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Report Name: Grain and Feed Annual

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Report Highlights:

Wheat production in marketing year (MY) 2023-2024 is forecast to remain flat at 1.2 million metric tons. Production will remain flat despite a larger harvested area as Post projects a return to trend from high yields in the previous season. Exports are also projected to remain unchanged at 750,000 tons. Corn production for MY 2023-2024 is forecast to rebound by more than 300 percent to 980,000 metric tons on a larger planted area and an anticipated return to normal weather conditions following the historic drought in the MY 2022-2023 season. As a consequence, corn imports are expected to drop significantly. Rice acreage, production and exports in MY 2023-2024 are forecast to remain practically unchanged from the previous season.

Wheat

Wheat production in marketing year (MY) 2023-2024 is projected at 1.2 million tons, very similar to the previous crop. Estimated yield is somewhat lower than last year's almost record high, but most farmers plan to increase the planted area up to 315,000 hectares or even higher. Good rains over the next few months are critical to recharge depleted soil moisture to allow farmers to plant.

Weather forecasts predict that the El Nino weather pattern will arrive over the next few months after three consecutive years of La Nina. El Nino in Uruguay brings wetter-than-normal climate and usually plays against wheat plantations because of late season diseases which hurt yields and grain quality. Despite this, farmers are expected to maintain the total area of winter crops (to be sown in 2023), but reduce significantly the acreage with canola which in MY 2022-2023 was record high with over 340,000 hectares. Canola returns last year were finally lower than those of wheat and barley due to lower yields than expected and a drop in price. Wheat returns in MY 2022-2023 were very good, with high yields due to excellent cool conditions during grain filling and strong prices. Many farmers will make planting decisions in MY 2023-2024 based on how well they did in the previous season.

Another factor which will play in favor of an acreage expansion of wheat is the strong need for cash at the end of 2023, after a very, very poor summer crop season severely affected by drought. Soybeans and corn plantations, which in a normal year should begin to be harvested soon, will produce less than half of what was initially projected. The final wheat area planted will depend on how much canola area drops (contacts estimate it could range between 15-20 percent) and how aggressively the malting companies, and feed barley exporters launch bids to attract farmers to produce. An additional factor which could play in favor of a somewhat larger acreage of wheat is that more than half of the planted fields were lost due to the drought and some farmers may be tempted to plant winter crops and delay the planting of a new field by one year.

Based on current production costs, wheat breakeven yield on rented land is 3.5-3.6 tons per hectare, quite close to the average country yield. Some farmers produce on their own land, and many use wheat as a "green bridge" to have their soil under cover to protect it from potential erosion, control weeds and keep a healthy soil rotation. Tight returns could make some farmers plant early corn or early soybeans directly (in September-November) and skip a winter crop, especially with the forecast of wetter weather. Summer crops have currently good returns.

Wheat production in MY 2022-2023 was estimated at 1.2 million tons on 302,000 hectares harvested, somewhat higher than those published by the government. Dry conditions and cool temperatures during a long grain filling stage produced surprisingly high yields.

Domestic consumption in MY 2023-2024 is projected at 450,000 tons, somewhat lower than in the previous year. Wheat for food, seed and industry is inelastic and remains quite stable throughout the years. However, improved weather in April 2023 with the change of the weather pattern from La Nina to El Nino is expected to improve pasture conditions and therefore cattlemen will not need to depend as much on feed wheat. Nowadays many cattlemen are using significant volumes of poor quality wheat as corn supplies are tight and expensive.

With a similar volume of production and consumption as last year, MY 2023-2024 exports are projected to remain unchanged at 750,000 tons, one of the highest volumes in the past decade. Uruguay normally exports its wheat surplus and maintains low ending stocks. Algeria and Brazil are expected to continue to be the main destinations, accounting for over 75 percent of all exports. Uruguayan official trade statistics do not show clearly the final destination of each shipment. Based on data provided by Agrosud, a local grain broker, Uruguay exported 694,000 tons of wheat in the period November 2021-October 2022. Roughly 60 percent was exported by two large multinational grain companies, while a local large agricultural and commercial company and the largest cooperative together exported 21 percent. Almost 90 percent was shipped from the Nueva Palmira port in the south west of the country.

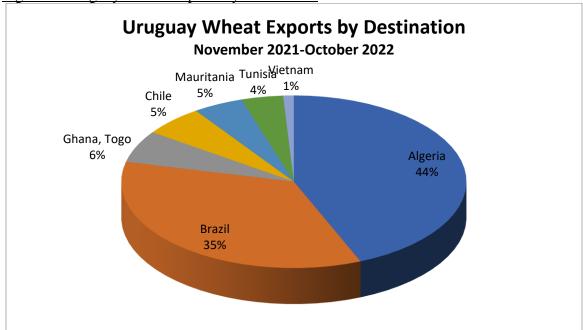


Figure 1: Uruguay Wheat Exports by Destination

Source: FAS Buenos Aires and Agrosud

Corn

Production in MY 2023-2024 is forecast at 980,000 tons, more than three times the volume expected for the drought affected MY 2022-2023. The total harvested area is projected to increase at a record 170,000 hectares, an expansion of 10-20 percent from the past 2-3 years.

Although planting of early corn will begin in September and that of second corn crop in November/December, at current prices and production costs, farmers are finding nowadays that corn is one of the most profitable crop alternatives. The combination of a winter crop such as wheat, barley or canola followed by a second corn crop planted right after the harvest has become very popular thanks to the late seed technology which helps control insects. This is different to what happens in Argentina, where most of the corn is late-planted with no winter crop. Most weather forecasts are predicting rainfall to normalize planting conditions after three

consecutive dry years, which could encourage early corn planting. The second corn crop is projected to account for 60 percent of the total. In normal conditions, early corn yields somewhat higher than late or second corn crop.

Irrigated acreage in the country is very small, estimated at about 60-70,000 hectares (excluding rice), but it has been increasing in recent years as the government has a policy to expand its use. In 2022 and 2023 approximately 20,000 hectares under irrigation will be added. This trends supports corn expansion as at least half of the irrigated area is typically cultivated with corn every year. Corn seed technology allows farmers to produce better and obtain higher yields, displacing the small sorghum growing area. Farmers prefer to plant corn as it is easier to produce; it is more profitable, and easier to sell. The below photo was captured by Post in late January 2023 near Mercedes, Departamento de Soriano. The tractor is planting late second corn on a field that is being harvested at the same time to make silage for a nearby dairy. The corn was in excellent condition, irrigated with a center pivot unit.

Figure 2: Intensification of Corn Production on Irrigated Fields



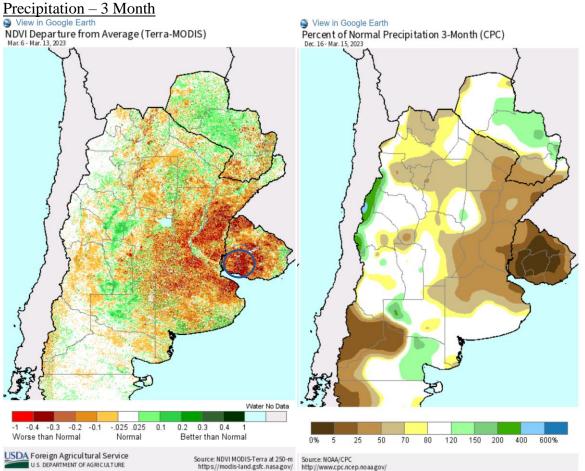
Source: FAS Buenos Aires, Soriano Department, Uruguay - January 2023

The current cost of production for corn is \$700-\$800 per hectare, significantly lower than last year, as global fertilizer and crop protection chemical prices have come down. If production is on rented land, early corn has an additional cost of approximately \$500 per hectare. If it is a second corn crop the additional cost is halved as the annual rental is split with the preceding winter crop. Early corn is normally planted by mixed operations which have both crop and dairy or beef cattle production.

The MY 2022-2023 corn crop, of which the early corn is almost all harvested and the second crop will be harvested in July/August, was severely hurt by La Nina dry weather. Contacts indicate that at the beginning of the season some 170,000 hectares were planted, and that only 70,000 hectares will finally reach harvest for commercial corn grain. The loss of area was primarily due to the poor conditions of the crops which did not receive good rainfall since spring

last year and developed under a very dry environment and high temperatures during most of the summer. Many corn fields were either chopped into silage or those which were in extremely poor condition were baled for winter cattle reserves. The average yields of the fields will be quite poor, estimated at 4.3 tons per hectare. Roughly 70 percent of the current corn is second crop and still has 3-4 more months to go before harvest. Rains have resumed in mid-March and the weather seems to be starting to normalize.

Figure 3 shows had dire the situation was during the summer months. In addition to the lack of moisture, very high temperatures hit Uruguay's main crop production area (circled in blue), severely damaging both early and second planted corn during the key tasseling stage. The map on the left shows the normalized difference vegetation index (NDVI) departure from average and the map to the right the percent of normal precipitation for a period of three months:



<u>Figure 3: Left – Departure from Average Green Vegetative Index; Right – Percent of Normal</u>

Source: USDA FAS IPAD Crop Explorer – Left: NDVI MODIS Terra at 250-m and Right: NOAA/CPC

Recent rains are not enough to save this crop as many fields show severe damage. However, it could mark a yield floor in the second corn crop planted last December and January as almost all the early corn crop was already harvested or cut.

Domestic corn consumption for MY 2023-2024 is forecast at a record 1.23 million tons. With expected normalized local corn production, livestock producers will consume locally produced corn rather than alternative feeds. When there is a shortage of locally-produced corn, more corn has to be imported and other locally-produced feed alternatives, such as wheat, barley or rice are used. Total corn consumption is estimated at 1.4-1.7 million tons a year but USDA's official PSD (Production, Supply and Distribution) tables show lower corn consumption and imports. Uruguay imports large volumes of broken corn (Harmonized Tariff Schedule code 110423) from Argentina, which not included in the PSD. Imports of this type of corn totaled 30,000 tons in 2018 and jumped to 370,000 tons in 2022. By exporting "processed" corn, Argentine brokers pay 4.5 percent export tax; lower than the 12 percent export tax if they would export whole corn kernels. Contacts believe that imports of this processed corn will diminish somewhat in the near future as the government is monitoring these imports more closely.

The poultry sector is the largest corn consumer. More cattle continues to be finished on grains in Uruguay, but the volume of cattle on feed varies quite significantly based on the profitability and/or pasture conditions. In late 2022 and early 2023 feedlot returns were slim or even negative due to the high cost of feed and low fed cattle prices. However, with China regaining beef import momentum, analysts believe that the feedlot sector will return to normal volumes and grain-fed cattle will continue its upward trend in years to come. Most of the other livestock sectors (dairy, poultry, and pork) are not expected to expand significantly in 2023.

Corn consumption in MY 2022-2023 is estimated at 980,000 tons, higher than the official USDA estimate. This is primarily because of the severe drought during spring 2022 and summer 2023 which severely hurt pastures. Tight corn supplies pushed producers to use less expensive feeds such as barley and rice.

No corn exports are forecast in MY 2023-2024 or in MY 2022-2023. Imports in MY 2023-2024 are forecast at 300,000 tons, half of what it is projected for MY 2022-2023 which will see imports grow significantly because of the small local corn crop affected by the drought. Corn comes primarily from Paraguay and Argentina.

Sorghum

Production in MY 2023-2024 is projected at 90,000 tons, more than double the production expected in MY 2022-2023 which is being harvested now and shows poor productivity because of a very dry environment throughout its development cycle. Harvested area in MY 2023-2024 is forecast at 20,000 hectares.

The area and production of dry-grain sorghum has been losing importance since MY 2014-2015. The main reason is the lack of improved seed technology, which in the case of corn, has moved very fast. While corn yields continue to increase, sorghum average yields have not improved in the last ten years. A significant area shifted from one crop to the other, especially in the past 3-4 seasons as farmers find corn easier and more stable to produce. In addition, the local oil/alcohol state-owned company has been reducing planting plans for low-tannin sorghum which they launch every year to attract farmers to plant to use in their ethanol plant in the North West of the

country. As an example, two years back, this program included the planting of 7,000 hectares, while in MY 2022-2023 it dropped to only 400 hectares.

Domestic consumption of dry grain sorghum in MY 2023-2024 is forecast at 95,000 tons. The beef cattle sector is the main consumer, followed by dairy and some minor ethanol production.

Sorghum trade in MY 2023-2024 is projected to continue to be negligible. In late November 2022 Uruguay and China signed a phytosanitary protocol to export sorghum. This is very important as China is the world's largest importer of sorghum, but only a few local companies have shown interest to register for eventual shipments. Many contacts indicate that they believe the protocol, which includes a long list of seeds of weeds which are prohibited, is very strict and difficult to comply with.

Rice

Uruguayan rice production for MY 2023-2024 is projected at 1.41 million tons, rough basis, very similar to the past two crop seasons. Harvested area is forecast to remain quite flat at 158,000 hectares. After three consecutive dry years, the level of most water reservoirs used for irrigating rice is very low. The planted area could be even somewhat lower if it does not rain above average during autumn and spring in order to fill water reservoirs.

Figure 4: Rice Fields in Northern Uruguay

Source: Necristal SA, Tacuarembo Department, Uruguay March 2023. This field is estimated to yield 11 tons per hectare.

Based on current prices and costs, farmers' returns are expected to continue to be quite slim. Production costs in the MY 2022-2023 were close to \$2100-2200 per hectare (land rent included), while the average gross income is calculated to be \$2300-2500 per hectare. Rice prices throughout the region are firm, as Argentina and southern Brazil are reported to have serious production problems because of a dry environment and smaller harvested areas. Despite the strong market, most farmers consider it to be too low to compensate for the large investment

demanded. Costs of production are expected to drop somewhat in MY 2023-2024 because of lower world fertilizer and of crop protection chemicals prices, but a stronger local currency offsets any gain in competitiveness.

Rice production in MY 2022-2023 is expected at 1.42 million tons, rough basis. By mid-March, the harvest at the country level was roughly 20 percent complete. The planted area was around 160,000 hectares with a loss of 3,000 hectares because of the severe drought and irrigation limitations in some fields. The expected average yield is on the high side at nine tons per hectare and the quality of rice is reported to be good.

Uruguayan rice exports in MY 2023-2024 are forecast at 940,000 tons, milled basis, very similar to what Post estimates for the previous two marketing years. Brazil is expected to be the main destination with milled and brown rice to meet the demand in the south and north-east. Mexico is also expected to be one of the top destinations for milled and paddy rice. Venezuela is expected to be the third market in importance, taking practically all paddy rice. Exports to Peru and Costa Rica make the top five markets, which all together are expected to account for 60-70 percent of total exports. Other smaller, but still important markets, will be Iraq, Belgium, Turkey, the UK and the Netherlands.

Rice domestic consumption for MY 2023-2024 is forecast at 60,000 tons, milled basis. Contacts indicate that per capita rice consumption has dropped to the pre-Covid volume. Human consumption is close to 50,000 tons, milled basis and seed use is approximately 15,000 tons. In MY 2021-2022 and MY 2022-2023 some rice is reported to have been used to feed cattle as a cheaper alternative to corn.

Production, Supply, and Distribution Table: Wheat

Wheat	2021/2022 Dec 2021		2022/2023 Dec 2022		2023/2024 Dec 2023	
Market Year Begins						
Uruguay	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	244	270	302	302	0	315
Beginning Stocks (1000 MT)	184	184	46	62	0	52
Production (1000 MT)	974	1020	1283	1200	0	1200
MY Imports (1000 MT)	14	14	10	10	0	10
TY Imports (1000 MT)	14	14	10	10	0	10
Total Supply (1000 MT)	1172	1218	1339	1272	0	1262
MY Exports (1000 MT)	706	706	700	750	0	750
TY Exports (1000 MT)	661	661	700	750	0	750
Feed and Residual (1000 MT)	10	30	50	50	0	30
FSI Consumption (1000 MT)	410	420	450	420	0	420
Total Consumption (1000 MT)	420	450	500	470	0	450
Ending Stocks (1000 MT)	46	62	139	52	0	62
Total Distribution (1000 MT)	1172	1218	1339	1272	0	1262
Yield (MT/HA)	3.9918	3.7778	4.2483	3.9735	0	3.8095

(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 2023/2024 = July 2023 - June 2024

Production, Supply, and Distribution Table: Corn

Corn	2021/2022		2022/2023		2023/2024	
Market Year Begins	Apr 2022		Apr 2023		Apr 2024	
Uruguay	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	152	152	140	70	0	170
Beginning Stocks (1000 MT)	76	76	130	130	0	50
Production (1000 MT)	878	878	750	300	0	980
MY Imports (1000 MT)	165	240	125	600	0	300
TY Imports (1000 MT)	124	124	150	600	0	300
Total Supply (1000 MT)	1119	1194	1005	1030	0	1330
MY Exports (1000 MT)	14	14	0	0	0	0
TY Exports (1000 MT)	14	14	0	0	0	0
Feed and Residual (1000 MT)	825	900	750	830	0	1050
FSI Consumption (1000 MT)	150	150	150	150	0	180
Total Consumption (1000 MT)	975	1050	900	980	0	1230
Ending Stocks (1000 MT)	130	130	105	50	0	100
Total Distribution (1000 MT)	1119	1194	1005	1030	0	1330
Yield (MT/HA)	5.7763	5.7763	5.3571	4.2857	0	5.76

(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 2023/2024 = October

2023 - September 2024

Production, Supply, and Distribution Table: Sorghum

Sorghum	2021/2022		2022/2023		2023/2024	
Market Year Begins	Apr 2	2022	Apr 2023		Apr 2024	
Uruguay	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	19	19	30	15	0	20
Beginning Stocks (1000 MT)	3	3	7	8	0	7
Production (1000 MT)	84	84	120	40	0	90
MY Imports (1000 MT)	10	11	3	20	0	5
TY Imports (1000 MT)	6	6	5	10	0	0
Total Supply (1000 MT)	97	98	130	68	0	102
MY Exports (1000 MT)	0	0	5	1	0	1
TY Exports (1000 MT)	0	0	5	1	0	1
Feed and Residual (1000 MT)	70	70	75	40	0	75
FSI Consumption (1000 MT)	20	20	40	20	0	20
Total Consumption (1000 MT)	90	90	115	60	0	95
Ending Stocks (1000 MT)	7	8	10	7	0	6
Total Distribution (1000 MT)	97	98	130	68	0	102
Yield (MT/HA)	4.4211	4.4211	4	2.6667	0	4.5

(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 Sorghum begins in October for all countries. TY 2023/2024 = October 2023 - September 2024

Production, Supply, and Distribution Table: Rice

Rice, Milled	2021/2022		2022/2023		2023/2024	
Market Year Begins	Apr 2022		Apr 2023		Apr 2024	
Uruguay	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	151	162	150	157	0	158
Beginning Stocks (1000 MT)	103	103	87	73	0	77
Milled Production (1000 MT)	974	980	860	994	0	990
Rough Production (1000 MT)	1391	1400	1229	1420	0	1414
Milling Rate (.9999) (1000 MT)	7000	7000	7000	7000	0	7000
MY Imports (1000 MT)	0	0	0	0	0	0
TY Imports (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	1077	1083	947	1067	0	1067
MY Exports (1000 MT)	950	940	800	920	0	940
TY Exports (1000 MT)	1004	1004	800	920	0	940
Consumption and Residual (1000 MT)	40	70	40	70	0	60
Ending Stocks (1000 MT)	87	73	107	77	0	67
Total Distribution (1000 MT)	1077	1083	947	1067	0	1067
Yield (Rough) (MT/HA)	9.2119	8.642	8.1933	9.0446	0	8.9494

(MT/HA), (TM 0001), (AH 0001)

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 2023/2024 =

January 2024 - December 2024

Attachments:

No Attachments