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Report Name: Oilseeds and Products Annual

Country: Paraguay

Post: Buenos Aires

Report Category: Oilseeds and Products

Prepared By: Benjamin Boroughs

Approved By: Rachel Bickford

Report Highlights:

Post projects marketing year (MY) 2022/2023 soybean production at 10 million metric tons (MMT) on 3.45 million hectares as Paraguay rebounds to more normal conditions following a significant drought. MY 2022/23 exports are projected at 6 MMT. In MY 2021/2022, sustained dry, hot weather substantially reduced soybean yields to historic lows, with final production projected at 3.9 MMT. As a result, in MY 2021/2022 domestic processing is projected to fall to 1.8 MMT and exports to 2.27 MMT. Drought conditions have also reduced the quality of the soybeans causing difficulties for the processing sector.

Production

MY 2022/2023

Total soybean planted acreage is projected to increase slightly in marketing year (MY) 2021/2022 after lower than average planted acreage of second crop (zafrina) soybeans in 2021/22. Total planted acreage is forecast at 3.45 million hectares (HA), with 2.90 million HA of first crop (zafra) soybeans and 0.55 million HA of zafrina. Total production is forecast at 10 million metric tons (MMT). While zafrina acreage is projected to grow 115,000 HA, this growth is from a historically low level of planted acreage in the last zafrina cycles. In the last decade, zafrina acreage has been as high as 1 million HA. However, the introduction of better adapted, higher-yielding corn hybrids is attracting acres away from the agronomically risky practice of growing soy on soy, and the resulting crop rotation can help break pest cycles. Growth in zafra acreage is expected to be very limited as producers will lack financial resources to convert scrub or forest land into soy production.

Very little land suitable for soybean production is available to be converted in the eastern part of the country. Some pastureland in San Pedro may be converted as well as some former rice lands in districts where low river water levels has made flood irrigation unviable. While land conversion is ongoing in the Chaco, the attractiveness of this option has waned despite high soybean prices. Local producers in the Chaco are reluctant to convert acres from ranching to crop production because of the high relative risk of crop cultivation in this drier region and the recent higher returns to livestock production. Farmers based primarily in the east of the country are dissuaded from purchasing land in the Chaco because of the logistical challenges associated with transporting equipment and labor across the country. The primary drivers of conversion at present are investors based in Asuncion who hope to buy ranch or scrubland at low prices and eventually profit by selling their property at higher cropland valuations.

While Paraguayan farmers are among the most aggressive in the region in their willingness to adopt new technology, the rising cost of farm inputs combined with poor financial returns as a result of the 2021/22 soybean zafra crop will likely lead to less investment in inputs for MY 2022/2023. According to industry sources, Paraguay has roughly 65% of its fertilizer needs secured for MY 2022/2023, meaning that these fertilizer resources are either in country or on the ships en route. High costs may cause some farmers to economize or even plant without sufficient fertilizer in the hope that their soils retain enough nutrients. Due to soil type, soybeans in Paraguay require substantially more nitrogen fertilizer than in neighboring Argentina. MAP fertilizers are the most commonly applied in Paraguay. Post's production projection of 10 MMT, assumes a roughly 5% reduction in overall yield due to reduced investment in fertilizer, seed, and agrichemicals.

MY 2021/2022

Total soybean planted area rose somewhat in MY 2021/2022, primarily due to increased zafrina plantings that were recovering from very low levels in 2019/2020. However, dry conditions significantly lowered total soybean production for Paraguay for 2021/22, which Post now estimates at 3.91 MMT on 3.325 million HA with an average yield of 1.175 tons/HA. This is the

lowest yield since 1985/1986 and the lowest production since 2008/2009, when the area under cultivation was 25% lower. Post's production estimate is 1.39 million tons lower than the official USDA estimate of 5.3 million tons, and a 73% loss relative to Post's pre-season estimate.

Despite warnings of a La Nina season that could bring dryness to the region, adequate rains in August and September provided good planting conditions for the zafra crop of 2.9 million hectares. Initial growth and development was robust with normal rains in October, but as conditions turned dry in November and then prevailed into December, plants began to wilt and die. Most Paraguayan soil has relatively low water holding capacity, which means farmers are dependent upon timely rains. At the same time, very high temperatures were recorded, resulting in faster evaporation of available moisture in addition to heat stress. With the exception of seed producers, irrigation systems are not widely used. The effect of several weeks of drought and heat during key reproductive phases was profound, resulting in poor pod setting and beans which were small and of low quality. Yields were variable between near total losses up to 2 T/HA, but practically all of eastern Paraguay was affected. However abandonment was low due to high prices, with some farmers choosing to harvest fields with yields as low as 0.2 T/HA. Some farmers in the Chaco saw higher than average yields after receiving rains in December, but acreage in this region is limited.

Due to dry conditions during the zafra season, soybean rust was non-existent and farmers reportedly retained much of their fungicide stocks for the coming year. The drought ultimately reduced weed pressure as well, requiring less spraying. While the widespread availability of low-cost imported generic pesticides provides Paraguayan farmers affordable options for weed and insect control, the continued spread of herbicide resistant weeds is complicating management practices and raising production costs relative to past years.

Figure 1:



Zafrina (second-crop) soybeans in Alto Paraná Department, Paraguay

Source: FAS Buenos Aires, March 24, 2022

Following the poor zafrina harvest, approximately 415,000 HA of zafrina soybeans were planted. While this represents a recovery from the very small zafrina crop of 2020/21, it is still below the average of the last decade. At present most zafrina soybeans are in good to average condition. Paraguayan farmers planted a record area of zafrina corn with farmers betting that high corn prices combined with a much higher yield potential would prove more profitable. The success of the coming corn harvest will be important to maintaining the financial viability of many Paraguayan farmers. Input suppliers and institutions making loans to farmers estimate that between 10-35% of Paraguayan farmers will need their loans refinanced in the coming year. While most farmers operating on their own land are expected to cover their costs, farmers operating substantially on rented land will face significant financial difficulties. Despite several years of strong returns, Paraguayan farmers tend to operate with relatively high levels of debt in order to maximize their access to land and up to date farming equipment.

MY 2020/21 production is lowered to 9.4 million tons on latest available private sector estimates, and this is 500,000 tons lower than the official USDA estimate.

Consumption

MY 2022/2023

Crush is forecast to rebound 105 percent to 3.7 million tons, thanks to a return to normal production levels following the drought of 2021/22 and delayed harvest of 2020/21. As a result, both meal and oil production will spike relative to the low levels seen in 2021/2022 with meal production is forecast at 2.83 million tons, and oil production is forecast at 0.705 million tons.

While pork and poultry production has grown in recent years, further growth in domestic soybean consumption outside of industrial processing is limited by Paraguay's location and the structure of its livestock industry. Despite some recent investment in large scale production, Paraguay's pork and poultry demand is largely met by small-scale production and some imports from Brazil. More large scale pork and poultry production would undermine this key source of income for rural residents. As Paraguay is landlocked it must ship overland to Brazilian ports and compete in export markets with established Brazilian protein producers with shorter supply chains.

In November 2021, a large renewable diesel plant began construction under the name Omega Green. Omega Green is a project of ECB Group, a Brazilian company. The firm has reported signed agreements with several international firms to export renewable diesel, renewable aviation fuel, and green naphtha. In January 2022, the President of Paraguay signed a decree declaring the project to be in the national interest. Some industry contacts report that the project has taken longer than expected to begin. Initially press releases suggested the plant would begin producing in 2024, but current statements refer to 2025. The plant, located in Villeta, south of Asuncion is planned to have a daily capacity of 20,000 barrels and, if realized, would consume a significant portion of Paraguay's soybean oil production. Some NGO's have criticized the development saying it would lead to more deforestation and that little of the biofuel produced at the plant would be consumed in Paraguay.

MY 2021/2022

Crush is forecast at 1.8 MMT, 50,000 tons lower than the official USDA estimate and a decrease of 1 MMT or 36 percent from MY 2020/2021. This reduced crush volume is due to the dramatic decline in soybean production in Paraguay due to drought. Limited volumes of soybeans are available to be crushed as significant portions of the available harvest had already been contracted for export as whole beans. Parts of the crushing industry will lie idle this year and many plants will run out of beans by July. Soy meal production is forecast at 1.375 MMT, 25,000 tons below the official USDA estimate and down 42% from revised 2020/2021 estimates. Meal production could ultimately fall more because of problems that crushers are encountering with small and malformed soybeans whose hulls are not sheering cleanly, this could result in a higher than normal portion of the crushed product being marketed as hulls or expellers. Similarly, soy oil production is forecast substantially down from last year at 345,000 tons. Soybean oil produced from poor quality soybeans this year reportedly has 6-7 times higher than normal chlorophyll levels, which will mean that most Paraguayan soybean oil will require additional refining or be diverted to non-food use.

MY 2020/2021

Crush is revised down to 2.8 million tons based on latest available private sector estimates. This is 500,000 tons lower than the USDA official estimate. A smaller than anticipated harvest reduced total supplies and changes in Paraguayan tax law reduced the incentive for crushers to export meal and oil and so more soybeans were exported in the form of whole beans. Crushers also lost the first two months of the year to a delayed harvest, reducing the available time for operations.

Trade

MY 2022/2023

Soybean exports are forecast at 6 MMT, more than doubling the forecast 2021/2022 export total as soybean production returns to more normal levels. A return to normal zafra harvest timing is expected to give crushers more operating days to increase crush, thus reducing the exportable surplus relative to 2020/2021. In recent years, Argentina has become the principal destination for whole Paraguayan soybeans and this trend is expected to continue in MY 2022/2023. The average protein content of Paraguayan soybeans is higher than Argentine beans, and the blending of Paraguayan beans allows Argentine crushers to meet their buyers' protein specifications. Paraguayan beans must be barged down the Paraguay or Parana rivers to ports in Argentina or Uruguay and loaded into ocean-going vessels.

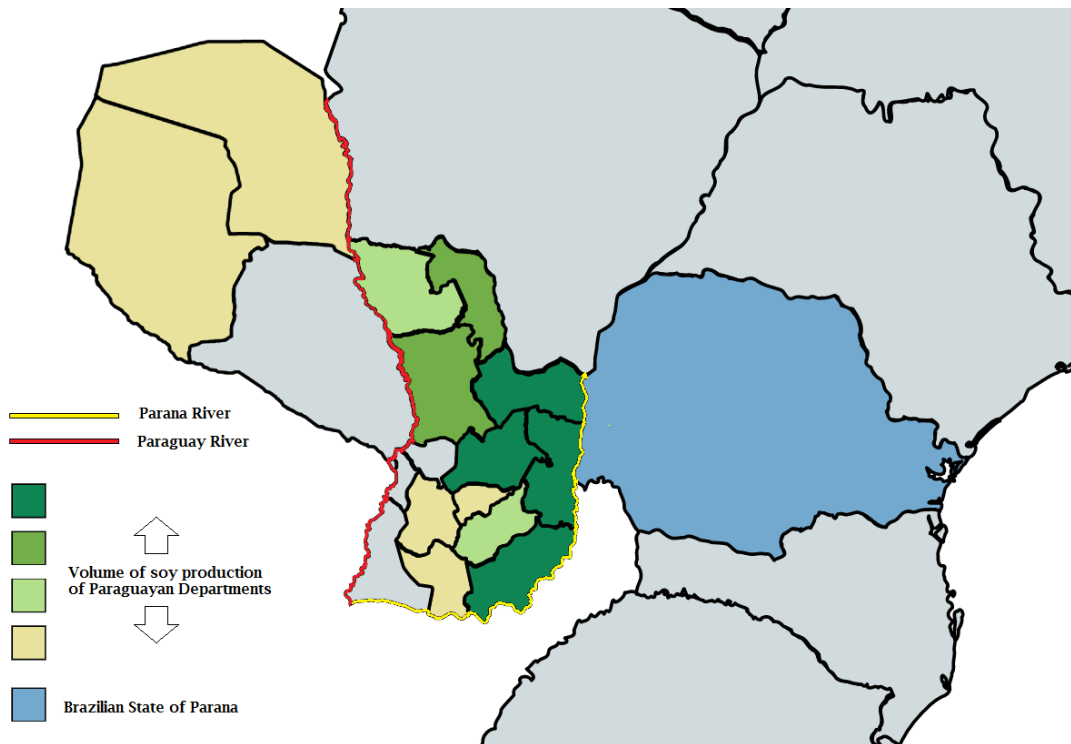
MY 2021/2022

Exports of whole beans are forecast at 2.27 MMT, which is 1.33 MMT below the official USA estimate and more than 4 MMT below 2020/2021 levels. The decline is due to drought which significantly reduced soybean production this year. While Argentina is expected to continue to be the largest destination for Paraguayan soybeans, the remainder could depend upon which contracts continue to be honored in the face of supply shortages. Some contracts to Russia,

which has been an important purchaser of Paraguayan soybeans in recent years, could be voided over concerns about payment difficulties, leaving the resulting beans available for the domestic crushing industry or for exports to other countries. Soybean exports by truck to Brazil will fall due to lack of production in Paraguay. However, Brazilian demand remains strong due to disappointing soybean harvests in the south of Brazil and the large animal feeding industries in the State of Parana. Outside of the busy harvest season, freight rates for Paraguayan truckers are competitive versus Brazilian truckers and Mercosur rules allow soybeans to cross the border easily and tariff free. The economics of trucking have been improved due to low water levels in the Parana River. When water levels on the Parana River are normal, soybeans grown in eastern Paraguay can be loaded onto barges on the Parana and shipped downriver. However, when low water levels make these shipments impossible or uneconomical, trucking soybeans to Brazil can make more sense than hauling overland to ports near Asuncion on the Paraguay River.

Meal exports are forecast sharply down at 1.413 MMT, due to the smaller crush, coming in at a little over 300,000 tons lower than the official USDA estimate. Exports of soy meal to Chile have grown in recent years and compensated for declines in exports to the EU as Brazil, Argentina, and the U.S. have captured market share from Paraguay. Oil exports are forecast at 362,000 tons, 58,000 tons lower than the official USDA estimate. As mentioned previously, Paraguayan oil may trade as a discount due to high chlorophyll levels in the range of 16,000 ppm.

Figure 2:

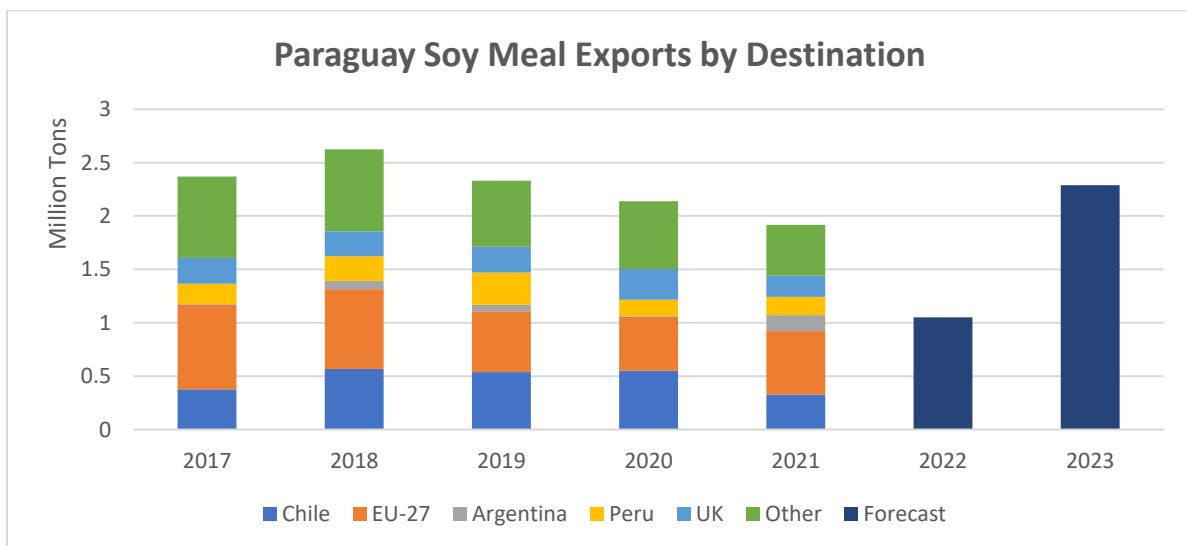
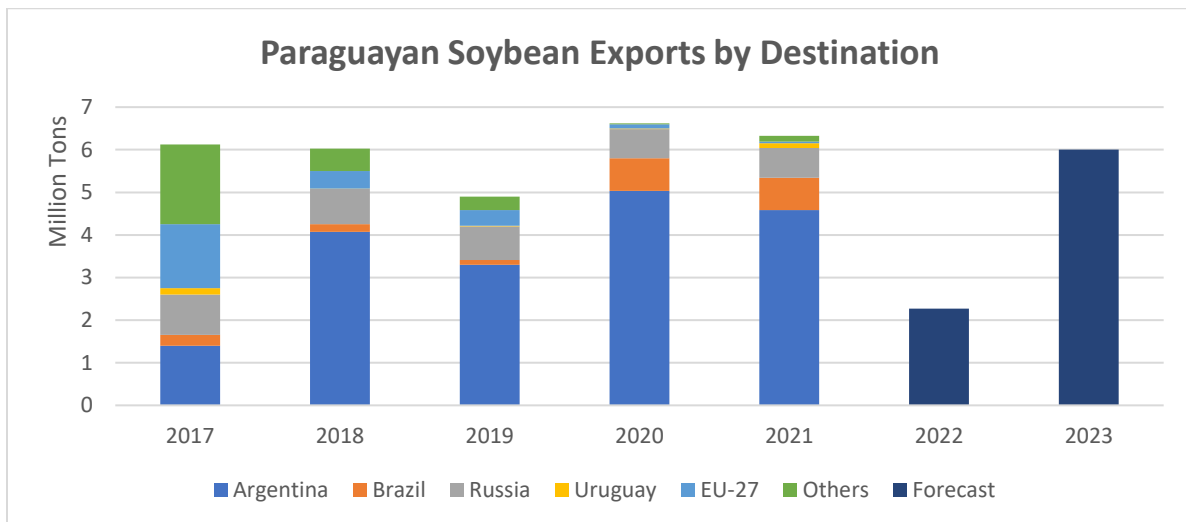


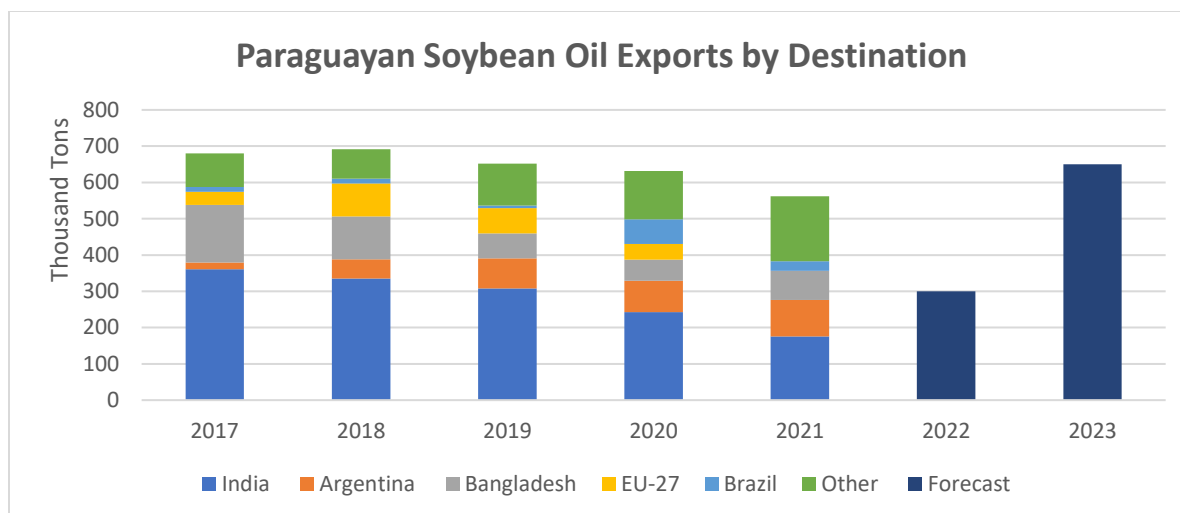
Source: FAS Buenos Aires

Low water levels on Paraguay’s two main waterways continue to complicate river barge exports. Very low rain levels in the Parana River basin have made certain sections of the river

impassable. Normally, approximately 35-40 percent of Paraguayan river barge exports are loaded at facilities on the Parana River and the remainder are loaded on the Paraguay River. However, since 2020, exporters have found it necessary to haul soybeans from storage and processing facilities on the Parana River to ports on the Paraguay River. In addition to being fed by different drainage basins, the Paraguay River has more stretches of sandy bottom which facilitates dredging operations. Nevertheless, even barges on the Paraguay River have needed to be loaded 20-30% less to clear certain low points in the river. While the Paraguayan government took a series of actions including several dredging projects and negotiated the release of water from Itaipu Dam, exporters are asking the government to further improve navigability especially across certain chokepoints and support new tolls to fund the improvements. Further release of water from Itaipu Dam seem unlikely in the short run due to low reservoir levels.

Figures 3,4,5:





Source: TDM and FAS Buenos Aires (2022 and 2023 export forecasts)

Production, Supply, and Distribution Tables:

Oilseed, Soybean Market Year Begins	2020/2021		2021/2022		2022/2023	
	Jan 2020		Jan 2021		Jan 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Paraguay						
Area Planted (1000 HA)	3150	3150	3300	3325	0	3450
Area Harvested (1000 HA)	3150	3150	2800	3315	0	3450
Beginning Stocks (1000 MT)	330	330	443	359	0	20
Production (1000 MT)	9900	9400	5300	3910	0	10000
MY Imports (1000 MT)	8	18	8	80	0	5
Total Supply (1000 MT)	10238	9748	5751	4349	0	10025
MY Exports (1000 MT)	6330	6329	3600	2269	0	6000
Crush (1000 MT)	3300	2800	1850	1800	0	3700
Food Use Dom. Cons. (1000 MT)	0	0	0	0	0	0
Feed Waste Dom. Cons. (1000 MT)	165	260	166	260	0	260
Total Dom. Cons. (1000 MT)	3465	3060	2016	2060	0	3960
Ending Stocks (1000 MT)	443	359	135	20	0	65
Total Distribution (1000 MT)	10238	9748	5751	4349	0	10025
Yield (MT/HA)	3.1429	2.9841	1.8929	1.1795	0	2.8986

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

Meal, Soybean Market Year Begins Paraguay	2020/2021		2021/2022		2022/2023	
	Jan 2020		Jan 2021		Jan 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Crush (1000 MT)	3300	2800	1850	1800	0	3700
Extr. Rate, 999.9999 (PERCENT)	0.7576	0.7679	0.7568	0.7639	0	0.7649
Beginning Stocks (1000 MT)	287	287	321	38	0	13
Production (1000 MT)	2500	2150	1400	1375	0	2830
MY Imports (1000 MT)	0	7	0	0	0	0
Total Supply (1000 MT)	2787	2444	1721	1413	0	2843
MY Exports (1000 MT)	1916	1916	1100	1050	0	2290
Industrial Dom. Cons. (1000 MT)	0	0	0	0	0	0
Food Use Dom. Cons. (1000 MT)	0	0	0	0	0	0
Feed Waste Dom. Cons. (1000 MT)	550	490	521	350	0	500
Total Dom. Cons. (1000 MT)	550	490	521	350	0	500
Ending Stocks (1000 MT)	321	38	100	13	0	53
Total Distribution (1000 MT)	2787	2444	1721	1413	0	2843
(1000 MT) ,(PERCENT)						

Oil, Soybean Market Year Begins Paraguay	2020/2021		2021/2022		2022/2023	
	Jan 2020		Jan 2021		Jan 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Crush (1000 MT)	3300	2800	1850	1800	0	3700
Extr. Rate, 999.9999 (PERCENT)	0.1894	0.1989	0.1892	0.1917	0	0.1905
Beginning Stocks (1000 MT)	63	63	70	5	0	8
Production (1000 MT)	625	557	350	345	0	705
MY Imports (1000 MT)	0	2	0	12	0	5
Total Supply (1000 MT)	688	622	420	362	0	718
MY Exports (1000 MT)	562	562	355	300	0	650
Industrial Dom. Cons. (1000 MT)	0	0	0	0	0	0
Food Use Dom. Cons. (1000 MT)	56	55	54	54	0	56
Feed Waste Dom. Cons. (1000 MT)	0	0	0	0	0	0
Total Dom. Cons. (1000 MT)	56	55	54	54	0	56
Ending Stocks (1000 MT)	70	5	11	8	0	12
Total Distribution (1000 MT)	688	622	420	362	0	718
(1000 MT) ,(PERCENT)						

Attachments:

No Attachments