 MT)	6571	6571	6250	6550	0	6650
Feed and Residual (1000 MT)	2000	2000	2250	2000	0	2000
FSI Consumption (1000 MT)	18600	18600	19000	18800	0	19000
Total Consumption (1000 MT)	20600	20600	21250	20800	0	21000
Ending Stocks (1000 MT)	3730	3781	2480	2431	0	2781
Total Distribution (1000 MT)	30799	30850	29980	29781	0	30431
Yield (MT/HA)	2.5704	2.5704	2.305	2.2695	0	2.5185

(1000 HA) ,(1000 MT) ,(MT/HA)

MY = Marketing Year, begins with the month listed at the top of each column

TY = Trade Year, which for Wheat begins in July for all countries. TY 2022/2023 = July 2022 - June 2023

Barley Market Year Begins Turkey	2020/2021		2021/2022		2022/2023	
	Jun 2020		Jun 2021		Jun 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	3800	3800	3700	3700	0	3800
Beginning Stocks (1000 MT)	766	766	522	522	0	472
Production (1000 MT)	8100	8100	4500	4500	0	7000
MY Imports (1000 MT)	706	706	2700	3100	0	1000
TY Imports (1000 MT)	1634	706	2100	3100	0	1000
Total Supply (1000 MT)	9572	9572	7722	8122	0	8472
MY Exports (1000 MT)	60	60	150	150	0	100
TY Exports (1000 MT)	122	60	100	150	0	100
Feed and Residual (1000 MT)	8100	8100	6400	6600	0	6800
FSI Consumption (1000 MT)	890	890	900	900	0	900
Total Consumption (1000 MT)	8990	8990	7300	7500	0	7700
Ending Stocks (1000 MT)	522	522	272	472	0	672
Total Distribution (1000 MT)	9572	9572	7722	8122	0	8472
Yield (MT/HA)	2.1316	2.1316	1.2162	1.2162	0	1.8421

(1000 HA) ,(1000 MT) ,(MT/HA)

MY = Marketing Year, begins with the month listed at the top of each column

TY = Trade Year, which for Barley begins in October for all countries. TY 2022/2023 = October 2022 - September 2023

Corn Market Year Begins Turkey	2020/2021		2021/2022		2022/2023	
	Sep 2020		Sep 2021		Sep 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	620	620	540	540	0	520
Beginning Stocks (1000 MT)	825	825	889	889	0	739
Production (1000 MT)	7100	7100	6500	6500	0	6000
MY Imports (1000 MT)	1781	1781	2800	2200	0	2800
TY Imports (1000 MT)	1794	1794	2800	2200	0	2800
Total Supply (1000 MT)	9706	9706	10189	9589	0	9539
MY Exports (1000 MT)	317	317	230	250	0	250
TY Exports (1000 MT)	309	310	230	250	0	250
Feed and Residual (1000 MT)	7400	7400	8300	7500	0	7600
FSI Consumption (1000 MT)	1100	1100	1100	1100	0	1200
Total Consumption (1000 MT)	8500	8500	9400	8600	0	8800
Ending Stocks (1000 MT)	889	889	559	739	0	489
Total Distribution (1000 MT)	9706	9706	10189	9589	0	9539
Yield (MT/HA)	11.4516	11.4516	12.037	12.037	0	11.5385

(1000 HA) ,(1000 MT) ,(MT/HA)

MY = Marketing Year, begins with the month listed at the top of each column

TY = Trade Year, which for Corn begins in October for all countries. TY 2022/2023 = October 2022 - September 2023

Rice, Milled Market Year Begins Turkey	2020/2021		2021/2022		2022/2023	
	Sep 2020		Sep 2021		Sep 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	97	97	97	97	0	99
Beginning Stocks (1000 MT)	181	181	161	161	0	82
Milled Production (1000 MT)	591	591	541	561	0	600
Rough Production (1000 MT)	882	882	807	837	0	896
Milling Rate (.9999) (1000 MT)	6700	6700	6700	6700	0	6700
MY Imports (1000 MT)	412	412	430	360	0	420
TY Imports (1000 MT)	332	332	450	360	0	420
TY Imp. from U.S. (1000 MT)	23	23	0	0	0	0
Total Supply (1000 MT)	1184	1184	1132	1082	0	1102
MY Exports (1000 MT)	213	213	230	230	0	230
TY Exports (1000 MT)	241	241	230	230	0	230
Consumption and Residual (1000 MT)	810	810	810	770	0	790
Ending Stocks (1000 MT)	161	161	92	82	0	82
Total Distribution (1000 MT)	1184	1184	1132	1082	0	1102
Yield (Rough) (MT/HA)	9.0928	9.0928	8.3196	8.6289	0	9.0505

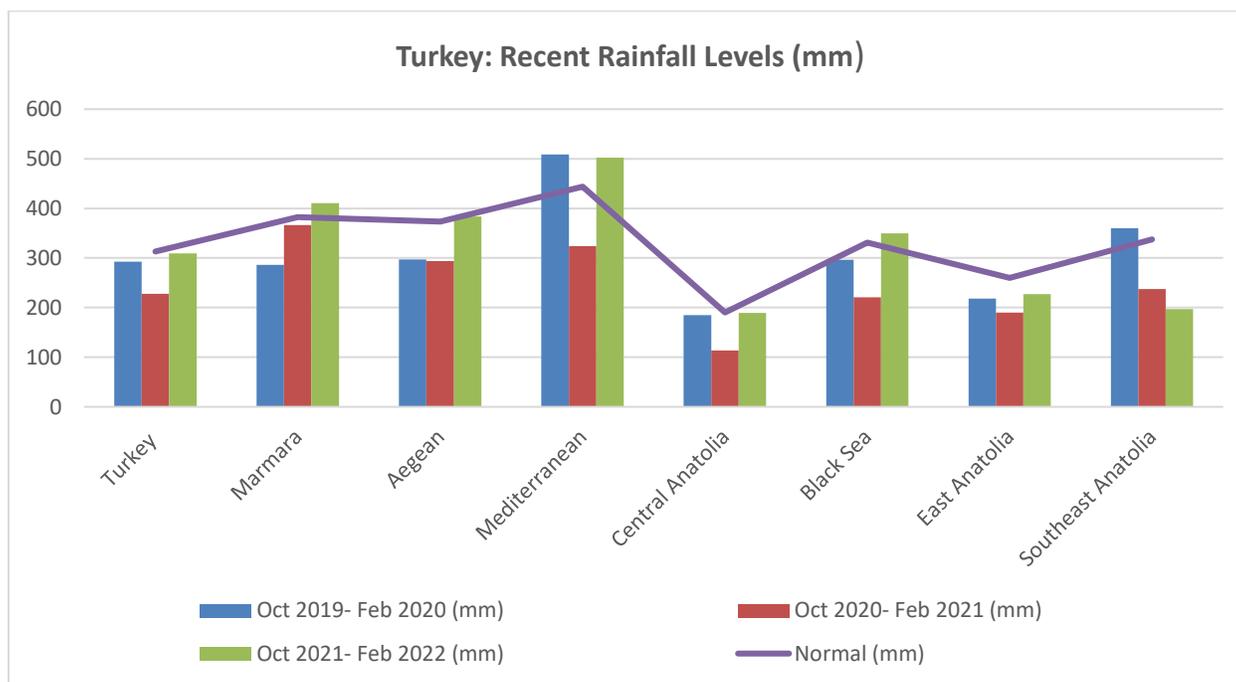
(1000 HA) ,(1000 MT) ,(MT/HA)

MY = Marketing Year, begins with the month listed at the top of each column

TY = Trade Year, which for Rice, Milled begins in January for all countries. TY 2022/2023 = January 2023 - December 2023

Appendix

Turkey: Cumulative Rainfall Levels by Region in Last Three Terms compared with Historical Average (mm)



Source: [Turkish State Meteorological Service](#)

Turkish Wheat Industry Statistics			
Type of Product	Active Factories	Production Capacity/Year (MMT)	Capacity use rate/Year (percent)
Wheat Flour	534	33	55
Pasta	23	3.0	74
Bulgur	93	2.0	53
Biscuit/Cracker	27	3.2	40
Semolina	27	1.9	46

Source: Local wheat industry (2021)

Turkey's Wheat Imports & Exports by Month/Marketing Year (MT)				
(Note: Excludes wheat products)				
MONTH	IMPORT	IMPORT	EXPORT	EXPORT
	MY 2020/21	MY 2021/22	MY 2020/21	MY 2021/22
	(MT)	(MT)	(MT)	(MT)
June	481,455	380,808	3,064	3,526
July	232,665	419,211	2,075	7,000
August	745,506	1,164,479	40,214	13,496
September	1,203,723	1,686,676	3,239	26,130
October	750,507	782,453	11,096	37,329
November	979,612	839,586	24,469	57,894
December	1,174,980	1,040,599	2,409	36,522
January	699,188	633,467	15,369	37,161
<i>Sub-total (June-Jan.)</i>	6,267,636	6,947,279	101,935	219,058
February	797,648		25,558	
March	754,089		11,375	
April	224,351		8,410	
May	88,220		22,455	
MY TOTAL	8,131,944	10,000,000 (f)	169,733	250,000 (f)

Source: TUIK

Turkey's Flour Exports by Month/Marketing Year (MT)			
Month	MY 2019/20	MY 2020/21	MY 2021/22
June	168,949	199,988	283,467
July	263,764	267,999	244,368
August	289,417	305,796	331,091
September	285,197	303,781	288,947
October	309,881	259,699	292,530
November	291,196	215,807	233,680
December	276,282	257,663	198,796
January	275,346	252,302	232,385
<i>Sub, Total Jun-Jan</i>	2,160,032	2,063,035	2,105,264
February	246,565	151,451	
March	247,108	238,252	
April	217,415	253,372	
May	193,245	231,445	
MY TOTAL	3,064,365	2,937,555	3,100,000 (f)

Source: TUIK

Turkey's Pasta Exports by Month/Marketing Year (MT)			
Month	MY 2019/20	MY 2020/21	MY 2021/22
June	73,879	116,512	112,826
July	130,799	131,169	116,458
August	103,920	101,115	131,368
September	97,553	130,262	123,070
October	121,286	153,771	114,738
November	105,660	98,276	123,440
December	101,597	141,087	114,287
January	111,639	86,231	100,111
<i>Sub, Total Jun-Jan</i>	846,333	958,423	936,298
February	117,080	94,077	
March	107,245	112,652	
April	133,269	107,576	
May	123,540	128,834	
MY TOTAL	1,327,467	1,401,562	1,400,000 (f)

Source: TUIK

Turkey's Pasta Exports by Destination (MT)			
	MY 2019/20	MY 2020/21	MY 2021/22*
Somalia	180,452	181,947	144,749
Ghana	83,892	98,430	71,215
Niger	15,318	50,696	48,439
Venezuela	206,618	194,362	143,325
Benin	80,198	83,287	82,706
Togo	68,921	72,448	57,056
Senegal	17,449	35,933	16,445
Japan	50,198	55,520	34,277
Yemen	13,343	14,663	14,524
Angola	106,498	33,733	26,711
Other	504,580	580,543	296,851
Total	1,327,467	1,401,562	936,298

Source: TUIK

*Between June 2021-January 2022

Turkey's Bulgur Exports by Month/Marketing Year (MT)			
Month	MY 2019/20	MY 2020/21	MY 2021/22
June	11,226	19,628	20,227
July	21,077	11,348	8,144
August	21,679	14,122	16,321
September	30,507	22,450	21,952
October	26,519	26,150	28,134
November	30,081	30,002	24,710
December	25,778	27,004	22,054
January	23,325	16,249	17,285
<i>Sub, Total Jun-Jan</i>	<i>190,192</i>	<i>166,953</i>	<i>158,827</i>
February	17,548	18,768	
March	23,178	23,982	
April	40,119	21,812	
May	28,152	16,274	
MY TOTAL	299,189	247,789	<i>245,000 (f)</i>

Source: TUIK

Turkey's Corn Imports & Exports by Month/Marketing Year (MT)				
Month	Import MY 2020/21	Import MY 2021/22	Export MY 2020/21	Export MY 2021/22
September	8,376	20,800	36,208	28,380
October	60,011	96,977	41,472	12,173
November	96,110	325,277	21,138	38,875
December	178,979	429,277	19,325	34,667
January	209,327	419,598	11,989	36,195
<i>Sub Total Sep-Jan</i>	<i>552,803</i>	<i>1,291,929</i>	<i>130,132</i>	<i>150,290</i>
February	314,771		17,165	
March	429,481		25,767	
April	283,549		32,199	
May	126,146		20,956	
June	23,253		33,167	
July	989		21,789	
August	44,051		35,369	
Total	1,775,043	2,300,000 (f)	316,544	250,000 (f)

Turkey's Barley Imports & Exports by Month/Marketing Year (MT)				
Month	Import MY 2020/21	Import MY 2021/22	Export MY 2020/21	Export MY 2021/22
June	14,550	19,167	43	11,049
July	52,481	65,278	7,474	8,254
August	40,510	585,254	55	27,579
September	49,999	416,522	495	23,124
October	112,258	271,324	2,771	19,646
November	44,751	323,875	314	11,467
December	66,006	377,312	2,922	4,627
January	104,343	295,167	8,745	6,429
Sub Total Jun-Jan	484,898	2,353,899	22,819	112,175
February	40,867		8,768	
March	165,947		10,345	
April	12,086		11,945	
May	1,952		5,853	
	705,750	3,100,000 (f)	59,730	150,000 (f)

Source: TUIK

Turkey's Rice Imports and Exports by Marketing Year (milled equivalent)				
	Import MY 2020/21	Import MY 2021/22*	Export MY 2020/21	Export MY 2021/22*
Rice In The Husk (Paddy Or Rough)	72,660	2,495	124	26
Rice, Husked (Brown)	6,795	2,292	42	2
Rice, Semi-Milled Or Wholly Milled, Whether Or Not Polished Or Glazed	332,219	64,586	194,869	102,036
Rice, Broken	8	4	17,502	12,403
Total Rice (milled equivalent)	411,682	69,376	212,537	114,467

*September 2021-January 2022

Source: TUIK, including transshipments

Turkey's Imports and Exports of Rice by Month/Marketing Year (MT)

Month	Import MY 2020/21	Import MY 2021/22	Export MY 2020/21	Export MY 2021/22
September	9,857	5,784	13,245	21,842
October	28,833	3,845	20,246	18,521
November	22,857	9,740	16,748	35,865
December	46,087	8,625	20,430	23,283
January	31,265	41,384	18,326	14,956
Sub Total Sep-Jan	138,899	69,376	88,996	114,467
February	29,078		21,014	
March	82,885		18,944	
April	82,339		21,428	
May	8,775		16,973	
June	39,375		16,010	
July	5,207		11,253	
August	25,123		17,919	
Total	411,682	360,000 (f)	212,537	230,000 (f)

Attachments:

No Attachments