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Israeli U.S. Wheat Imports Rise as U.S. Corn Imports Drop in MY 2019/20

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Post: Tel Aviv

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Prepared By: Oren Shaked, Senior Agricultural Specialist and Olutayo O. Akingbe, Agricultural Attaché

Approved By: Ali Abdi, Minister-Counselor for Agricultural Affairs

Report Highlights:

Israel is almost completely dependent on imports to meet its grain and feed needs. In recent years, dried distillers grains with solubles (DDGS) and corn gluten feed (CGF) imports have increased significantly. FAS Tel Aviv (Post) forecasts Israel's imports of wheat - primarily feed wheat - in market year (MY) 2020/21 to reach 1.79 million metric tons (MMT), up 11 percent from Post's MY 2019/20 figure. In MY 2019/20, U.S. wheat accounted for 11 percent of the market, up 4 percent from the previous year. Post forecasts Israel's imports of corn in MY 2020/21 to reach 1.74 MMT, of which 147 thousand metric tons (TMT) are expected to be of U.S.-origin. In recent years, corn imports originate mainly from Ukraine, Argentina, and Brazil. Post forecasts this increase in grain and feed imports due to expected demand by the feed sector in the Palestinian Authority (PA).

Executive Summary:

FAS Tel Aviv (Post) forecasts Israel's wheat production in MY 2020/21 (July-June) to reach 85 TMT, up 13 percent compared to 75 TMT in marketing year 2019/20. Though wheat production is forecast to be higher, it is still much lower than normal given Israel's ten-year average is about 107 TMT. Israeli wheat is dependent on rainfall. Post attributes the production increase in MY 2019/20 to higher precipitation during the winter with no extremes. However, political protests in some of the growing areas where Palestinian protestors burnt some 400 hectares of wheat fields along the Gaza Strip border, limit the production gains. Post forecasts Israel's imports of wheat in MY 2020/21 to reach 1.79 MMT, up 11 percent from Post's MY 2019/20 figure. Post anticipates the increase primarily in the form of feed wheat which may be substituted for other grains due to pricing. The Israeli feed mills alternate between the different grains according to their prices.

Post forecasts Israel's barley production in MY 2020/21 (October-September) at about 15 TMT from a harvested area of around 5,000 hectares. Post estimates that the area planted with barley is actually 6,700 hectares but 1,700 hectares are going to silage. The other 5,000 hectares is for grain production. Most barley production is located in the south of Israel while the rest of the production is in the Beit-Sh'e'an Valley, in the east of the country. Production is about 3 MT/hectare for grains and around 8.5 MT/hectare when cultivated for silage.

Israel is an insignificant producer of corn. No corn is cultivated for feed use. Post forecasts Israel's corn consumption in MY 2020/21 (October-September) at 1.73 MMT, up around 5.4 percent or increasing 89 TMT compared to the 2019/20 figure. Consumption will fluctuate somewhat mainly influenced by grain prices. Corn is the main commodity used by Israel's feed industry. Poultry and egg production drives consumption followed by dairy, turkey, and other ruminants. Post forecasts Israel's imports of corn in MY 2020/21 to reach 1.74 MMT, of which 147 TMT are expected to be of U.S.-origin. In recent years, corn imports originate mainly from Ukraine, Argentina, and Brazil. Marketing year 2019/20 saw imports of 200 TMT of U.S.-origin corn, up 66 TMT compared to the previous year.

Israel is almost self-sufficient in milk, poultry, and certain fruits and vegetables, but remains highly dependent on imports of many grains, feed products, and oilseeds. Israel has limited arable land suitable for agriculture and grazing. The water used for field crops is limited, expensive, and tightly controlled by governmental quotas. Precipitation is low in most of the country, and the arid conditions limit rain-fed agriculture. Farmers prefer to use their land and water resources for cash crops and for crops with low water demand. This will not change in the near future and Israel will continue relying on grain and feed imports. Due to the growing population, future demand for grains and feed will increase in the coming years.

Wheat**Production:**

In MY 2020/21, FAS Tel Aviv forecasts wheat production of 85 TMT, which is 13 percent higher than the 75 TMT of wheat production in MY2019/20. The increase in MY 2019/20 production was a direct result of high precipitation during the normal winter season with no extreme weather. However, combined with political protests in some of the growing areas, it led to early harvest of the fields for silage use to

limit the burning of fields. Palestinian protestors burnt some 400 hectares of wheat fields along the Gaza Strip border. The ten-year average wheat production was 107 TMT.

About 70 percent of Israeli wheat is planted in the southern part of the country and the rest in the central and northern regions. Average rainfall in the southern wheat producing regions generally reaches 450 millimeters (mm) per year, while the northern regions receive 500-550mm per year. Annual rainfall is concentrated during the winter months, from October until April. The average rainfall during MY 2019/20 was only 89 percent of its normal average in the southern growing areas and 75 percent in the northern growing areas. The lower than average rainfall impacted 2019/20 production levels and kept them below the 10-year average.

Current precipitation and soil moisture distribution are well above the annual averages in the central and northern parts of the country. Post expects the high rainfall in the south and the farmer's intentions to harvest green for silage along the Gaza Strip to have some impact on total production. Post forecasts MY 2020/21 production levels to be 22 TMT lower than the 10-year average. While in any given year about 100,000 ha of wheat are planted, only about 70 percent are harvested for milling while the remainder is used as fodder for livestock feed. Post anticipates these levels to remain steady this year.

Table 1: Israel's Wheat Production (TMT) and Annual Percent Change

MY	Total Production	Annual Percent Change
2009/10	100	67
2010/11	100	0
2011/12	100	0
2012/13	165	65
2013/14	130	-21
2014/15	90	-31
2015/16	155	72
2016/17	142	-8
2017/18	50	-65
2018/19	70	40
2019/20	75	7
2020/21	85*	13

*Forecast: Based on information collected from the Field Crops Organization and from local media.

Consumption:

Wheat consumption in MY 2020/21 is forecasted at 1.855 MMT, which is an increase of 105 TMT or six percent from MY 2019/20 figures. For human consumption, there is growing preference amongst Israeli consumers to use substitutes to white flour. Increasingly, buyers are using rice, spelt, teff, and rye flours in lieu of white wheat flour. On the other hand, feed wheat consumption is expected to grow due to the decrease in the price in the Black Sea region.

Feed Wheat – The Israeli feed milling industry shifts easily from corn, barley and sorghum to feed wheat and vice versa, depending on prevailing prices. Feed mills do not entirely substitute one grain in their mix for another grain, regardless of the price relationship. For example, with wheat and corn, despite the increase in the price of feed wheat in 2018, feed mills still used significant quantities of wheat in their feed products and did not replace it completely with cheaper grains such as corn and barley. Most mills use computerized systems to assist with substitution decisions in rations. The systems produce a best-value product considering the costs and benefits of available inputs (protein, carbohydrates, fat, price, etc.). Israeli feed mills produce hundreds of different feed formulas for different usages and for the different growth stages of the animals and each formula has a slightly different feed ratio.

In MY 2019/20, Israel imported 941 TMT of feed wheat. Due to their proximity, exporters from the Black Sea region, primarily Russia and Ukraine, dominated shipments to Israel. Imports of feed wheat from the US in MY 2019/20 were zero, as they have been since 2010. Feed wheat from the United States was priced at least US \$30 per ton higher than Black Sea origin.

Milling Wheat – Israeli wheat for milling is sourced from Russia, the United States, Hungary, Germany, Canada and Romania. Most of these imports are hard red winter wheat. There are 19 flour mills in Israel, with a total capacity of 1.3 million tons. In addition to milling wheat, there are also imports of packaged flour mainly from Ukraine and Russia. Annual non-feed wheat consumption in Israel used to be steady at around 1,000,000 MT but is expected to decrease due to changing health trends. Israel is also shipping some milled wheat to the Palestinian Authority (PA) due to their insufficient milling capacity and high demand.

Trade:

In MY 2020/21, post forecasts total wheat imports at 1.79 MMT an increase from previous year imports of 1.61 TMT.

Feed Wheat – post forecasts that in 2020/21 feed wheat imports will be 849 TMT; most feed wheat is imported from Ukraine.

Milling Wheat – In MY2020/21 milling wheat imports are expected to reach 941 TMT. Despite annual population growth of two percent, consumption remains stable, due to consumption trends that have led to reduced use of white flour. Increasing numbers of people in Israel are looking for substitutes for white flour, which is considered less healthy than whole wheat or other products such as gluten-free products.

The local production of milling wheat covers a maximum of 15 percent of annual consumption. The market share of U.S. wheat is expected to increase to 93 TMT in MY2020/21. Wheat exports from the United States tend to have lower stability values than those demanded by Israeli millers, making the use of U.S. product impracticable in many cases. In the current marketing year, the share of U.S. wheat was 11 percent of total imports compared to seven percent in MY 2018/19.

Stocks:

In MY 2020/21 wheat stocks are forecast at 415 TMT. Post is revising MY2019/20 stock estimates up to 415 TMT, from earlier estimates of 383 TMT. The increase in stocks is due to new estimations regarding additional stocks held by local livestock producers.

The government's emergency stocks of milling wheat are usually at their annual high in July after the end of the harvest in Israel. During this period, stocks are generally at an estimated 150 TMT, which would be sufficient to cover two months of demand. Stocks generally decline from July through March or April to around 30 TMT and rebound again at the onset of the harvest.

Emergency stocks are based on the domestic wheat harvest size; however, in the case of a shortage in local wheat production, stocks are rebuilt with imported wheat, as was done this year. Emergency stocks are controlled by the Israeli Ministry of Agriculture. The ministry also chooses, through tenders, the companies that are best suited to store the emergency stocks. In addition to the emergency stocks, local importers usually have some milling wheat stocks, which tend to be imported.

The Israeli Ministry of Agriculture also holds emergency stocks of feedstuffs. These include feed grains, oilseed meal, DDGS and CGF. Stocks of wheat normally stand at about 120 TMT and are sufficient to meet feed demand for approximately two weeks. Out of the total 120 TMT, about 20 TMT are feed wheat.

Table 2: Wheat Production, Supply and Demand Data Statistics

Wheat Market Begin Year Israel	2018/2019		2019/2020		2020/2021	
	Jul 2018		Jul 2019		Jul 2020	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	65	65	60	65	0	60
Beginning Stocks	526	526	358	490	0	415
Production	70	70	75	75	0	85
MY Imports	1669	1610	1850	1610	0	1790
TY Imports	1669	1610	1850	1610	0	1790
TY Imp. from U.S.	113	0	0	60	0	93
Total Supply	2265	2206	2283	2175	0	2290
MY Exports	7	5	0	10	0	20
TY Exports	7	5	0	10	0	20
Feed and Residual	850	765	850	800	0	1006
FSI Consumption	1050	946	1050	950	0	849
Total Consumption	1900	1711	1900	1750	0	1855
Ending Stocks	358	490	383	415	0	415
Total Distribution	2265	2206	2283	2175	0	2290
Yield	1.0769	1.0769	1.25	0.87	0	1.4167

Source: Ministry of Agriculture, CBS, Farm Associations, post estimates

Barley

Production:

Post forecasts Israel's barley production in MY2020/21 (October-September) at about 15 TMT from a harvested area of around 5,000 hectares. Post estimates that the area planted with barley is actually 6,700 hectares, but 1,700 hectares are going to silage. The other 5,000 hectares is for grain production. Most barley production is located in the south of Israel; the rest of the production is in the Beit-Sh'ean Valley in the east of the country. Production is about 3 MT/hectare for grains and around 8.5 MT/hectare when cultivated for silage.

Consumption:

FAS Tel Aviv forecasts Israel's barley consumption in MY 2020/21 at 355 TMT with no change from past years figures. Following feed wheat and corn, barley is the third most utilized feed grain in Israel. Post anticipates that annual consumption will range 250 to 500 TMT over the course of the next few years. Barley's main use in Israel is for sheep feed. Most feed mills will swap out feed wheat for barley depending on prices.

Trade:

FAS Tel Aviv forecasts Israel's imports of barley in MY 2020/21 at around 340 TMT, same as 2019/20 figures. There have been no U.S.-origin barley imports in recent years. Most of Israel's barley imports originate in Ukraine, taking advantage of shipping proximity and lower prices.

Barley and other grains are necessary in feed rations due to the presence of a pigment in corn called xanthophyll 1 that turns the broiler meat yellow. Poultry producers and feed millers use higher amounts of barley, sorghum or even feed wheat to mitigate for the strong yellow pigment in chicken meat. Israeli consumers tend to associate a yellow color in poultry to poor animal health and obesity. In recent years, annual barley imports have varied between 190 TMT and 550 TMT and will stay at these levels in the coming years.

Stocks:

FAS Tel Aviv forecasts Israel's barley stocks in MY 2020/21 at 42,000 metric tons. Most of the stocks will be from the government's emergency feedstuff stocks. A limited number of stocks may however be held at private feed mills.

Table 3: Barley Production, Supply and Demand Data Statistics

Barley Market Begin Year Israel	2018/2019		2019/2020		2020/2021	
	Oct 2018		Oct 2019		Oct 2020	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	0	4	0	5	0	5
Beginning Stocks	23	23	19	42	0	42
Production	0	12	0	15	0	15
MY Imports	236	339	300	340	0	340
TY Imports	236	339	300	340	0	340
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	259	374	319	397	0	397
MY Exports	0	0	0	0	0	0
TY Exports	0	0	0	0	0	0
Feed and Residual	230	322	270	345	0	345
FSI Consumption	10	10	10	10	0	10
Total Consumption	240	332	280	355	0	355
Ending Stocks	19	42	39	42	0	42
Total Distribution	259	374	319	397	0	397
Yield	0	3	0	3	0	3
(1000 HA) ,(1000 MT) ,(MT/HA)						

Source: Ministry of Agriculture, CBS, Farm Associations, post estimations

Corn

Production:

Israel is an insignificant producer of corn. No corn is cultivated for feed use. In calendar year 2019, total planted area was around 14,000 hectares. Over half of this amount is for silage, with some 6,000 hectares cultivated for human consumption as sweet corn (either fresh or processed). Popcorn grows on about 1,000 hectares. Israel is entirely dependent on imports of feed corn. Due to water constraints (dependency on irrigation, water shortages, and high prices), farmers continue to produce other higher value crops in lieu of feed corn.

Consumption:

FAS Tel Aviv forecasts Israel's corn consumption in MY 2020/21 (October-September) at 1.73 MMT, up around 5.4 percent, or increasing some 89 TMT, compared to the 2019/20 figure. Consumption will fluctuate somewhat, influenced mainly by grain prices. Corn is the main commodity used by Israel's feed industry. Poultry and egg production drives consumption, followed by dairy, turkey and other ruminants. In the last decade, total animal protein production increased by 1.4 percent, reaching 832,000 MT in calendar year 2018. This trend will continue in the coming years. Annual per capita meat consumption in Israel is 86.1 kilograms (kg) per person, ranking it fourth in the world after Australia with 90.3 kg, the United States with 90.1 kg, and Argentina with 86.6 kg per capita (2014 statistics).

BROILERS: In 2016, Israel eliminated its poultry production quota system. With no mandated quota, production surpluses were expected, but none occurred. Growers are now attempting to put in place an internal quota control to avoid excess production. The quota system, dating back to 1997, increased broiler production by 113 percent through 2014. Poultry production in 2019 is estimated at 500,000

MT, down seven percent compared to 2018 due to low market prices. Israel is self-sufficient in broiler production.

TABLE EGGS: In MY 2019, table egg production was 2.17 billion eggs, up 7.7 percent from 2018. Shortages in the Israeli market usually occur around the months of April and September due to local holidays and imported table eggs fill the gap. Salmonella outbreaks on local farms can exacerbate the seasonal shortages. The Ministry of Agriculture and Rural Development controls table egg production through a production quota system. There is little incentive or interest in changing the existing system.

MILK: In the first 11 months of 2019 (Jan-Nov), local cow milk production was 1.375 million liters, down 50 million liters from the same period of 2018. Due to milk surplus in the market, attributable to the increase in imported hard cheeses and higher consumption of milk substitutes, the production quota for 2020 will be 1.500 million liters. Post estimates that total milk production will stabilize around the quota quantities even with the growing population due to increase in consumption of milk substitutes and in imported dairy products, mainly semi hard cheeses. Local consumption per capita is about 197 liters per person. Israel also produces 14 million liters of goat milk and around 10 million liters of sheep milk.

BEEF: Local beef production in 2019 is estimated at 80,000 MT, with no significant change from the past year 2018. Israel is increasingly dependent on imported feeder cattle, as well as chilled or frozen beef as demand for beef rises. With the resource constraints and high dependence on imported inputs, locally produced beef is now more expensive than the imported product. Post expects to see an increase in both chilled and frozen beef imports due to increasing demand, and a decrease in imported feeder cattle. The demand for beef in Israel is increasing.

TURKEY: Turkey meat is not common in Israeli cuisine. The local processing industry absorbs most domestically produced turkey. Total production in calendar year (CY) 2019 was about 90,000 MT, down 4,000 MT compared to 2018. Consumption is stabilizing at this amount for the near future.

MUTTON AND GOAT MEAT: Israeli production of mutton and goat is estimated at 12,000 MT in 2019, largely unchanged from previous years. Consumption is stabilizing at this amount for the near future.

PORK: Due to religious restrictions on pork consumption by the Jewish and Muslim population, local pork production is relatively small and production levels have remained unchanged since 1997, totaling about 14,000 metric tons. The Israeli Kosher Law prohibits imports of non-kosher meats but does permit domestic pork production.

FEED INDUSTRY: Eight feed mills control about 90 percent of the local feed milling industry. The largest feed miller controls 22 percent of the market and plans to increase production by 12 percent. There are some 150 feed centers in Israel. These are communal feed mills operated by local farming communities (i.e., Kibutzim), and sell their feed mix to the cattle industry. Fifteen of these are large feed centers servicing the largest cattle producers while the remaining 135 are smaller operations, selling feed to smaller producers. Each small feed center supplies feed to 100-300 cattle. In Israel, due to the dry weather including long dry summers and short winters with little rainfall, beef cattle lack

grazing meadows. Most of the year farmers must feed cattle, making beef production in Israel relatively expensive. Post estimates that the total market for the Israeli feed milling industry (feed millers and feed centers) is about 4 million MT (excluding hay and silage). Their typical formulation is composed of grains, oilseed meals (i.e., soy, sunflower, and canola), and other feed sources such as DDGS and corn gluten feed. Israeli feed mills export about 15 percent of their production to Jordan and the Palestinian Authority.

Table 5: Feed Prices in Israel (US\$/MT)

	August 2018	August 2019	% Difference
Corn	213	217	+2
Barley	240	220	-8
Feed wheat	235	225	-4
Soy meal	500	410	-18
Gluten feed	265	238	-10
Canola meal	300	257	-14
Sunflower meal	315	272	-14
DDG	272	267	-2
Exchange rate INS/\$	3.66	3.5	-4.3

Source: Israeli Cattle Growers Association

Trade:

In MY 2020/21, corn imports are expected to be 1.74 MMT, of which 147 TMT are expected to be of U.S. origin. In recent years, corn has been imported mainly from Ukraine, Argentina and Brazil. In MY 2019/20, 200 TMT of US corn was exported to Israel. The dramatic decline of U.S. corn exports to Israel in the past decade is due to competitive pricing of Ukraine and South American corn, cheaper shipping costs, and quality concerns with U.S. corn. Notably, in the Middle East and North Africa, U.S. corn is increasingly perceived as being of lower quality than South American or Black Sea product. Corn shipments from the U.S. typically arrive with a higher percentage of broken kernels than comparable shipments from other sources.

Ukrainian and other Black Sea corn sources' proximity to Israel, results in a freight advantage over the United States and South America. Israeli importers report that Ukrainian corn, including freight, may be as much as \$30 per ton lower than U.S. product. Corn imports over the past ten years have ranged between 900 – 1,700 TMT. Post expects imports next year will be higher and will stand at 1,740 TMT due to expected increase for feed at the PA.

Israel remains a steady, long-time customer of U.S. corn co-products including DDGS and CGF. In recent years, DDGS and CGF imports have increased significantly. In MY 2019/20, 681 TMT of CGF and DDGS were imported by Israel, of which 94 percent was from the United States. This figure has doubled in the last decade. The country's dairy sector is a heavy user of DDGS and CGF with some DDGS earmarked for poultry consumption.

Stocks:

MY 2020/21 ending stocks are forecast at 100 TMT. These stocks will be held in government storage, as well as privately-owned feed mills and centers.

Table 6: Corn Production, Supply and Demand Data Statistics

Corn Market Begin Year Israel	2018/2019		2019/2020		2020/2021	
	Oct 2018		Oct 2019		Oct 2020	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	0	0	0	0	0	0
Beginning Stocks	148	148	149	101	0	100
Production	0	0	0	0	0	0
MY Imports	1611	1550	2000	1650	0	1740
TY Imports	1611	1550	2000	1650	0	1740
TY Imp. from U.S.	134	200	0	200	0	147
Total Supply	1759	1698	2149	1751	0	1840
MY Exports	10	15	10	10	0	10
TY Exports	10	15	10	10	0	10
Feed and Residual	1500	1482	1900	1541	0	1630
FSI Consumption	100	100	100	100	0	100
Total Consumption	1600	1582	2000	1641	0	1730
Ending Stocks	149	101	139	100	0	100
Total Distribution	1759	1698	2149	1751	0	1840
Yield	0	0	0	0	0	0
(1000 HA) ,(1000 MT) ,(MT/HA)						

Source- Ministry of Agriculture, CBS, Farm Associations

Attachments:

No Attachments