

Required Report: Required - Public Distribution

Date: April 19, 2023

Report Number: PA2023-0002

Report Name: Grain and Feed Annual

Country: Paraguay

Post: Buenos Aires

Report Category: Grain and Feed

Prepared By: Kenneth Joseph

Approved By: Benjamin Boroughs

Report Highlights:

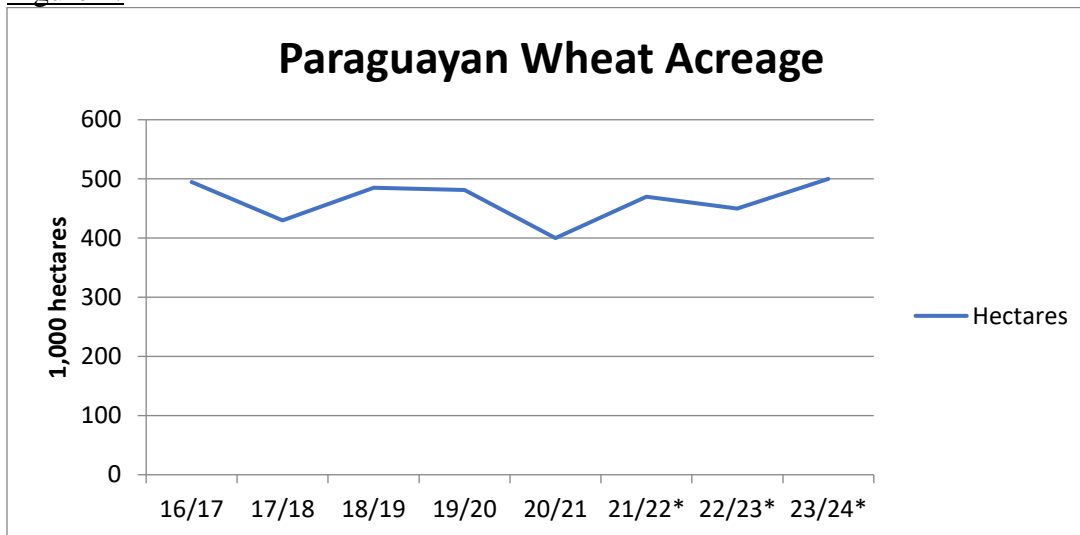
Posts projects Paraguay's wheat production for marketing year (MY) 2023/2024 to increase to 1.25 million metric tons (MMT), with exports rising to 410,000 MT. Brazil is projected to be the main destination, accounting for approximately 90 percent of Paraguayan exports. Post forecasts corn production in MY 2023/2024 to increase marginally to 5.5 MMT, one of the highest volumes on record. Corn exports are forecast at 3.5 MMT, with Brazil also expected to account for more than 50 percent of the total. Rice production in MY 2023/2024 is projected to increase to 1.3 MMT, rough base, on a record high planted area.

Wheat

Paraguayan wheat production in marketing year (MY) 2023/2024 is forecast at 1.25 million metric tons (MMT), the highest in the past four years. Planted area projected at 500,000 hectares (HA), 11 percent higher than the previous crop season.

Wheat planted area is very dependent upon the area that is planted to zafrinha (second-crop) corn and soybean crops which are normally planted in January-March every year. In 2023, because of a delayed harvest of the previous and zafrá (main) soybean crop (normally harvested in January), there was a lower corn area and a larger soybean acreage. There was also a larger than normal area not seeded. Wheat is planted on idle soil and/or land which come immediately after soybean zafrinha which is normally harvested in May. Corn has a longer cycle and it is normally harvested somewhat later, which normally prevents farmers from following corn with wheat. The combination of a larger area with soybeans and idle land is expected to encourage farmers to plant more wheat.

Figure 1:



Source: USDA FAS PSD & FAS Buenos Aires

* Post estimate/projection

Production costs in MY 2023/2024 are expected to be lower than the prior year because of a significant drop in fertilizer prices and some agricultural chemicals. Many farmers use wheat to rotate crops to protect the soil and incorporate nitrogen, especially in rotational schemes which have a strong predominance of soybeans. Planting wheat keeps the soil under cover in winter, with a crop which requires different chemicals than soybeans and helps to protect the soil from erosion and control glyphosate-resistant weeds. Farmers usually feel commercially secure in planting more wheat, because in addition to having solid domestic demand, Brazil is usually able to take surplus wheat.

While this production forecast assumes normal weather conditions, farmers are anticipating wetter conditions. The Southern Cone region has experienced three consecutive years of a La Niña climate pattern, which normally results in drier weather. This year many private forecasters

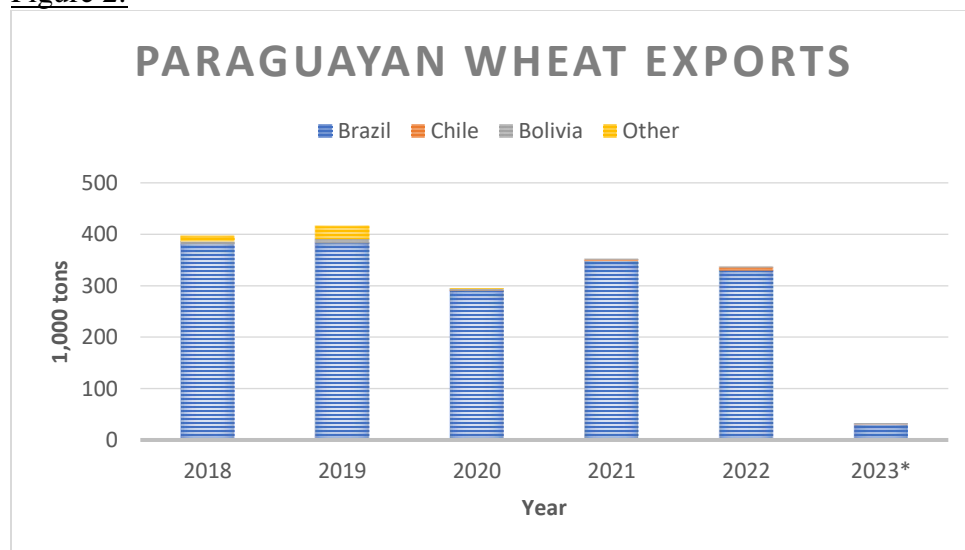
are predicting a neutral or El Niño pattern which should lead to more abundant rains. Some producers, especially in southeastern Paraguay, may be somewhat reluctant to plant wheat in a wet year to avoid the late attack of funguses such as fusarium which can harm both volume and quality. Wheat is primarily planted in the departamentos of Alto Parana and Itapua, accounting for roughly half of the country's acreage.

The Paraguayan Institute of Agricultural Technology together with private partners continues to release wheat improved seed varieties adapted to the country's conditions. These are very popular and extended in use. However, rains during the harvest of 2022 affected the quality of the wheat and some farmers may not have good quality saved seed to plant.

Post estimates MY 2022/2023 wheat production at 920,000 MT, on a harvest area of approximately 450,000 HA. This is 280,000 MT lower than the official USDA estimate. Heavy rains during the harvest season affected the volume and quality of a significant portion of the production as farmers had to harvest with high humidity.

Paraguayan wheat exports in MY 2023/2024 are forecast at 410,000 MT, the highest since MY 2018/2019. As shown in the chart below, well over 90 percent is expected to be exported to Brazil, the main historic buyer. Wheat is trucked to Brazil to wheat flour mills that are in a range of 250-650 kilometers (KM) of the border. In the past, Paraguayan wheat was imported to mix and improve Brazilian wheat, but more recently it is also imported because of its competitive price. Paraguay exports roughly 20,000 tons a year of wheat flour and this also mostly goes to Brazil. Typically Bolivia is another destination for Paraguayan flour, but lately demand has diminished because of the availability of very competitively priced Argentine flour.

Figure 2:



Source: TDM; * January-February 2023

Wheat domestic consumption for MY 2023/2024 is forecast at 750,000 tons, in line with the previous two years. Local flour mills are operating at 50-60 percent of capacity. Some companies are focusing in improving the quality of their products and are also developing products made with whole grain. Flour production is concentrated primarily around the city of Estigarribia,

which accounts for more than 60 percent of Paraguay's flour production. Other mills are located primarily in the eastern and southern parts of the country.

Corn

Post projects MY 2023/2024 production at 5.5 MMT, the second highest volume on record. Planted area is forecast to increase to 920,000 HA, 50,000 HA than in MY 2022/2023, but if good conditions persist, it could expand even more.

The planting of corn is very dependent on the timing of the harvest of the main soybean crop, which usually takes place in January. If done on time (sometimes it is delayed because of late planting or bad conditions at harvest), corn is planted in February and it is normally the preferred choice vis-à-vis second soybean crop. Some farmers still prefer to plant soybeans as its cycle is shorter (approximately 90 days from planting to harvest at the end of May) and escape potential early frosts in June. However, corn is a crop which is now well established with the value of providing crop rotation in a very soybean-dependent agricultural system. The expansion of the domestic ethanol sector ensures demand and gives farmers the possibility to market low-quality corn if it is affected by bad weather conditions. Apart from the zafrinha corn, there is a small area of corn which it is normally planted in August, but its production usually does not get enter the commercial chain.

The corn planted area in MY 2022/2023 was smaller than what farmers had planned because the soybean harvest was delayed. Therefore, contacts indicate that there is corn seed available from this crop which will be used in the MY 2023/2024. Roughly 75-85 percent of the area is said to be sown with hybrids developed by reputable seed companies and the balance is planted with seed produced locally called "casera" or homemade, which yields not as much but it is significantly less expensive. Most hybrids used are bred for sub-tropical environments such as that of Brazil. Local seed companies are introducing to the market seed with germplasm with higher yield potentials, taking yields from a 4-7 ton per hectare range to one of 7-9 ton per hectare. Most professional farmers in Paraguay use modern technology and invest inputs for their corn fields, with good volumes of fertilizers and crop protection agricultural chemicals. The below photos were taken by Post in mid-March 2023 in Alto Parana (to the far left) and in Itapua (center, right), showing zafrinha corn in different growing stages.

Figure 3:



Source: FAS Buenos Aires

The corn crop in MY 2022-2023 is estimated at 5.25 MMT with planted area of 870,000 HA. Planting in general was delayed, with approximately 30 percent planted in the optimal window,

with the last lots being planted very late, around March 20. About half of the corn planted runs risks of early frosts, which could eventually affect the final output.

The cost of production with farmers using their own equipment was estimated for MY 2022/2023 at about \$800-900 per hectare, which at an average yield of 6 tons per hectare would result in a return of about \$150 dollars per hectare. Costs of production for MY 2023/2024 will be lower as world prices of fertilizers and some crop protection products have dropped quite significantly.

Paraguay is divided by the Paraguay River into two regions. The area in the west is called Chaco. This area, which has historically been for cattle production is going through productive transformation incorporating land into cropping every year. Most of this area comes from degraded pastures and the production of crops is basically used in ranches to improve the feeding of the cattle. Based on data developed by a local distributor of agricultural products, the corn area in the Chaco region in MY 2022/2023 totaled 64,000 hectares, with an increase of more than 20 percent since last year. The Department of Boqueron, where there is a large Mennonite community is the main corn producing area in the Chaco. The below photos are of corn fields in the Chaco region taken in February and March 2023.

Figure 4:



Source: Paraguayan Industry Contact

Post forecasts corn exports for MY 2023/2024 at 3.5 MMT, the second highest ever. Brazil is expected to continue to be the main destination with 1.7-2.0 MT. Brazil in the past 5 years has accounted for 50-70 percent of Paraguayan corn exports. Buyers are typically poultry and swine plants close to the border in a radius of about 150-600 kilometers from the border. Chile is normally an important destination, as well as Uruguay and Peru. These countries usually import corn primarily from Argentina, but due to the severe drought affecting Argentina, its exports are projected to drop quite significantly, so Paraguayan corn is a good replacement. South Korea is also a reliable buyer of Paraguayan corn.

Corn consumption in MY 2023/2024 is projected up at 2.0 MMT, the highest of the past three years. The local ethanol sector, with two large plants and three smaller ones is expected to consume approximately 1.1-1.2 MMT of corn. The balance is basically animal feed for the

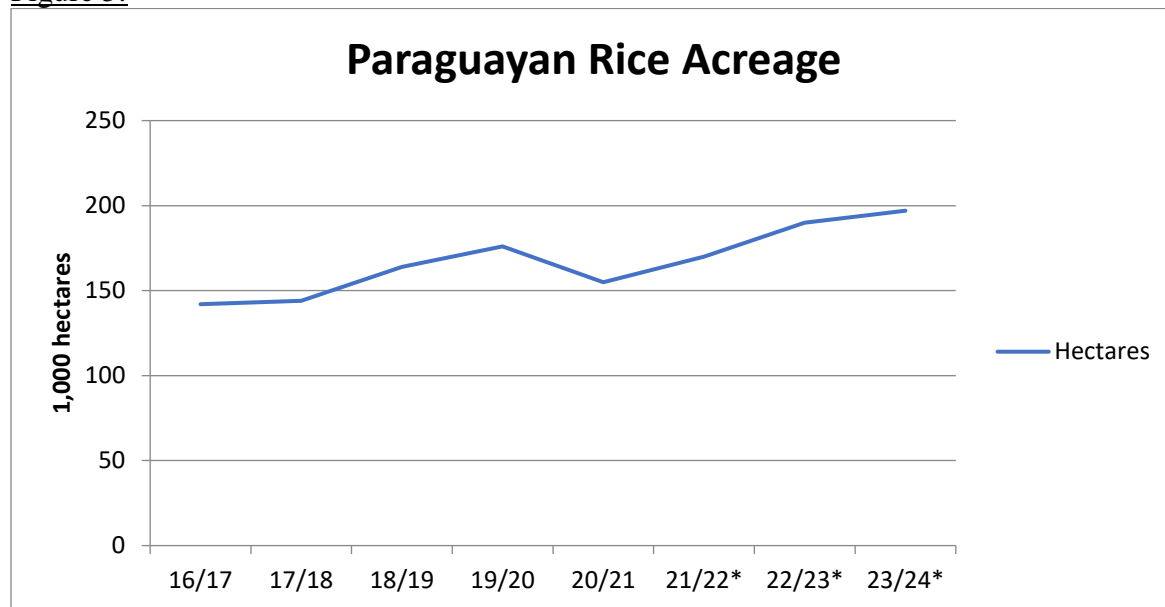
livestock sector. The pork industry is growing rapidly as well as feedlots for cattle. Contacts indicate that the local production of poultry and milk are expected to remain quite flat, with strong pressure from lower-priced products coming in in border cities, especially with Argentina.

Rice

Paraguayan rice production in MY 2023/2024 is forecast up at 1.3 MMTs rough basis and 871,000 MT milled base. The acreage is forecast to be a record high, with a harvested area of 197,000 HA. The following are the main drivers expected to push up rice acreage:

- Investors are continuing to purchase and convert more area for rice production, having had success with their smaller initial land investments. There are several companies planting or in the process of planting several thousand hectares which they incorporate in 3-4 years. The main areas where new, large investments are occurring are to the north and to the south of the city of Asuncion on the border of the Paraguayan River (areas circled in Figure 6)
- Rice prices in the region are currently high because Brazil and Argentina have had serious production problems in MY 2022/2023 because of dry weather. Paraguayan average FOB rice prices in January-February 2023 were 26 percent higher than the same period a year ago. Ending stocks in the region are expected to be very tight by the end of MY 2022/2023 giving support to prices.
- A significant drop in costs of production, primarily in fertilizer prices which dropped about 50 percent in less than a year, most likely will help improve returns. Some agricultural chemicals, such as glyphosate, also dropped in price.

Figure 5:



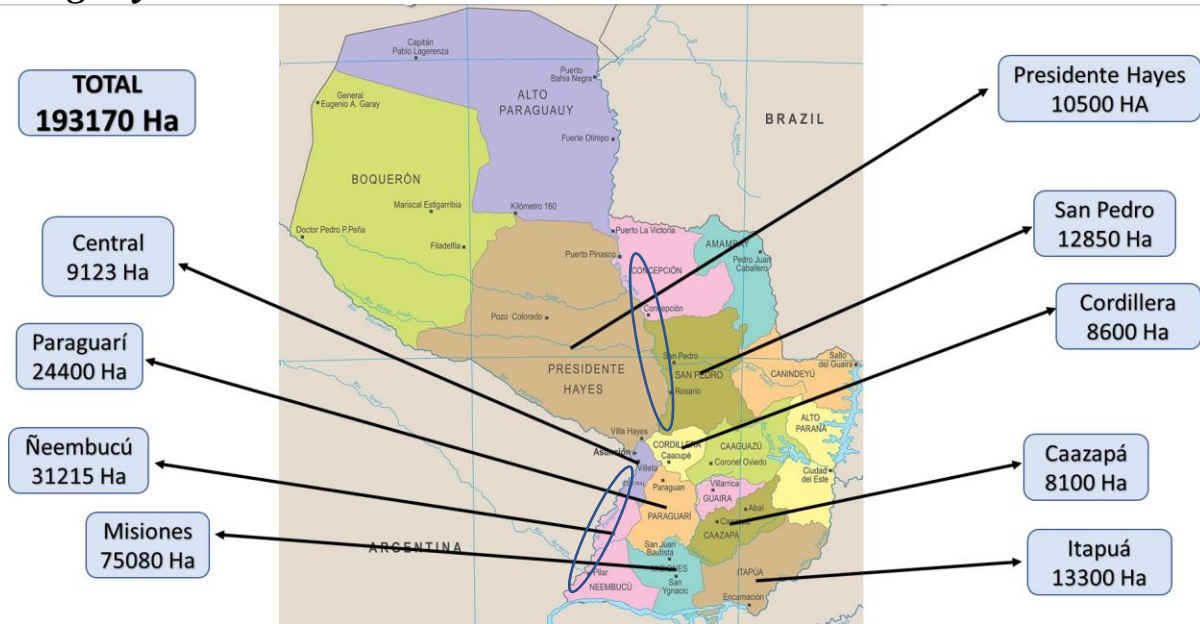
Source: USDA FAS PSD & FAS Buenos Aires

* Post estimate/projection

The area and volume of production of rice in Paraguay has always been hard to estimate accurately. The below map was developed recently by a local distributor of agricultural chemicals which has rice as its main focus and visits frequently the main players in the sector throughout the different productive areas of the country:

Figure 6:

Paraguayan Rice Planted Area – MY 2022-2023



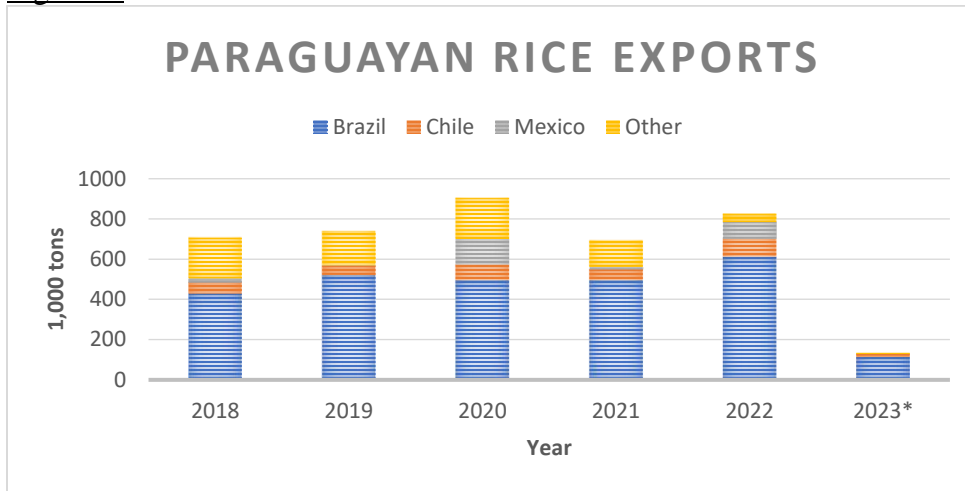
Source: Tafirel

Post forecasts Paraguayan rice exports in MY 2023/2024 at 711,000 MT, milled base, practically unchanged from the previous year. Despite an expected larger output, rice production in the region is expected to recover and could help rebuild ending stocks in Paraguay.

Brazil is forecast to continue to be the leading destination for Paraguayan rice in MY 2023/2024. Exports are almost all trucked for consumption in the States of San Pablo, Minas Gerais, Rio de Janeiro and Goias. Most is milled and brown rice with a growing trend of exports of packaged products. Chile is forecast to continue to be the second most important destination, with a volume ranging 50,000-80,000 MT, primarily of milled and broken rice. Rice bound for Chile is trucked through Argentina. Exports to Mexico are forecast to be approximately 50,000 MT of paddy rice. Smaller volumes will be exported to numerous other countries; including several in the EU.

In 2022, Paraguay exported rice to 31 countries. In product weight volume, milled rice accounted for 42 percent of the total, brown rice 32 percent, paddy rice 16 percent and broken rice 10 percent.

Figure 7:



Source: TDM; * January-February 2023

Domestic consumption in MY 2023-2024 is forecast at 130,000 MT, milled base, marginally higher than in MY 2022/2023. Post's consumption volume is significantly higher than the official USDA estimate. Although there are no official government data, a few local sources estimate human domestic consumption at 160,000-180,000 tons, rough base a year and approximately 24,000 tons rough base for seed use. Paraguayans consume little rice compared to some other countries in the region. However, contacts indicate that typical local foods which take longer to prepare are slowly being replaced by other foods such as rice which demand less time and energy.

Tables 1-3: Production Supply and Distribution of Wheat, Corn, and Rice:

Wheat Market Year Begins Paraguay	2021/2022		2022/2023		2023/2024	
	Sep 2021		Sep 2022		Sep 2023	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	400	470	500	450	0	500
Beginning Stocks (1000 MT)	555	555	507	467	0	472
Production (1000 MT)	980	940	1200	920	0	1250
MY Imports (1000 MT)	3	3	5	5	0	4
TY Imports (1000 MT)	3	3	5	5	0	4
Total Supply (1000 MT)	1538	1498	1712	1392	0	1726
MY Exports (1000 MT)	331	331	300	180	0	410
TY Exports (1000 MT)	331	331	300	180	0	410
Feed and Residual (1000 MT)	50	50	50	50	0	50
FSI Consumption (1000 MT)	650	650	690	690	0	700
Total Consumption (1000 MT)	700	700	740	740	0	750
Ending Stocks (1000 MT)	507	467	672	472	0	566
Total Distribution (1000 MT)	1538	1498	1712	1392	0	1726
Yield (MT/HA)	2.45	2	2.4	2.0444	0	2.5

(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 Wheat begins in July for all countries. TY 2023/2024 = July 2023 - June 2024

Corn Market Year Begins Paraguay	2021/2022		2022/2023		2023/2024	
	Jun 2022		Jun 2023		Jun 2023	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	1100	1100	950	870	0	920
Beginning Stocks (1000 MT)	1765	1765	895	1895	0	1905
Production (1000 MT)	5500	6800	4800	5250	0	5500
MY Imports (1000 MT)	30	30	25	10	0	20
TY Imports (1000 MT)	47	47	25	20	0	0
Total Supply (1000 MT)	7295	8595	5720	7155	0	7425
MY Exports (1000 MT)	4700	5000	3100	3400	0	3500
TY Exports (1000 MT)	3187	3187	3800	4000	0	3500
Feed and Residual (1000 MT)	600	600	600	750	0	700
FSI Consumption (1000 MT)	1100	1100	1150	1100	0	1300
Total Consumption (1000 MT)	1700	1700	1750	1850	0	2000
Ending Stocks (1000 MT)	895	1895	870	1905	0	1925
Total Distribution (1000 MT)	7295	8595	5720	7155	0	7425
Yield (MT/HA)	5	6.1818	5.0526	6.0345	0	5.9783

(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

Rice, Milled Market Year Begins Paraguay	2021/2022		2022/2023		2023/2024	
	Jan 2022		Jan 2023		Jan 2024	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	164	170	175	190	0	197
Beginning Stocks (1000 MT)	131	131	34	24	0	25
Milled Production (1000 MT)	700	770	768	837	0	871
Rough Production (1000 MT)	1045	1149	1146	1249	0	1300
Milling Rate (.9999) (1000 MT)	6700	6700	6700	6700	0	6700
MY Imports (1000 MT)	0	0	0	1	0	0
TY Imports (1000 MT)	0	0	0	1	0	0
Total Supply (1000 MT)	831	901	802	862	0	896
MY Exports (1000 MT)	752	752	720	710	0	711
TY Exports (1000 MT)	752	752	720	710	0	711
Consumption and Residual (1000 MT)	45	125	45	127	0	130
Ending Stocks (1000 MT)	34	24	37	25	0	55
Total Distribution (1000 MT)	831	901	802	862	0	896
Yield (Rough) (MT/HA)	6.372	6.7588	6.5486	6.5737	0	6.599

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

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

TY = Trade Year, which for Rice, Milled begins in January for all countries. TY 2023/2024 = January 2024 - December 2024

Attachments:

No Attachments