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Report Highlights:

Post forecasts that the cattle herd will grow four percent in 2021 and 2022, while beef production is forecast to decrease six percent in 2021, reaching 9.5 million tons Carcass Weight Equivalent (CWE), but increase two percent in 2022. Post forecasts beef consumption for 2021 at 6.93 million tons (CWE), which is an eight percent decrease from 2020, mainly due to rising beef prices, while consumption should increase two percent in 2022. Post forecasts an increase of almost two percent in the pig crop in 2022 and a two percent growth in domestic pork consumption. Pork production growth is forecast at almost five percent in 2021 and 3.5 percent in 2022, reaching 4.47 million tons (CWE), reflecting continued strong exports to China, and improved domestic demand, and more stable feed costs in the second semester of 2021 onwards. Pork exports are forecast to increase twelve percent in 2021 and almost seven percent in 2022 due to high global demand and a devalued Real.

EXECUTIVE SUMMARY

The Brazilian economy has been slowly recovering from the pandemic crisis, with GDP projection for 2021 at around five percent. Although the first quarter of 2021 saw moderate economic growth of around one percent, its gross value represents a contraction of 3.8 percent in relation to 2020's first quarter. Post anticipates that challenges faced by the Brazilian bovine and swine sectors since the onset of the COVID-19 pandemic crisis should remain until 2022. The outlook for production, trade, and sector expansion in 2022 is similar to that of 2021.

Post estimates that the cattle herd will grow at around one percent in 2021; for 2022, Post forecasts the herd size to remain stable. The price of animal feed for both cattle and swine has continued growing since 2020 because of the increase in corn and soybean meal costs, driving up production costs. Post expects corn and soybean prices to remain elevated in 2022, which will continue to reflect in higher livestock production costs. Post expects beef production to fall around six percent in 2021, reaching 9.5 million tons Carcass Weight Equivalent (CWE), due to the high feed and operational costs, as well as lower consumer demand. For 2022, Post forecasts beef production to increase around two percent driven mainly by growing foreign demand. Beef consumption in 2021 is expected to drop around eight percent, to around 6.9 million tons CWE, yet should increase around one percent in 2022. The high meat prices and lower disposable income of families account for this. Post forecasts that both cattle and beef prices will remain elevated in 2021-2022, due to global meat demand and a relatively devalued domestic currency that favors exports of these products.

There are a few uncertainties facing the animal protein sector in 2022, namely, unstable political scenario, together with the Presidential Election; unpredictable crop harvests, due to climatic instability and farmers' shift from livestock to crop production; and potential reduction in China's demand for both pork and bovine meat.

The swine sector is facing similar challenges to those of the bovine sector, although in 2021 the production costs should remain more stable, and domestic consumption for pork is expected to rise slightly. For 2021, Post forecasts the Brazilian pig production to increase by 2.8 percent and by 1.8 percent in 2022. This forecast is due to high export demand, especially from Asia, mainly due to the continued impact of African Swine Fever outbreaks in the Chinese and several European herds, leveling of production costs – including feed costs - from mid-2021 onwards, and due to growing substitution of beef protein for pork meat in Brazil. The slaughter rate should increase four percent in 2021 and 2022 and, since this rate is higher than the growth rate of production, the total swine population should fall around one percent in 2021 and three percent in 2022. Pork meat production should grow around five percent in 2021 and around 3.5 percent in 2022. The increased demand from Asia for pork should cause Brazilian pork exports to increase around seven percent in 2021, and around five percent in 2022.

1. CATTLE

Animal Numbers, Cattle	2020		2021		2022	
Market Begin Year	Jan 2020		Jan 2021		Jan 2022	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
(1000 Head)						
Total Cattle Beg. Stks	244144	244144	252700	252700	-	263800
Dairy Cows Beg. Stocks	43750	43750	45280	44625	-	46200
Beef Cows Beg. Stocks	58100	58100	58970	58970	-	61920
Production (Calf Crop)	51500	51500	52000	52000		53300
Total Imports	0	0	0	0	-	0
Total Supply	295644	295644	304700	304700	-	317100
Total Exports	329	329	70	100	-	120
Cow Slaughter	8550	8550	8600	7600	-	7400
Calf Slaughter	200	200	300	300	-	300
Other Slaughter	30665	30665	28100	28900	-	29800
Total Slaughter	39415	39415	37000	36800		37500
Loss and Residual	3200	3200	3200	4000	-	3560
Ending Inventories	252700	252700	264430	263800	-	275920
Total Distribution	295644	295644	304700	304700	-	317100

1.1 – Production

Cattle numbers

Post estimates that in 2021, the total cattle stock in Brazil will grow around four percent to 264 million head. Post forecasts the herd will continue to grow at a similar rate in 2022, i.e. around four percent. Due to the current record-high market prices of bovine animals and meat, the Brazilian cattle growers are retaining cows for calf production, a trend that has resulted in a lower slaughter volume. In addition to market conditions, Post forecast also considers the fact that the Brazilian livestock sector is in a recovery phase from a 'low supply' phase in 2016-2019.

There are a few government programs in place to support the cattle industry in increasing their production, such as subsidized agricultural credit for pasture improvement, recovery of degraded pastures, crossbreeding programs using imported cattle genetics, proper nutrition, and increasing use of reproductive technologies. Nonetheless, these have a relatively limited effect as the main factors that farmers take into account are market forces, namely demand, supply, and meat prices forecast for the next couple of years. Generally, market analysts expect the scenario in 2021-2022 to be favorable to farmers investing in the expansion of their cattle herds and meat production. In 2021, exports continued to play an important influence in determining the bovine production levels, especially exports to China (and the rest of Asia), providing a steady incentive for ranchers and slaughterhouses to operate despite the challenges faced.

Post expects slaughterhouses to maintain reduced meat production in 2021, in line with market expectations. According to the Brazilian Institute of Geography and Statistics (IBGE), cattle production fell around 10 percent in the 1st trimester 2021, in comparison to 1st trimester 2020, due to smaller number of feedlots/activities, shrinking revenue margins, slaughter periods of female cattle, climatic conditions, migration to crop growing, and economic recession due to the pandemic crisis. Nonetheless, the production change in relation to the 2nd semester of 2020 was positive, showing an initial sign of recovery, as high animal and meat prices attracted ranchers into investing in calf production. In 2021, various slaughterhouses are operating at partial capacity as ranchers have smaller herds to sell and are maintaining their animals for fattening and expanding their production.

For 2022, Post forecasts calf production to increase around three percent over the current year. Although the high prices of bovine meat and the high demand from other countries should be an incentive for Brazilian farmers to increase calf production, several challenges remain as the bovine sector still recovers from the livestock cycle's depression phase. Further, the smaller number of feedlots and farmers who migrated to crop farming cannot be compensated as soon as next year.

Cattle losses are occurring in 2021 due to drought, especially in the South of Brazil, where cattle have suffered from insufficient feed and/or water. Post saw this firsthand in Rio Grande do Sul, where different entities reported that many cattle ranchers were losing part of their herds due to the dry weather that has been especially damaging to pastureland. There have also been some losses in the reproduction cattle (cows), as producers have held on to their herd for longer to produce more calves, and had to eventually discard the cows at an older age.

Regional Context

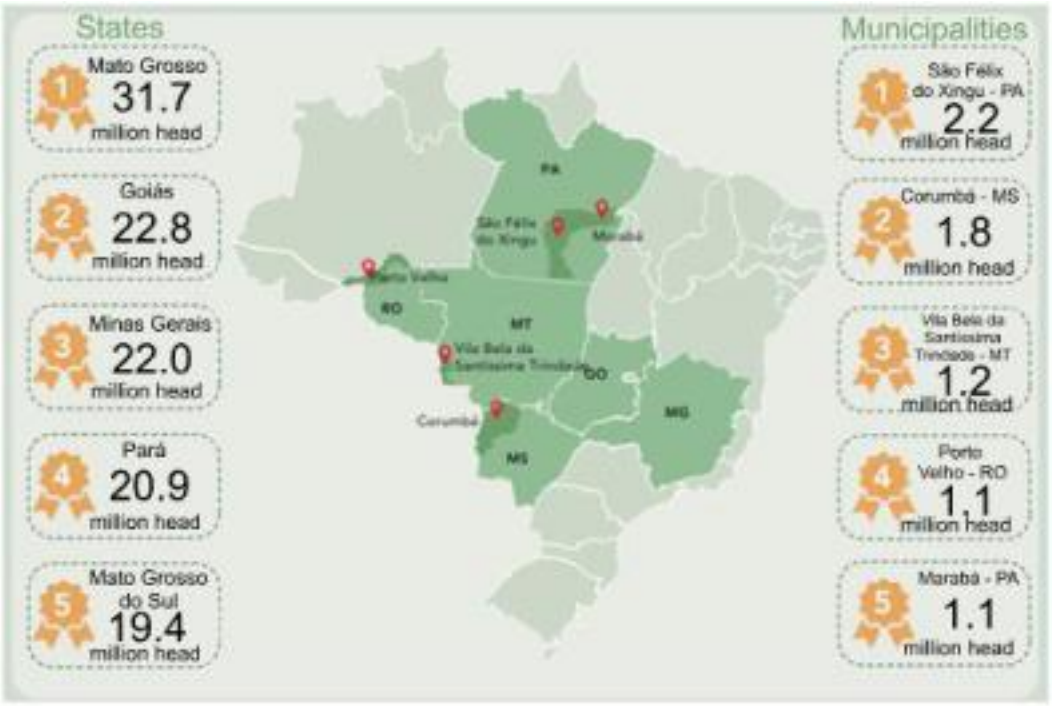
Although different cattle growing regions of the country have somewhat different conditions and contexts, they all experience the same market pressures of high prices for bovine meat, high feed costs, and lower availability of cattle in the market. Cattle growers have been facing several challenges over the recent years, which have forced some of them to adapt to the current context or even forced them to migrate to other agricultural activities, such as crop growing. Such pressure has been especially intense on the small and medium-sized ranchers, mainly from the South and Southeast regions of Brazil, where the very high inputs and feed costs made cattle growing economically unviable. Some of these ranchers faced bankruptcy, while others decided to switch to more lucrative activities, such as corn and soybean growing. Post observed these trends in Rio Grande do Sul, where the bovine sector stakeholders are concerned that the number of ranchers has fallen in 2021 and should remain low in 2022.

In the Center-West region, the largest cattle-growing region, which accounts for 35 percent of national production, producers are usually larger and often have more financial resources and credit options available to survive the current challenging period. Also, given that they rely more on pastureland for cattle grazing, and less on cattle feeding or confinement, the pressure from the high feed costs has been and will continue to be, lower. The larger focus of these cattle ranchers on exporting their products has also worked in their favor, as foreign demand has grown over the

period and should continue through 2021. However, the global demand for beef in 2022 is less predictable. The Brazilian market is concerned that China, the main importer of Brazilian exports, may reduce its imports. In addition, there is also an expectation of shifting global trade dynamics associated with changes in consumer demand and purchasing power on the account of the novel coronavirus pandemic that has now entered its second year.

The below map shows the top five producing states in Brazil, the top five producing municipalities, and the size of their herds as of the end of 2019. In 2019, the states of Mato Grosso, Goiás, and Minas Gerais maintained their positions as the top three cattle producers, and together they represent over 35 percent of the total cattle herd in Brazil. The states of Mato Grosso and Goiás supply the most livestock for slaughter and are the two top beef exporters, while Minas Gerais is the largest milk producer. Post does not anticipate major shifts in production from these states in 2021 or 2022.

Top 5 Cattle Producing States and Municipalities



Data source: IBGE 2019 Livestock Production by Municipality (October 2020)

Cattle Confinement Expansion to Remain Limited

Post revised its earlier expectation that in 2021 the number of cattle raised in confinement would rise. As of July 2021, Post does not expect an expansion in confinement this year, mainly due to the surprisingly high feed costs. The industry's trend towards confinement, observed since 2016, has been interrupted by such elevated input costs that make confinement less economically viable than using pastureland. Around 84 percent of the fattening of the Brazilian cattle will continue in open pastures, while 16 percent is divided between feedlots and supplement feeding on pastures (known as semi-confinement). The latter is a trend that has grown over recent years and that is proving to be efficient and appealing to cattle growers of almost all regions of Brazil. The lower

operational costs and greater flexibility allowed by semi-confinement have been especially useful during this unpredictable period of the Covid-19 pandemic crisis and the bovine market`s current cycle.

From the total number of cattle that were under some sort of confinement in 2020 (either full or semi-confinement), around 60 percent were in feedlots, and the remaining 40 percent were in semi-confinement, with supplemental feed. The proportion of cattle on supplemental feed/semi-confinement should rise in 2021 through 2022. According to research by DSM consulting firm, the overall number of cattle in confinement in Brazil was a record 6.19 million head in 2020, a six percent increase from the previous year. The region that had the largest increase in cattle confinement was the Northeast, with a 17 percent increase when compared to 2019, reaching 148 thousand confined cattle. In volume terms, the Center-West region had the largest confined cattle herd, with an eight percent annual increase in 2020.

Given that it is more cost-effective to use pastures, as the costs are lower, even though the weight gain of the herds is smaller and require longer periods, many cattle farmers preferred this method in 2021. In 2022, cattle production from feedlots is expected to increase slightly, around one percent, because the input and feed prices should fall as their supply is readjusted in the market (especially corn and soybeans).

Pasture and Weather Conditions

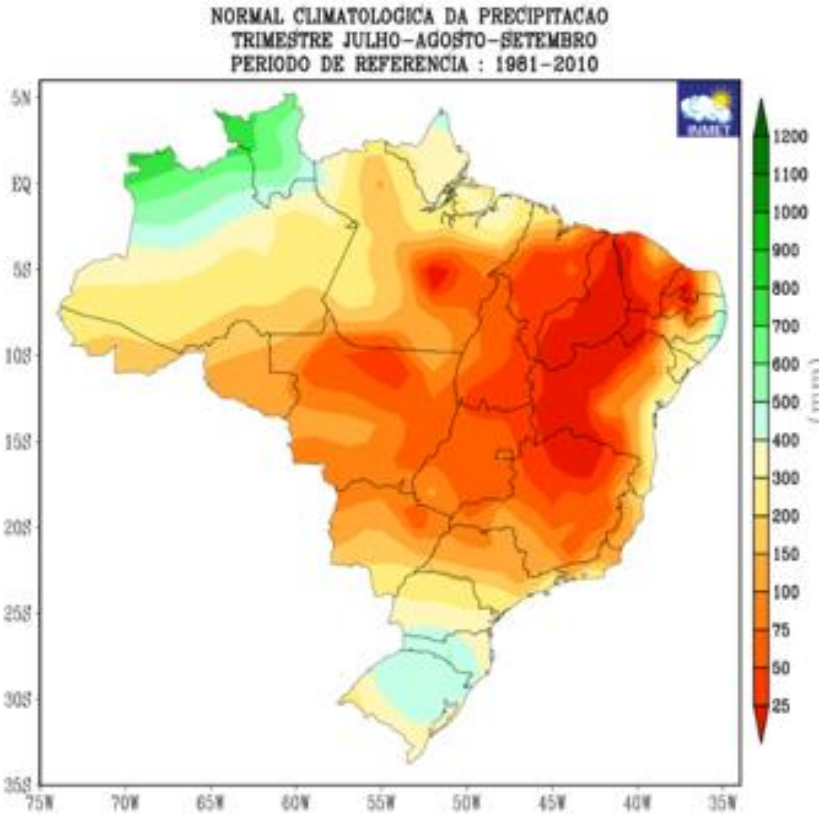
One factor that has influenced cattle production in 2021, and should continue through 2022, is pasture quality and improvements that allow for higher productivity levels, together with improved genetics and animal feed supplementation. Select ranchers have invested in tools that have increased the return on their investments. New cultivars of forage developed by EMBRAPA, the Brazilian Agricultural Research Corporation, over the past several years have allowed farmers to improve the quality of their pastures. The increasing use of high productivity and protein rich cultivars, together with the greater adoption of chemical controls for pasture protection, have contributed to pasture improvements. Another trend has been the increasing use of ‘braquiárias’ (brachiaria brizantha, also known as ‘bread grass’, is a tufted perennial grass used as forage), to feed cattle in pastureland.

Another component that ensures good pasture conditions is rainfall and efficient use of water. This is especially challenging for cattle producers in the open pasture production model. The second half of 2020 experienced droughts in many producing regions, which negatively affected pasture conditions. The poor pasture, together with high feed costs (corn and soybeans), pressured producers into holding their cattle longer until they could reach market weight. The weather conditions for the first quarter of 2021 allowed them to follow the plan and fatten their herds during the summer months of January to March (although rainfall levels were relatively low in a few of the cattle producing states).

The map below shows the rainfall forecast for the third quarter of 2021, where rainfall levels will be lower than the average of recent decades in most of the Center-West and the Northeast regions of Brazil. Indeed the 2021 winter has been relatively dry and unfavorable for maintaining pastures and cattle in these two regions. The winter conditions have also been harmful to crops, especially

corn and soybeans, causing losses in harvests, thereby raising their prices in the market. This has impacted cattle farmers as these crops are used as feed for their animals.

Rainfall Forecast (mm)
Updated in May 2021, valid for July, August, September 2021
(reference period: 1981-2010)



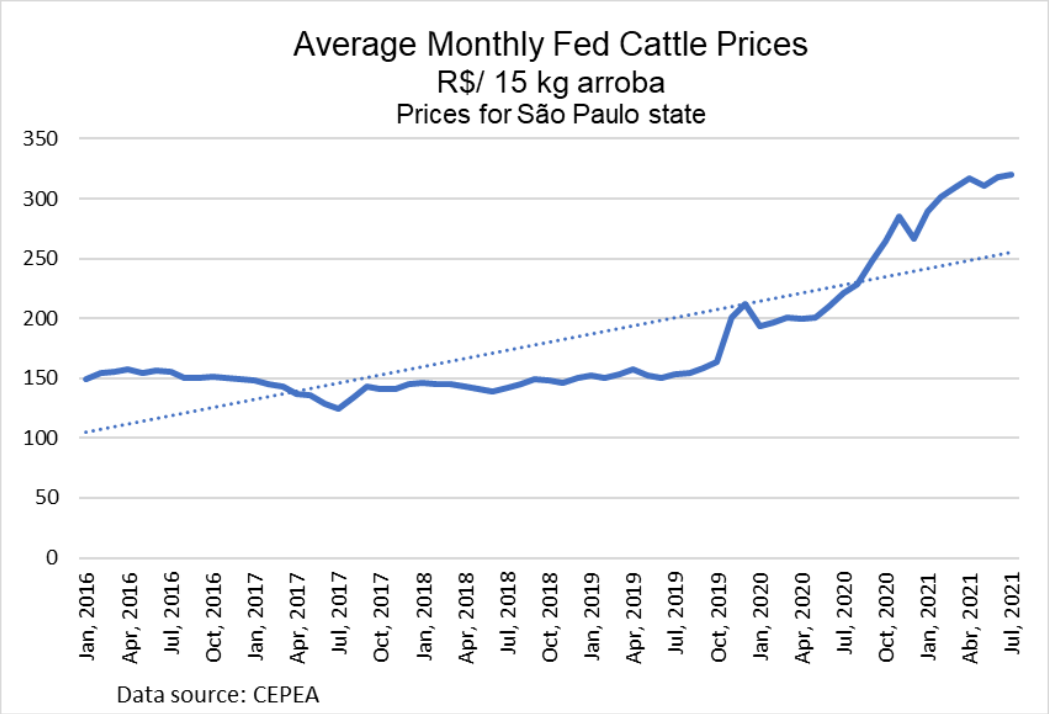
Data source: INMET Monthly Agri Climatological Report May 2021.

Farmers are concerned about climatic conditions for 2022 as forecasts predict unfavorable weather for agriculture, especially in terms of erratic behavior, which can be damaging to crop farmers. The *El Nina* effect, during the January-March months of 2021/22, should be less intense than normal and so climate experts predict an unstable summer period, which may be unfavorable for agriculture. In addition, in the regions that use irrigation, there are growing disputes for water resources as demand from urban areas, hydroelectric dams, and other usages, increases, together with irrigation by farms.

Price and Profitability Outlook

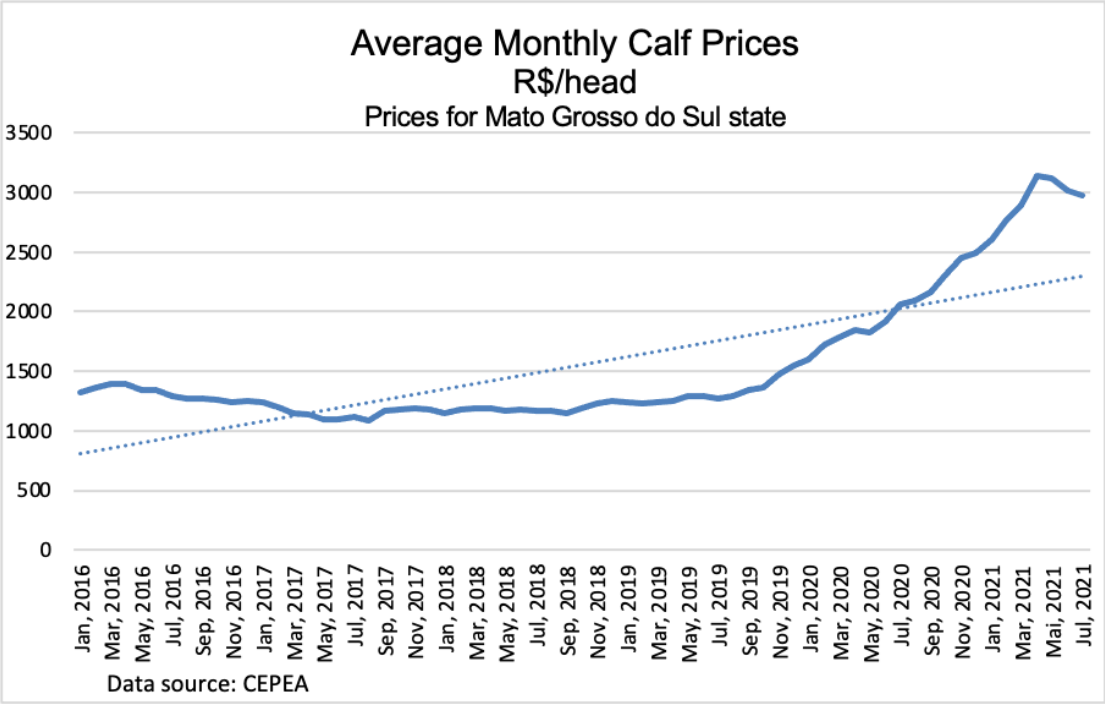
The Brazilian bovine sector experienced high inflation rates in 2021 for cattle production costs, especially feed inputs, animal, and meat prices. This has posed several challenges to cattle ranchers and other operators of the supply chain. As Post forecasted in its two previous reports (numbers BR2020-0045 and BR2020-050), both cattle and beef prices remained elevated in 2021 and are expected to continue so for the remainder of 2021 and early 2022. The high and steady global meat

demand and the relatively devalued Real have allowed for record export numbers of bovine meat. The Brazilian market price of bovine meat is currently at record levels, registering around R$ 320 (approx. US$ 61.5) per 'arroba' (unit of weight corresponding to 33 pounds) in July 2021.



Both calf and cattle prices initially spiked in November 2019 due to the African Swine Fever (ASF) outbreak in China, which led to an increase in protein demand in China and elevated global beef prices. In Brazil, the national currency (Real) devalued around 30 percent in the first half of 2020 and has remained devalued through 2021, which has led to an increase in exports. Higher exports have created a scarcity in the domestic supply of cattle/beef, which then boosted prices in the national market. At the end of 2020, the price for the calf was R$ 2,490 (approx. US$ 480), which continued growing until a record R$ 3,140 (approx. US$ 605) per calf was reached in April 2021. The price is expected to fall only slightly in the remainder of the year. In 2022, prices should fall more noticeably as cattle production and market supply increase.

As a result of the COVID-19 pandemic crisis, the Brazilian population saw its income and purchasing power reduced. Although some of the government support offered to the poor families during the pandemic, known as 'Corona voucher', allowed families to increase spending in food consumption, including meats, this effect has waned in 2021 because a large portion of the population is facing debt and has used the financial support for more urgent expenses. Therefore, bovine meat demand in the Brazilian market should continue to remain lower in 2021, due to both less income available in the middle-lower classes and because of the high prices of meats at retail. Similarly, although the government plans to extend the voucher until early 2022, it is unlikely that families would use these funds to buy bovine meat.

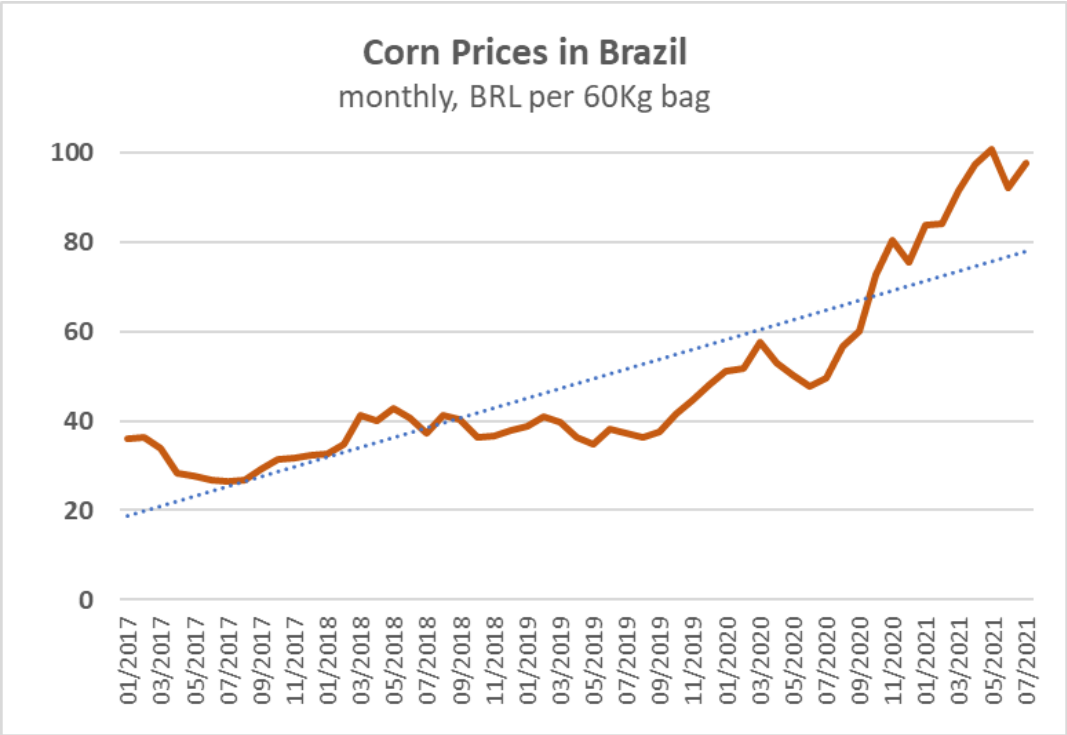


Although cattle and meat prices are currently favorable to cattle producers and slaughterhouses, their operational costs remain elevated in 2021, thereby reducing profit margins. As predicted by sector experts, and by Post, the prices of corn and soybean crops have continued growing over the past years through to 2021. This has made it very expensive for farms to feed their cattle with these traditional crops. Some cattle farms have been unable to operate with the resulting small profit margins, others have used pastures during the winter (although in poor conditions) to 'hold out' until the summer rains, while others have sought alternative feed crops. Confinement and semi-confinement feeding profitability are highly dependent on the price of animal feed – corn, for instance, represents almost 60 percent of the feed given to cattle.

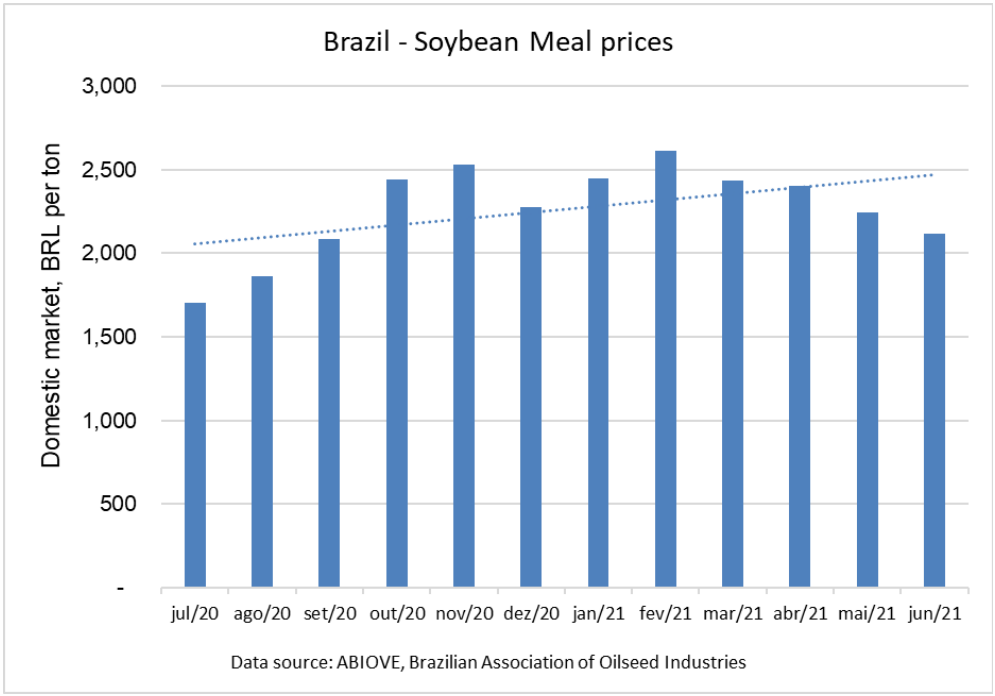
As in 2020, the unfavorable weather conditions that influenced the crop harvest and the favorable exchange rate for exports have maintained crop prices elevated in 2021. Although the protein sector managed to convince the government to eliminate soybean and corn tariffs for non-Mercosur trade block members and to import corn at lower prices, the measure did not yet cause a fall in corn prices. Experts do not expect such imports to reach the Brazilian market at prices noticeably lower than domestic prices.

At the end of 2020, the Brazilian National Union for the Animal Nutrition Industry (Sindirações) had forecasted 2021 production of animal feed to increase by six percent from the previous year, due to improved demand for animal feed both for livestock and poultry production to support meat demand from the domestic and export markets. For 2021, Post expects prices of corn and soybean meal to remain high and continue presenting a challenge to livestock producers looking to increase confinement feeding of cattle. As shown in the graphs below, the feed prices have remained high in 2021: corn prices increased R$ 80 (approx. US$ 15.4) per 60 kg bag in January to almost R$ 100 (approx. US$ 19.2) per 60 kg bag in July; soybean prices have remained relatively stable in the

first semester of the year, while soybean meal reduced slightly from R$ 2,400 (approx. US$ 462) per ton in January to around R$ 2,150 (approx. US$ 413) per ton in July.



Data source: CEPEA, corn price indicator Esalq/BM&F-Bovespa.



Data source: ABIOVE, Brazilian Association of Oilseed Industries.

The costs of fertilizers should continue influencing the prices of these crops, including for pastures: fertilizer prices remained high in the first semester of 2021 and are expected to fall only slightly in the remainder of the year. Nonetheless, the consulting firm Rabobank predicts that fertilizer demand in Brazil will grow four to five percent in 2021. Part of the reason is the expected increase in crop growing areas in the 2021/22 season, including corn and soybeans. Currently, the exchange ratio of fertilizers to corn/soybeans is favorable to farmers and so it is expected that demand for such fertilizers grows over the coming months.

Slaughter and Supply

Post forecasts that in 2021 farmers will continue holding cattle in pasture seeking to gain higher premiums for the animals, possibly affecting slaughter rates for the period. Due to the drought experienced last year, most producers are still rebuilding their herds and so do not have animals to sell to the slaughtering plants. Cattle producers are also avoiding fattening animals via supplemental feed in confinement and/or semi-confinement, because of the high costs of feed. Consequently, as noticed in the first quarter of 2021, the average weight of carcass has been higher because ranchers have kept their animals grazing/fattening for longer periods.

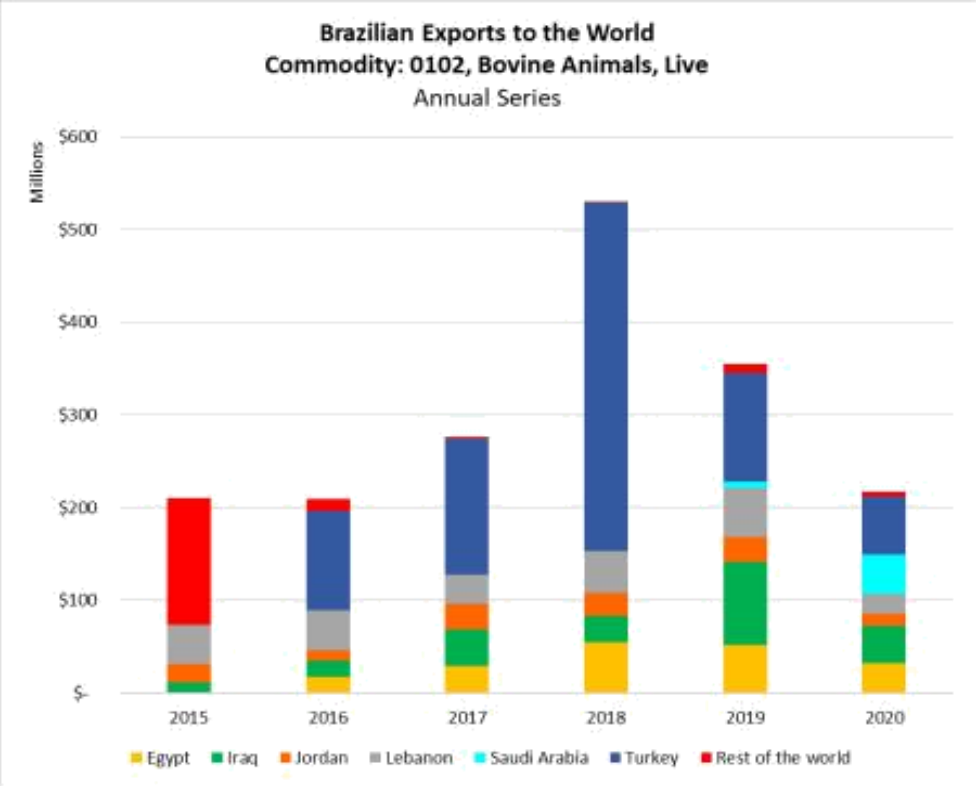
Overall, so far in 2021, cattle slaughter has fallen and, many slaughterhouses have been operating at lower capacities, with some only operating three days a week. As a result, the total cattle supply grew around three percent in 2020 and should continue at a similar rate in 2021. Although Post forecasts higher slaughtering rates in 2022, the overall cattle supply, and ending stocks, should increase around four percent next year.

Although the production prospects for 2022 look favorable, with greater animal supply available for slaughter, lower feed and input costs, slightly better economic conditions (in Brazil and abroad), and more accessible beef prices in the market for consumers, it is worth noting that the Brazilian bovine sector is going through structural changes. Although it is difficult to predict the influence these will have in the sector, it is worth observing these changes in the coming years: increasing investment in timed artificial insemination – TAI (IATF - *inseminação artificial em tempo fixo*); restructuring of farms to incorporate crop-livestock integration systems (ILP - *integração lavoura-pecuária*), stronger commercial partnerships between cattle growers and industry; growing use of ‘boiteis’, i.e. ‘hotels for cattle’ where animals are confined for feeding with special nutrients during specific periods, and afterward are released to pastures; increasing adoption of low carbon market in the livestock sector; among other trends.

1.2 – Trade

Exports

In 2020, Brazil was the fifth largest exporter of live cattle in the world. In that year, Brazil's exports of live cattle fell 40 percent, mainly because of the limited supply of cattle and higher cattle prices, as mentioned in the production section of this report. Post forecasts exports of live cattle will also decrease in 2021, around 70 percent, following the trend of decreasing export volumes since 2018. In the first semester of 2021, the exports already fell significantly (86 percent). In 2022 cattle exports are expected to rebound somewhat, rising twenty percent on the account of recovering the global economy and associated uptick in global demand. Brazil's exports are under tariff HS Code 0102.29.90 – 'Other live cattle', and sold mainly to developing countries, especially in the Middle East, as shown in the graph below.



Data Source: Brazil Ministry of Economy

Brazil's top markets for live cattle in recent years have been Turkey, Iraq, Lebanon, Egypt, and Jordan. In 2020, exports were down to all the top five markets. Turkey, for instance, which has been Brazil´s top importer of live cattle, in 2020 reduced its purchases by 46 percent. Lebanon reduced its imports by almost 59 percent; followed by Iraq, with a 55.7 percent reduction; Jordan, with a 51 percent reduction, and Egypt with a 37.3 percent reduction. Because of the lag in data publication for competing export countries, and from the importing countries as well, it is not possible at the moment to determine if Brazil's market share in its main importers was taken over by a different supplier, or if the countries reduced imports broadly speaking. At the same time,

exports of live cattle to Saudi Arabia jumped more than five-fold, confirming Post's forecast in the 2020 Annual Report.

Imports

Brazil imports a very small volume of live animals, mostly for improved genetics for breeding. Around 88 percent of imports were supplied by the United States. In 2020, Brazil imported 36 units of cattle from the United States, under the tariff HS Code 0102.21.90 ('Other pure-bred cattle, for breeding'). So far in 2021, the United States has been the sole supplier of live animals, at a volume proportionately similar to that of 2020. Brazil has also been a long-time importer of bovine genetics and a traditional market for U.S. cattle genetics exports. Genetic improvement by artificial insemination is a technique being used in Brazil to enhance productivity.

Brazil Imports from World

Commodity: 0102, Bovine Animals, Live

Partner	Unit	2015	2016	2017	2018	2019	2020	2021 (Jan-Jun)
Argentina	USD	15,135	15,050	35,085	33,225	-	60,781	-
United States	USD	-	98,015	10,000	24,000	113,458	429,679	451,960
Uruguay	USD	1,380,120	1,898,092	104,835	20,868	15,982	-	-
Total	USD	1,395,255	2,011,157	149,920	78,093	129,440	490,460	451,960

Data Source: Brazil Ministry of Economy

2. BEEF

Meat, Beef and Veal	2020		2021		2022	
Market Begin Year	Jan 2020		Jan 2021		Jan 2022	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
** 1000 MT CWE*						
Slaughter (Reference) (1000 Head)	39415	39415	37000	36800	-	37500
Beginning Stocks	0	0	0	0	-	0
Production	10100	10100	9550	9500	-	9700
Total Imports	48	48	75	72	-	75
Total Supply	10148	10150	9625	9572	-	9775
Total Exports	2539	2539	2400	2602		2654
Human Dom. Consumption	7609	7611	7225	6934	-	7121
Other Use, Losses	0	0	0	0	-	0
Total Dom. Consumption	7609	7611	7225	6934	-	7121
Ending Stocks	0	0	0	0	-	0
Total Distribution	10148	10150	9625	9536	-	9775

2.1 – Production

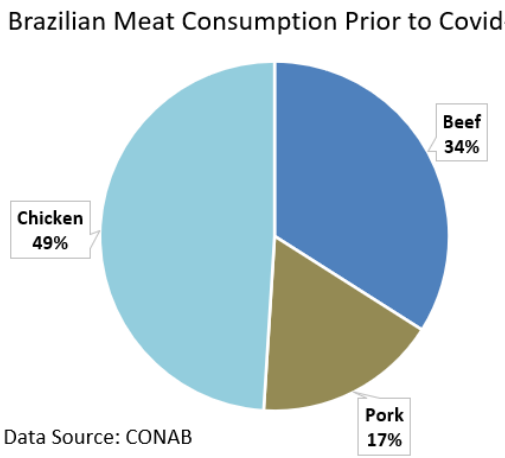
Brazilian beef production in 2021 is expected to be six percent less than in 2020, falling from 10.1 million tons Carcass Weight Equivalent (CWE) to 9.5 million tons. The decrease in production is estimated despite the fact of continued strong prices; as of 2020, producers have received record prices for cattle and calves, and Post forecasts this tendency will continue in 2021, boosted by strong exports, mainly to China and Hong Kong. The main reason for production decrease should be attributed to the smaller availability of cattle for slaughter. Further, with such high cattle prices, the producers/packers are unable to pass along the cost to consumers, particularly given the decrease in consumers' incomes during the pandemic.

For 2022, Post forecasts a 2.1 percent increase in beef production as animals for slaughter become increasingly available and profit margins improve for slaughterhouses. Most of this increase in beef production should take place in the second semester of 2022. It should also be noted that the average weight per animal that arrives at slaughterhouses should increase slightly in the first semester of 2022 as cattle ranchers have held cattle for longer periods in order to benefit from increasing prices of beef.

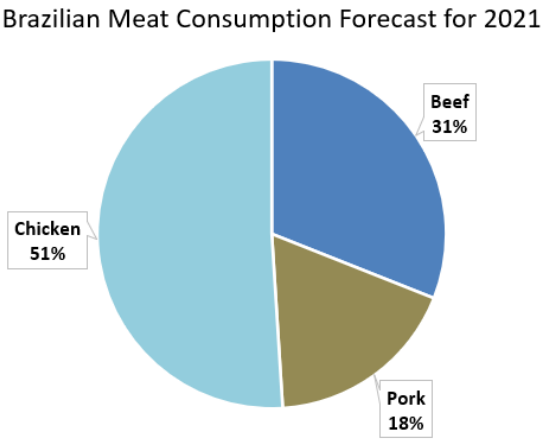
In the Center-West region, an ongoing trend has been for cattle producers to adopt the `Chinese standard` of cattle, i.e. to meet the requirements for exporting the bovine meat to China. This trend continued in 2021, as Chinese demand for Brazilian beef continues at high levels. A characteristic of the cattle is that they gain weight at a relatively faster rate and are slaughtered at a younger age, thereby producing a higher meat output and revenues (due to premiums received) for cattle producers and slaughterhouses. The animals must be born within the Brazilian territory, have up to four permanent incisors teeth, be less than 30 months of age when slaughtered, have the respective *Guia de Trânsito Animal* (GTA – animal transportation document), no incidence of foot-and-mouth-disease (FMD) and traceability guaranty. Other requirements also apply, relating to the farm conditions, feeding, vaccination, and slaughter procedures. While there is no data on the proportion of Brazilian cattle that meet the 'Chinese standard', it is estimated that up to half of cattle herd in the Center-West meet the requirements.

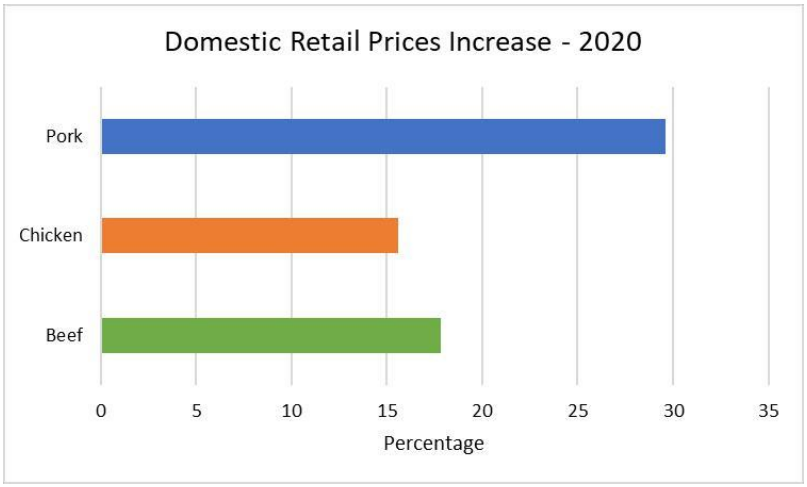
2.2 – Consumption

Post reduced its beef consumption forecast for 2021 to 6.93 million tons (CWE). The revision is based on lower domestic demand for beef, as consumers look to other meats on the account of elevated beef prices. The National Supply Company (CONAB) published a study in May 2021 showing that meat consumption changed since the onset of the Covid-19 pandemic crisis. Before the pandemic, beef consumption represented 34 percent of total meat consumption, but in 2021 represents only around 31 percent of the total meat consumption in Brazil. Chicken consumption, on the other hand, increased its share from 49 percent to 51 percent of all meat consumption, given that it is the less expensive protein option, and pork increased from 17 percent to 18 percent of all proteins consumed in the country. The financial hardship of most families during the pandemic crisis accounts for this change in consumer preference, and Post believes this trend will continue through 2021 and the first semester of 2022.



Data Source: CONAB





Data Source: IBGE

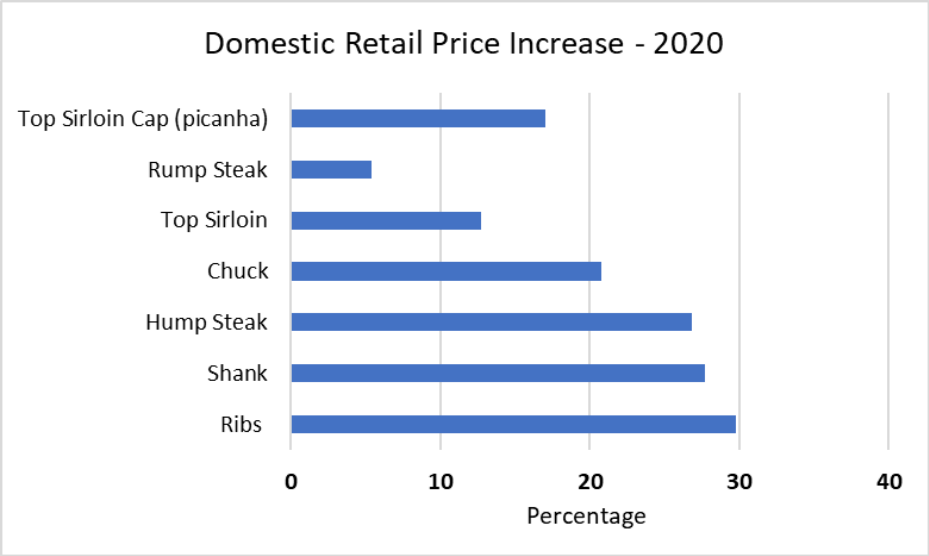
The Brazilian economy has been greatly affected by the pandemic with official GDP falling 4.1 percent in 2020. For 2021, the Brazilian economy is expected to recover, with a market expectation of a 5.27 percent growth. The economic recovery, however, will depend on how the pandemic evolves in 2021.

Although the general economic recovery of the Brazilian economy should lead to increases in food consumption, many families are still in debt from the pandemic crisis, meaning that many will not have enough financial resources to consume proteins at the same levels as prior to the pandemic crisis. Economists expect that by 2022, the economy will recover to the same levels as before COVID-19, yet consumer spending will take longer to recover due to the debt accumulated during the period. The GDP is expected to grow over two percent in 2022, while the exchange rate is expected to remain above R$ 5 per U.S. dollar.

As the pandemic wore on, total meat consumption fell in Brazil: currently, each Brazilian consumes 26.4 kilograms of meat per year, which is 14 percent lower than in 2019. This is the

lowest volume since 1996 when CONAB began estimating meat consumption. The availability of meat in the market fell around one percent during this period. As shown in the charts above, the current economic scenario has driven a shift in consumer purchases towards less-expensive meats, primarily chicken. The price of chicken in 2020 remained the most affordable of the three main types of meat and that continues to be the case in 2021. While the prices of all three types of meat rose during the pandemic crisis, the increases were larger for pork and beef, as shown in the graph below. During the initial 12 months of the pandemic crisis, prices of meats rose by more than a third in Brazil, five times larger than the general inflation.

In 2020, the retail prices of beef increased around 18 percent. According to IBGE, in 2020 certain cuts – mostly consumed by lower-income families – saw larger price increases when compared to other grades of cuts, as shown in the following table. Post anticipates that prices are likely to remain elevated until 2022.

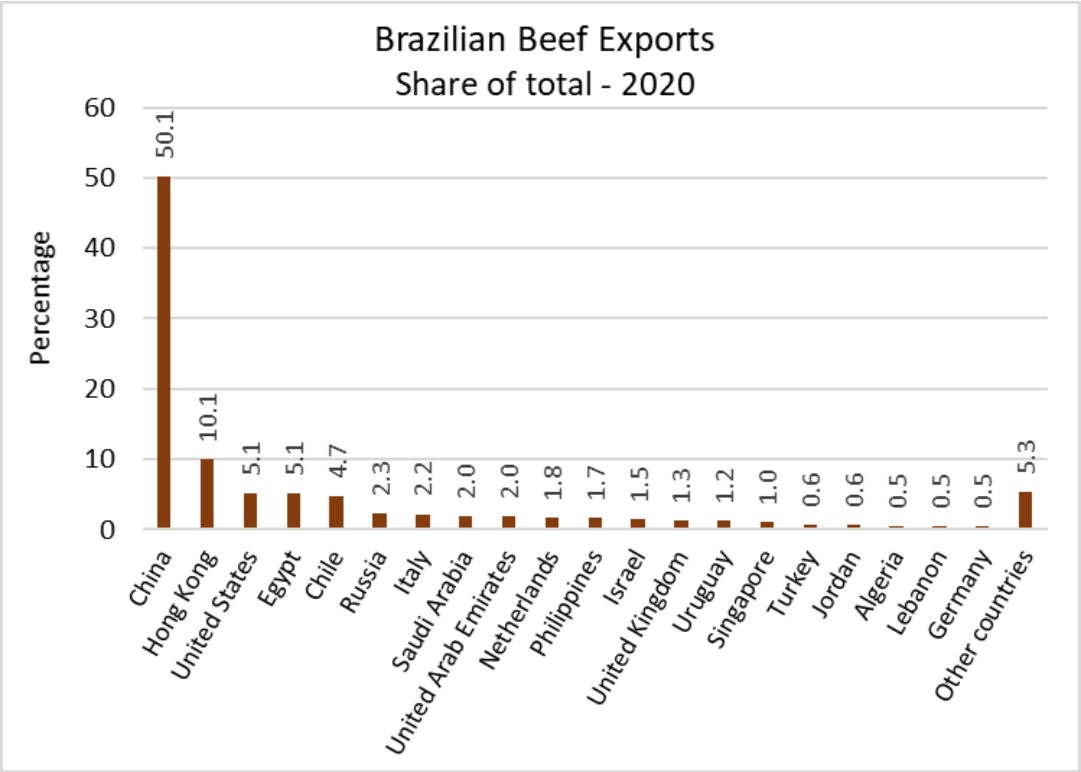


Data Source: IBGE

2.3 – Trade

Exports

For 2021, Post forecasts a 3.5 percent increase in beef exports, mainly due to continued strong Chinese demand. In 2021, Post forecasts exports will represent 27.6 percent of total production.



Data Source: Brazil Ministry of Economy

In 2020, Brazil exported a total of US$ 8.05 billion of beef and veal, a record figure, representing a 13 percent increase in value from the prior year. These exports represented 25 percent of all beef production. The top markets for Brazilian beef were, in order: China, Hong Kong, the EU, and the United States. Chinese demand in 2020 was 50 percent of total exports, followed by Hong Kong with 10 percent of exports, the European Union is in the third position with US$ 526.7 million, or 6.5 percent of all Brazilian beef exports, and the United States was the destination of 5.1 percent of all Brazilian beef exports.

In 2020, Brazil had several slaughterhouses temporarily delisted by the Chinese sanitary authorities due to allegations of the presence of the Coronavirus in the packaging of different meats. Nevertheless, Brazilian authorities questioned these measures and managed to revert the situation relatively quickly, reducing the possible impacts on export volumes. In 2021, as China works to rebuild its herd, Brazilian exports could experience a smaller growth, directly impacting beef prices in Brazil. Nonetheless, market analysts are uncertain as to the Chinese sector`s activities and actual performance due to a lack of information available.

Brazil Exports to the World

Commodity: PSD-Meat, Beef, and Veal

Annual Series

Partner	Unit	2015	2016	2017	2018	2019	2020
China	USD	476.390.658,00	702.792.720,00	929.013.419,00	1.486.835.385,00	2.685.554.237,00	4.037.540.181,00
Hong Kong	USD	658.838.523,00	719.096.073,00	1.026.649.019,00	1.066.956.842,00	742.421.042,00	813.702.892,00
United States	USD	281.790.018,00	279.982.432,00	284.875.432,00	259.008.424,00	315.715.846,00	412.278.037,00
Egypt	USD	639.032.364,00	540.887.638,00	520.819.544,00	516.759.704,00	469.861.449,00	407.947.843,00
Chile	USD	260.454.007,00	300.678.002,00	280.964.521,00	467.518.110,00	424.775.024,00	376.202.479,00
Russia	USD	552.133.352,00	389.837.439,00	452.264.010,00	11.484.854,00	214.170.068,00	184.836.172,00
Italy	USD	223.145.937,00	183.424.823,00	188.489.104,00	203.191.785,00	181.168.944,00	176.896.719,00
Saudi Arabia	USD	-	111.417.398,00	167.052.207,00	155.521.707,00	142.908.290,00	159.838.547,00
United Arab Emirates	USD	80.394.070,00	79.907.530,00	93.396.378,00	148.685.053,00	262.537.937,00	157.403.368,00
Netherlands	USD	156.984.304,00	173.989.577,00	170.165.412,00	160.095.746,00	121.599.652,00	142.104.556,00
Philippines	USD	39.722.327,00	54.660.063,00	29.847.968,00	86.796.145,00	106.781.121,00	134.646.854,00
Israel	USD	80.130.527,00	71.546.141,00	86.785.774,00	80.495.486,00	122.246.711,00	118.474.039,00
United Kingdom	USD	152.930.934,00	138.607.332,00	117.761.295,00	125.108.548,00	103.412.141,00	104.607.149,00
Uruguay	USD	7.620.957,00	7.580.149,00	15.233.271,00	48.085.289,00	102.480.756,00	99.391.948,00
Singapore	USD	68.253.998,00	65.386.578,00	72.237.793,00	69.684.294,00	75.409.271,00	80.134.174,00
Turkey	USD	4.086.104,00	2.575.509,00	3.515.889,00	24.616.674,00	98.892.613,00	50.957.875,00
Jordan	USD	50.410.704,00	46.514.761,00	49.208.118,00	67.904.165,00	67.517.056,00	47.792.976,00
Algeria	USD	85.263.463,00	71.257.010,00	39.928.490,00	59.117.180,00	62.464.596,00	42.999.875,00
Lebanon	USD	73.046.115,00	63.844.926,00	64.306.166,00	80.931.438,00	76.718.902,00	38.393.429,00
Germany	USD	55.917.124,00	62.805.252,00	56.069.039,00	58.433.339,00	49.931.025,00	37.039.255,00
Other countries	USD	1.373.932.342,00	873.744.219,00	944.806.083,00	848.805.078,00	698.983.311,00	430.554.140,00
Total	USD	**5.320.477.828,00**	**4.940.535.572,00**	**5.593.388.932,00**	**6.026.035.246,00**	**7.125.549.992,00**	**8.053.742.508,00**

Data Source: Brazil Ministry of Economy

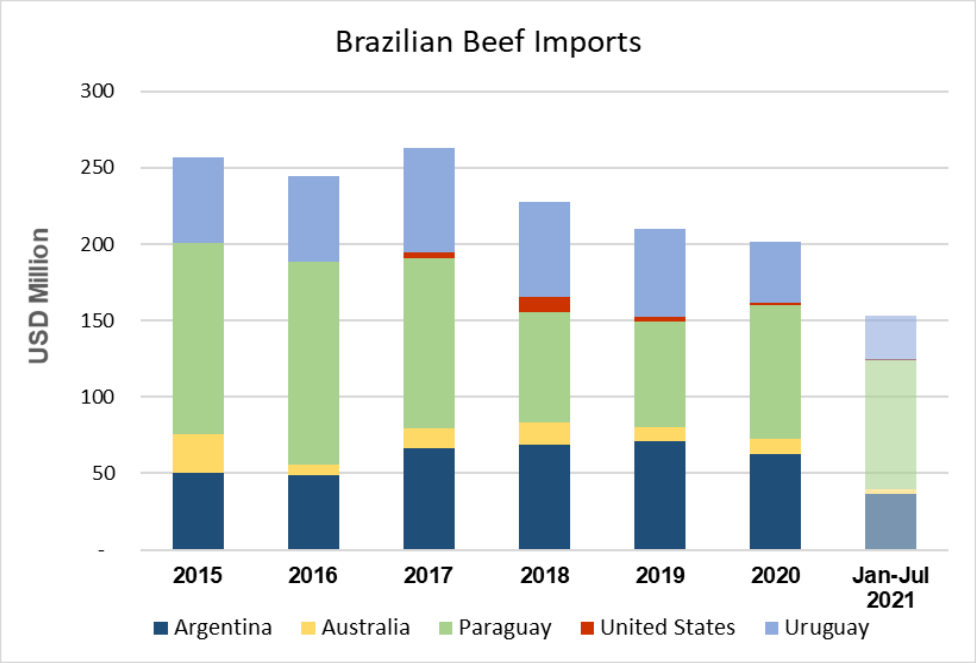
At the beginning of 2021, the volume and value of beef exports fell somewhat compared to the second semester of 2020. However, the exports are recovering to values registered in 2020. As shown in the graph below, the average price of beef exports grew 16 percent during the first semester of 2021, a sign that there is a lack of beef supply in the global market and so importers are willing to pay more. Beef exports in January – July of 2021 were 3 percent lower in volume, compared to January – July of 2020, but revenues were 9 percent higher. In July of 2021, when beef exports reached a record value, the volume was one percent lower than July of 2020, but revenues were 30 percent higher. While China remains the main buyer in 2021, the United States imported 93 percent more in Jan-Jul 2021 than in the same period of the previous year.

Bovine Monthly Exports, July 2020-Jun 2021

Source: ABIEC Beef Report 2021.

Imports

Despite being the world´s largest beef exporter, in 2021 Post forecasts Brazil will import 0.5 percent of all its domestic use. In 2020, beef imports from Brazil were also 0.5 percent of the total supply. Brazil´s main suppliers of beef are Paraguay, Argentina, and Uruguay, which are all members of Mercosur, which lowers transportation costs and tariffs are not applied. Together, these three countries represented 94.6 percent of total imports in 2020. Brazil also imported from Australia, Japan, and the United States. The U.S. beef represented 0.55 percent of total beef imports to Brazil in 2020. The import data for January-July 2021 indicate that the total amount of beef imported should increase around 50 percent through the end of the year and increase four percent in 2022.



Data: Trade Data Monitor

The United States is facing a challenge in maintaining and expanding its meat market access in Brazil. The Brazilian beef market was de facto closed to U.S. beef exports from April 2019 – February 2020, following a request from Brazil for administrative changes to a previously agreed upon U.S. export certificate. In February 2020, Brazil re-opened its market for U.S. beef exports through the end of August 2021, agreeing to continue trade while negotiating a new export certificate language. In June 2020, MAPA also requested new changes to the Bovine Spongiform Encephalopathy (BSE) certificate attestation. Brazil acknowledged in writing that the official letter provided by APHIS in December 2020 concerning BSE requirements resolved all concerns and no additional attestations would be required. The USDA has negotiated with MAPA on both certificate requests in good faith, even though these requests are burdensome and duplicative. Notably, the Brazilian beef industry has been exporting approximately US$ 500 million in beef and beef products to the United States.

3. SWINE

Animal Numbers, Swine	2020		2021		2022	
Market Begin Year	Jan 2020		Jan 2021		Jan 2021	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Total Beginning Stocks	37850	37850	37350	37350	-	36475
Sow Beginning Stocks	3005	3005	3050	3010	-	2980
Production (Pig Crop)	43525	43525	44800	44515	-	45316
Total Imports	2	2	1	1	-	1
Total Supply	81377	81377	82151	81866	-	81792
Total Exports	3	5	2	5	-	5
Sow Slaughter	140	140	140	140	-	140
Other Slaughter	42710	42710	44110	44110	-	45440
Total Slaughter	42850	42850	44250	44250	-	45580
Loss and Residual	1174	1172	1049	1136	-	1160
Ending Inventories	37350	37350	36850	36475	-	35047
Total Distribution	81377	81377	82151	81866	-	81792

Numbers in 1000 HEAD

3.1 – Production

Pig Numbers

For 2021, Post forecasts the Brazilian pig production to increase by 2.8 percent and by 1.8 percent in 2022. This expansion forecast is based on several factors. The market expects continued high export demand, especially from Asia, mainly due to the continued impact of ASF outbreaks in the Chinese and several European herds. In addition, Post anticipates leveling of production costs – including feed costs - from mid-2021 onwards. Finally, current domestic market trends point to a growing substitution of beef protein for pork meat in Brazil. While the swine production in 2021 and 2022 grew around two percent year-on-year, the slaughter rate grew at around three percent during the same period, thereby resulting in decreasing ending inventories in both 2021 and 2022.

As prices of swine and pork meat increased since 2020, swine producers began increasing their production of piglets to benefit from this favorable market. This incentivized the swine population to increase in 2021, while the slaughter rate grew in both 2021 and 2022. The other statistics should remain relatively unchanged between 2020 and 2021: beginning stocks of sow, imports, and exports of animals, sow slaughter, and loss/residual animals. On the other hand, the prices of inputs, feeds, and other production costs have experienced significant increases during this period, bringing various challenges to swine producers.

As producers invested in different aspects of production to improve the quality, sanitary conditions, and efficiency of production, one of the results has been the increase of two percent in the average weight per animal, from 2020 to 2021, from around 89 kg to 91 kg per head. The numbers for the first quarter of 2021 point to an increase of around one percent in relation to the first quarter of 2020. The result was a 7.8 percent increase in total pork meat production in the first quarter of 2021, reaching 1.16 million tons. Another possible explanation may be that producers have held onto the animals waiting for further increases in prices of the animals and meats, thereby resulting in higher weight gains of the animals before their slaughter.

The Brazilian swine sector benefitted considerably from China's growing demand for pork meat due to the ASF outbreak that contaminated its swine population in 2019 and caused a significant cut in its pork meat production. Brazil exported an additional 13 percent of pork in 2019, to China, because of this effect. As the ASF continued decimating the Chinese swine sector in 2020, forcing China to terminate thousands of pigs, Brazil exported more pork meat to China. This growth in demand for pork increased world market prices of the meat, which ensured higher income to Brazilian swine producers and slaughterhouses. This trend continued through to 2021, acting as an incentive for Brazilian swine producers to increase their production in order to benefit from exporting activities. However, there are uncertainties as to China`s demand for pork during the rest of 2021, as the country is restoring its sows and swine production.

Although there was a sharp fall in pork meat demand in Brazil (and some other countries) at the beginning of Covid, this trend reversed as the country went into lockdowns and the population began spending more on food. However, the high feed costs and operational costs in 2020 made the pork price fluctuate from R$ 3.2 /Kilogram to R$ 9.6 /Kilogram, making consumers wary of buying meat amid increasing prices.

Geography of Brazil's Swine Production

The following map shows the top three producing states and municipalities of pigs in Brazil and the size of their herds at the end of 2019. In Brazil, the three largest swine-producing states are in the south: Santa Catarina, Paraná, and Rio Grande do Sul, respectively. Together, they are responsible for 49.5 percent of the total pig crop in Brazil. In terms of slaughter, Embrapa's data indicates that these states are responsible for 66 percent of all swine slaughter in Brazil. In 2020, the South accounted for 60 percent of total animals, the Center-West and the Southeast for almost 20 percent each, with three percent in the Northeast. As for the top three producing municipalities, two of them are located in the states of Goiás and Minas Gerais - outside of the largest producing region. Goiás and Minas Gerais states are also important cattle producing states, as mentioned in the Cattle Production section of this report. Considering the entire country, the Northeast region had the largest percentage increase in its pig crop in 2019, the most recent data year. Livestock production in the region is increasing as cattle production also saw the largest increase.

Data source: IBGE Livestock Production by Municipality 2019, adapted by Post

Price and Profitability Outlook

The production costs increased significantly in 2020 and continue to do so, albeit at a slower pace, in 2021. Besides the general inflation faced in Brazil during the Covid-19 pandemic crisis, the prices of animal feed reached record levels, bringing challenges to farmers and swine producers. Details of the spike in animal feed costs are presented in the price and profitability outlook section of the Cattle Portion of this report. The effects of such an increase in prices are noticeable in the table below, which summarizes costs related to the production of swine in the reference state of Santa Catarina. As can be seen, the feed costs continued to increase in 2021 from January till June: corn costs increased from R$ 1.46 to R$ 1.61; soybean meal rose from R$ 2.89 to R$ 2.95 in March, then fell to R$ 2.50 in June. The average costs are noticeably higher in 2021 than in 2020, showing that swine producers faced significant challenges in producing pigs while still profiting from swine sales. The swine production costs (full cycle) also increased during 2021 from R$ 6.63 to R$ 6.82, having reached R$ 7.30 in May.

The table below shows that the production costs increased more than the hog live prices, in the State of Santa Catarina, from January 2020 to June 2021. Therefore, swine producers experienced smaller profit margins, with probable losses during some months, throughout this period.

Prices for Santa Catarina State - R$/Kg													
	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hog Live Weight	2019	3.12	3.19	3.39	3.53	3.69	3.88	4.07	4.1	4.1	4.19	4.46	4.61
	2020	4.61	4.54	4.64	4.58	4.51	4.51	4.67	4.88	5.23	5.63	6.76	6.84
	2021	6.66	6.44	6.37	6.17	6.41	6.36						
Corn	2019	0.64	0.65	0.66	0.61	0.59	0.63	0.64	0.64	0.64	0.68	0.71	0.76
	2020	0.81	0.84	0.84	0.83	0.83	0.82	0.86	0.94	1.01	1.22	1.42	1.35
	2021	1.46	1.48	1.52	1.71	1.77	1.61						
Soybean Meal	2019	1.44	1.38	1.40	1.33	1.33	1.46	1.42	1.41	1.41	1.41	1.43	1.48
	2020	1.49	1.46	1.60	1.86	1.92	1.91	1.95	1.98	2.07	2.6	2.89	2.76
	2021	2.89	3.13	2.95	2.64	2.66	2.50						
Production Costs (full cycle)	2019	3.89	3.83	3.81	3.73	3.71	3.88	3.87	3.88	3.88	3.96	4.04	4.17
	2020	4.27	4.32	4.44	4.6	4.64	4.62	4.73	5.04	5.37	6.17	6.77	6.56
	2021	6,63	6,88	6,87	7,03	7,30	6,82						

Data Source: EMBRAPA Avian and Swine Central Intelligence

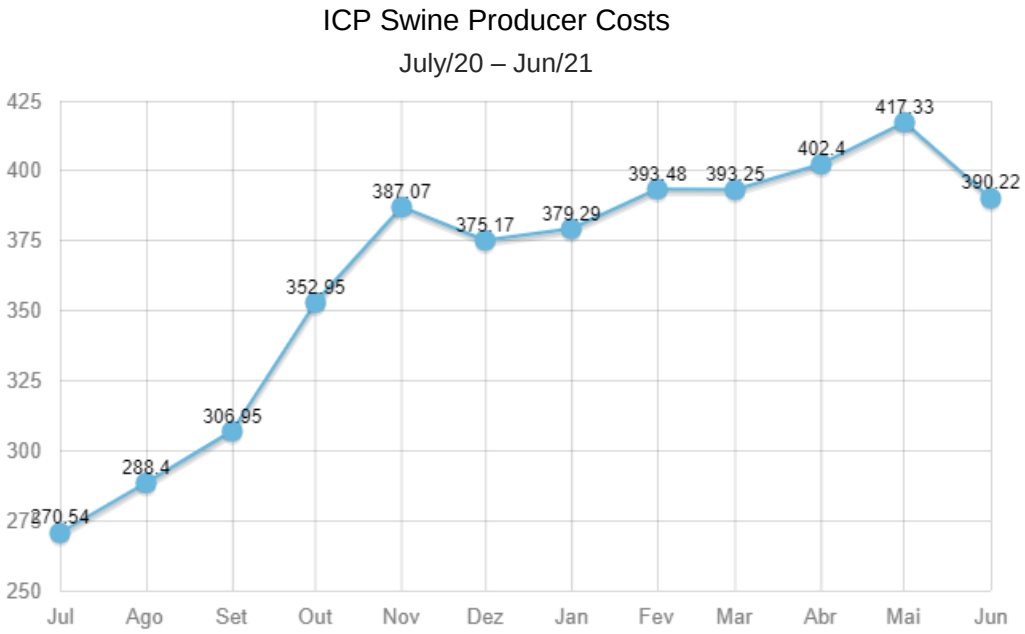
EMBRAPA's index for swine production costs, called *ICPSuínos*, shows that, in Santa Catarina, nutrition (feed) costs increased 42 percent in 2020; and a cumulative 35 percent during the 12 months prior to June 2021. Swine producers saw their total cost of production increase a cumulative 47 percent in 2020 and 41 percent during the 12 months prior to June 2021, mainly due to the cost of animal feed. In the Brazilian pork industry, as most of the production is done intensively, nutrition costs accounted for 80.84 percent of total costs in June 2021. In 2021, the increase in costs was much smaller: 2.87 percent for nutrition expenses in the first semester; and 4.32 percent for all costs. Post believes that the costs of production may reduce slightly during 2022, mainly due to an expected reduction in the cost of feed crops.

		Cost Change		
Composition Jun/21	Item	2020	Jan-Jun/21	12 months
80.84%	Nutrition (feed)	+42.05%	2,87%	35,32%
3.50%	Capital Cost	+0.98%	0,71%	1,41%
3.27%	Labor	0%	0,48%	0,48%
3.08%	Maintenance/ Financial/ Funrural	+1.66%	-0,34%	1,30%
2.89%	Transportation	+0.09%	0,11%	0,20%
2.33%	Depreciation	+0.51%	0,29%	0,69%
2.26%	Others	+0.98%	0,08%	0,78%
1.36%	Sanitary maintenance	+0.97%	0,08%	0,97%
0.47%	Eletric Energy/ Heating	+0.04%	0,04%	0,06%

Data Source: EMBRAPA Swine and Poultry, ICPSuínos

As shown in the graph below, the ICP swine producer index increased significantly during the past 12 months (July-2020 to June-2021), from 270 to 390. Nonetheless, since November 2020, the index grew at a slower rate, reaching a peak in May 2021, and then falling in the following month. The prices of the live animals experienced a similar pattern, maintaining a relatively stable level in 2021 of around R$ 6.3 to R$ 6.6 per Kilogram.

Both the private sector and the state-level governments have discussed ways of lowering animal feed expenses, given that these represent a significant portion of production costs, and given the sector's importance to certain states, particularly in Southern Brazil. Measures included the replenishment of Conab's stocks of corn in certain states, to a level considered above the 'minimum necessary' for the security of the animal producers; reducing import tariff of corn from countries outside the Mercosur region; finding alternative crops to be used as feed during the period. Nonetheless, these measures only had limited effects on the feed prices paid by producers, thereby having little impact in the attempt to lower their costs.



Data Source: EMBRAPA Swine and Poultry, ICPSuínos

3.2 – Trade

For 2021, Post forecasts that Brazil will maintain live swine exports and imports level with previous years. Despite being among the top five producers of swine in the world, exporting live swine is not an important activity for the sector. Brazil primarily sends hogs to its most important traditional market, Argentina, as well as other neighboring countries like Paraguay, Bolivia, and Uruguay.

Exports

Brazil Exports to the World

Swine, Live

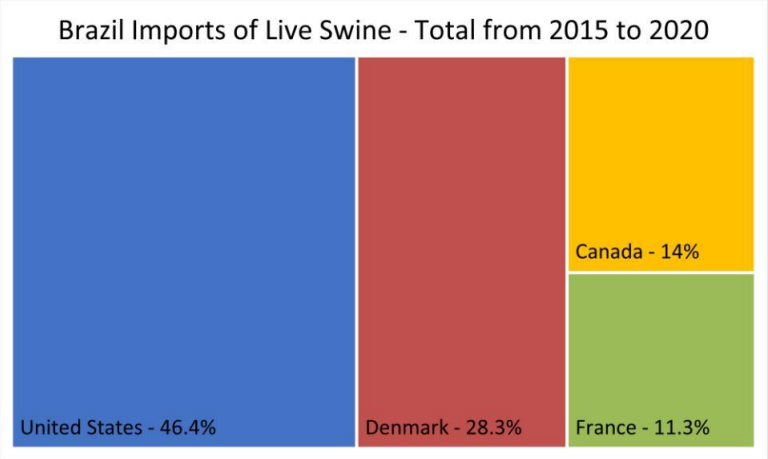
Partner	Unit	2015	2016	2017	2018	2019	2020	Jan-Jul 2021
Argentina	USD	1,284,950	1,460,607	2,931,910	4,243,501	5,333,750	2,537,214	1,161,318
Bolivia	USD	82,833	229,085	555,494	162,828	302,351	238,648	139,086
Canada	USD	-	5,748	-	-	-	-	-
Mexico	USD	-	-	-	-	997	-	-
Norway	USD	-	-	-	518	319	69	-
Panama	USD	-	-	-	-	238	-	-
Paraguay	USD	885,173	523,160	690,939	695,913	832,943	1,075,916	200,594
United States	USD	-	3,382	-	-	-	-	-
Uruguay	USD	-	-	-	-	49,676	-	68,559
Total	**USD**	**2,252,956**	**2,221,982**	**4,178,343**	**5,102,760**	**6,520,274**	**3,851,847**	**1,569,557**

Data Source: Brazil Ministry of Economy

Brazil is the ninth-largest exporter of live hogs, mostly for slaughter as well as for purebred breeding for genetic improvement. From the traditional markets where Brazil exports live swine, Argentina accounted for 74 percent of all exports in the past six years. In 2020, there was a significant decrease in Argentina's imports of live swine, which Post believes was likely a consequence of the pandemic. However, Argentina's imports accounted for a larger share in 2021 (Jan-July). Paraguay accounted for 19.5 percent of the total over the past six years. Argentina has only imported from a different supplier once in six years, and Paraguay used Brazil as its sole supplier in the period. The export numbers for 2021 indicate that the total exports of the year should be slightly lower than in 2020.

Imports

Brazil imports a relatively small volume of live swine, being the 17th largest importer in the world. As with live cattle, Brazil's imports of live swine are focused on genetic improvement. Brazil has only imported live swine for purebred breeding (HS Code 010310). Among Brazil´s traditional suppliers, the United States supplied over 46 percent of total imports over the past six years.



Data Source: Brazil Ministry of Economy

4. PORK

Meat, Swine	2020		2021		2022	
Market Begin Year	Jan 2020		Jan 2021		Jan 2021	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Slaughter (Reference) 1000 Head	42850	42850	44250	44250	-	45580
Beginning Stocks	0	0	0	0	-	0
Production	4125	4125	4280	4325	-	4477
Total Imports	2	2	2	5	-	3
Total Supply	4127	4127	4282	4330	-	4480
Total Exports	1178	1178	1275	1320	-	1410
Human Dom. Consumption	2949	2949	3007	3010	-	3070
Other Use, Losses	0	0	0	0	-	0
Total Dom. Consumption	2949	2949	3007	3010	-	3070
Ending Stocks	0	0	0	0	-	0
Total Distribution	4127	4127	4282	4330	-	4480

Numbers in 1000 MT CWE

4.1 – Production

In 2020, pork production grew around 3.8 percent year on year. Post forecasts production will grow at five percent in 2021, reaching 4.3 million tons in CWE. The Brazilian Association of Animal Protein (ABPA) recently published its forecast production for 2021 at 4.4 million tons CWE with their assessment of the swine industry slightly more optimistic than Post. The Post forecast is lower due, in part, to the 47.3 percent increase in costs of animal feed, which represents over 80 percent of the total costs of production for swine producers in Brazil, as previously detailed in the Production Sections of both cattle and swine. Post forecasts productivity to stay virtually the same as the 2020 estimate of 97 kilograms CWE per slaughtered pig. In 2022, Post expects pork production to increase by 3.5 percent.

Since the ASF outbreak in China in 2018, and its spread to other parts of the world, such as some European countries, Brazil has been benefitting from increased world demand for pork, and has been able to supply much of China's and Hong Kong's demand. Producers benefited from a favorable exchange rate in 2020, for most of the year, and have aimed production towards foreign markets. The currency exchange continues at a favorable level for Brazilian exporters. The industry is investing in production to take full advantage of the current overseas demand while domestic demand has grown only slightly. In 2020, the ABPA reported that 15 new exporting plants received authorization to export to destinations such as Chile, the Philippines, Singapore, Vietnam, and South Africa. Pork meat production grew 5.7 percent in the first quarter of 2021, requiring an additional 12.6 million heads slaughtered during the period.

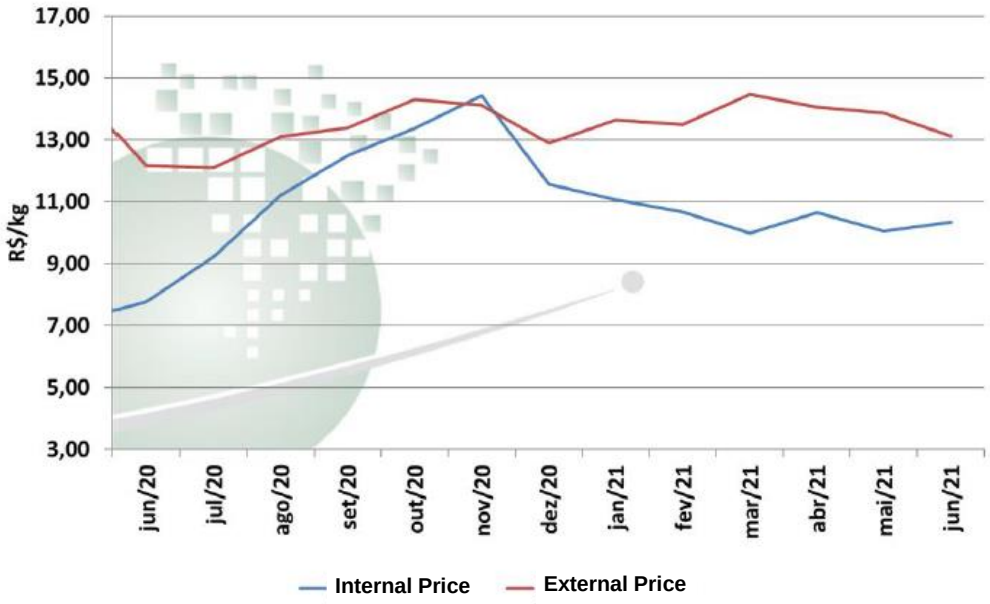
4.2 – Consumption

The onset of the pandemic crisis in Brazil reduced social gatherings 2020, especially in the first months, which reduced the demand for meats in general. With restaurants, hotels, and other similar businesses shuttered, the consumer retail market saw an increased supply of meat, resulting in lower prices for consumers. Although quarantine rules were eased over time, which allowed the population to gather in public, the economic slowdown restricted the Brazilian's capacity to purchase meats with the same frequency as before. At the same time, external demand peaked, and prices of pork went up, leaving domestic consumers pressed to purchase even cheaper sources of protein, such as poultry and eggs. In 2020, domestic consumption of pork fell to 2.95 million tons CWE.

Nevertheless, Post forecasts 2021 domestic pork demand to grow two percent. For 2022, Post expects consumption to also grow at two percent. Post's forecast is based on the expected economic recovery, although slower than initially predicted, and the possibility of reinstating payment of the Corona voucher in 2021. Pork consumption will also increase as consumers switch to pork from beef, which is facing increasingly high prices. At the same time, pork prices have stabilized after the initial increase in November 2020.

As shown in the graph below, after reaching a peak in November of 2020, to the same level of external prices, the domestic prices of pork decreased and have remained relatively stable at around 40 percent less than external prices. In the first semester of 2021, pork prices have remained between R$ 10 (approx. US$ 1.92) and R$ 11 (approx. US$ 2.12) per kg. Note that the price reached a peak of R$ 14 (approx. US$ 2.69) per kg in November of 2020.

Pork Internal and External Prices*



Data source: CEPEA, Swine Bulletin, July 2021

Notes: Internal Price (domestic): São Paulo state carcass. *External Price (foreign): Fresh pork. No definition was available of how the external price is calculated.

Prices of meat wholesale in São Paulo: on average prices were R$ 10.2 (approx. US$ 1.96) /Kilogram in the first semester of 2021, compared to R$ 7.8 (approx. US$ 1.5) /Kilogram during the same period of 2020, i.e. around 30 percent higher. A market research study found that pork prices had risen 59 percent in April 2021, in relation to April 2020. Note that these prices in 2021 are around 80 percent higher than the average historic prices of the first semesters. Compared to the prices of other proteins, pork wholesale prices in SP fell more than that of bovine and chicken meats since November 2020. Pork was the only protein whose prices remained relatively stable in 2021, while bovine and chicken prices increased since January.

Post forecasts pork price increase of 10 percent in 2021, given the current trend in producer costs and demand for the protein, as well as China's persistent pork imports (although the market expected a reduction in such demand during 2021). At the beginning of 2021, the projections were that pork meat prices would increase by 25 percent during the year, however, the statistics show a relatively stable price range from January till July, therefore lowering Post's projected price increase till the end of the year. Post forecasts the price of pork to reduce by 6 percent by 2022 as China's demands are expected to fall by then. Production costs should also decrease, allowing for lower prices in the market.

4.3 – Trade

Exports

Post forecasts a seven percent increase in exports in 2021. This forecast is higher than the previous Post forecast as the export statistics indicate a noticeable increase in pork export volumes. Despite China´s efforts to rebuild its herd after the ASF outbreak in 2018, the persistence of the disease has meant that import demand has remained high. As of the end of 2020, China was among the top three global markets for pork, and Brazil was the third-largest supplier to that market, behind Spain and the United States, respectively. According to the Ministry of Agriculture, Livestock, and Supply, there are 17 plants in Brazil authorized to export pork to China as of February 7, 2021, 15 of which are located in the South of Brazil.

In 2020, Brazilian pork exports rose 36 percent in volume terms and surpassed 1 million metric tons for the first time in Brazilian history (1.024 million tons). From this record export volume, China accounted for a little over half of the total pork shipments, followed by Hong Kong, with 16.4 percent of total exports, and Singapore, with a total of 5.2 percent of the total exports. Chinese imports increased by 106 percent in volume when comparing to 2019. Other countries that also increased purchases of Brazilian pork: Vietnam, a 198 percent increase in volume; Japan, with a 91 percent increase, and the United States, which increased imports by 30.4 percent in 2020. The three largest destinations for Brazilian pork are all in Asia, and the continent accounted for 80 percent of total exports, a 67 percent increase in volume from 2019.

The main destinations in Jan-July 2021 were: China imported 348 thousand tons (23.5 percent higher than 2020), Chile imported 37.7 thousand tons (80 percent higher than 2020), Uruguay imported 25 thousand tons (8 percent higher than 2020). Post anticipates that Asia will represent close to 80 percent of Brazilian pork export destinations in 2021, with China representing 65

percent of that volume. The swine sector expects exports to grow in 2021 and, as in 2020, to surpass the 1 million tons mark. In 2021, pork exports represent a quarter of all production in terms of weight, while in 2020 it was equivalent to 23 percent.

As shown in the table below, pork exports from January to July 2021 reached high values, similar to exports for all of 2019, around US$ 1.5 billion. The increase of 20 percent in the value of pork exports for the first seven months of the year, in relation to the same period in 2020, is partly due to the higher pork prices in the international market, given that the volume of exports rose proportionately less during the period. Nonetheless, the number indicates that pork exports should indeed grow at a relevant rate in 2021. In July, while the volume of exports increased only two percent in relation to July 2020, the value increased 21 percent, showing how prices of pork exports grew during this period.

The Brazilian industry is monitoring other factors that may cause an increase in pork prices due to a reduction in pork supply in the global market, such as the recent outbreak of ASF in Germany, although currently ASF is reportedly only found in wild boars. China barred pork imports from Germany in September 2020 due to an outbreak of the disease in the European country, which supplied 14 percent of Chinese pork imports (the fourth-largest supplier) in 2020 and is one of Brazil's main competitors. Although negotiations to lift the ban were advancing, the recent detection of ASF in Germany has brought concerns to the negotiators and postponed the possibility of Germany exporting pork to China.

Brazil Exports to the World

Commodity: PSD-Meat, Swine,

Annual Series

Partner Country	Unit	2015	2016	2017	2018	2019	2020	Jan-Jul 2021
China	USD	9823074	189290460	100594596	303816568	618654544	1231066592	882288182
Hong Kong	USD	189458006	236720251	239691814	223261866	241592490	253553099	165111850
Singapore	USD	63800387	71746188	83187658	92293288	83342855	126161953	68631120
Chile	USD	20199555	51488965	54852106	69439924	98626860	101485420	96285782
Uruguay	USD	53703347	62465443	78551921	71710052	89448778	90590075	56195114
Vietnam	USD	286588	2835157	518463	12942015	24621921	81008904	38287974
Argentina	USD	32662672	67551839	95054042	88665195	70372313	49866954	43007755
Japan	USD	7439291	6417188	6752703	6093710	20858960	43647720	26355805
United States	USD	644305	6010091	11587397	13676860	17790235	27748848	20140520
United Arab Emirates	USD	11822531	17387459	17384478	18275763	19219936	26476412	11226068
Rest of the World	USD	802229408	662880636	807239150	193563473	229270238	112609036	100589894
TOTAL	USD	1192069164	1374793677	1495414328	1093738714	1513799130	2144215013	1508120064

Data Source: Brazil Ministry of Economy

Imports

Brazil is not a major importer of pork, ranking 37th in global imports of pork in 2020. In 2020, Brazil only imported pork from five countries, with USD 14.8 million in purchases. From this total, almost 90 percent was HS Code 021019 (Meat of swine, nesoi, salted, in brine, dried or smoked), mostly coming from Italy and Spain. For 2021, Post does not forecast any major differences in the scenario for imports. Nonetheless, import values from January till July of 2021 are equivalent to 84 percent of all of 2020 imports. In 2022, imports should increase only slightly.

Brazil Imports from the World

Commodity: PSD-Meat, Swine,

Partner Country	Unit	2015	2016	2017	2018	2019	2020	Jan-Jul 2021
Italy	USD	5,615,136	6,108,361	8,354,888	7,697,877	8,680,851	8,372,233	7,632,456
Spain	USD	4,819,722	5,568,157	6,396,232	7,868,818	7,485,112	5,540,643	3,707,777
Portugal	USD	541,470	505,616	478,034	596,218	661,832	509,680	175,127
Paraguay	USD	-	-	-	-	-	363,477	428,847
France	USD	50,659	15,707	22,546	29,341	22,486	47,377	27,634
Hungary	USD	-	-	2,228	-	-	-	2,228
Argentina	USD	27,124	-	-	1,016	-	-	28,140
Brazil	USD	-	-	-	-	30	-	30
Chile	USD	108,092	72,731	333,075	-	-	-	513,898
TOTAL	USD	11,162,203	12,270,572	15,587,003	16,193,270	16,850,311	14,833,410	12,516,137

Data Source: Brazil Ministry of Economy

Attachments:

No Attachments