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Global Agricultural Information Network

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## Saudi Arabia

### Grain and Feed Annual

**2019**

**Approved By:**

Alan Hallman, U.S. Embassy, Riyadh

**Prepared By:**

Hussein Mousa, U.S. Embassy, Riyadh

**Report Highlights:**

Saudi Arabia partially rescinded a virtual ban on domestic wheat production and is projected to produce 500,000 MT in MY 2019/20. The Saudi government's decisions to reduce irrigation are driving this dramatic increase from 10,000 MT in MY 2018/19. Wheat imports are projected to fall by 17 percent to 2.86 MMT in MY 2018/19. Due to winter rains that have reduced demand, we estimate MY2019/20 imports of barley at 6.5 million MT, 1.4 million MT lower than prior year level. Because of increased demand by animal feed producers, we estimate MY2018/19 corn imports at 4.4 million MT, up about 11 percent over MY2017/18 levels. MY 2018/19 Saudi rice imports are estimated at 1.35 million MT, up by nearly 4 percent from last year.

## **Wheat**

### **Production:**

Post forecasts Saudi wheat production of 500,000 for MY2019/20, an increase of 490,000 MT from 10,000 MT produced in 2018/19. The increase is due to a Saudi government decisions to reduce groundwater consumption by limiting alfalfa production and allowing some farmers to produce wheat. Saudi Ministry of Environment, Agriculture and Water (MEWA) estimates that 87,280 hectares (HA) of wheat will be cultivated this year, and that production will reach 500,000 MT in MY2019/20. If the current policies continue, than production could rise even further in 2020. MEWA will monitor the impact of the new forage and wheat production policy and make corrective measures as needed.

Saudi Arabia partiality rescinded a virtual ban on domestic production of wheat that had been in place for three years. Wheat production is being permitted to provide medium and smaller size forage producers with an alternative field crop. Many have been forced to cease forage production because of the Saudi government's decision to reduce domestic forage production by 42.5 percent effective from November 3, 2018. The main reason for the significant reduction in the Kingdom's forage production is concern over the depletion of the country's groundwater. Domestic wheat and forage production depends on 100 percent irrigation, but wheat uses much less water than alfalfa. MEWA estimates that approximately 10.75 million MT of forage was produced in Saudi Arabia in 2015/16. It projects MY2018/19 forage production at 6.17 million MT.

Under the new policy, farmers cultivating less than 100 hectares prior to the issuance of the decree in December 2016 are given the option of planting either wheat or forage only on 50 hectares. Farmers who opt to produce wheat or forage are required to obtain a farming permit from MEWA to plant the licensed crop two seasons before they are allowed to switch.

The wheat crop is completely irrigated. However, cooler temperatures and cloudy weather associated with rainfall (when it arrives) affect wheat growing conditions and the crop yield. Traditionally Saudi Arabia grows a hard-winter variety known as 'Yecoro Rojo' that originated from the United States. Saudi wheat is preferred by Saudi Arabia Grains Organization (SAGO) due to its hard kernel and a lower moisture content than imported wheat. These two attributes allow for extended storage time.

### **Consumption:**

Total Saudi wheat consumption in MY2017/18 was about 3.5 million MT based on data provided by SAGO. This is very close to USDA's official estimate of 3.55 million MT. Official data issued by SAGO shows that the Kingdom wheat flour consumption was 2.8 million MT in MY2017/18. Approximately 2.7 million MT of that was produced by SAGO while around 100,000 MT was imported from Kuwait and other countries. Wheat flour consumption has been static for the past several months and is not expected to significantly increase in the next two marketing years.

Demand growth is expected to be limited due to the continued departure of expatriate workers and their families due to policy measures implemented by the Saudi government. Demand growth is also constrained by the increase in the cost of living in the Kingdom over the past couple of years due to sharp increases in utility charges, and the implementation of a five percent value added tax (VAT) in

January 2018. These two factors have reportedly contributed to significantly reducing food waste, including bread and wheat flour wastage, which has been estimated at 30 percent nationwide. Preferences for other food alternatives such as imported pasta products, rice, as well as increased fruit and vegetables consumption, has been an additional factor.

The estimated 1.5 percent annual wheat consumption increase over the next two years is driven mostly by increases in the number of Umrah and Hajj pilgrims that will visit the two holy cities of Makkah and Medina due to relaxed visa rules aimed at attracting more pilgrims to the country.

Wheat is mostly consumed in the form of flat (pita) bread or local hamburger buns known as ‘Samoli’ and other western-style bread, such as French baguettes and pizza. The average per capita consumption of wheat in Saudi Arabia is currently estimated at about 107 grams per day, or about 39 kg annually.

White flour constitutes the bulk of wheat flour consumed in Saudi Arabia. In recent years, however, there has been a small but growing demand for whole-wheat flour due to its perceived health benefits, particularly by health conscious consumers and those with health conditions such as diabetes and obesity. It should be noted that Saudi Arabia has one of the highest diabetic and obesity rates in the world. SAGO, the exclusive wheat flour miller in Saudi, has increased its whole-wheat production in recent years to meet the growing demand.

ARASCO, the dominant Saudi animal feed processor, imported 60,000 MT feed wheat from Ukraine in MY2016/17. No feed wheat imports have been reported this marketing year.

### **Trade:**

SAGO is the exclusive importer of subsidized food grade wheat in Saudi Arabia. The organization imports mainly hard wheat directly through public tenders open to registered international exporters. It does not buy through grain brokers. SAGO purchases wheat from a wide range of origins, including the EU, the U.S. South America and Australia. Saudi Arabia banned Canadian grain imports in 2018.

### **SAGO Wheat Import Data**

SAGO has completed its wheat imports tender for this MY and will import approximately 2.86 million MT by the end of June 30, 2019. Any wheat import tender that SAGO may issue before June will probably be for wheat that will arrive in July and subsequent months.

SAGO has issued five international wheat import tenders in MY2018/19 to import approximately 2.86 million MT for this MY, a 17 percent decrease compared to 3.43 million MT imported in MY2017/18. One of the major factors causing the decrease in the Kingdom’s wheat imports this marketing year is the high carrying stock from last MY. SAGO no longer follows a policy of keeping wheat reserve stock level at annual consumption. The organization is believed to maintain stocks at six months of consumption. A further decrease of about 9 percent in total Saudi wheat imports is forecast in MY2019/20 due to the expected increase in the domestic wheat production. Next MY, local wheat production is likely to reach 500,000 MT.

SAGO Wheat Purchase MY2017/18		SAGO Wheat Purchase MY 2018/19	
Shipment Arrival Date	Quantity in MT	Shipment Arrival Date	Quantity MT
Jul-17	179,794	Jul-18	245,518
Aug-17	319,451	Aug-18	229,911
Sep-17	260,522	Sep-18	282,112
Oct-17	385,020	Oct-18	197,600
Nov-17	260,154	Nov-18	230,510
Dec-17	304,010	Dec-18	309,744
Jan-18	295,725	Jan-19	250,000
Feb-18	298,560	Feb-19	250,000
Mar-18	287,093	Mar-19	240,000
Apr-18	297,509	Apr-19	130,000
May-18	306,136	May-19	250,000
Jun-18	237,734	Jun-19	245,000
<b>Total MY2017/18</b>	<b>3,431,708</b>	<b>Total MY2018/19</b>	<b>2,860,395</b>

Source: SAGO

### Supplying Countries Wheat Export Data

Supplying countries customs data shows that about 3.4 million MT of wheat was exported to Saudi Arabia in MY2017/18, seven percent lower than total exports a year earlier. It is worth noting that supplying countries' wheat export data may not agree with actual wheat arrival figures issued by SAGO. Exporting countries' data is compiled based on shipments that depart seaport in a given month, while SAGO's data reflects actual vessel debarkation dates at Saudi seaports. Shipments that leave an exporting country in June might arrive at Saudi ports in July. In this section, supplying countries' export data is used to discuss market share in the Saudi market for MY2017/18.

In MY2017/18, Germany retained its dominance of the Saudi imported wheat market for the second year in a row with 1.07 million MT, or 31.8 percent of the market. German exports decreased by about 37.4 percent in MY 2017/18, compared to the year before. Latvia was the second largest supplier with 19.7 percent followed by Lithuania (19 percent) and France (18.3 percent). While the three countries drastically expanded their exports to the Kingdom, Poland's market share went down by about 71 percent in MY2017/18 in relation to its exports a year earlier. The United States was a distant fourth place with 4.7 percent market share. MY2016/17 was the first time the United States exported wheat to Saudi Arabia since MY2013/14.

The United States is not a regular wheat exporter to Saudi Arabia. In MY2017/18, it exported only 88 MT of wheat. A year earlier, it exported 172,450 MT, the largest quantity since Saudi Arabia turned to imports to meet its wheat consumption needs a decade ago. The second largest year for U.S. wheat exports to Saudi Arabia was MY2012/13 when 169,140 MT was shipped. The main reason for the low and irregular U.S. wheat exports to Saudi Arabia is high U.S. wheat export prices.

<b>Saudi Wheat Imports Per Supplying Countries Customs Data</b>
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<b>Exporter</b>	<b>MY2016/17</b>	<b>Market Share</b>	<b>MY2017/18</b>	<b>Market Share</b>
Germany	1,714,352	47.2%	1,073,047	31.8%
Latvia	131,249	3.6%	664,151	19.7%
Lithuania	328,749	9.0%	641,153	19.0%
France	0	0.0%	619,673	18.3%
Poland	1,023,499	28.2%	299,907	8.9%
Estonia	8,597	0.2%	66,000	2.0%
Australia	7,039	0.2%	13,946	0.4%
United States	172,461	4.7%	88	0.0%
Ukraine	60,000	1.7%	0	0.0%
Finland	56,345	1.6%	0	0.0%
Belgium	0	0.0%	0	0.0%
Brazil	62,430	1.7%	0	0.0%
Canada	68,250	1.9%	0	0.0%
Other Countries	189	0.0%	94	0.0%
<b>Total</b>	<b>3,633,160</b>	<b>100%</b>	<b>3,378,059</b>	<b>100%</b>

Source: Global Trade Atlas (GTA)

### Stocks:

SAGO owns and operates silo complexes in major cities around the Kingdom. The organization had total combined storage capacity of 3.23 MMT at the end of 2018, an increase of 70 percent over 2011. SAGO has signed contracts to build five additional silos in Mecca, Qassim, Jazan, Aseer, and al-Hasa, which will increase the total storage capacity to 3.7 MMT by the end of 2019. SAGO has become expert in sourcing wheat from the international market and considers the world wheat supply to be reliable. As such, it no longer strives to maintain strategic wheat reserves equal to annual consumption. Although SAGO does not release its actual wheat reserve stock level, it is believed to maintain stocks at six months of consumption. This can change depending on the supply and demand situation.

### Policy:

The Kingdom ceased domestic wheat production at the end of 2014/15 because of strong concern over the depletion of the country's scarce water reserves. The MY2014/15 harvest was the last crop purchase by SAGO. The situation changed this year; wheat production is being permitted to provide medium and smaller-size forage producers with an alternative field crop.

Small-scale farmers who used to produce forage on 50 HA or less of land on December 7, 2015, have been provided with three options: (1) terminate forage production altogether and receive financial compensation of SAR4,000 (\$1,067) per HA for up to \$53,333, (2) produce forage, or (3) produce wheat.

Medium sized farmers who used to plant forage on 100 hectares or less of land were also given some options: (1) terminate forage production and receive financial compensation of \$106,667 for the 100 hectares or (2) receive financial compensation of \$53,333 for 50 hectares and farm either wheat or forage on the remaining 50 hectares.

Farmers that opt to produce wheat or forage have to obtain licenses from MEWA and should only produce the crop they are licensed to grow at least for two years. If a farmer wishes to switch from wheat to forage or vice-versa, he must reapply for a new license after two production seasons.

It is estimated that 87,280 hectares of former forage area was converted to wheat production this crop year. Planting begins in late October and runs to early January. Harvest of approximately 500,000 MT of wheat is expected to start by early June. The harvest will be delivered to SAGO in MY2019/20.

Wheat production in Saudi Arabia relies on mechanical irrigation and underground nonrenewable water resources. Although the wheat crop is completely irrigated, the cooler temperature and cloudy weather associated with rainfall (when it arrives) affects crop yield. Traditionally, the wheat grown in Saudi Arabia is hard winter, and the main wheat variety cultivated in Saudi Arabia is 'Yecoro Rojo', which originated from the United States. Saudi grown wheat is considered hard wheat with a low moisture content. It can be stored for extended period.

### **Saudi Arabia Privatizes Flour Mills**

On November 9, 2015, the Saudi government approved the establishment of four milling companies and restructured the Grain Silos and Flour Mills Organization (GSFMO) under a new name, the Saudi Grains Organization (SAGO). The Saudi government authorized the Public Investment Fund (PIF) to set up the four flour milling companies. The PIF has completed the required restructuring and formed the four companies, which have commenced operating independently. The four companies are named: First Mills Company, based in Jeddah, Second Mills Company based in Riyadh, Third Mills Company based in Khamis Mushit and Fourth Mills Company headquartered in Dammam.

The PIF has reportedly finalized required procedures to sell the mills to interested buyers through a competitive bidding process before the end of this year. Foreign investors are allowed to partner with Saudi investors to co-own and operate these flourmills. It was reported that foreign investors are allowed to own up to 49 percent ownership in the flourmills.

The new milling companies will be clients of SAGO. They will process and distribute wheat flour to government-approved customers at agreed subsidized prices. The new mills would be allowed, if they so choose, to import wheat for production of non-subsidized flour after obtaining import permits from SAGO. This could be used for the production of upscale quality bakery and pasta products. Most of the revenue of the private mills is expected to come from the milling fees charged to SAGO. These flourmills have a combined daily milling capacity of 14,000 MT.

### **SAGO Roles after Privatization**

SAGO will remain the sole importer of subsidized milling wheat and will maintain ownership and operation of most of the wheat silos across the country. SAGO will manage the strategic wheat reserves and ensure the Kingdom's food security objectives. SAGO is expected to privatize only a part of its grain storage silos to provide a smooth transition for the new flourmills. The rest of the storage capacity will be retained by SAGO for strategic reserve purposes.

SAGO's post-flour mill privatization roles will include the following:

- Issuing import permits for unsubsidized wheat to interested flour mills;
- Setting regulations related to wheat flour quality;

- Inspecting flour mills to ensure compliance with quality regulations;
- Encouraging and regulating competition among private flour mills; and
- Ensuring sufficient wheat flour is produced and delivered Kingdom-wide.

### Marketing:

Licensed bakeries and supermarkets and almost all industrial users get their flour directly from SAGO's flourmills or from assigned agents in their respective areas. There are more than 525 appointed distributors, with about 100 that have more than one outlet. They serve 11,606 establishments, of which 6,500 are licensed bakeries. The distributors provide packaged flour to licensed bakeries in 45-kg sacks and to retailers in one, two, five and ten-kg sacks. Industrial users purchase in bulk (metric tons).

### Market Development Activities:

Since the resumption of wheat imports in 2008, the U.S. Wheat Associates (USWA) regional office has coordinated market development and trade servicing activities in Saudi Arabia. The capacity-building activities, which included seminars, training and exchange programs, were designed to assist SAGO's purchasing staff in understanding the quality attributes of various U.S. wheat varieties. The USWA offered workshops to address diverse wheat purchasing issues, including risk management, contract terms, quality specifications, wheat inspection and other global market considerations related to wheat supply and demand, as well as freight and shipping costs.

### Prices:

Large bakeries and industrial users purchase wheat flour directly from SAGO flourmills, while smaller bakeries and retailers receive their assigned quotas from SAGO-appointed distributors. SAGO's wholesale prices vary based on the flour type and extraction rate. The wholesale price of a kg of consumer-packed white wheat flour increased by 50 percent from \$0.27 to \$0.40 in 2017. Bakers purchase at prices from \$5.30 to \$8 per 45 kg based on flour extraction rates, patent or regular flour, while industrial users purchase in bulk for prices that range between \$117.30 and \$160 per MT. Prices to bakers and industrial clients have not changed for over three decades.

### Exports:

Saudi Arabia does not export wheat. However, an estimated 10,000 MT of wheat equivalent of wheat products such as macaroni, pasta, biscuits and some bread are exported annually to the GCC and other nearby countries.

### Production, Supply and Demand Data Statistics:

Wheat Market Begin Year	2017/2018		2018/2019		2019/2020	
	Jul 2017		Jul 2018		Jul 2019	
Saudi Arabia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	2	2	2	2	0	87
Beginning Stocks	3415	3415	3214	3247	0	2557
Production	10	10	10	10	0	500
MY Imports	3440	3432	3400	2860	0	2600

<b>TY Imports</b>	3440	3432	3400	2860	0	2600
<b>TY Imp. from U.S.</b>	2	0	0	0	0	0
<b>Total Supply</b>	6865	6857	6624	6117	0	5657
<b>MY Exports</b>	1	10	10	10	0	10
<b>TY Exports</b>	1	10	10	10	0	10
<b>Feed and Residual</b>	100	100	100	0	0	0
<b>FSI Consumption</b>	3550	3500	3500	3550	0	3600
<b>Total Consumption</b>	3650	3600	3600	3550	0	3600
<b>Ending Stocks</b>	3214	3247	3014	2557	0	2047
<b>Total Distribution</b>	6865	6857	6624	6117	0	5657
<b>Yield</b>	5	5	5	5	0	5.7471
(1000 HA) ,(1000 MT) ,(MT/HA)						

## Barley

### Production:

Saudi barley production is estimated at approximately 10,000 MT and is mostly for human consumption. The government has stopped feed barley production to conserve scarce water resources, as the Saudi barley crop is 100 percent irrigated. Local barley production is mainly used in specialty food items, such as soups and traditional Saudi dishes during the fasting month of Ramadan. A small quantity is used by households making barley tea.

### Consumption:

Imported barley is used for animal feed, as there is no beer production in Saudi Arabia, and is fed in conjunction with hay. Domestic feed barley consumption in 2018/2019 is forecast to decline by approximately 21 percent to 6.7 million MT from last year. This is 2 million MT lower than USDA's official estimate of 8.7 million MT. The main reason for the projected decline in the barley consumption is plentiful pasture this winter because of sporadic and heavy rains. The sporadic rains are continuing in some parts of the Kingdom and may last for another few weeks. The good pasture conditions are expected to continue to offer good grazing opportunities until the end of April.

The Kingdom's barley consumption for MY2019/20 is forecast to increase by 16 percent to 7.8 million MT. The increased demand presumes normal rain patterns and lower domestic forage production.

MEWA is projecting a 42.5 percent reduction in domestic forage production due to regulations that took effect on November 3, 2018. In 2015/16, an estimated 10.75 million MT of various forages, dominantly alfalfa, were produced. The new Saudi government domestic forage production policy allows the cultivation of about 6.2 million MT annually going forward. Local feed experts estimate that about 30 percent of locally produced forage is wasted mostly at the traditional livestock premises and the reduced production will increase prices significantly, forcing traditional farmers to be efficient in their forage use. Some domestic feed experts believe that 4 million MT of forage will be sufficient for the traditional sector livestock farmers if used efficiently and in conjunction with manufactured feed. This, they say, will eliminate the need for importing millions of MT of grain barley. This, along with higher hay prices, would require a significant adjustment by small livestock producers.

Traditionally, white barley has been the preferred animal feed for Bedouins. Approximately 80 percent of imported barley is fed to sheep, camels, and goats without further processing in combination with green forage. The remainder is largely used as an ingredient in dairy feed processing. Barley use in poultry feed processing is estimated to be less than five percent of total imported barley.

Sheep and goats consume the largest portion of imported barley, followed by camels. Dairy farms use limited quantities of barley in their feed formulations. When it is readily available at competitive prices, barley is often used in the place of forage. According to the 2017, published official data, livestock in the Kingdom total about 14.7 million head (10 million sheep, 3.4 million goats, 813,000 camels and 500,000 cows). About 8 million head of livestock, mostly sheep, are imported annually for slaughtering and they consume an estimated 1.3 million MT of feed, mostly barley, annually.

Barley is not generally used in local livestock (sheep, camel and goats) feed manufacturing. The dominant ingredient is corn. Local feed processors indicate that the increased competitiveness of locally processed feed has been attracting a growing number of Bedouin livestock owners. It appears that they are discovering its better nutritional value and cost savings over raw barley feed. Both MEWA and feed processors report that more than 20 percent of raw barley fed to livestock is wasted without being digested, thereby providing no benefit in terms of weight gain or nutrition to the animals.

ARASCO, the largest Saudi animal feed processor, with an annual production capacity of 4 million MT, has kept its wholesale price of the 50 kg-bag of “Wafi” compound feed at ex-factory price of \$9.07. This which is equal to the price wholesale price that the Saudi government charges for unprocessed barley of the same weight. Saudi Bedouins have preferred barley for animal feed because it is easier to handle and store than processed feed. Saudi feed processors believe that the country’s animal feed processing sector that depends largely on imported corn feed will not reach its optimal production level as long as the Saudi government keeps on providing highly subsidized barley to the traditional livestock producers. SAGO purchases barley on international market at going rates and sells to the livestock farms for \$192 wholesale price per MT regardless of import prices and other overhead costs. The maximum retail price is \$213.33 per MT at any location in the Kingdom.

### **Trade:**

On March 27, 2019, SAGO announced signing of its fifth and last barley import contract with international grains exporters for this marketing year to import 730,000 MT of barley for arrival in May and June 2019. As a result, Saudi Arabia’s barley imports for MY2018/19 are expected to fall to 6.5 million MT from the approximately 7.9 million MT reported by SAGO in MY2017/18. This is 2 million MT less than USDA’s official estimate for MY 2018/19. Good pasture conditions this winter due to sporadic and heavy rains are the main factors for the reduced demand for barley by traditional farms. The sporadic rains is expected to continue in April.

SAGO paid an average price of \$211.86 per MT for the barley it purchased at the end of March, which is \$55 per MT less than the average price it in early November 2018 when it purchased more than 1 million MT for January-February arrival. It appears that the reduced demand for barley by Saudi Arabia has increased stock and contributed in significant reduction of feed barley prices on the international market.

<b>SAGO Barley Import Contracts for Marketing Year 2018/2019</b>		
Expected Shipment Arrival Period	Quantity Purchased in MT	Average per MT Price in USD
May-June 2019	730,000	\$211.86
Jan.-Feb.2019	1,020,000	266.83
Nov-Dec 2018	1,500,000	260.79
Sep-Oct 2018	1,740,000	226.47
Jul-Aug 2018	1,500,000	228.61
<b>Total MY 2018/19 Imports</b>	<b>6,490,000</b>	

Source: SAGO

Saudi barley imports in MY2019/20 are projected to increase and reach 8 million MT, an increase of about 21 percent over estimated MY2018/19 total imports. This is due to a significant reduction in the country's domestic forage production, which is expected to increase forage prices.

In MY2017/18, Russia exported about 2.3 million MT of barley to Saudi Arabia, almost doubling the quantity it exported a year earlier. The Russian share of the barley market increased from 14.5 percent in MY2016/17 to 28.9 percent in 2017/18. Ukraine, the longtime dominant supplier of barley to the Kingdom, lost its leadership to Russia and exported 20 percent less barley. Germany maintained third place with 12.7 percent market share but exported about five percent less in 2017/18.

<b>Saudi Barley Imports in MT</b>				
Exporter	MY2016/17	Market Share	MY2017/18	Market Share
Russia	1,171,173	14.5%	2,291,825	28.9%
Ukraine	2,275,521	28.2%	1,813,051	22.8%
Germany	1,061,013	13.2%	1,010,566	12.7%
Romania	471,231	5.8%	788,451	9.9%
Argentina	910,805	11.3%	764,798	9.6%
France	863,823	10.7%	749,854	9.4%
Estonia	99,300	1.2%	259,862	3.3%
Netherlands	0	0.0%	66,000	0.8%
Canada	132,000	1.6%	66,000	0.8%
Denmark	66,000	0.8%	65,994	0.8%
Lithuania	147,354	1.8%	64,000	0.8%
India	22	0.0%	4	0.0%
Latvia	72,220	0.9%	0	0.0%
Australia	793,801	9.8%	0	0.0%
<b>Total</b>	<b>8,064,263</b>	<b>100%</b>	<b>7,940,405</b>	<b>100%</b>

Source: GTA

**Stocks:**

SAGO does not release information on Saudi strategic barley data. However, it is estimated at approximately 25 percent of total consumption.

## Marketing:

### Domestic Barley Price

Sufficient barley supplies are readily available at competitive prices throughout the Kingdom. Currently, large livestock farmers and licensed wholesale barley distributors can purchase a 50 kg sack of barley at a packing facility at the government-set price of 36 Saudi Riyals (SAR), or about \$9.60 per 50 kg. The government permits barley dealers to resell the 50 kg sack at a maximum retail price of 40 SAR (\$10.60).

### Barley Distribution Channels

Barley shipments usually arrive through five Saudi ports: Jeddah, Dammam (the largest and second largest seaports in the country, respectively), Yanbu, Diba, and Jazan on the Red Sea. After barley is discharged at port, it is transported by truck to the nearest SAGO-contracted bagging facility outside the port. The bagged barley is usually picked up by preassigned dealers or large end-users from the distribution centers.

### Production, Supply and Demand Data Statistics:

Barley Market Begin Year	2017/2018		2018/2019		2019/2020	
	Jul 2017		Jul 2018		Jul 2019	
Saudi Arabia	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	2	2	2	2	0	2
Beginning Stocks	2344	2344	1829	1738	0	1538
Production	10	10	10	10	0	10
MY Imports	8000	7894	8500	6500	0	8000
TY Imports	7700	7700	8500	6500	0	8000
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	10354	10248	10339	8248	0	9548
MY Exports	0	0	0	0	0	0
TY Exports	0	0	0	0	0	0
Feed and Residual	8500	8500	8700	6700	0	7800
FSI Consumption	25	10	25	10	0	10
Total Consumption	8525	8510	8725	6710	0	7810
Ending Stocks	1829	1738	1614	1538	0	1738
Total Distribution	10354	10248	10339	8248	0	9548
Yield	5	5	5	5	0	5

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

## Corn

Corn production is very limited. Saudi Arabia produces approximately 80,000 MT annually, mainly for human consumption. Domestic dairy farmers plant a significant acreage of corn silage.

Corn planting occurs twice a year, in the spring and summer. The spring planting is in March, with harvest in August. The summer planting is in the last week of June, with harvest from mid-November until the end of December. About 60 percent of corn production is from the summer crop. The area planted to corn in MY 2018/2019 is estimated at 14,200 HA, with an average yield of 5.6 MT per hectare.

Domestic corn production has been constant over the past several years because Saudi corn growers do not receive government support, neither through direct production subsidies nor by government-guaranteed prices. Government policy has been to discourage domestic production of water-intensive crops, including feed corn. The government also subsidizes imported corn.

### **Consumption:**

Imported corn is primarily used for animal feed. Approximately 150,000 MT is used in the production of food processing ingredients, such as starch and sweeteners. Most domestically grown corn is used as corn-on-the-cob or milled for flour by small neighborhood flourmills.

MY2018/19 corn consumption is estimated at approximately 4.46 million MT, about 11 percent less than USDA's official estimate of 5 million MT. This is however, an increase of about 17 percent over estimated total consumption in MY2017/18. Lower domestic corn consumption this year, compared to the USDA's initial estimate of 5 million MT is driven by good pasture conditions and adequate supply in the market of government supplied barley at discounted price to livestock farmers.

We project corn consumption in MY2019/20 to increase by 12 percent, to 5 million MT, because of higher demand for processed feed by traditional livestock producers. We expect prices of domestically produced forage to increase significantly due to the 42 percent reduction in local forage production. We expect a new feed mill to be commissioned in the red sea port of Yanbu at the end of 2019. Total production capacity is expected to be 1.5 million MT.

We expect the demand for processed feed to increase in the next few years as prices of locally produced forage increase significantly due to tight supply. However, we do not expect a drastic demand increase for corn and processed feed as long as government continues to provide barley at discounted price.

Corn continues to be a very important feed grain for poultry farms; it accounts for approximately 60 percent of poultry feed formulations. It is also a key feed grain used by commercial feed processors and domestic dairy farms.

Feed accounts for approximately 70 percent of broiler-meat production costs. The Saudi government has been providing import subsidies for feed corn and other feed ingredients, including DDGS and CGF, to help reduce production cost of poultry meat, table eggs, dairy and other livestock products. The current import subsidy for corn is \$82.40 per MT.

### **Industrial Use:**

MEFSCO is a joint venture of ARASCO and Cargill that manufactures starch-based products for the Saudi market and the MENA region. MEFSCO's plant produces starches, sweeteners, glucose, high fructose corn syrups and other food processing ingredients for confectioneries, juices, and bakery. Based in Al-Kharj, MEFSCO depends on imports for corn. The company plans to crush approximately 150,000 MT of corn this year, increasing the total food, seed and industrial use (FSI) consumption to 240,000 MT, an increase of 20 percent over a year earlier. More competitively priced starches, sweeteners and other related other food processing ingredients, mainly from Latin America, are serious challenges for MEFSCO.

### Trade:

Saudi corn imports for MY2018/19 are forecast to reach 4.4 million MT, up approximately 11 percent over MY2017/18 imports. This is due to increase in demand by animal feed processors and assumes that no sorghum will be imported to Saudi Arabia. Projected MY2018/19 corn imports are down 12 percent from USDA's official estimate of 5 million MT. In MY2017/18, four-vessels (or 280,000 MT), of U.S. sorghum that was destined to China was diverted to Saudi Arabia because of China's 179 percent tariff on U.S. sorghum. Sorghum is a good substitute for corn if its prices are significantly less than corn by at least \$15 per MT. The main reasons why feed processors require the significant price difference is the about \$7 per MT more import subsidy paid by the Saudi government for corn imports and the familiarity of local feed mills with corn. The current import subsidy per MT for corn is \$82.40 and for sorghum is \$75.53.

In MY2017/18, the United States lost its four-year dominance of the Saudi imported corn market to Argentina. In that year, Argentina exported about 1.8 million MT of corn to Saudi Arabia, accounting for 44.8 percent of total Saudi corn imports. Last year, Argentina's corn exports to Saudi Arabia increased by 659,631 MT over a year earlier. With 39.8 percent of the market, the United States was the second largest corn exporter to Saudi Arabia last marketing year. We supplied about 1.6 million MT, a reduction of 450,563 MT from the prior year. Brazil was third with 14.4 percent of the market, or 575,166 MT, more than doubling its shipments over a year earlier.

Saudi corn importers prefer Latin American corn when supplies are good and prices are competitive to U.S. corn. The main reason for the preference is less breakage. Saudi importers feel that this is due to different drying methods. Broken corn is more susceptible to mold and creates dust.

<b>Saudi Corn Imports in Metric Ton</b>				
Exporter	<b>Oct 2016-Sep 2017</b>		<b>Oct 2017-Sep 2018</b>	
	Quantity	Market Share	Quantity	Market Share
Argentina	1,124,656	32.6%	1,784,287	44.8%
United States	2,035,479	59.1%	1,584,916	39.8%
Brazil	284,257	8.3%	575,166	14.4%
Paraguay	0	0.0%	31,607	0.8%
Other Countries	1,089	0.0%	6,879	0.2%
<b>Total</b>	<b>3,445,481</b>	<b>100%</b>	<b>3,982,855</b>	<b>100%</b>

Source: GTA

While wheat and barley are exclusively imported by SAGO, feed corn is imported freely by the private sector in Saudi Arabia, with no import duties. In addition, as mentioned earlier, the government encourages corn imports by providing an import subsidy of \$82.40 per MT to importers.

### **Distillers dried grains with solubles (DDGS) and corn gluten feed (CGF)-HS code 2303**

In MY 2017/18, Saudi Arabia imported 88,014 MT of DDGS and CGF, an increase of about 25 percent over a year earlier. France was the dominant supplier with about 85 percent of the market, or 74,794 MT. France increased the quantity it exported in that year by 64,894 MT. The United States was the second largest exporter with 15 percent of the market or 13,216 MT. This was 36,450 MT less than a year earlier.

There are two groups of customers for DDGS in Saudi Arabia: (1) Dairy farms import and use the product in their dairy rations when its prices are competitive to that of corn. This sector is the main user of DDGS in Saudi Arabia. Farms use DDGS to reduce their production cost and achieve higher milk production. (2) Local feed processors use DDGS as source of fiber in their feed formulation to replace fiber sources such as hulls and straw. Demand for DDGS in this industry materializes if its price is comparable to that of other fiber sources. If DDGS prices are comparable to that of hulls, DDGS is preferred due to its richer nutritional attributes.

DDGS and corn gluten feed (CGF) are two of the 31 animal feed ingredients that are eligible to receive Saudi government import subsidies. Importers of DDGS and CGF receive import subsidies of \$99 and \$91 per MT, respectively. To qualify for the subsidies, DDGS shipments must have at a minimum protein content of 23 percent and 2,800 energy units per MT. For CGF, the minimum protein requirement is 20 percent and the energy requirement is 2,700 units per MT.

### **Production, Supply and Demand Data Statistics:**

Corn	2017/2018		2018/2019		2019/2020	
	Oct 2017		Oct 2018		Oct 2019	
Market Begin Year	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Saudi Arabia						
Area Harvested	14	14	15	14	0	14
Beginning Stocks	192	192	255	355	0	295
Production	80	80	84	80	0	80
MY Imports	3983	3983	5000	4400	0	5000
TY Imports	3983	3983	5000	4400	0	5000
TY Imp. from U.S.	1577	1500	0	1500	0	0
Total Supply	4255	4255	5339	4835	0	5375
MY Exports	0	0	0	0	0	0
TY Exports	0	0	0	0	0	0
Feed and Residual	3700	3700	4700	4300	0	4900
FSI Consumption	300	200	300	240	0	240
Total Consumption	4000	3900	5000	4540	0	5140
Ending Stocks	255	355	339	295	0	235
Total Distribution	4255	4255	5339	4835	0	5375
Yield	5.7143	5.7143	5.6	5.7143	0	5.7143

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

## Ethanol

Saudi Arabia, a leading producer and exporter of petroleum, is a significant importer of ethanol. In MY2017/18, the Kingdom imported more than 69 million liters or 53,353 MT, a 15 percent decline from MY2016/17. In MY2017/18, the United States exported 98 percent of total Saudi ethanol imports, a more than six-fold increase over a year earlier. At least two Saudi companies import industrial grade ethanol to produce solvents and plastics. A third company imports about 3,000 MT for use in perfume production. U.S. market share fluctuates based mainly on price.

Saudi Arabia Ethanol Imports						
Reporting Country	Quantity					
	MY2015/2016		MY2016/2017		My2017/2018	
Reporting Total	Liter	MT	Liter	MT	Liter	MT
United States	9,760,661	7,686	9,502,362	7,482	67,911,845	53,474
France	295,465	233	223,759	176	740,470	583
United Kingdom	160,793	127	111,316	88	100,035	79
South Africa	0	0	0	0	100,000	79
Belgium	71,240	56	24,888	20	79,292	62
Germany	87,233	69	29,370	23	45,207	36
Spain	24,457	19	7,750	6	44,484	35
Pakistan	0	0	2,055	2	7,034	6
Brazil	36,401,802	28,663	0	0	0	0
China	0	0	70,082,808	55,183	0	0
Other Countries	2,623,712	2,066	0	0	0	0
<b>Total MY Import</b>	<b>49,425,363</b>	<b>38,918</b>	<b>80,714,199</b>	<b>63,554</b>	<b>69,028,388</b>	<b>54,353</b>

Source: GTA

## Rice

### Production:

There is no rice production in Saudi Arabia; the country relies on imports to satisfy the local market.

### Consumption:

We expect rice consumption to increase by more than 2 percent to 1.35 million in MY 2018/19. Projected rice consumption is approximately four percent higher in MY2019/20 than in the prior year. We expect rice consumption to grow because of an increase in foreign visitors to the two holy cities of Makkah and Medina to perform the Hajj and Umrah rituals. Promoting religious tourism is one of the Saudi government's key economic diversification initiatives. Recently available official data indicates that the total number of visitors who came to Saudi Arabia to perform religious rituals have increased from 8 million in 2010 to 12 million by the end of 2017. The Saudi government expects the number to reach 15 million by the end of 2020. Massive expansion projects at the two holy mosques in Makkah and Medina, as well as other infrastructure projects, are near completion. The number of visitors is projected to reach 30 million by 2030. To support this objective, the Saudi government has commenced issuing Umrah visas all year around except for a few weeks during Hajj season.

The expected significant annual increase in religious visitors in the next several years to the Kingdom is expected to more than offset the negative effects of the continued departure of resident expatriates on the demand for rice and other food products. In the past two years, the demand for some food products, including rice, fell due to the departure of a large number of resident expatriates. Expatriates continue to depart the Kingdom due to various Saudi government measures. These include a tax on expatriate family members, numerous Saudization programs, and a Saudi government campaign that focuses on expelling illegal aliens and those violating residence and labor laws from the country. Despite the downturn in the expatriate population, growth in the domestic population and the tourism industry is forecast to lead to modest increases in rice consumption.

Rice is a staple food in Saudi Arabia that is served for lunch and dinner. A traditional dish called *kabsah* is widely consumed in Saudi homes. The majority of Saudis include rice as a major part of their daily diet. Most of the 12 million expatriates living in Saudi Arabia (from the Indian subcontinent and other Asian countries) are also large consumers of rice. Saudi Arabia's per capita rice consumption is estimated at about 40 kg/year. In MY2017/18, Saudi Arabia's population was estimated at 33.4 million; they consumed an estimated 1.3 million tons of rice.

Basmati (aromatic rice from the Indian subcontinent) is the most popular rice variety in the Saudi market. The American long-parboiled and medium-grain calrose rice varieties are well known, but Saudi consumers' preference has shifted to basmati varieties. While Indian basmati rice is mostly consumed in the eastern, central and western regions of Saudi Arabia, American rice is popular in the southern region of the Kingdom. It is also very popular in restaurants that prepare *kabsah* dishes.

### **Trade:**

Private companies freely import rice into Saudi Arabia. Rice does not face a tariff and is not subsidized.

MY 2018/19 Saudi rice imports are estimated at 1.35 million MT, up by more than 4 percent from last year and nearly a 4 percent increase from the official USDA estimate for this year. Saudi Customs data put total Saudi rice import for MY2017/18 at 1,293,370 MT. Post projects rice imports to continue to grow by approximately four percent in MY2019/20. This is mainly due to increases in foreign visitors to two holy cities to perform the Hajj and Umrah rituals. We expect this increase to offset the continued departure of expatriates from the country.

India continued to dominate the Saudi rice market in MY2017/18 (Jan-Dec 2018). It exported 974,244 MT of rice to Saudi Arabia, accounting for 75 percent of the Kingdom's rice imports (according to Saudi Customs). Indian rice exports to Saudi Arabia faced a short-lived risk in the summer of 2018 when the Saudi Food and Drug Authority (SFDA) tried to apply the EU's maximum permissible residue level of tricyclazole in basmati rice at 0.01 mg per kg, a reduction from the earlier limit of 1.0 mg.

SFDA's unannounced testing for the fungicide at the lower level created confusion. Saudi rice importers and their Indian suppliers found out about SFDA's new requirement when the authority's labs at the Kingdom's ports of entry began rejecting consignments. According to major Saudi rice importers, the restrictive MRL restriction was rescinded following an emergency meeting between SFDA and an Indian government delegation that visited Saudi Arabia a few days after the undeclared implementation of the EU tricyclazole level.

Saudi importers reported that the EU minimum tricyclazole level of 0.01 mg per kg stopped Indian rice exports to EU last summer and helped reduce basmati rice prices destined to Saudi Arabia in the fourth quarter. This price reduction boosted Indian rice exports to Saudi Arabia in the last few months of MY2017/18. In MY2016/17, Indian rice exports to Saudi Arabia totaled 831,462 MT.

With 7.3 percent of the market, Pakistan was the second largest rice exporter to Saudi Arabia in MY2017/18. They exported approximately 94,000 MT, an increase of roughly five percent.

The United States was third with 7.1 percent of the market. In MY2017/18, US rice exports were 92,000 MT, a reduction of approximately 28 percent from a year earlier. The decrease was due to a 77 percent drop in medium grain exports - due mainly to a 17 percent increase in its FOB price from \$813 per MT in MY2016/17 to \$954 per MT in MY2017/18. The higher price reduced the quantity of U.S. medium grain rice from 38,646 MT to 6,101 MT in the same period. According to a major Saudi rice importer, the FOB price of U.S. medium grain rice continued to increase this year - reaching \$1,100 per MT in February 2019. Local rice importers blame the increase in U.S. medium grain rice prices on tight supplies in California. Saudi importers also noted the global impact of increased medium-grain import demand from Egypt following the June 2018 Egyptian government decision to open the domestic market to imported rice. This was a significant new development as Egypt, which used to export a significant quantity of medium grain rice to Saudi Arabia, was suddenly seeking to import rice instead.

According to a major Saudi rice importer, the average FOB price of U.S. long grain rice increased \$58 per MT in 2018 from \$698 in 2017. Unlike medium grain rice, the price increase did not reduce the exported quantity; it increased from 80,046 MT to 85,903 MT during the period.

With 4.9 percent market share, Thailand has maintained its traditional fourth place in the Saudi rice market. In MY2017/18, it exported 63,412 MT of rice, about six percent increase over a year earlier.

Other small but consistent rice suppliers to Saudi Arabia for the past several years have been Australia and Vietnam. In MY2017/18, Australia exported 30,359 MT of rice to Saudi Arabia, up by 56 percent from a year earlier. Vietnam, exported 21,293 MT last year, a 46 percent increase over MY2016/17.

<b>Saudi Rice Imports in MT</b>
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	MY2016/17 (Jan-Dec 2017)		MY2017/18 (Jan-Dec 2018)	
Origin	Quantity	Market Share	Quantity	Market Share
India	831,462	71.6%	974,244	75.3%
U.S.	127,270	11.0%	92,004	7.1%
Pakistan	89,725	7.7%	93,889	7.3%
Thailand	59,933	5.2%	63,412	4.9%
Australia	19,513	1.7%	30,359	2.3%
Vietnam	14,767	1.3%	21,293	1.6%
Brazil	7,864	0.7%	6,834	0.5%
Other Countries	10,026	0.9%	11,335	0.9%
<b>Total</b>	<b>1,160,560</b>	<b>100%</b>	<b>1,293,370</b>	<b>100%</b>

Source: Saudi Customs

## Competitors' Activities

Many of the Saudi rice companies that import Indian rice allocate a significant part of their marketing budgets to promote their own brand names in newspaper, radio and billboard advertising. Indian and Pakistani rice exporters often participate in domestic food shows in Jeddah and Riyadh, where they provide buyers with point-of-sale materials. Promotions coupled with product tasting are also organized occasionally in local supermarkets. U.S. promotional activities are targeted at rice importers, trade servicing, and building locally owned brands that exclusively sell U.S. rice.

## Production, Supply and Demand Data Statistics:

Rice, Milled Market Begin Year Saudi Arabia	2017/2018		2018/2019		2019/2020	
	Jan 2018		Jan 2019		Jan 2020	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	0	0	0	0	0	0
Beginning Stocks	255	255	230	230	0	230
Milled Production	0	0	0	0	0	0
Rough Production	0	0	0	0	0	0
Milling Rate (.9999)	0	0	0	0	0	0
MY Imports	1300	1293	1300	1350	0	1400
TY Imports	1300	1300	1300	1350	0	1400
TY Imp. from U.S.	0	92	0	100	0	100
Total Supply	1555	1548	1530	1580	0	1630
MY Exports	0	0	0	0	0	0
TY Exports	0	0	0	0	0	0
Consumption and Residual	1325	1318	1325	1350	0	1400
Ending Stocks	230	230	205	230	0	230
Total Distribution	1555	1548	1530	1580	0	1630
Yield (Rough)	0	0	0	0	0	0

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