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Report Highlights:

Post increased its corn production forecast for Marketing Year (MY) 2022/23 to 120 million metric tons (MMT) based on strong demand, increased prices in the domestic and international markets, and diminishing uncertainty over the availability of fertilizers. For MY 2021/22, Brazil's corn planted area is set to reach new records. Post revised its estimated rice harvest area to 1.62 million hectares for MY 2021/22 because of a decrease in rainfed rice and an increase in cost of production. Post forecasts that Brazil's planted area for wheat for 2022/23 will increase by 18% over 2021/22 to 3.2 million hectares because of the conflict in Ukraine and rising global wheat prices.

Corn PSD

Corn	2020/2021		2021/2022		2022/2023	
Market Begin Year	Mar 2020		Mar 2021		Mar 2022	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	19900	19900	21800	21700	22700	22500
Beginning Stocks	5328	5328	4153	3928	4653	4428
Production	87000	87000	116000	116000	126000	120000
MY Imports	2848	2900	2000	2000	1300	1800
TY Imports	2281	2281	2500	2500	1300	1800
TY Imp. from U.S.	1	1	0	0	0	0
Total Supply	95176	95228	122153	121928	131953	126228
MY Exports	21023	21000	44500	44500	47000	46500
TY Exports	27492	27492	34000	34000	46500	46000
Feed and Residual	59500	60300	62000	62500	65500	63500
FSI Consumption	10500	10000	11000	10500	11500	11500
Total Consumption	70000	70300	73000	73000	77000	75000
Ending Stocks	4153	3928	4653	4428	7953	4728
Total Distribution	95176	95228	122153	121928	131953	126228
Yield	4.3719	4.3719	5.3211	5.3456	5.5507	5.3333
(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. TY 2022/2023 = October 2022 - September 2023 Source: Post Brasilia						

CORN PRODUCTION

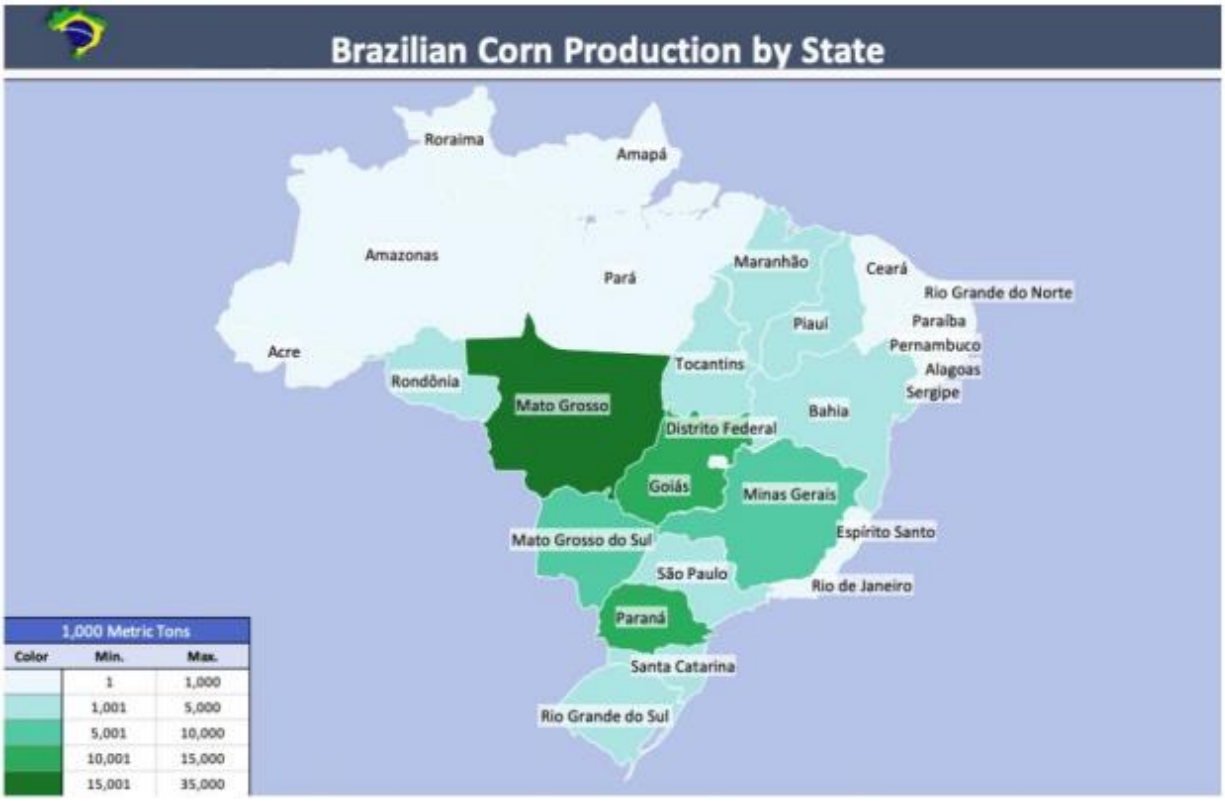
2022/23 Planting Area, Production and Yield continue bringing good forecasts

Post maintained its corn area forecast for MY 2022/23 (March 2023 – February 2024) at 22.5 million hectares, continuing the expected uptrend from the 21.7 million hectares in MY 2021/22. Strong demand for corn from the domestic livestock and poultry industry, high export prices, and diminishing uncertainty over the availability of fertilizers motivate growers to continue investing in corn production.

With increased corn prices in the domestic and international markets, corn production is expected to continue high for the next season in Brazil. As such, Post increased its production forecast to 120 MMT for MY 2022/23, a slight increase from the previous forecast. Our analysis is based on the high return rate for the crop, availability of land in the country, and greater clarity on fertilizers availability.

Brazil imports 85 percent of its fertilizer, mainly from Russia, Canada, China, Morocco, the United States, and Belarus. The initial fear that Brazil would run out of fertilizers because of last year's sanctions against Belarus and the current conflict in Ukraine has not materialized. In fact, in May 2022, Brazil imported 35 percent more fertilizers than the previous month and showed a 63 percent increase in fertilizers imported from Russia in May, compared to April 2022.

For the 2022/23 corn crop, Post forecasts a yield of 5.33 metric tons per hectare (MT/ha), a slight increase over the previous 5.24 MT/ha forecast. Post assumes average weather conditions for the coming season and optimal use of technological resources. Still, the forecast may be revised in future updates based on weather conditions, farmers' ability to plant within the ideal time frame, and fertilizer supplies.



Source: National Supply Company (CONAB), Graphic Post Brasilia

2022/2023 Cost of production remains a challenge for growers

The economic uncertainties imposed by the conflict in the Black Sea and decreases in production due to weather effects, which have affected grain crops in Brazil, Argentina, and Paraguay, may cause the world agricultural commodities market to experience new high prices in the coming months, with effects on prices of corn in Brazil. In addition, the current weather forecast points that La Nina should continue until the end of the year, with varied effects on the country's crops.

In addition, high production costs have risked the profitability of the 2022/23 harvest, in particular, skyrocketing increases in fertilizer costs, which have jumped 120 percent in recent months. According to

a recent study by Rabobank, fertilizers accounted for approximately 30 percent of the operational costs of corn crops in the last five years but are expected to account for 41 percent of this cost in the next corn harvest. As the chart below shows, fertilizers are the producers' most expensive input.

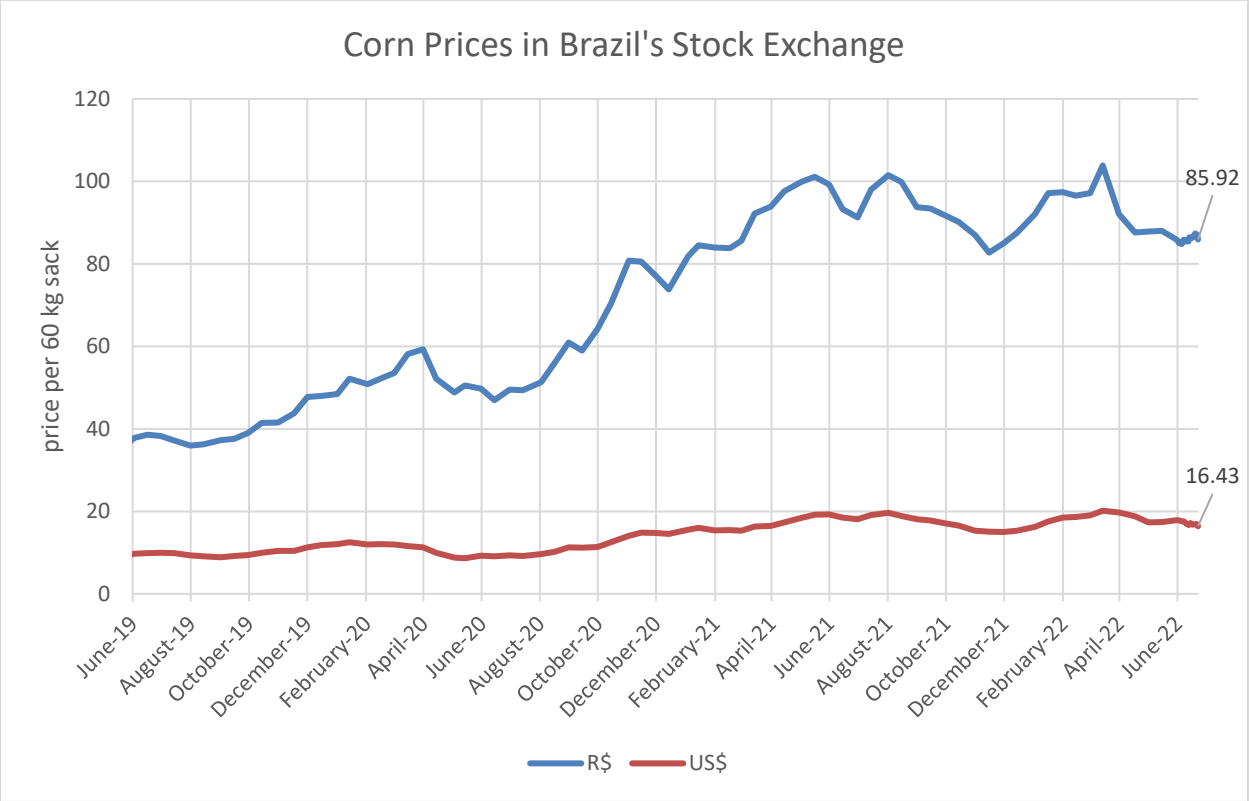
COST OF CORN PRODUCTION IN MATO GROSSO (R$/ha)					
Harvest	**2019/20**	**2020/21**	**2021/22**	**2022/23***	**2022/23***
Year	**2019**	**2020**	**2021**	**2022**	**2022**
Month				**March**	**April**
Seeds	429.88	445.42	554.43	668.63	671.48
Fertilizers	684.96	735.63	1,168.51	1,808.74	1,851.84
DEFENSIVES (Fungicide, Herbicide, Insecticide, etc.)	328.16	398.17	469.15	566.57	577.5
MECHANIZED OPERATIONS (Planting, Fertilizing, Applications with Machines, and Harvesting)	101.03	84.05	109.63	139.65	145.54
Third Party Services	18.22	2.09	1.73	2.18	2.18
Labor	98.75	72.99	76.91	79.31	78.89
Maintenance	109.93	106.13	106.47	107.4	107.38
Taxes and Fees	104	90.59	108.19	115.59	116.19
Financing and Insurances	176.54	160.18	214.02	275.77	282.63
POST-PRODUCTION (Classification and Processing, Storage, Production Transport)	277.74	286.26	278.6	283.69	283.58
Other Costs (Technical Assistance, Utilities Fuel, General Expenses)	58.9	69.46	84.29	94.73	95.46
Lease	94.72	132.3	210.01	217.19	215.28
DEPRECIATION (of Equipment, Utilities, and Improvements)	167.17	196.96	198.41	203.49	203.33
Family Labor	50.66	59.83	60.97	61.62	61.31
OPPORTUNITY COST (Working Capital, Improvements, etc.)	360.37	538	754.53	916.75	931.19
TOTAL	**3,061.04**	**3,378.06**	**4,395.84**	**5,541.30**	**5,623.79**

Data Source: IMEA, cost in R$/ha, with 2022/23 representing estimates; Chart Post Brasilia

Nevertheless, various internal and external factors will also influence corn production costs. In Brazil, many inputs, such as machinery and seeds, are imported. Accordingly, input prices will vary with the volatility of the domestic currency (the Brazilian real - R$). The fate of Brazil’s currency this second half of the year will rely not only on economic decisions by the government but also on the outcomes of the presidential election, which will be known by the end of October 2022.

At the same time, the market expects corn prices to remain high, which should lessen input price shocks. At this point, international corn prices will depend on the corn harvest in the United States, which will begin in September. Nevertheless, with Ukraine not expected to be fully capable of supplying the typical

volume in the market, the international buyer is likely to turn to Brazil in the second half of the year, which would support domestic corn prices. In addition, the continuous increase in petroleum prices and higher demand for ethanol will reinforce domestic prices.



Data Source: Center for Advanced Studies in Applied Economics (CEPEA/ESALQ); Graph Post Brasilia

2021/22 planting area, production and yield to set new records

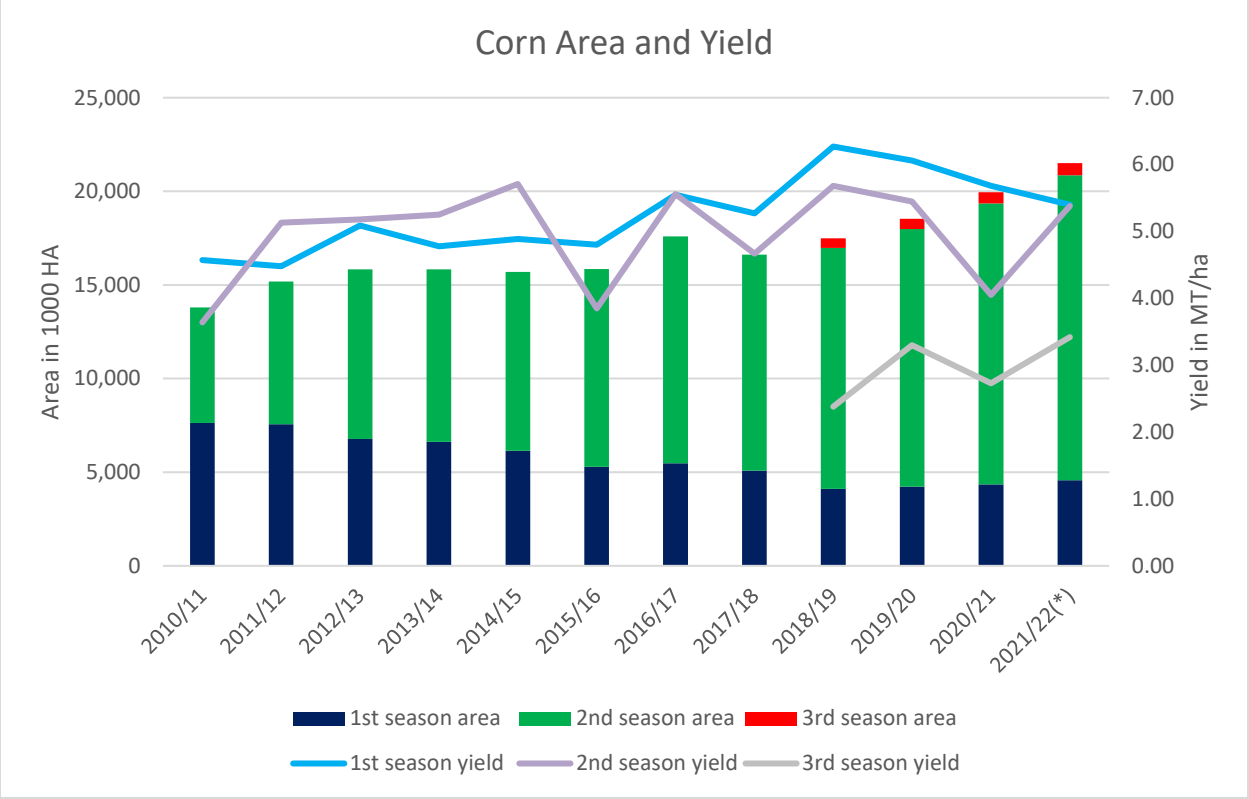
Post updated its estimate for corn planted area for MY 2021/22 (March 2022 to February 2023) to 21.7 million hectares, from the previous estimate of 21.5 million hectares, as corn growers remain optimistic and encouraged by the high prices of grain in domestic and international markets. In addition, early soy planting in the previous season has also allowed for an early and wider window for sowing of second-season corn, resulting in a 9.7 percent increase in planted area in MY 2021/22 compared to MY 2020/21.

Brazil plants corn throughout the year, divided into three crops. First-crop corn is usually planted between September and December and sown between January and May (depending on the region). During the 2020/2021 harvest, first-crop corn was responsible for roughly 28 percent of the production of corn in Brazil and almost 22 percent of corn area. Planted in the optimal season, this corn traditionally produces the highest yield.

The bulk of Brazil's corn production is the second-season corn, or 'safrinha' corn, which is planted from December to March, usually following the soybean harvest. In the 2020/21 season, safrinha corn

accounted for almost 70 percent of corn production in the country and 75 percent of the area but with lower yield rates than the first-season corn. For the 2021/2022 harvest, second-season corn is forecast to account for 76.4 percent of all corn produced in the country.

Since 2019, Brazil has also considered a third-season corn crop, planted only in some states of the country's north and northeast. Due to the region's climate, this crop cycle resembles that of the United States, with planting occurring around May and harvesting in October. In the 2020/21 harvest, third-season corn only accounted for two percent of production and three percent of the total corn area, as seen in the graph comparison below.



Data Source: CONAB, with 2021/22 representing estimates; Graph Post Brasilia

Post increased its estimate for corn production for MY 2021/22 (March 2022 to February 2023) to 116 MMT, up 1 million tons from the previous forecast. With the harvest of first season crops underway and the second and third crops in the sowing phase, Brazil is heading for a new production record in the 2021/2022 harvest, despite an expected drop in production of second-season corn due to weather conditions. Nevertheless, this record production will likely be less groundbreaking than initially forecasted since the regions with second and third corn harvests, from the north of Paraná to the south of Maranhão and Piauí, are facing low rainfall and, consequently, a potential limitation in productivity. Additionally, the intense mass of cold air that took frosts to the south of Mato Grosso and Goiás in mid-May restricted the productive potential of the corn crop in that area.

Post notes that although there was an increase in total production, the south region registered a sharp decline of almost 19 percent in the initially projected productivity of first-season corn due to the lack of

rain in the region at the end of 2021 and beginning of 2022. Nevertheless, this decline will likely be compensated by more significant gains in productivity, surpassing 32 percent, in the second-crop corn. While the south region showed yields of 2.59 MT/ha in the 2020/2021 harvest, the National Supply Company (CONAB) estimates that in 2021/22, the yield will increase 126 percent in the region to 5.85 MT/ha.

Harvest Outlooks

First-Season Corn

The harvest of first-season corn reached 85 percent of the planted area in the country, and even with the improvement in yields of crops sown late, these were not enough to reverse the drop in production in the states of the south and in Mato Grosso do Sul.

- Minas Gerais: The state represents 18.5 percent of first-crop corn production and has shown good yields for the 2021/22 harvest. According to CONAB, productivity reached 6.56 MT/ha, proving that excessive rainfall during the corn flowering period did not affect the crops.

- Rio Grande do Sul: The second largest first-crop corn-producing state, with 18 percent, has seen considerably lower productivity from its crops, reaching 3.62 MT/ha, a reduction of almost 34 percent compared to the 2020/2021 crop. In addition, due to damages to the grains because of the lack of rains in the planting season, many regions will have to use their planted corn for animal feed.

- Piauí: Located in the northeast of Brazil, the state that accounts for almost 10 percent of first-season corn has reached around 40 percent of harvesting, with most of the crop in the maturation stage and an initial yield estimated at 4.43 MT/ha.

- Bahia: The state increased its 2021/2022 first-crop corn productivity by almost 8 percent compared to the previous crop, mainly due to favorable weather conditions, reaching 4.75 MT/ha. Bahia is responsible for 9.7 percent of first crop corn production.

- Paraná: In the south of Brazil, the state plants around 9.5 percent of first-season corn, has harvested almost all its crops, with an average yield of 6.9 MT/ha, down 44 percent from the original estimate. This decrease is mainly due to the lack of rains during the development phase and the presence of leafhoppers (*Dalbulus Maidis*).

- Santa Catarina: The southern state, responsible for 7.8 percent of first season corn area, has finished its sowing with estimated productivity of 6.06 MT/ha, with crops suffering from lack of rain in different parts of the state.

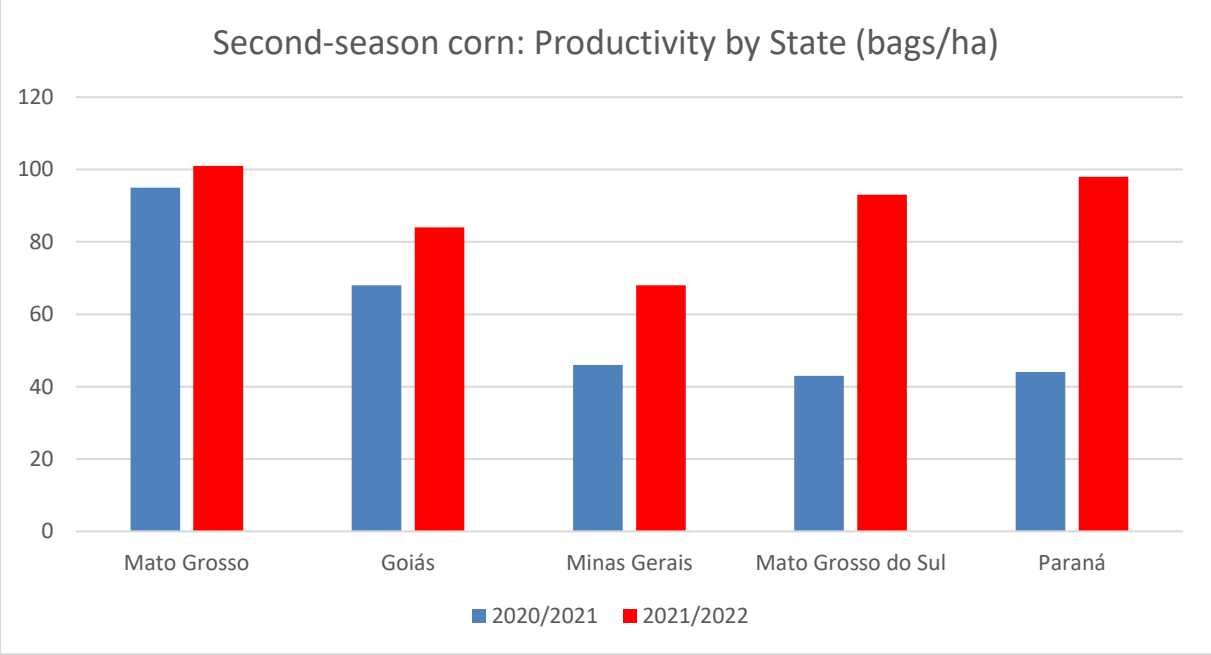
- São Paulo: The state, located in the southeast region of Brazil, finished its harvest with a yield of 5.70 MT/ha. The state is responsible for a little over 7 percent of the first corn planted area in the country.

- Maranhão: The Northeastern state, which accounts for 6.51 percent of the planted area of first-season corn, has harvested around 50 percent of the crop, and steady weather conditions have set its yield estimates at 5.03 MT/ha.

- Other states of Brazil, which account for less than 5 percent of the planted area of first-season corn each, have seen significant yield figures. For example, in Goiás yields vary from 8.50 to 10.20 MT/ha, in Mato Grosso yields are at 8.31 MT/ha, and in Mato Grosso do Sul yields are projected at 10.25 MT/ha, despite a high incidence of leafhoppers throughout the crop cycle.

Second-Season Corn

After a sharp decline in second-season corn production last year because of the effects of delayed planting and lack of rain in the main producing states, we expect normal growing conditions this year. Planting is almost concluded throughout Brazil and most of the states managed to plant within the ideal sowing window, which will likely favor good harvests. However, there is still concern over the prolonged dry periods that affected planting in some areas of the states of Minas Gerais, Goiás and Mato Grosso.



Data Source: Agroconsult, with 2021/22 representing estimate; Graph Post Brasilia

- Mato Grosso: The biggest state producer of second-season corn, which accounts for almost 40 percent of this harvest, experienced long periods of drought in various regions, which may hinder the development of the crop. The Mato Grosso Soy and Corn Producers Association (APROSOJA) estimates that the state could suffer a loss of approximately 4 million tons, bringing their projected production to 36 million tons. Despite field losses, CONAB still projects good yields for Mato Grosso's safrinha, at 6.23 MT/ha. The second crop benefited from the early planting and sowing of soy crops in

the state when 83 percent of the corn was planted within the ideal window (February 25) for the 2021/22 harvest.

- Paraná: The second largest state in planted area of safrinha corn, with 16.6 percent, is expected to bring in a yield in the 2021/2022 harvest of 5.85 MT/ha, a sharp increase of 126 percent from the dismal productivity seen last season, following extremely adverse weather conditions. Despite some occurrences of early rains, threats of frost during the crop development, and the presence of leafhoppers (*Dalbulus Maidis*), the current scenario in the state is favorable for the harvest, estimated at 16 million tons.

- Mato Grosso do Sul: The corn crop has been developing well in most of the state, which corresponds to 13 percent of the area of safrinha corn planted in Brazil. Yields are expected to be 5.30 MT/ha if the control of pests such as the green-bellied bug, aphid, and leafhopper, currently threatening parts of the crops, can be appropriately made. As a result, CONAB expects production to average 11.4 million tons.

- Goiás: Third largest planted area of second-season corn (10.57 percent) in the Center-West region (behind Mato Grosso and Mato Grosso do Sul), this state has been suffering from long periods of drought, which will likely affect the yield of the harvest. However, in the southwest of the state, the main producing region, about 55 percent of the crops is considered in good development condition, which might sustain yield figures at 4.80 MT/ha, according to CONAB, bringing the state's production to around 8.3 million tons.

- Southeast: The two producing states of second-crop corn in Brazil, Minas Gerais, and São Paulo, account for roughly 3.5 percent each of planted area of this season corn and present similar yield estimates for the 2021/22 harvest, with Minas Gerais at 4.82 MT/ha and São Paulo at 4.20 MT/ha. Around 5.2 million tons of safrinha corn are expected to be produced by both states.

Third-Season Corn

Only grown in Brazil's north and northeast regions, third-season corn is still relatively minor to the overall production figures of corn crops in the country. While first-season crops are expected to produce around 25 MMT and safrinha corn around 88.5 MMT, third-season corn's production is expected to reach only 2.5 MMT in the 2021/22 harvest.

- Bahia: The largest producing state, corresponding to 46.9 percent of the area of third-season corn planted in the country, is investing in technology and irrigation to secure better yields. With the state expected to finalize sowing by the end of June, the projected production is 1.1 MMT, and the yield for this season 2021/22 is 3.50 MT/ha. While smaller than other large producing states of first and second-season corn, this yield represents a 60 percent increase compared to the previous season.

- Sergipe: The northeastern state is responsible for 26 percent of the planted area of third-season corn and is estimating a yield of 5.50 MT/ha for the 2021/22 harvest. Sowing has reached around 65 percent in the state, with projected production of close to one million tons.

- Pernambuco: Despite being the third-largest state in planted area of third-season corn (16 percent), Pernambuco increased its planted area this harvest but experienced meager yield, at a meek 0.67 MT/ha, a 15 percent decrease in comparison to the previous crop.

2021/2022 Cost of production hits high marks, driven by fertilizer prices

A new study carried out by the Center for Advanced Studies in Applied Economics (CEPEA/ESALQ) shows that the cost of producing second-crop corn in Mato Grosso and Paraná, the two leading producing states in the country, jumped from 36 percent to almost 75 percent between May 2021 and April 2022. The main reason for the increase was the elevated cost of fertilizers.

In May 2021, growers spent 41.26 bags of corn to produce one hectare in Mato Grosso. This operational cost has increased to 64.31 bags/ha in April this year, or almost 56 percent more from one period to the next. Expenses with fertilizers, in this case, went from 11.2 bags of corn per hectare to 24.54 bags/ha, an increment of almost 120 percent.

In Paraná, the increase in costs was felt even more by farmers. While in May 2021, growers needed 36.25 bags of corn per hectare, they now require 63.27 bags/ha, an increase of 74.5 percent. In addition, expenses for fertilizers used in corn in Paraná were also higher, jumping from 10.32 bags of cereal per hectare to 26 bags/ha in April 2022, more than 150 percent between the two periods.

The Mato Grosso Institute of Agricultural Economics (IMEA) also projected the impact of fertilizers and other inputs in the 2021/2022 harvest. According to the institute, the cost of the corn crop production in Mato Grosso is R$ 3,327.43/ha, an increase of 40 percent compared to last season. The components that most participated in this increase were fertilizers (60%), other pesticides (23%), and seeds (21%).

However, as already mentioned, the record-setting corn prices compensate for the volatility and the rise in production costs. Generally, post contacts are optimistic about their profitability for the current and the forthcoming season.

CORN TRADE

Brazil’s weakening currency, the Brazilian real, will influence production costs and export numbers. While the import of inputs, such as fertilizers, will become increasingly more expensive with a weaker currency, Brazilian growers might find an opportunity to profit from larger exports, should corn prices remain high in international markets. The Central Bank Focus survey predicts that the real will be R$ 5.05 to the USD in 2022 and R$ 5.10 to the USD in 2023.

2022/23 Exports set to increase, while imports will decline

Post forecasts corn exports at 46.5 MMT for MY 2022/23 (March 2023 – February 2024), up 2 MMT from MY 2021/22, due to the expectation of a record harvest and high international demand. Exports

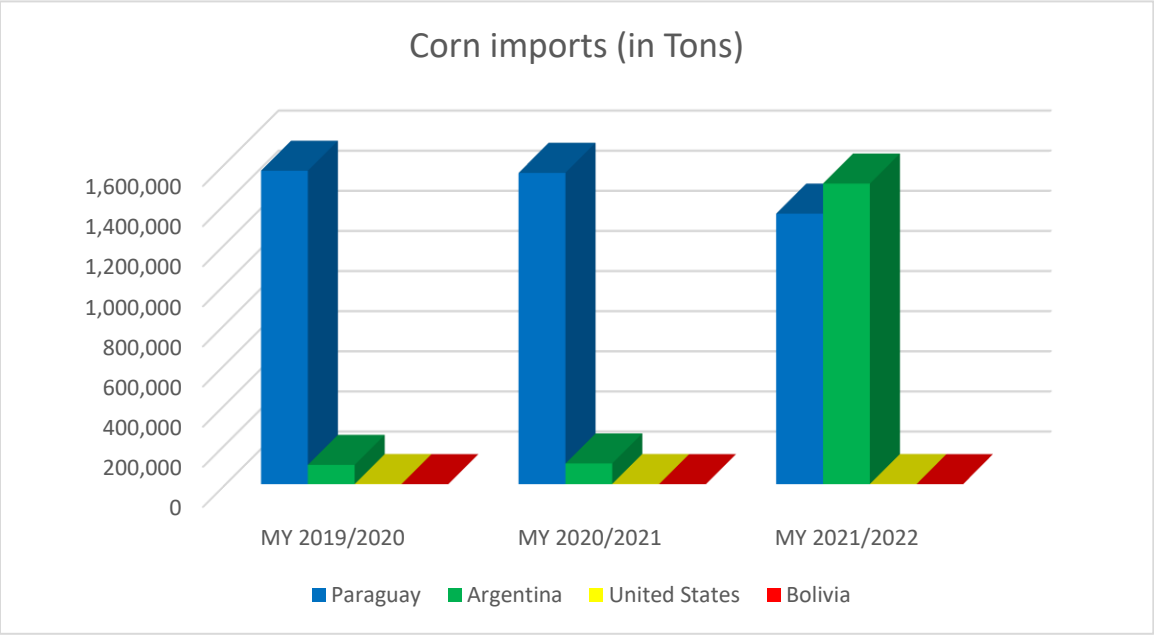
may also be given a boost with the recently signed agreement between the Brazilian and Chinese governments, which foresees the sale of Brazilian corn to the Asian country once phytosanitary requirements are met. However, lower production figures can ultimately impact the availability of corn to be exported.

Post maintained its 2022/23 import forecast at 1.8 MMT, based on the 5-year average imported volume. Most corn buyers in Brazil have sufficient stocks until the end of June, when the off-season harvest begins in the country, and for this reason, they only buy on occasion if and when the prices are attractive. The imports are linked to the demand of the Brazilian livestock and poultry industry, which make up most of the consumption of corn in the country.

2021/22 Corn trade remains at a steady pace

For MY 2021/22 (March 2022 to February 2023), Post maintained its corn imports estimate at 2 MMT, based on market demands and crop availability. While there has been an expressive increase in domestic production compared to last season, Brazil's livestock industry, the primary consumer of corn, is set to reach record numbers and offset this expected rise in production, which will not be enough to supply all its internal feed needs.

In May 2022, the Brazilian government cut import tariffs for several categories of goods to reduce consumer inflation. Among the commodities affected by the measure is corn (grain), which had an import tax reduction from 7.2 percent to 0 percent (see GAIN report Brazil Lowers Agricultural Tariffs to Fight Inflation | BR2022-0033). However, analysts consulted by Post project that this measure will have little impact on the import figures of Brazil, given that in MY 2021/22, 99 percent of corn imports came from Paraguay and Argentina, countries which already have zero import tariffs as part of the Mercosur agreement.



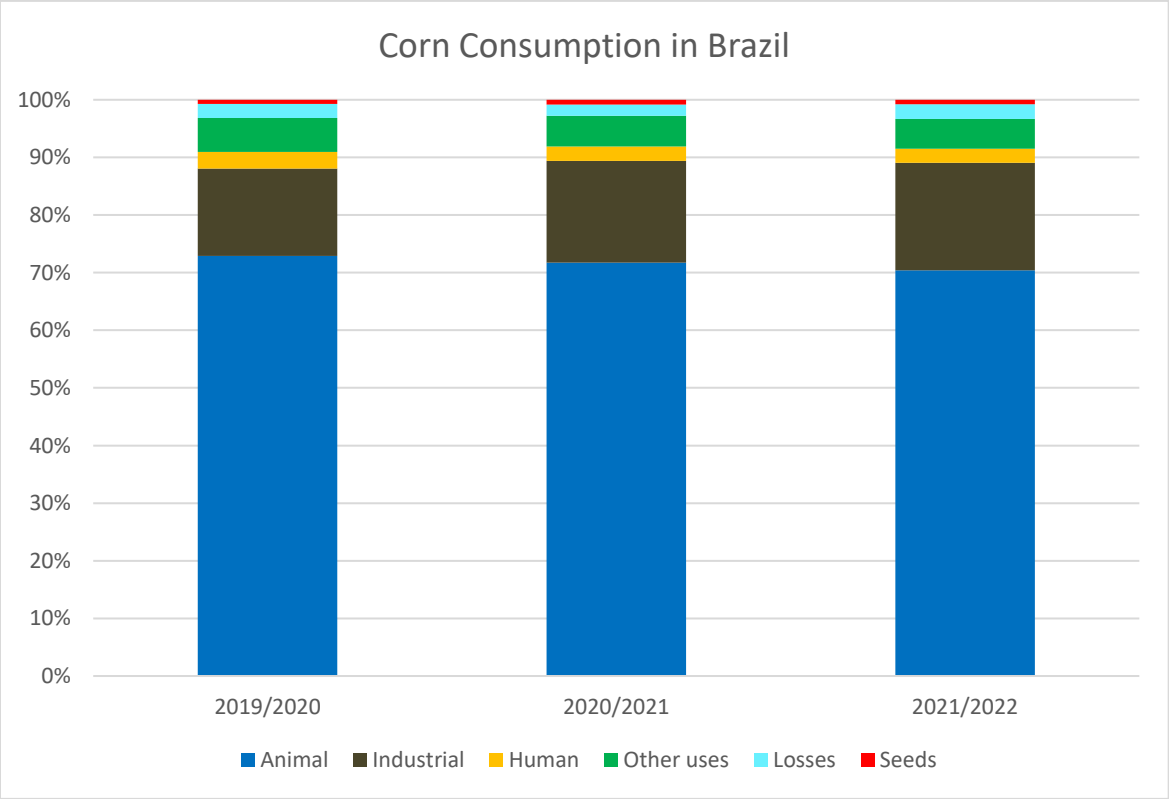
Data Source: Brazilian Foreign Trade Secretariat (SECEX); Graph Post Brasilia

Post projected a 2.2 percent increase from its previous projection in corn exports for MY 2021/22 to 44.5 MMT, based on the rise in Brazilian production and heated international demand. Additionally, Brazil needs to secure solid exports of corn to empty its storage units for the 2023 soybean harvest.

According to data from the Mato-Grosso Institute of Agricultural Economics (IMEA), with the harvest of the following 2021/22 crop approaching, it is expected that the volumes shipped will increase from July 2022 in the state. In addition, due to the prospects of increased production in Mato Grosso and more limited world supply, a reflection of delays in sowing corn in the United States and reduction in production in Ukraine, IMEA projects growth of 61.85 percent in shipments in Mato Grosso alone.

CORN CONSUMPTION

Post maintained its 2022/23 domestic consumption at 75 MMT, representing a 2.7 percent increase on the current season estimate of 73 MMT. The forecast is in line with the average ten-year annual growth and based on the expectation of continued expansion of Brazil's livestock and poultry industries. According to the Brazilian Association of Corn Industries (ABIMILHO), currently only around 15 percent of the national production of corn is destined for human consumption. That figure also involves the indirect composition of other products. The Brazilian Agricultural Research Corporation (EMBRAPA) estimates that only 7 percent of corn is directly used for human consumption in Brazil.



Data Source: ABIMILHO; Graph Post Brasilia

Additionally, the country's corn ethanol production is likely to increase the demand for corn. Brazil's Energy Research Company (EPE) estimates that ethanol production should grow 35 percent by 2029. Corn ethanol production jumped from 37 million liters in the 2013/2014 harvest to a projection of 4.2 billion liters in the MY 2022/23 harvest, and the expectation that production could reach 10 billion liters in MY 2030/31.

For MY 2021/22, post maintains its corn consumption at 73 MMT, almost four percent higher than the previous marketing year. Corn consumption in Brazil has seen an upscale in the last two decades, boosted primarily by the livestock and poultry industries, as the grain makes up almost 60 percent of the feed rations. Brazil is now the world's largest chicken meat exporter and fourth-largest pork exporter.

According to Brazil's National Union for the Animal Nutrition Industry (SINDIRAÇÕES), total feed production by the sector, including corn and other ingredients, in calendar year 2021 grew to 81.2 MMT, an increase of 4.7 percent in comparison to 2020. SINDIRAÇÕES data also indicates that the production of feed rations for broiler chickens grew by 4.1 percent in 2021, feed production for laying hens grew by 1.5 percent, and swine feed production grew by 5.9 percent. SINDIRAÇÕES projects feed production to grow between 4 and 4.5 percent in 2022 under the current trade dynamics and domestic economic scenario.

Rice PSD

Rice, Milled	2020/2021		2021/2022		2022/2023	
Market Year Begins	Apr 2021		Apr 2021		Apr 2022	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	1682	1682	1630	1620	1600	1600
Beginning Stocks	235	235	569	620	445	270
Milled Production	8001	8006	7276	7200	7100	7100
Rough Production	11766	11774	10700	10588	10441	10441
Milling Rate (.9999)	6800	6800	6800	6800	6800	6800
MY Imports	634	634	800	700	850	900
TY Imports	685	685	800	700	850	900
TY Imp. from U.S.	0	0	0	0	0	0
Total Supply	8870	8875	8645	8520	8395	8270
MY Exports	951	951	850	850	650	700
TY Exports	782	782	850	850	650	700
Consumption and Residual	7350	7304	7350	7400	7300	7300
Ending Stocks	569	620	445	270	445	270
Total Distribution	8870	8875	8645	8520	8395	8270
Yield (Rough)	6.9952	7.000	6.5644	6.5358	6.5256	6.5256

(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. TY 2022/2023 = January 2023 - December 2023

Rice Production

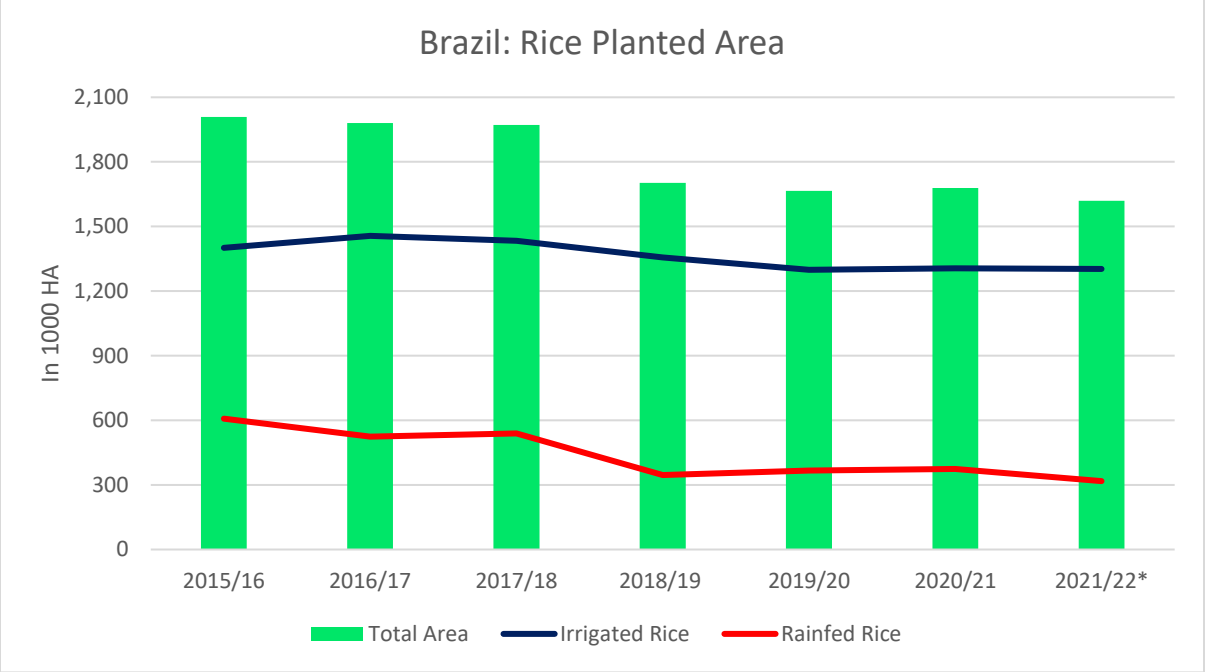
MY 2022/23 planted area, production and yield continue to decline because of competing crops and high costs

For MY 2022/23 (April 2023 – March 2024), Post maintained its forecast for rice area at 1.6 million hectares, a historic low for Brazil. Roughly 70 percent of the rice planted in the country is concentrated in the south of Brazil, of which around 85 percent is irrigated, leading growers to favor the planting of more lucrative crops, such as corn and soybean. The southern state of Rio Grande do Sul has accounted in past seasons for around 70 to 76 percent of all irrigated rice planted in Brazil, followed by the neighboring state of Santa Catarina, with roughly 11 percent.

Post contacts have reported that planting rice has consistently been losing its profitability, causing Brazil to reduce its area by about 45 percent over the last 20 years. In addition, high maintenance costs of irrigated fields and other production costs have affected farmers' return on investments. Post continues

to project that milled rice production will be 7.1 MMT of milled rice equivalent (an equivalent of 10.44 MMT of paddy rice) in MY 2022/23.

Despite rising costs, rice planting is somewhat embedded in the culture of various growers in the south of Brazil, as it is a practice that has been carried on through multiple generations, making it unlikely to disappear. Furthermore, rice sowing is also part of the critical soybean-rice rotation cycle of the crop pattern that benefits the soil in the region. The Federation of Rice Producers of Rio Grande do Sul (FEDERARROZ) states that such a cycle of rotation can reduce production costs by as much as 15 percent and increase rice yields by 10 to 20 percent, depending on the condition of the land. In addition, some areas of the state are known for having poor drainage, making them suitable for planting irrigated rice, so these farmers are also unlikely to change crops.

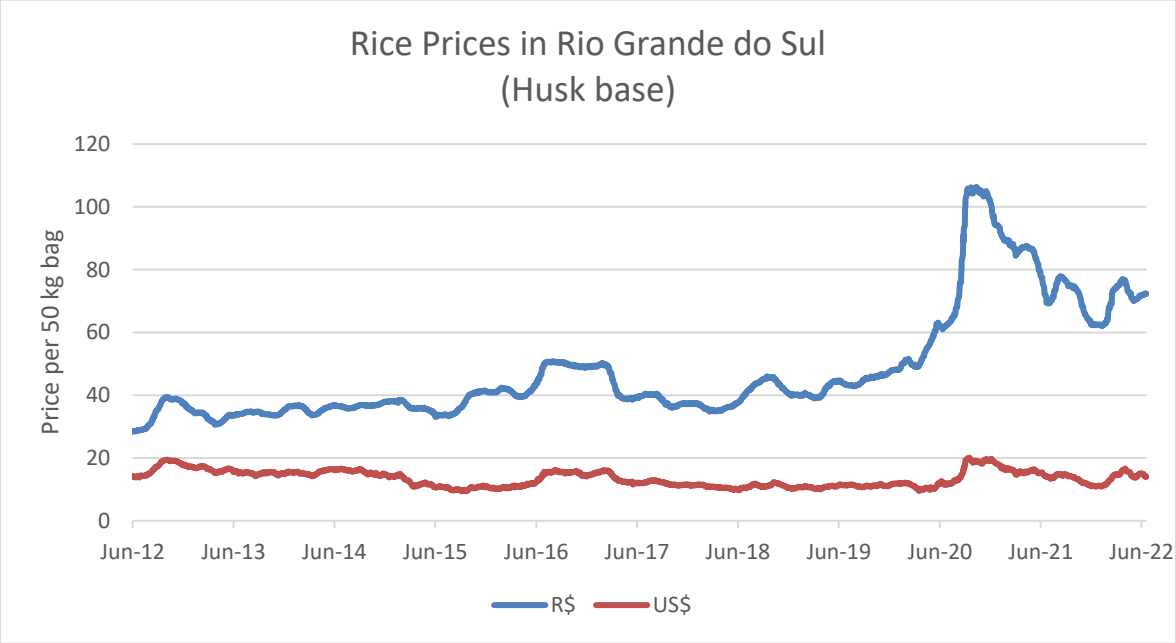


Data Source: CONAB, with 2021/22 as estimate, Graph Post Brasilia

Rice prices continue to rise, but are still not enough to make the grain lucrative

After a period of setbacks in mid-April, rice prices again gained traction in June in Rio Grande do Sul, thanks to the excellent liquidity maintained by the cereal. According to the University of Sao Paulo's Center for Advanced Studies in Applied Economics (CEPEA), the value of a 50-kilogram sack of the husked product reached R$ 72.46 (US$ 13.94), the highest level in nominal terms since mid-April this year. The highest price level that rice reached, in the historical average calculated by CEPEA since 2015, was at the height of the Covid-19 pandemic in September 2020, when the price reached R$ 106.34 (US$ 19.08). In comparison, rice reached its lowest mark in May 2006, traded at R$ 16.12 (US$ 7.82).

Post does not expect rice prices to surpass the R$100 per sack registered in 2020. Early in the pandemic, rice exports boomed amid steep depreciation of the Brazilian real. However, for MY 2022/23, rice exports are expected to be constrained because of high maritime freight costs and the availability of containers.



Data Source: University of Sao Paulo Center for Advanced Studies in Applied Economics (CEPEA/ESALQ), Graph Post Brasilia

The Federation of Rice Growers Associations of Rio Grande do Sul (FEDERARROZ) estimates that high production costs have been affecting growers' decision to opt for other crops. Today, the price received for rice from the 2021/22 harvest is on average R$ 70.00 per 50 kg sack, while the average production cost is R$75.00 per sack. A study by the National Confederation of Agriculture (CNA) revealed that in the states of Rio Grande do Sul and São Paulo, expenditure on pesticides and fertilizers for rice cultivation increased by 25 percent and 45 percent, respectively, concerning data collected in 2021. On the other hand, the average productivity obtained per hectare was 166 sacks of 50 kilos, a reduction of 20 percent in relation to what was observed in the previous year's survey.

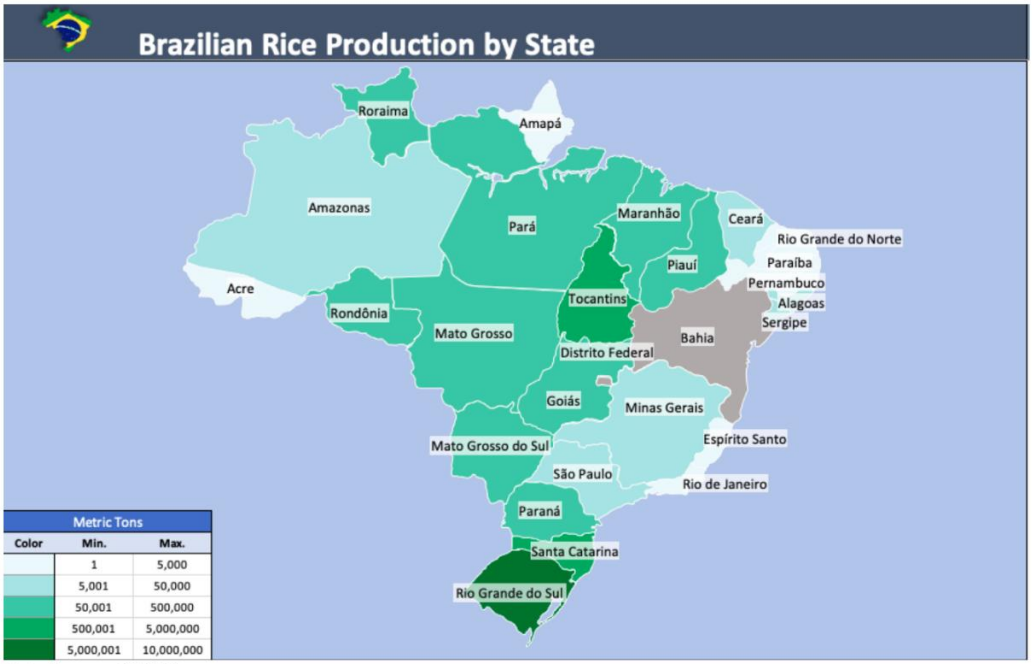
To reduce the impact of the pandemic and the war in Ukraine on input prices, the Brazilian government announced at the end of May a 10 percent reduction in the import tax of various commodities, including rice, valid until December 2023.

2021/22 Rice area and production continue to decline

Post revised its estimated rice harvest area to 1.62 million hectares for MY 2021/22 (April 2022 – March 2023), representing a slight decrease from the previous forecast, estimated at 1.64 million hectares. This new calculation is based primarily on a lessening in rainfed rice, which has seen its area reduced by 15 percent this MY 2021/22 harvest compared to MY 2020/21. Of the total planted area, about 80 percent is linked to irrigated rice farming, and the other 20 percent of the Brazilian crop is rainfed rice. The sowing season for rainfed rice is from October to February, while irrigated rice is traditionally sown from August to December.

Brazil's major rice-producing states have suffered adverse weather conditions that have impacted the productivity of crops. The south and center-west regions have gone through periods of droughts, while the north and northeast have experienced excessive rains. As such, Post estimated its rough production of paddy rice for MY 2021/22 at 10.588 MMT (equivalent to 7.2 MMT milled rice), down 10 percent from the previous season. While the MY 2020/21 rice harvest presented a good yield because of overall optimal weather conditions, the MY 2021/22 harvest saw a scenario of climatic abnormality due to the La Niña phenomenon, which has led to an intense drop in productivity. In addition, growers have been favoring more competitive and lucrative crops, such as corn and soybeans, which have brought record prices in international markets.

Harvest Outlook



Data Source: CONAB
Graphic: FAS Brasilia

- Rio Grande do Sul: The state in the south is by far the largest producer of rice in Brazil, responsible for approximately 70 percent of production, practically all of which is irrigated. The Instituto Rio Grandense do Arroz (IRGA) has officially called the end of the 2021/2022 rice harvest and pointed out that 927,009 hectares were harvested in the state, with a production of 7.7 MMT. The rainfall that occurred in the period contributed to the recovery of the levels of reservoirs and springs. Still, some adverse conditions during critical maturation periods were responsible for declines of around 10 percent in yield results compared to the previous season.

- Santa Catarina: In a distant second place as the biggest rice producer in the country with 10 percent of production, this southern state finished the 2021 harvest with declines in planted area, production, and yield. While there were high expectations of larger crop, production was hampered by pest issues. Overall, the state produced, according to the National Supply Company (CONAB), 1.1 MMT of rice,

representing an 8.6 percent decrease from last year's harvest. The state's yield also dropped around 8 percent, reaching 7.7 MT/ha this season.

- Mato Grosso: The third-largest producing state, at only 3 percent, showed substantial declines in planted area, from 122.5 thousand hectares in 2020/2021 to 93.3 thousand hectares in 2021/2022.

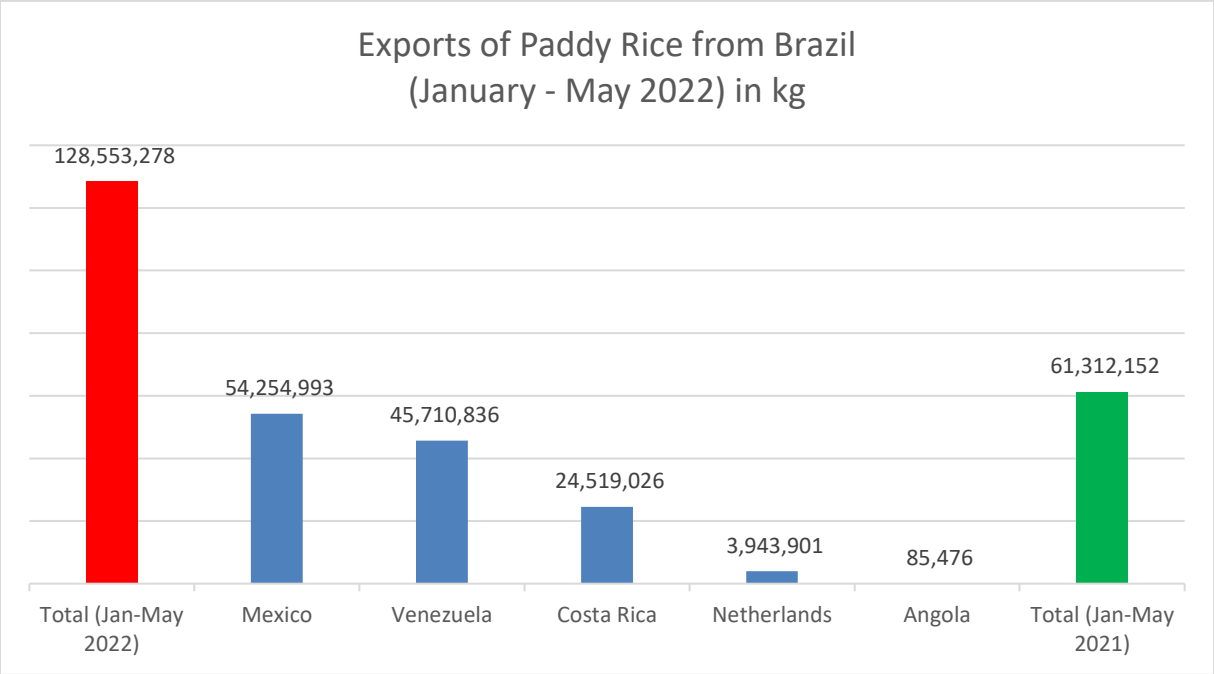
- Other States: Of the remaining states that produce rice in Brazil, the majority presented a decline in the planted area in MY 2021/2022 compared to last, according to CONAB. The exceptions were Maranhão, Ceará, and Minas Gerais. However, together, these states only account for 2.2 percent of production.

Rice Trade

Exports in 2022/23 looking good, if farmers can meet demand; Imports to receive a new boost

Post increased the MY 2022/23 (April 2022 – March 2023) rice export forecast to 700,000 MT, from the original 600,000 MT forecast, based on the high demand for rice in the international market and growing interest of farmers in exporting. With rice prices rising, the pace of exports in the first five months of 2022 was quite heated in Brazil. The first quarter saw confirmed new rice shipments heading to Mexico and Peru, and June already has scheduled shipments from Brazilian ports to the Netherlands. For the next few weeks, Post contacts expect greater demand for Brazilian rice, both from export businesses and the domestic market. According to official data from the Secretariat of Foreign Trade (SECEX), the first five months of the year have seen exports of paddy rice increase a staggering 109 percent compared to last year.

The Mexican government's new measure announced on May 5, 2022, is expected to increase Brazil's rice exports. The government of Manuel Obrador announced anti-inflationary measures aimed at stabilizing the prices of Mexico's basic food basket. One of the main topics is zeroing import tax for primary products and inputs for the next six months, including paddy rice. The measure is likely to further boost Brazilian exports to that country and increase the competitiveness of Brazilian grain.



Data Source: Secretariat of Foreign Trade (SECEX), Graph Post Brasilia

Brazil, however, is not likely to have enough supply to satisfy both the domestic market and international demand, so the export offer is still limited in the country. Additionally, shipping costs and lack of containers are still a source of concern for growers. Industry alternatives, such as renting space in the holds of ships to send rice in big bags, have not been enough to mitigate these issues.

The current exchange rate, ranging above R$ 5.0 to the U.S. dollar, with variations on this mark throughout the year, strongly influenced rice inflows and outflows from Brazilian ports. Nevertheless, if the exchange rate weakens again, new export windows may open, which, in addition to improving prices, will also help dry the internal balance in the second half of the year, when supply pressure decreases due to the off-season.

For MY 2022/2023, Post increased rice imports to 900,000 MT, based on additional new stimulus adopted by the Brazilian government to expand trade within the country. In addition, in May, Brazil approved a measure that removed the 10 percent Common External Tariff (TEC) levied on imported rice until December 2023, which may encourage cheaper rice to enter the national market.

2021/22 Exports to remain steady, while imports continue highly dependent on Mercosur countries

For MY 2021/22 (April 2021 – March 2022), Post maintained its estimate for Brazil's rice exports at 850,000 MT and increases its imports from 680,000 MT to 700,000 MT. High maritime freight rates and lack of vessels have contributed to a decrease in exports in 2020/21 across all categories of rice that Brazil exports. However, Brazil's competitive rice prices have managed to entice exporters.

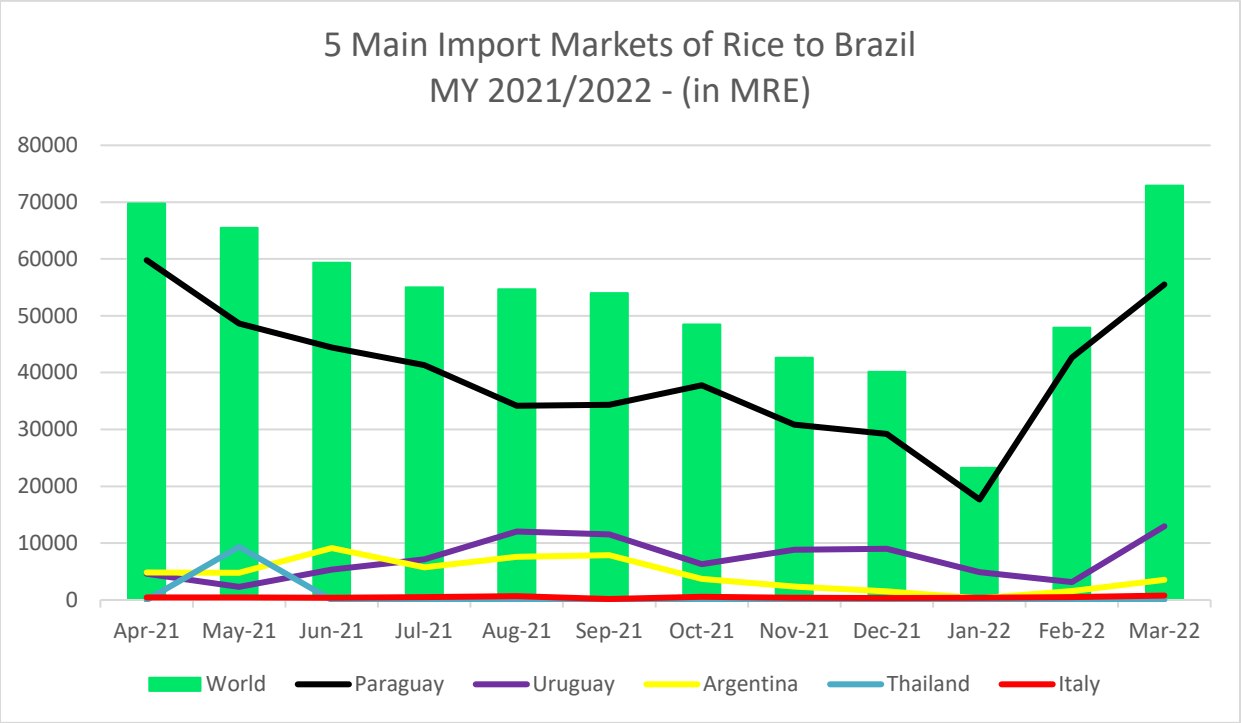
Venezuela remains the largest buyer of Brazilian paddy rice despite years of political and economic unrest.

Main destinations of Paddy Rice from Brazil (in MT)							
(MY 2018/2019)		(MY 2019/2020)		(MY 2020/2021)		(MY 2021/2022)	
Venezuela	477,821.673	Venezuela	196,180.688	Venezuela	159,605.812	Venezuela	117,642.851
Nicaragua	89,626.662	Costa Rica	24,488.156	Costa Rica	90,517.265	Costa Rica	107,438.481
Costa Rica	77,498.917	Paraguay	344.560	Mexico	88,792.177	Mexico	86,255.002
Turkey	2,922.005	Angola	250.000	Guatemala	30,007.079	Nicaragua	28,270.180
Nigeria	480.000	Argentina	90.004	Honduras	28,093.619	Netherlands	13,878.405
Guatemala	294.000	Uruguay	49.918	Turkey	26,013.195	China	3,277.799
Paraguay	188.200	Panama	13.014	Nicaragua	22,749.993	Paraguay	249.480
Angola	45.080	Guyana	11.500	El Salvador	7,621.021	Angola	112.476
Marshall Islands	5.225	Marshall Islands	10.343	Netherlands	4,053.435	Congo	64.640
Panama	4.198	Liberia	8.124	Paraguay	158.160	Uruguay	49.042

Data Source: Secretariat of Foreign Trade (SECEX), Chart Post Brasilia

According to data from the Secretariat of Foreign Trade (SECEX), Brazil has maintained a positive trade balance for rice (husk base) in the accumulated result for this year. From January to May 2022, the grain exports totaled 557.9 thousand tons, against imports of 491 thousand tons. In the specific case of milled rice, year-to-date exports grew 11% in value and 26% in volume compared to the same period in 2021. However, rice exports (husk base) in May reached the lowest level of the year: 39.7 tons, though Post contacts expect that embarkments will pick up in the coming months.

Brazil’s rice imports are highly dependent on Mercosur countries, which comprise more than 98 percent of total imports in MY 2021/22, with Paraguay being responsible for 76 percent of all rice traded into the country.

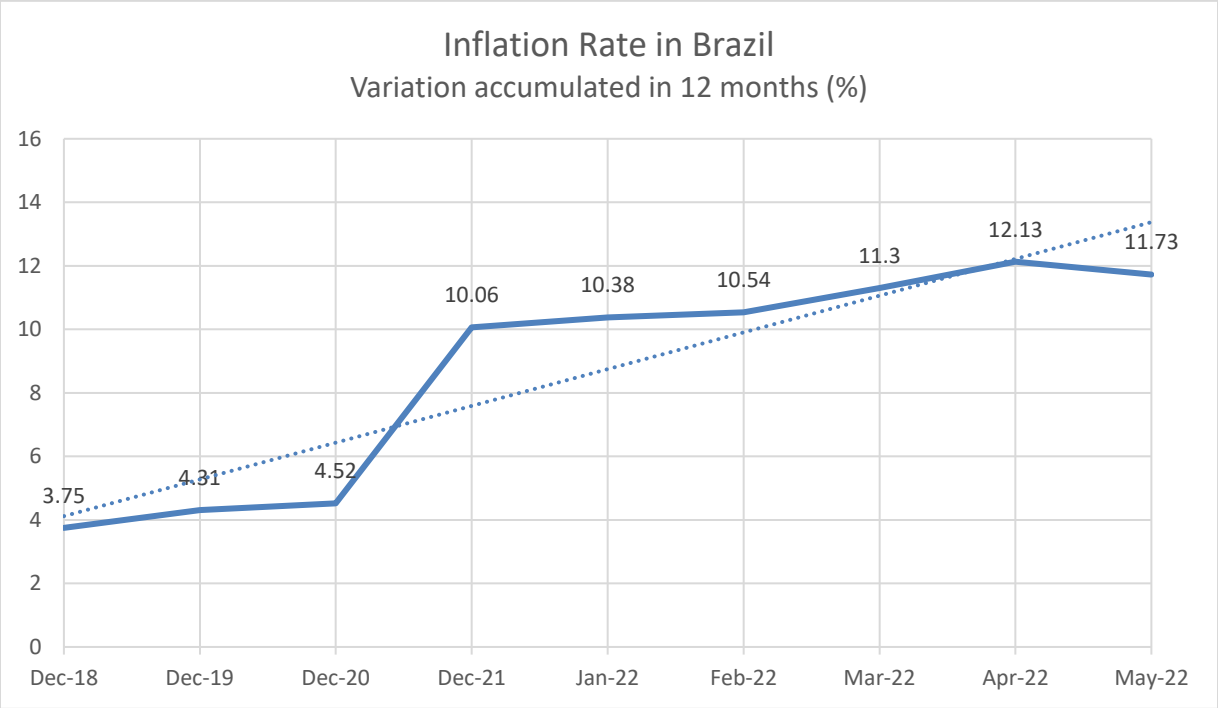


Data Source: Secretariat of Foreign Trade (SECEX), Graph Post Brasilia

In the last five years, Brazil's Mercosur partners typically accounted for 95 percent or more of their rice import volumes due to their geographic proximity and duty-free access to the Brazilian market. One exception was the 2019/20 trade year when the Brazilian government instituted a quota for duty-free entry for up to 400,000 MT of paddy and milled rice. The TRQ relaxed the 10 percent import tax on paddy rice and 12 percent import tariff on milled rice, with the United States, Guyana, India, and Thailand being the primary beneficiaries. As already mentioned in this section, the new reduction in import tariff announced by the Brazilian government in May, valid until December 2023, is set to impact grains and competitive prices.

Rice Consumption

For MY 2022/23 MY, Post decreased its rice consumption forecast by 1.3 percent from the previous forecast to 7.3 MMT of milled rice equivalent. The slight slowdown in consumption is credited to the sharp increase in inflation in Brazil, which has been slowing down the purchases of essential food items by lower-income families. With rice being a primary food in Brazil, consumed daily (with beans) in one or two meals, Brazilians are battered by the high inflation indexes.



Data Source: IBGE, Graph Post Brasilia

For MY 2021/2022, Post maintains its estimate of 7.4 MMT in rice consumption, based on the projected production for that season and the continuous population growth and per capita consumption. However, as mentioned, while rice is an essential item in Brazilian's basic food basket, high prices could lead families to seek less expensive alternatives, albeit temporary ones, such as manioc, potatoes, and wheat products.

WHEAT PSD

Wheat	2020/2021		2021/2022		2022/2023	
Market Year Begins	Oct 2020		Oct 2021		Oct 2022	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested	2340	2500	2740	2700	3200	3200
Beginning Stocks	1991	761	1911	981	1161	621
Production	6250	6800	7700	7740	8500	8700
MY Imports	6395	6395	6500	6500	6400	6400
TY Imports	6359	6359	6500	6500	6400	6400
TY Imp. from U.S.	508	508	0	0	0	0
Total Supply	14636	13956	16111	15221	16061	15721
MY Exports	925	925	3200	2800	2800	3000
TY Exports	911	911	3200	2800	2800	3000
Feed and Residual	400	400	450	500	550	600
FSI Consumption	11400	11650	11300	11300	11500	11400
Total Consumption	11800	12050	11750	11800	12050	12000
Ending Stocks	1911	981	1161	621	1211	721
Total Distribution	14636	13956	16111	15221	16061	15721
Yield	2.6709	2.72	2.8102	2.8667	2.6563	2.7188

(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. TY 2022/2023 = July 2022 - June 2023
Source: Post Brasilia

WHEAT PRODUCTION

2022/2023 area, production and yields forecasts are slightly on the downside, but harvest still looks promising

For MY 2022/23 (October 2022 – September 2023), Post reduced its previous forecast for wheat area from 3.4 million hectares to 3.2 million hectares, a reflection of high production costs that have hit growers in the country. Notwithstanding, the new forecast still represents an increase of over 18 percent from the current season. A combination of factors supports the estimated growth in planted area for Brazil's 2022/23 wheat crop. The increase in international demand due to the conflict between Russia and Ukraine, two of the world's largest wheat producers, the rise in global prices for wheat, and a more favorable planting window than last season are some of these factors.

Post revised its production forecast for MY 2022/23 to 8.7 MMT, a reduction of around 1 million tons. This revision is based on an adjustment of the expected planted area for the coming season, mainly in

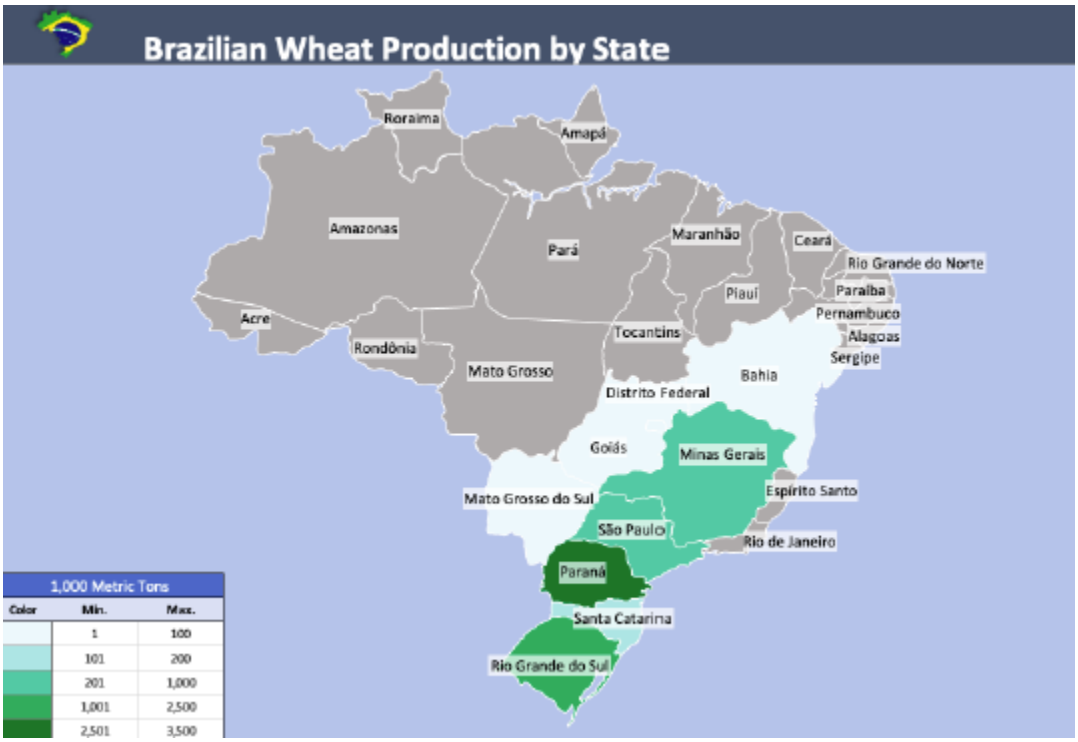
the state of Paraná, which is responsible for roughly 40 percent of Brazil's wheat production. Despite initial fears of sharp declines in temperatures in the center-south of Brazil in mid-May, the weather conditions were not enough to cause significant damage to crops, as the plants were still in the initial phenological stage, which make them less sensitive to changes. As such, Post sets its initial yield forecast at 2.75 MT/ha, an almost 3 percent increase from the previous forecast but slightly below the yields estimated for the current 2021/22 season of 2.82 MT/ha.

Cost of production remains an issue for farmers

As mentioned in the corn section, fertilizer is the item that will contribute most to the next grain crop being the most expensive in recent history. Despite the initial fear of a lack of products, mainly due to the conflict in Ukraine, the National Association for the Diffusion of Fertilizers (ANDA) reported that the sector is managing to meet demand, albeit at a slower pace than desired. Today Brazil produces only 15% of the fertilizers it consumes, and the National Fertilizer Plan, launched earlier this year by the Federal Government, will only begin to affect supply in the long term.

Brazil sows most of its wheat in the winter months of May and June in the country's southern region. As such, wheat is the first significant crop in Brazil to suffer the effects of high prices of fertilizers or lack thereof. However, Post contacts indicate that input contracts for the winter crop were mostly concluded well before the conflict began and that deliveries were made, though without 100 percent certainty if contracts were fully concluded. According to data released by the Mato Grosso Soy and Corn Producers Association (APROSOJA-MT), in addition to potassium chloride (KCl), which varied from US$ 350 to US$ 1,300 per ton from one crop to the next, monoammonium phosphate (MAP), went from an average price of US$ 480 to US$ 1,400 per ton from the previous crop to the current one. However, with wheat prices rising domestically and internationally, growers remain optimistic in relation to the trade, despite the increase in the cost of production.

Harvest Outlooks



Source: CONAB, Graphic Post Brasilia

- Rio Grande do Sul: The state located in the south of Brazil is estimated to plant the largest area for the 2022/23 wheat crop, around 45 percent, with the State Technical Assistance and Extension Services Enterprise (EMATER/RS-Ascar) projecting over 1.4 million hectares, a 15 percent increase over the 2021 harvest. The agency also estimates a record production for the state in 2023, with 3.9 million tons. While sowing started slowly in May, the rhythm will likely pick up from June onwards, as the weather is expected to stabilize.

- Paraná: CONAB highlights that a little over half of the state's wheat crops have already been planted under good soil conditions. The second-largest planted area, representing almost 41 percent, is expected to produce 3.3 million tons in the 2022/23 harvest. This represents a slight increase from the 3.2 million tons of the previous season.

- Santa Catarina: Although CONAB estimates a one percent increase in planted area for the current marketing year, state agencies fear that weather conditions may hinder production and impact yield numbers. The MY 2022/2023 wheat crop is forecast to bring in yields of 3.0 MT/hectare, a 9 percent drop from the 3.3 MT/ha seen in the 2021/2022 estimation. Production is forecast at 0.31 MT for 2022/2023.

- São Paulo: The high prices of wheat in the market have caused growers in the state to increase their planted area by over 10 percent over the MY 2021/2022 harvest, reaching 95.7 thousand

hectares. With over 75 percent of the area sown for the MY 2022/23 harvest, the forecast is for better yields than in previous seasons, which may result in a 15 percent increase in production, forecast at 0.29 MT.

- Minas Gerais: The southeastern state is expected to present optimal numbers in the MY 2022/2023 harvest. There has been a 42 percent increase in planted area from the MY 2021/22 season, now at 103.9 thousand hectares. Although the state is only accountable for 3.5 percent of the wheat grown in Brazil, its early planting is expected to result in a more significant production of 0.28 MT for 2022/23, an increase of almost 69 percent in relation to the previous year.

- Center West: The three states from the center-west region that produce wheat, Goiás, Mato Grosso do Sul, and Distrito Federal, comprise together almost 3 percent of the total planted area and production, with yields varying from 2.8 MT per hectare (Mato Grosso do Sul) to 3.5 MT per hectare (Distrito Federal).

- Bahia: The only state in the northeast of Brazil producing wheat is responsible for less than 0.5 percent of total production in the country and 0.2 percent of the total planted area. However, the state shows the best yields, with 5.7 MT per hectare.

2021/22 Wheat crop sets a record

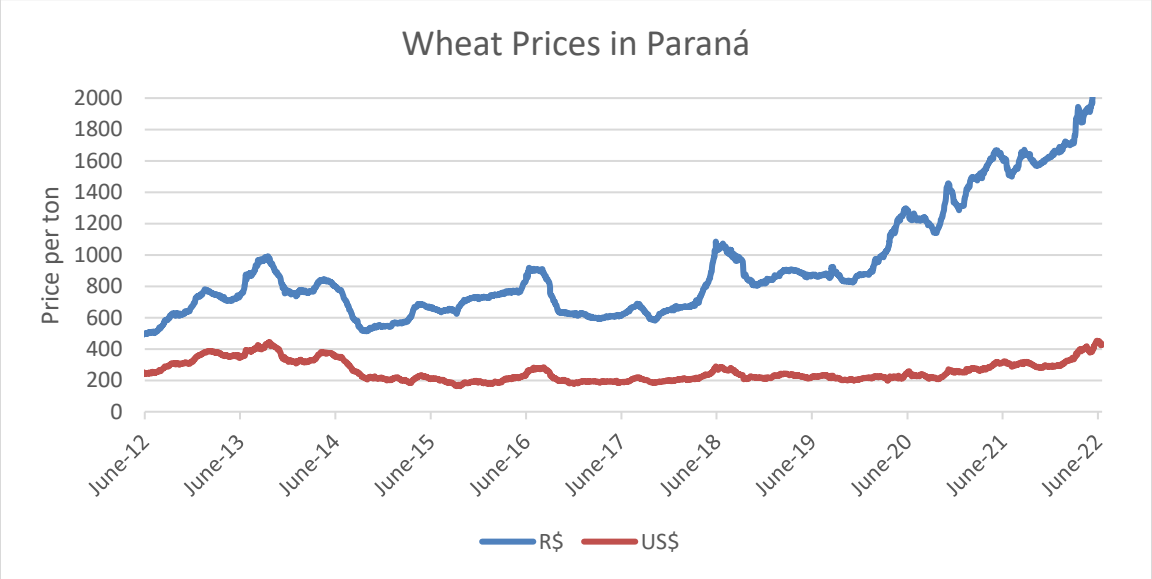
For MY 2021/22, Post maintained its estimated wheat area at 2.7 million hectares, an almost 10 percent increase from the previous season. With prices of wheat spiking, growers remain optimistic about planting, despite the rise in production costs. The three states in the south of Brazil - Paraná, Rio Grande do Sul, and Santa Catarina – remain the largest growers of wheat in the country, accounting for little over 90 percent of the planted area in the 2021/22 harvest, according to data from CONAB. Rio Grande do Sul alone was responsible for 45 percent of all the wheat produced, followed by Paraná, with 41.7 percent. In a distant third place, Santa Catarina produced 4.4 percent of the grain in 2021, followed by the southern state of São Paulo, with 3.3 percent, and Minas Gerais, with 2.2 percent.

Post increased slightly its wheat production estimate for MY 2021/22 to 7.74 MMT, from the previous 7.7 MMT. This reflects optimal production gains in the state of Rio Grande do Sul, estimated by EMATER/RS at an impressive 3.4 MMT, more than 60 percent higher than the previous season. Therefore, with the slight increase in production, Post increased its yield estimate for wheat for MY 2021/22 to 2.8 MT/ha, just a slight increase in relation to the previous forecast.

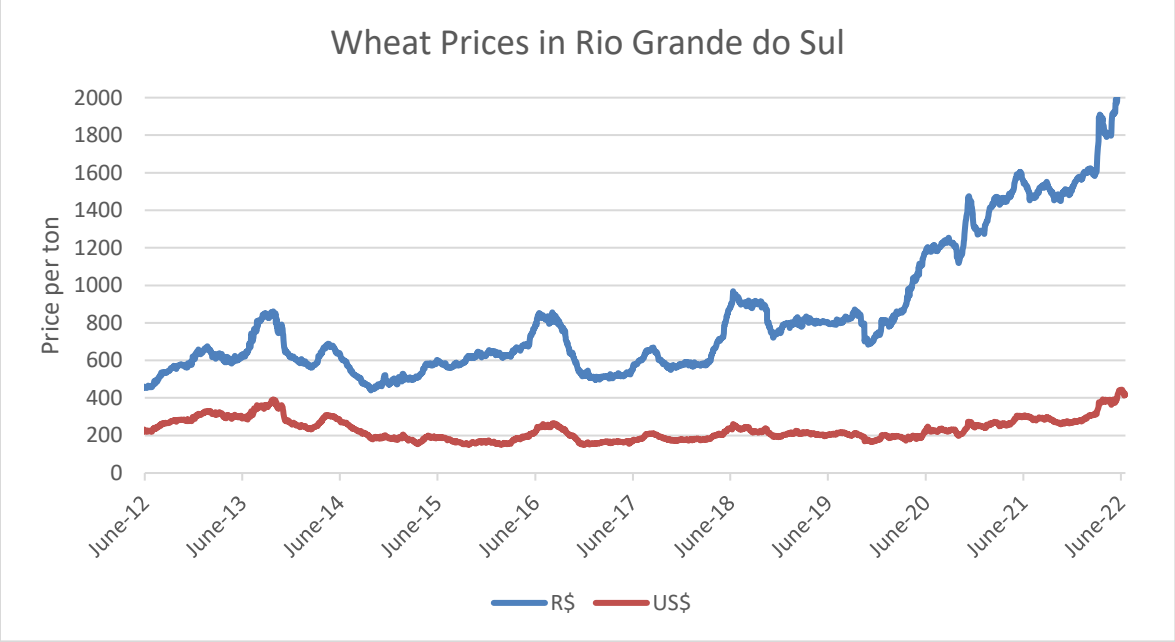
Wheat prices supported by export demand

In Brazil, wheat prices continue to soar. Post contacts also remain confident that prices will continue to rise amid the international uncertainties between Russia and Ukraine. The University of Sao Paulo’s Center for Advanced Studies in Applied Economics (CEPEA) has highlighted that wheat prices in Paraná have reached an all-time high in real (R$) terms. The same trend has been seen in grain prices in Rio Grande do Sul, Santa Catarina, and São Paulo.

For the two biggest producing states, Paraná and Rio Grande do Sul, which together account for roughly 86 percent of all wheat grown in Brazil, prices in June, in real terms, were the highest they have ever reached since the beginning of the survey carried out by CEPEA in 2004. On June 14, 2022, Paraná registered a record R$ 2,191.31/ton (US$ 426.32), almost 78 percent higher than two years earlier, when the state traded wheat at R$ 1,234/ton (US$ 239.62) in June 2020. Meanwhile, Rio Grande do Sul closed on June 17 with the wheat at R$ 2,136.7/ton (US$ 415.70), its highest rate in history and 40.8 percent higher than on the same date last year in the state.



Data Source: Center for Advanced Studies in Applied Economics (CEPEA/ESALQ), Graph Post Brasilia



Data Source: Center for Advanced Studies in Applied Economics (CEPEA/ESALQ), Graph Post Brasilia

The progressive weakening of the Brazilian real throughout the years has made Brazilian commodities very affordable in the international market, primarily since trade is typically led in U.S. dollars. As seen in the charts above, the high spike in real prices has not been proportionate to the U.S. dollar, based on the devaluation of the Brazilian currency. If traded in U.S. dollars, the Brazilian wheat remains competitive, given that in the international market, the prices remain high. This is partly due to a panorama of climate problems in countries such as the United States, France, and India, news of the suspension of exports from India, and the reduction of both global production and ending stocks of wheat in the United States.

Wheat Trade

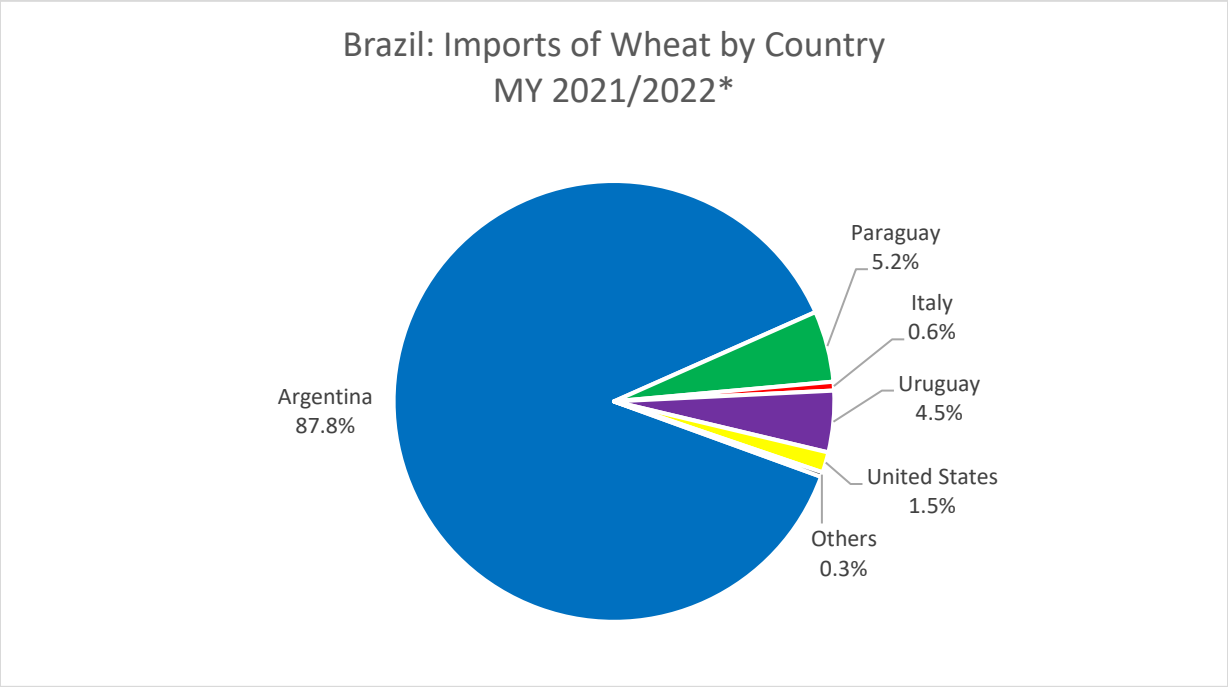
2022/2023 Brazil's wheat trade continues heating up

Post increased its MY 2022/23 wheat import forecast to 6.4 MMT on a wheat grain equivalent basis (WGE) from its initial forecast of 6.2 MMT. It should be noted that USDA uses WGE for trade numbers, which in addition to wheat grain, include flour and wheat product volumes adjusted on a wheat grain equivalent basis. Although Brazil is set to produce more wheat this coming season, production is not enough to meet internal demand, and trade heavily depends on Argentina. The neighboring country is responsible for around 85 percent of incoming wheat, with millers benefiting from the country's proximity and tax-free arrangement with Brazil.

Post maintained its 2022/23 export forecast at 3 MMT on a wheat grain equivalent basis (WGE). As occurred last season, Post contacts expect Brazil to once again trade well above the 1 MMT that the country traditionally exports. Furthermore, with wheat prices in high demand in international markets, growers expect to gain more return on exports in US dollars to compensate for the high production costs, given the Brazilian currency's devaluation.

2021/22 Imports set to increase to meet internal demands

Post increased its import estimate for MY 2021/22 to 6.5 MMT on a wheat grain equivalent basis (WGE), based on the need to supply internal demand. Fifty percent of the wheat that is consumed in the country is still imported, with around 85 percent coming from Argentina.



Data Source: SECEX, with 2021/2022 as estimates, Graph Post Brasilia

Brazil is the fourth-largest global wheat importer; historically, more than 90 percent of its imports are tax-free from its Mercosur neighbors Argentina, Uruguay, and Paraguay. However, in November 2019, the Brazilian government implemented an annual duty-free tariff-rate quota (TRQ) for 750,000 MT of non-Mercosur wheat imports. In December 2020, the Brazilian government made the TRQ permanent, meaning that it would no longer have to be renewed annually by Brazil's Foreign Trade Chamber (CAMEX). Though the TRQ typically accounts for around 10 percent of Brazil's total wheat imports, it took a direct hit on wheat exports from the United States to Brazil.

However, in March 2022, the Brazilian government announced a new measure to exempt the import tax on wheat and various products imported from outside Mercosur. According to the decision, valid until the end of 2022, the wheat-related products included in the so-called List of Exceptions to the Common External Tariff (LETEC) were:

- Bakery and pastry products (from 16.2% to zero).
- Wheat flour (from 10.8% to zero).
- Wheat (from 9% to zero).
- Cookies and crackers (from 16.2% to zero).

The Brazilian Wheat Industry Association (ABITRIGO) supported the measure, as it believes that the import tax reduction on wheat flour and other wheat and mixtures of wheat and rye will help alleviate some of the cost of the cereal purchased abroad. However, the association recognizes that the measure's effect is limited since the prices of wheat imported from Argentina, Canada, and other countries are almost 40 percent higher due to the war, with a tendency for them to remain as such in the short and medium-term.

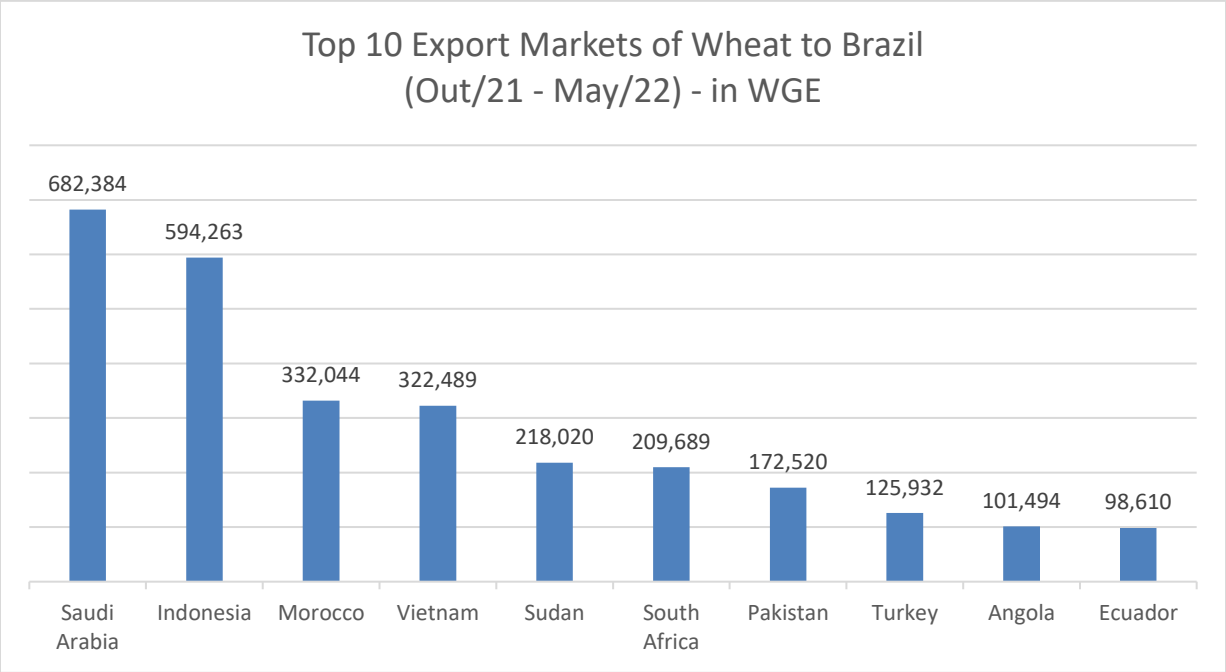
Brazil's Wheat Imports by Partner						
	2018/19		2019/20		2020/21	
Partner	**MT**	**% of total**	**MT**	**% of total**	**MT**	**% of total**
Argentina	5,900,847	84.1%	5,540,577	78.8%	4,562,243	71.3%
Uruguay	135,336	1.9%	181,110	2.6%	404,320	6.3%
Paraguay	499,657	7.1%	262,871	3.7%	365,664	5.7%
United States	297,012	4.2%	707,045	10.1%	333,505	5.2%
Russia	19,235	0.3%	171,374	2.4%	150,747	2.4%
Canada	121,346	1.7%	116,552	1.7%	40,672	0.6%
World Total	**7,020,038**		**7,028,619**		**6,395,196**	

Data Source: SECEX, Chart Post Brasilia

2021/22 Exports continue bringing in good numbers

Post maintained its MY 2021/22 export estimate to 2.8 MMT on a wheat grain equivalent basis (WGE), based on the high returns of the commodity with the increase of the dollar in comparison to the Brazilian real and with the search for the Brazilian grain, due to diminishing availability over the conflict in Ukraine. According to data from the Secretary of Foreign Trade (SECEX), in the first five months of 2022, Brazil exported more than double the entire volume of 2021. However, numbers are not expected to continue high, as the volume of exports should settle once producers run out of wheat to export towards the end of the season.

In this new global scenario, Brazil has seen a diversification of its export destinations. New markets, such as Saudi Arabia, Morocco, and Sudan, which last year imported 190,000 tons in this period, this year already exceeded the volume of 1 million tons. Post anticipates that for the remainder of the season, Brazil will continue to ship to a diverse customer base. However, exports to the Middle East and North Africa may rise proportionally more than to other destinations as Brazil looks to secure increased fertilizer flows from this region in a barter exchange for crop shipments.



Data Source: USDA, Graph Post Brasilia

Post maintained its MY 2022/23 consumption forecast at 12 MMT, based on the notion that consumption in Brazil will remain on the uptrend, albeit at a slower pace, given the high prices of the commodity to end consumers. Furthermore, with wheat products remaining a staple food category in Brazil, post maintained its forecast for MY 2022/23 in wheat food, seed, and industrial (FSI) consumption at 11.4 MMT.

Post revised down its estimate for MY 2021/22 wheat consumption to 11.8 MMT, a 3 percent decrease from the previous estimate. This revision is based on the high prices of wheat products to end consumers and a spike in inflation in Brazil, which has taken a toll on Brazilian households. In addition, the Brazilian Wheat Industry Association (ABITRIGO) points out that in 2021 there was no growth in flour consumption by Brazilians, as a possible reflection of the impacts of the pandemic on the population. This finding is consistent to the survey carried out by the Union of the Wheat Industry in the State of São Paulo (SINDUSTRIGO), which analyzed the per capita consumption of wheat in the most populous city of Brazil, São Paulo and saw little variation from 2020 to 2021. Additionally, this year there is a scenario of conflict between Russia and Ukraine that made the product more expensive.

Annual Per Capita Consumption of Flour/Mixtures in The State of São Paulo		
	2020	**2021**
Consumption of Wheat Flour/Mixtures (MMT)	2.277	2.29
Population of the State of São Paulo	44.639.899	44.917.608
PER CAPITA CONSUMPTION (kg)	51	51

Data Source: Fundação SEADE, ABITRIGO & SINDUSTRIGO, Chart Post Brasilia

ABITRIGO carried out research showing that in 2021, 12.67 million tons of wheat were milled, representing around 9.9 million tons of wheat flour, in 160 industrial units. According to the association, the flour produced was mainly consumed in the bakery segment (44%), followed by pasta, biscuits, industrial bread, food service, and domestic use.

For various contacts made by Post, wheat products are reaching a tipping point. Their high prices lead consumers to seek alternatives, choosing second-line products or buying fewer quantities. This will likely be the case for pasta and biscuits. As noted by the Brazilian Manufacturers Association of Biscuit, Pasta, and Industrialized Bread & Cakes (ABIMAPI), flour makes up 70 percent of the cost of pasta, 60 percent of industrialized bread, and cakes, and 30 percent of cookies. As such, Post decreases its wheat food, seed, and industrial (FSI) consumption estimate to 11.3 MMT in MY 2021/22 from its previous estimate of 11.5 MT.

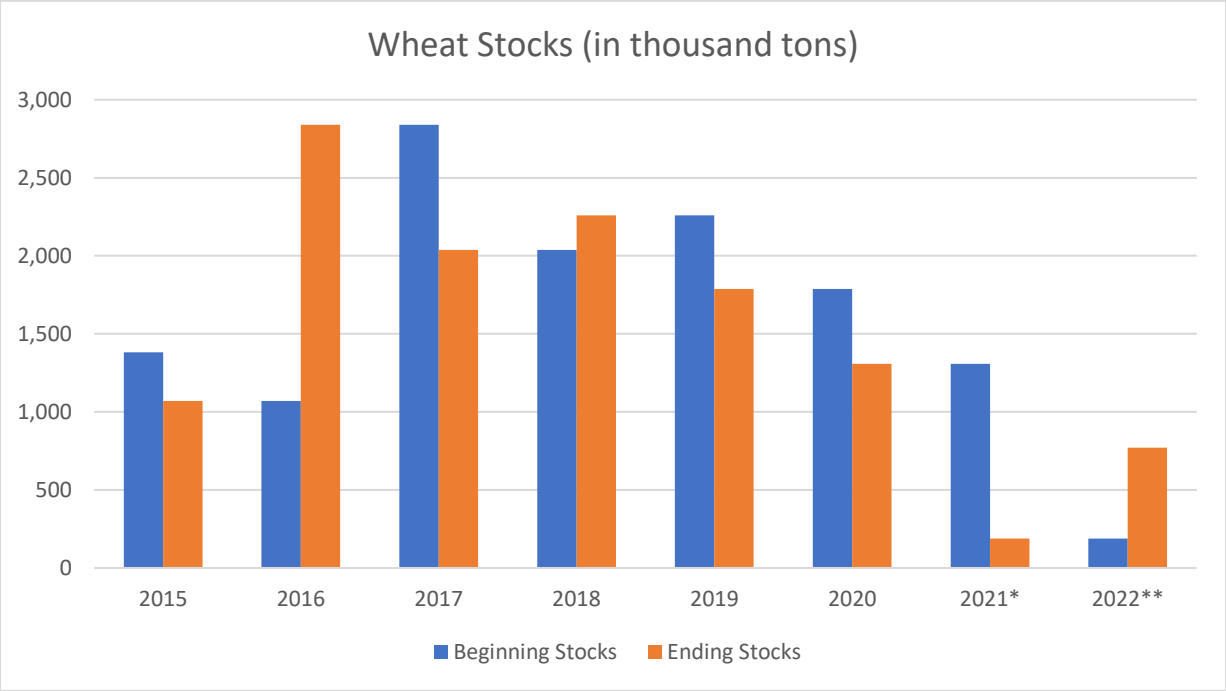
The Brazilian Agricultural Research Corporation (EMBRAPA) has been developing tropical wheat varieties to plant wheat mainly in the Center-West states of Goiás, Mato Grosso, Mato Grosso do Sul, and the Federal District, as well as the southeastern state of Minas Gerais and São Paulo. According to the institution, the project can make Brazil self-sufficient in wheat for consumption in up to ten years. Furthermore, researchers estimate that 204 million hectares can be explored without cutting down trees, only cultivating in degraded regions. Additionally, these irrigated wheat varieties tolerate the hotter climate of the cerrado biome, being more resistant to droughts and resisting fungal diseases during periods of high humidity.

EMBRAPA predicts the first results of the test with the planting of this genetically modified wheat (HB4) for mid-July and August this year when the plants will be harvested. However, analyzes of the functionality of the transgenic cultivar may take another two to four years.

Stock volumes increase, but storage facilities are still an issue in the country

The available storage capacity in Brazil reached 183.3 million tons in the second half of 2021. The volume is 1.5 percent higher than that recorded in the first half of that year. The data results from a Stock Survey released by the Brazilian Institute of Geography and Statistics (IBGE). The survey also shows that the number of establishments grew by 1.2 percent. Most of them are in Rio Grande do Sul (2,159), followed by Mato Grosso (1,397) and Paraná (1,340). With 45.5 million tons, Mato Grosso has the largest storage capacity in the country. Of this total, 59.1 percent are bulk carriers, and 34.2 percent are silos.

Among the five main agricultural products in the storage units, the largest volume (16.9 million tons) is corn stocks, followed by soybeans (7.7 million), wheat (6.4 million), rice (2.4 million), and coffee (1.1 million). In the second half of 2021, soybean inventories grew 81.4 percent, wheat 40.5 percent, rice 45.4 percent, and corn 20.3 percent. However, the coffee stock fell by 16.0 percent compared to December 31, 2020. According to the IBGE, these products represent 94.0 percent of the total products monitored by the survey. The remaining 6.0 percent comprises cotton, black beans, colored beans, and other grains and seeds.



Data Source: CONAB, with 2021 & 2022 as estimates. Graph Post Brasilia

Attachments:

No Attachments