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Report Highlights:

Post forecasts that the cattle herd will grow at three percent in 2021, and beef production is also forecast to increase three percent, reaching 10.4 million tons Carcass Weight Equivalent (CWE). Post forecasts beef consumption for 2021 at 7.725 million tons (CWE), which is a one percent increase from 2020. Post forecasts a two percent increase in the pig crop and three percent growth in domestic pork consumption. Pork production growth is forecast at three percent in 2021, reaching 4.25 million tons (CWE). Pork export are forecast to increase four percent in 2021. The Post cattle forecasts account for poor pasture conditions in the second half of 2020 due to an extended drought and the expectation of lower rainfall in the first quarter of 2021. Higher prices of animal feed for both cattle and swine are expected because of a spike in corn and soybean meal costs. High global meat demand, and a devalued Real support the forecast record exports, specially to China.

EXECUTIVE SUMMARY

The Brazilian economy has been greatly affected by the pandemic with official GDP for the third quarter of 2020 showing a cumulative contraction of 3.4 percent and projections for that 2020 will end at a 4.5 percent retraction. For 2021, the Brazilian economy is expected to recover with expected 3.6 percent growth. The price of animal feed for both cattle and swine have increased significantly in 2020 because of a spike in corn and soybean meal costs, driving production costs up. Post forecasts the cattle herd will continue to grow at three percent in 2021, and beef production is also forecast to increase three percent, reaching 10.4 million tons Carcass Weight Equivalent (CWE). Post forecasts account for poor pasture conditions in the second half of 2020 due to an extended drought and expectation for lower rainfall in the first quarter of 2021. Post forecasts beef consumption for 2021 at 7.725 million tons (CWE), which is a one percent increase from 2020. This forecast is based on lower domestic demand for beef, in favor of other meats. Post forecasts that both cattle and beef prices will remain elevated in 2021, with global meat demand and a relatively devalued domestic currency supporting the forecast record export numbers.

In regards to the swine and pork industry, post forecasts only a two percent increase in the pig crop, considering the impact of the high-cost of animal feed. This forecast considers increased export demand, especially to China, and a forecasted three percent growth in domestic consumption, a result of the high prices for beef, the preferred source of protein for Brazilians. 2021 should be another record year for swine production. Post forecasts pork production to grow at three percent in 2021, reaching 4.25 million tons in Carcass Weight Equivalent (CWE), and a four percent increase in pork exports in 2021.

1. CATTLE

Animal Numbers, Cattle Market Year Begins Brazil	2019		2020		2021	
	Jan 2019		Jan 2020		Jan 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Total Cattle Beg. Stks (1000 HEAD)	238158	238158	244144	244144	252250	252700
Dairy Cows Beg. Stocks (1000 HEAD)	42250	42250	43750	43750	45280	45280
Beef Cows Beg. Stocks (1000 HEAD)	57200	57200	58100	58100	58970	58970
Production (Calf Crop) (1000 HEAD)	50490	50490	51500	51500	52750	52650
Total Imports (1000 HEAD)	0	0	0	0	0	0
Total Supply (1000 HEAD)	288648	288648	295644	295644	305000	305350
Total Exports (1000 HEAD)	535	535	325	329	370	370
Cow Slaughter (1000 HEAD)	9500	9500	8900	8550	9000	9000
Calf Slaughter (1000 HEAD)	300	300	300	200	300	300
Other Slaughter (1000 HEAD)	30850	30850	30665	30665	31750	31410
Total Slaughter (1000 HEAD)	40650	40650	39865	39415	41050	40710
Loss and Residual (1000 HEAD)	3319	3319	3204	3200	3205	3200
Ending Inventories (1000 HEAD)	244144	244144	252250	252700	260375	261070
Total Distribution (1000 HEAD)	288648	288648	295644	295644	305000	305350
(1000 HEAD)						

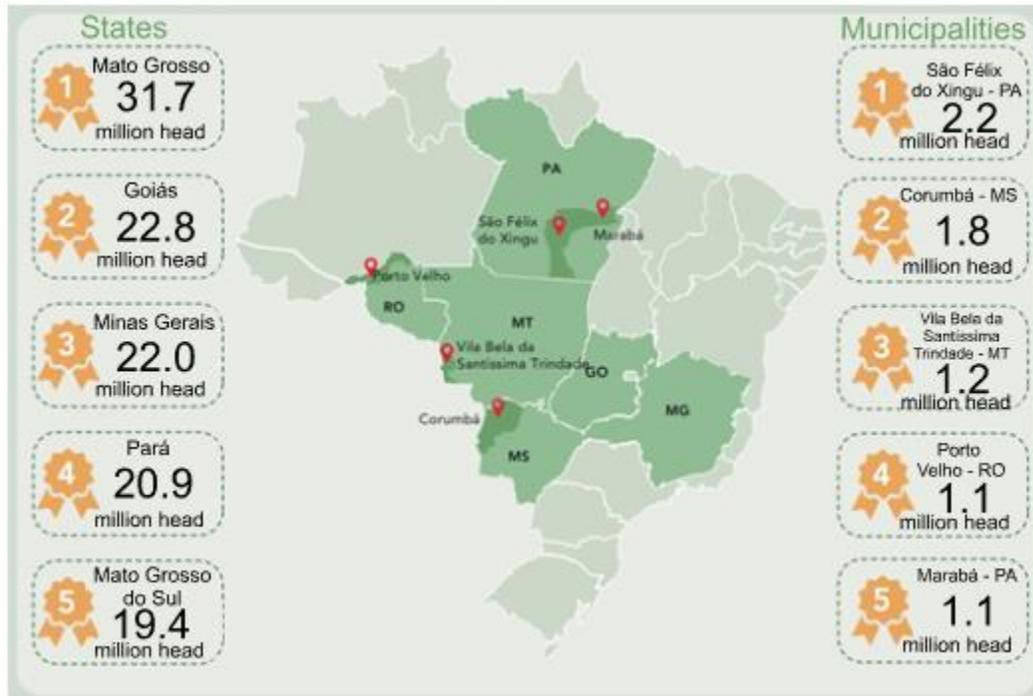
1.1 – Production

Cattle numbers

Post forecasts the herd will continue to grow at three percent in 2021. The forecast is based on the historical trend. The Brazilian cattle herd has been steadily growing over the past few years at a yearly rate of three percent. The following 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.

The Center-West region – composed of the states of Goiás, Mato Grosso, Mato Grosso do Sul, and the Federal District – continued to lead the country in herd size, representing 34.5 percent of the total. However, the fastest pace of growth is in the Northeast region, with growth of 2.7 percent when compared to the previous year.

Top 5 Cattle Producing States and Municipalities

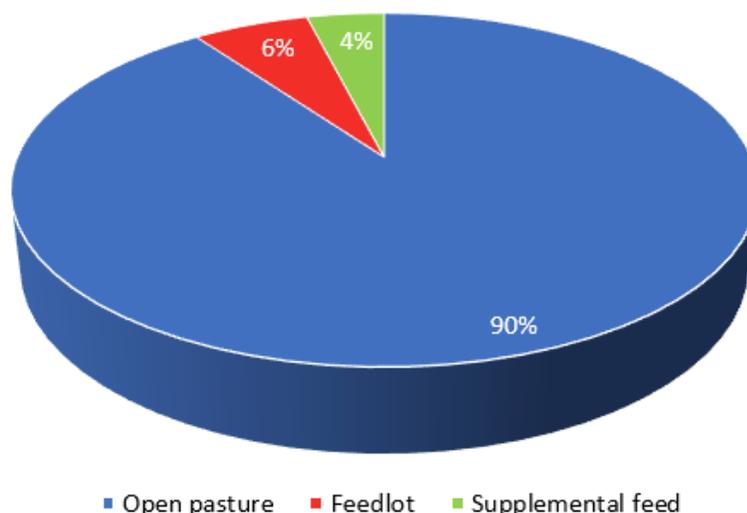


Data source: IBGE 2019 Livestock Production by Municipality (October 2020)

For 2021, Post forecasts the number of cattle raised in confinement will rise, despite the high cost of feed. The forecast is based on recent industry trends and on rising demand for high quality product bringing profits to producers. Despite the evident trend towards confinement, Post believes that 90 percent of the fattening of the Brazilian cattle is done in open pastures, and only 10 percent is divided between supplement feeding on pastures (known as semi-confinement) and feedlots.

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. This proportion of cattle on supplemental feed and in feedlots (40/60 percent) has been steady for at least the past five years. According to research by DSM, the overall number of cattle in confinement in Brazil was a record of 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 the 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.

Finishing Systems for Brazilian Cattle



Data Source: IHS Markit, Anualpec 2020

Pasture and Weather Conditions

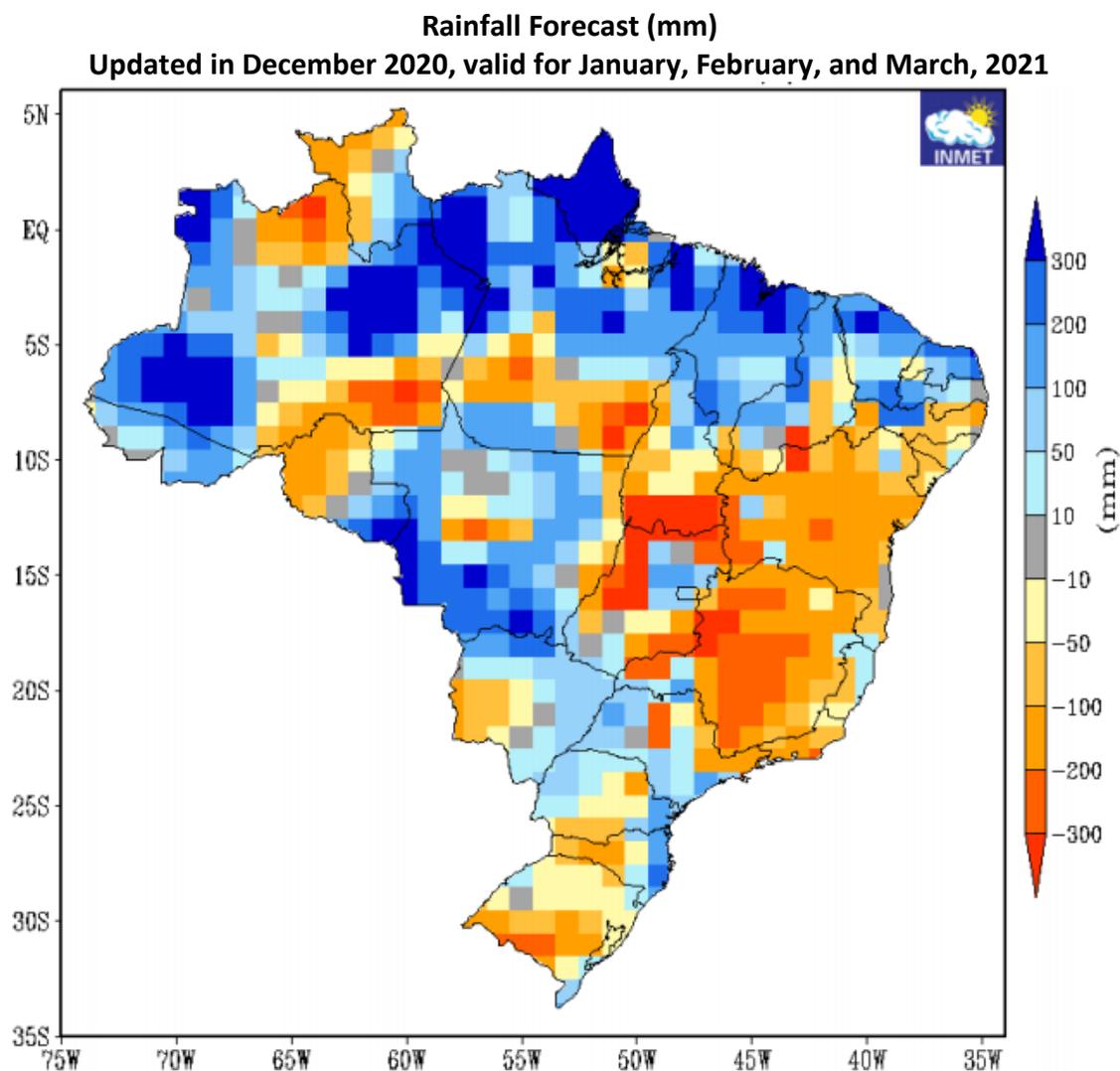
The Post 2021 production forecast of 52.6 million head for the calf crop assumes that productivity will continue to improve based on improved genetics and animal feed supplementation, as well as pasture improvements. The Post forecast also accounts for poor pasture conditions in the second half of 2020 due to an extended drought and expectation for lower rainfall in the first quarter of 2021, in three of the top five cattle producing states.

Pasture improvements are a key driver of higher productivity. EMBRAPA, the Brazilian Agricultural Research Corporation, over the past several years has launched at least 14 different cultivars of forage. EMBRAPA also created a phone app that allows producers to identify characteristics and compare the main forage varieties available in the market, a total of 16 forage types, with 107 variables. Post recently visited ranches in central Goiás and observed the replacement of native grasses with high productivity and protein rich cultivars. Widespread adoption of chemical controls for pasture protection has also contributed to pasture improvements.

Finally, a key component of pasture conditions is optimizing the use of water. This is also considered the main challenge for cattle producers in the open pasture production model. The second half of 2020 was marked by drought in many producing regions, which negatively affected pasture conditions. With less-than-ideal pasture, producers held cattle longer until they could reach market weight. Post believes that these animals will become available for slaughter in mid-March 2021.

For the period January to March 2021, the National Meteorology Institute (INMET) forecasts rainfall will be above average for most of Mato Grosso and Mato Grosso do Sul but below average for Goiás, with temperatures above normal in the entire Center-West region. Minas Gerais, the third largest in herd population, is forecast to have rainfall below average in most parts of the state. This will also be

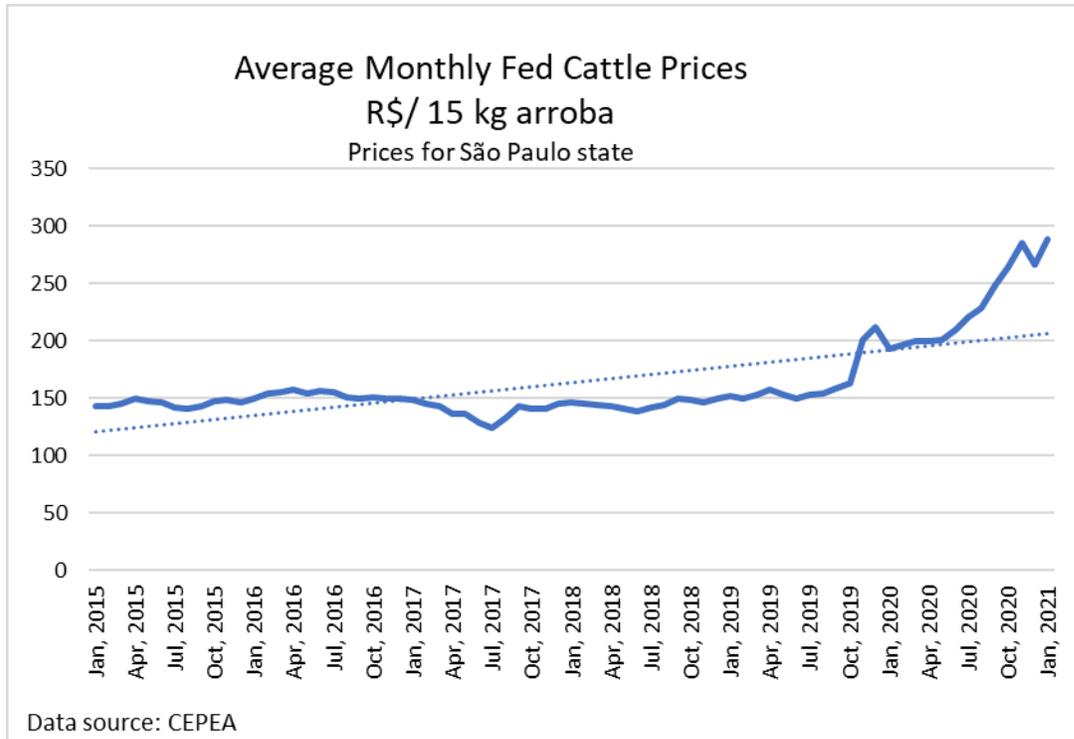
the case for the state of Pará, with the fourth largest herd. The graph below shows rainfall forecast for the period. Goiás state, for instance, is expected to endure lower rainfall with no increase in herd population expected in 2021.



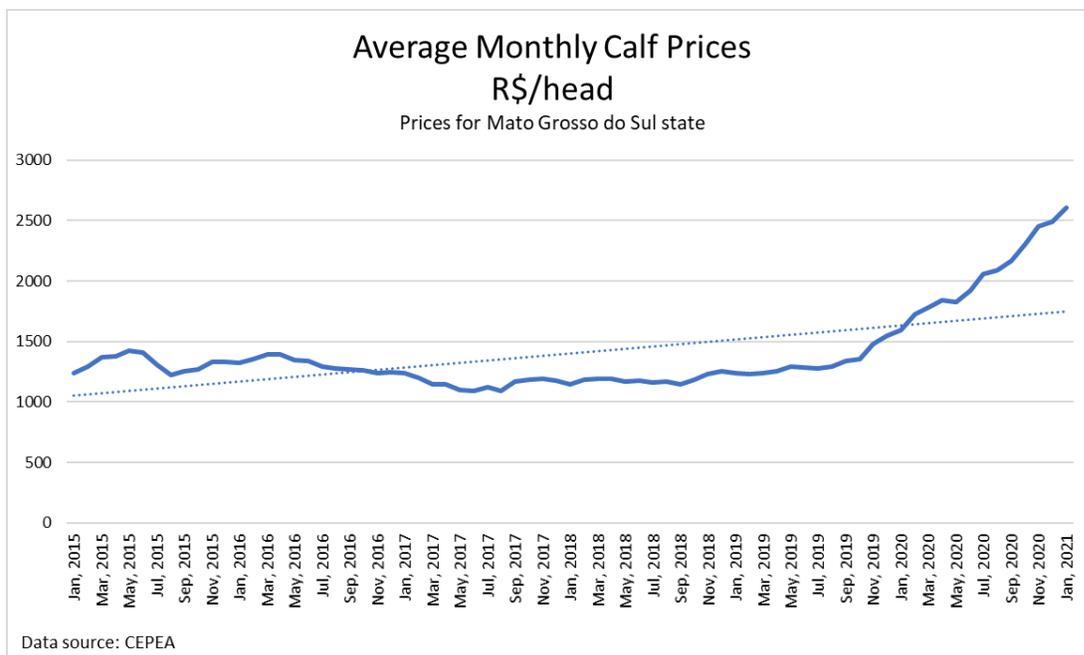
Data source: INMET Monthly Agri Climatological Report January 2021.

Price and Profitability Outlook

Post forecasts that both cattle and beef prices will remain elevated in 2021, with global meat demand and a relatively devalued Real supporting the forecast record export numbers. The future's market price of an arroba (metric unit of 15 kilograms and equal to 33 pounds) is being traded at R\$274.50 for the month of May 2021 and at R\$ 281.00 for the month of October 2021. This is an increase over 2020 prices with the yearly average for an arroba of R\$ 226.69 and a record R\$ 292.48 in mid-November 2020.



Both calf and cattle prices initially spiked in November 2019 due to the African Swine Fever outbreak in China, which led to an increase in protein demand in China and elevated global beef prices. In Brazil, prices climbed further due to the devaluation of the national currency, the Real, which lost about 30 percent of its value in the first half of 2020. As a result, domestic prices reached record levels last year. In 2020, the average price for calf was R\$ 2020.61, and a record R\$ 2590.46 per calf was reached in late November.



There are potential headwinds for domestic prices if domestic consumption declines substantially. Post expects some leveling off in consumption as the emergency relief, the so-called “Corona voucher”, is not expected to be renewed for 2021. There is talk that the vouchers could be paid in 2021, but it depends on approval of the national budget, which has little space for additional expenses. Currently, 94 percent of the Brazilian budget is marked as mandatory expenses. Furthermore, the unemployment rate in Brazil has been on the rise, closing the year 2020 at above 14 percent.

While the price outlook is robust, Post also forecasts that input prices will weigh on the sector’s profitability. Post anticipates that feed prices, mainly corn and soybean prices, will remain well above their average of recent years. 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 previously reported by Post in GAIN report numbers [BR2020-0045](#) and [BR2020-050](#), the prices for corn and soybean meal in Brazil greatly increased in 2020, due to weather conditions that impacted the crops and due to a favorable exchange rate for exports. As domestic inflation spiraled, the animal sector pressured the government to eliminate soybean and corn tariffs for non-Mercosur trade block members. The industry argued that this would tamp down feed costs and thereby drive down domestic meat prices. The soybean meal tariff exemption expired on January 15 but the corn tariff waiver is in place until March 31, 2021 – though Post does not anticipate that either measure will lead to substantial volumes of corn and soybean imports outside of Mercosur.

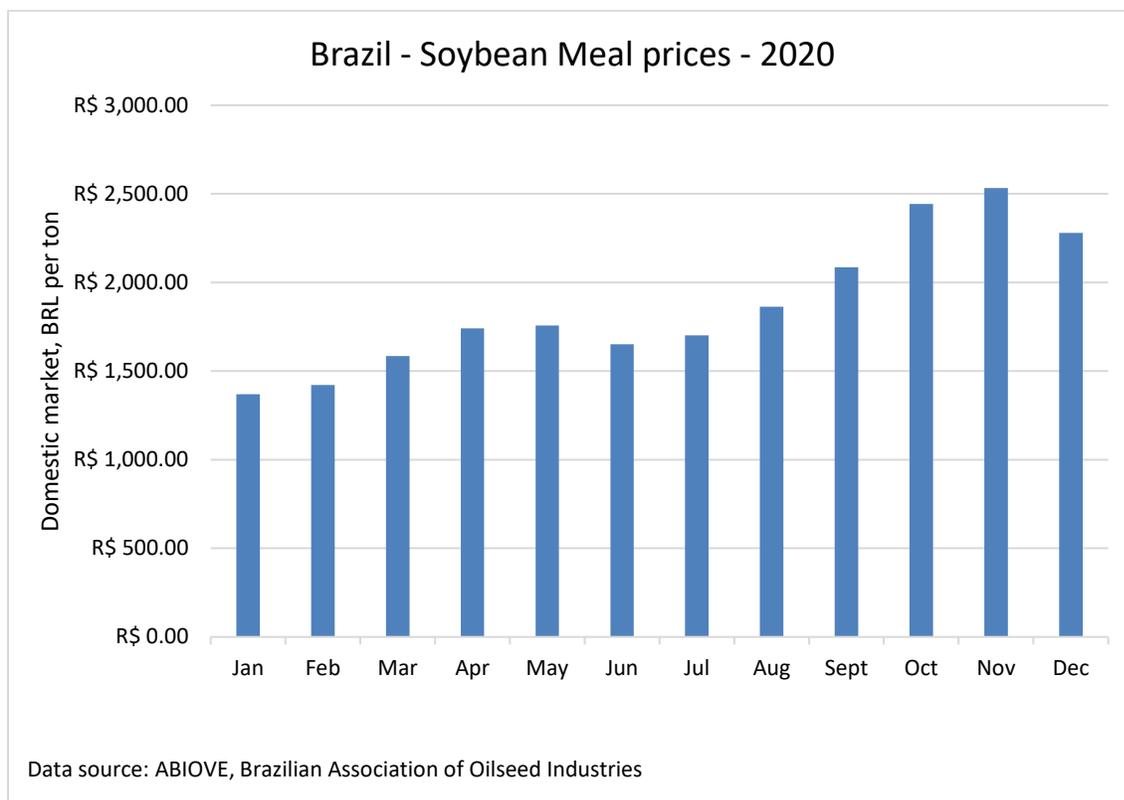
The Brazilian National Union for the Animal Nutrition Industry (Sindirações) forecasts 2021 production of animal feed to increase by six percent from last year, due to improved demand for animal feed both for livestock and poultry production to support meat demand from the domestic and export markets. 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.

Brazil – corn prices*, Jan 2015-Jan 2021



Data source: Rabobank Brazil Agribusiness Outlook 2021

*Basis: ESALQ/B3



Furthermore, the high cost of fertilizer for pastures will increase production costs. In 2020, due to the devaluation of the Real, the price of fertilizers, which are mostly imported, rose. The fertilizer industry in Brazil normally grows, on average, two to three percent a year, but in 2020, analysts believe that it grew on the order of six percent. Mosaic Fertilizers forecasts that for 2021, sales could surpass the mark of 40 million tons. For 2020, the final number is estimated at around 38.5 to 39 million tons of fertilizers traded in Brazil. From this total, the Secretariat of Foreign Trade of the Ministry of Economy reports that 34.2 million tons came from imports, a USD 8 billion market. Demand increased for fertilizers for the corn and soybeans crops, which further supported prices for fertilizers used by the livestock industry. However, for every kilogram of a fertilizer invested in forage, with technology and good sources of macro and microminerals, there is a gain of four kilograms in live weight or a total of 2.7 kilograms in carcass weight equivalent (CWE), and 1.5 kilograms in beef. Hence, with a high price for the fertilizers due to the exchange rate, producers need to make the appropriate calculations to make sure purchasing fertilizers is still a worthwhile investment.

On January 22, President Jair Bolsonaro signed decree 10605 creating an Interagency Working Group that will be responsible for developing a National Plan of Fertilizers. The goal of the policy is to strengthen competitiveness policies for production and distribution of fertilizers so as to reduce foreign dependency and increase Brazilian agribusiness competitiveness. According to the National Association for Fertilizers Difusion (ANDA, in its Portuguese acronym), Brazil currently imports 75 percent of the fertilizers it consumes.

Slaughter and Supply

Post expects that slaughter will continue at reduced levels in the first quarter of 2021. As a consequence of the drought experienced last year, many slaughterhouses began 2021 working at lower capacities because of weak supply and producers needing to rebuild their herds. Some slaughterhouses opted not to function on some days of the week. Current slaughter supply is coming from residual confined animals. The fattening period for cattle was negatively impacted by the drought in 2020, and cattle are only expected to be at the optimal weight for slaughter around mid-March.

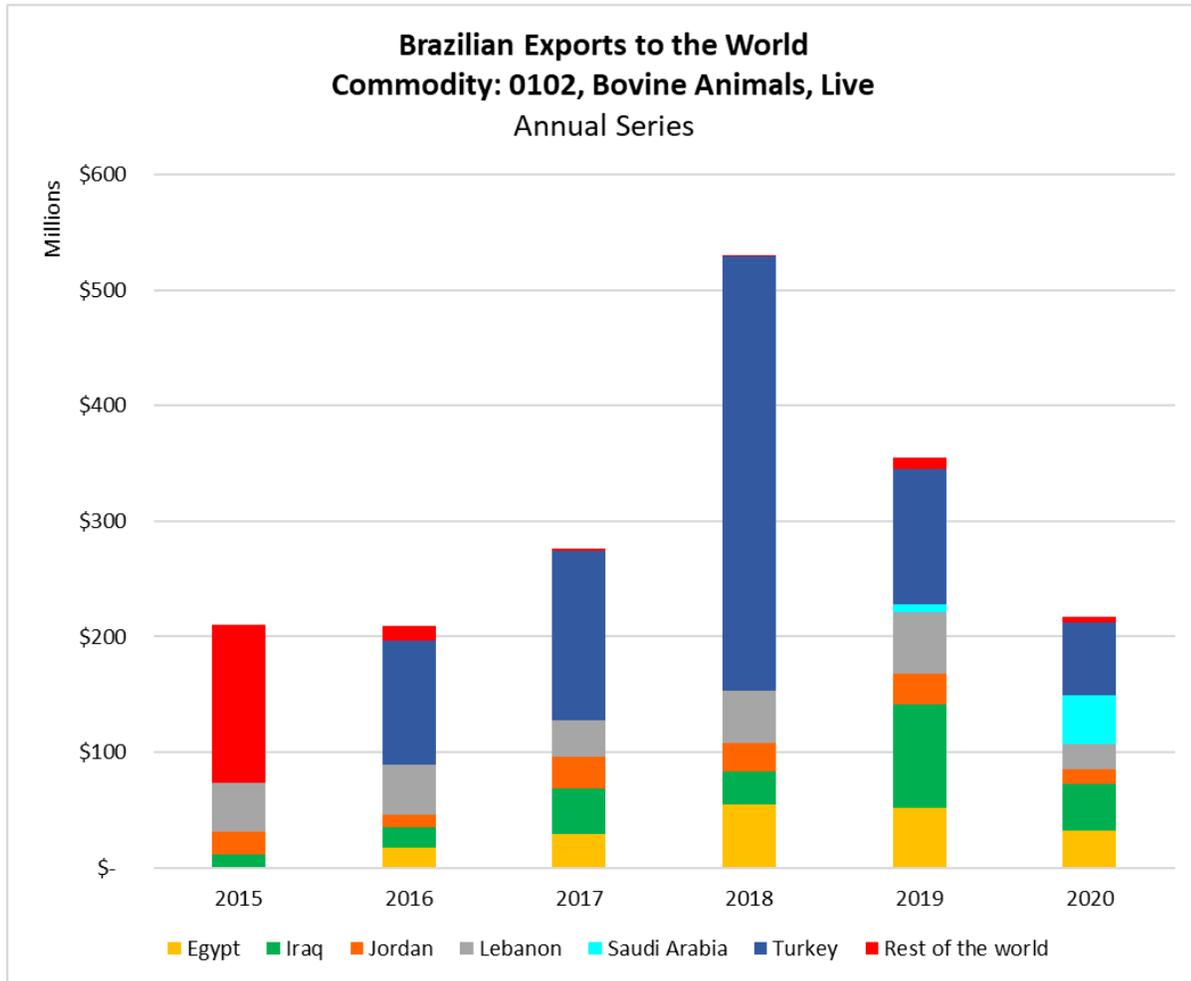
Cattle producers are also avoiding fattening animals via supplemental feed in confinement and/or semi-confinement, because of the high costs of feed. Post forecasts that farmers will continue holding cattle in pasture seeking to gain higher premiums for the animals, possibly affecting slaughter rates for the period.

1.2 – Trade

Exports

Brazil is the fifth largest exporter of live cattle in the world. Post believes exports of live cattle will rise about eight percent in 2021, recovering from a significant decrease in live cattle exports in 2020. This forecast is in part based on the situation of the largest competitor for Brazil in live cattle exports, Australia, as reported by Post Canberra in September 2020 – GAIN report number AS2020-0024, which estimates live cattle exports to decrease in 2021. There are reports in Brazil that the Indonesian Ministry of Agriculture is planning on diversifying its imports, which are mainly sourced from Australia. This could increase opportunities for Brazilian live cattle exports.

For 2020, updated data shows that the largest competitor for Brazil, Australia, had a 10 percent decrease in live bovine exports. As far as the other leading competitors (the European Union, Canada, and Mexico) their final numbers are not yet available due to the lag in reporting. However, when looking at Brazil's final 2020 numbers for exports, there was a 40 percent decrease in exports of live cattle. This decrease was caused by limited supply of cattle and higher cattle prices, as mentioned in the production section of this report.



Data Source: Brazil Ministry of Economy, via Trade Data Monitor

Brazil's top markets for live cattle in the recent years have been: Turkey, Iraq, Lebanon, Egypt, and Jordan. Exports last year were down to all of 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 a five-fold, confirming Post's forecast in the 2020 Annual Report.

Imports

Despite being a net exporter of cattle and beef in 2020, Brazil had a 278 percent increase in cattle imports, when compared to the previous year. From the total, almost 88 percent was supplied by the United States – which coincidentally also had a 278 percent increase in value. Imports jumped on increased purchases of HS Code 01022190 (Other pure-bred cattle, for breeding) with Brazil importing

36 units of cattle from the United States in 2020. Brazil’s imports are aimed at improving genetics, while 99.75 percent of what it exports is HS Code 01022990 – “Other live cattle”. Brazil has also been a long-time importer of bovine genetics and a traditional market for U.S. cattle genetics exports. In the coming weeks Post plans to release a detailed GAIN report on the Brazilian bovine genetics market. Genetic improvement by artificial insemination is one of the key tools Brazil is using to boost productivity.

Brazil Imports from World
Commodity: 0102, Bovine Animals, Live
 Annual Series

Partner	Unit	2015	2016	2017	2018	2019	2020
Argentina	USD	15.135,00	15.050,00	35.085,00	33.225,00	-	60.781,00
United States	USD	-	98.015,00	10.000,00	24.000,00	113.458,00	429.679,00
Uruguay	USD	1.380.120,00	1.898.092,00	104.835,00	20.868,00	15.982,00	-
Total	USD	1.395.255,00	2.011.157,00	149.920,00	78.093,00	129.440,00	490.460,00

Data Source: Brazil Ministry of Economy, via Trade Data Monitor

2. BEEF

Meat, Beef and Veal Market Year Begins Brazil	2019		2020		2021	
	Jan 2019		Jan 2020		Jan 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Slaughter (Reference) (1000 HEAD)	40650	40650	39865	39415	41050	40710
Beginning Stocks (1000 MT CWE)	0	0	0	0	0	0
Production (1000 MT CWE)	10200	10200	10100	10100	10470	10400
Total Imports (1000 MT CWE)	43	43	50	50	45	50
Total Supply (1000 MT CWE)	10243	10243	10150	10150	10515	10450
Total Exports (1000 MT CWE)	2314	2314	2539	2539	2670	2725
Human Dom. Consumption (1000 MT CWE)	7929	7929	7611	7611	7845	7725
Other Use, Losses (1000 MT CWE)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT CWE)	7929	7929	7611	7611	7845	7725
Ending Stocks (1000 MT CWE)	0	0	0	0	0	0
Total Distribution (1000 MT CWE)	10243	10243	10150	10150	10515	10450
(1000 HEAD) ,(1000 MT CWE)						

2.1 – Production

Brazilian beef production is forecast to increase three percent in 2021, reaching 10.4 million tons Carcass Weight Equivalent (CWE). The forecast is based on available slaughter supply and is in line with cattle production, which is forecast to also increase three percent. Notably, Post forecasts the

same slaughter as last year at 13 percent of the total herd in 2021 and with heavier animals as Brazil continues to make efficiency gains.

As outlined in the cattle section of this report, problems faced in the second half of 2020 with poor pasture conditions due to an extended drought in the main producing regions, decreased animal supply for slaughter this year. There is an expectation of lower rainfall in the first quarter of 2021 in three of the top five producing states, which will exacerbate problems with pastures. Therefore, beef production will remain somewhat constrained from lower slaughter supply.

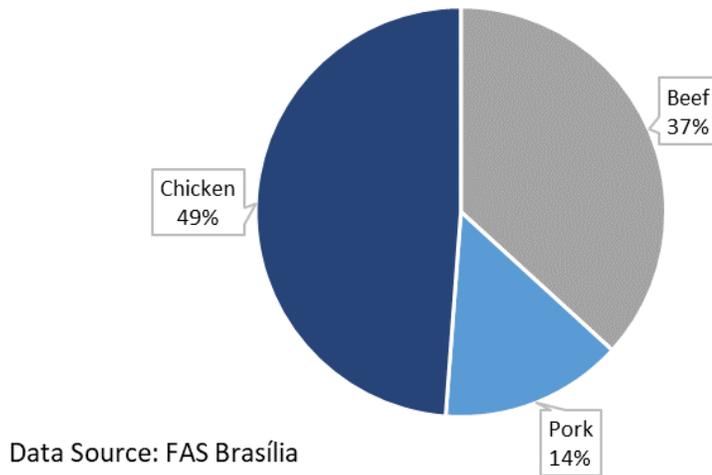
In 2020, producers received record prices for cattle and calves, and Post forecasts this tendency will continue in 2021, boosted by strong exports, mainly to China and Hong Kong. Improvement in carcass weight is forecast for 2021 which will help partially compensate for the tightened supply of cattle.

In regards to slaughter, many slaughterhouses are currently slaughtering fewer animals due to less offer from producers, despite the very high prices. Some farmers are holding the animals in pasture to be able to deliver heavier animals and hence increase profits. Some do not have animals ready for slaughter because of the drought that affected pastures in 2020. As Brazilian cattle are primarily grass-fed, the drought negatively impacted producers. It is expected that by mid-March, 2020, some of the cattle that have been held on farm due to the drought will start arriving at slaughterhouses.

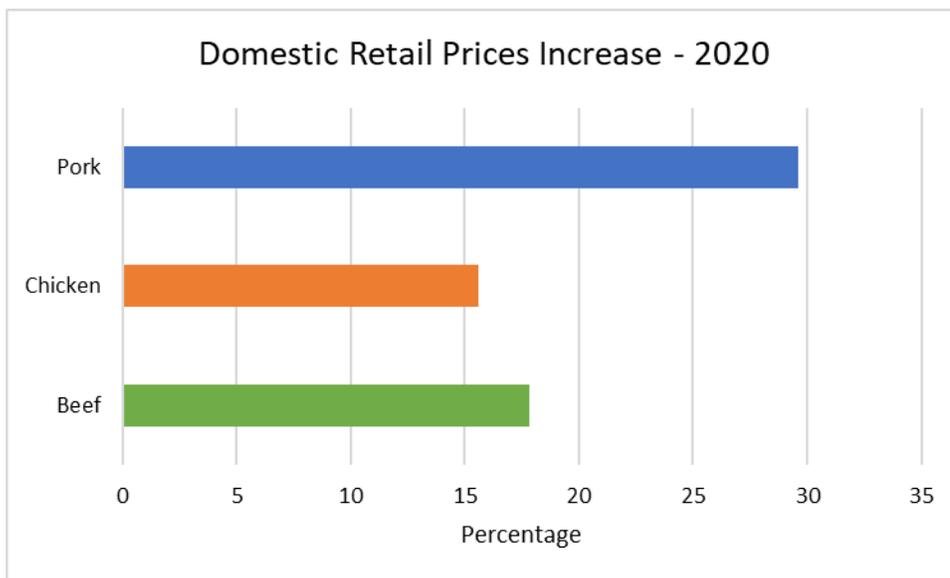
2.2 – Consumption

Post reduced its beef consumption forecast for 2021 to 7.725 million tons (CWE) to reflect only a one percent increase, versus the previous forecast of a three percent increase. The revision is based on lower domestic demand for beef, in favor of other meats. The previous Post forecast showed beef consumption at 40 percent of total meat consumption. Now, even accounting for a one percent increase in beef consumption in 2021, Post forecasts that beef consumption will represent 37 percent of the total meat consumption in Brazil, as chicken will remain the less expensive meat, making it more financially attractive to domestic consumers. Overall, Post believes 2021 will be marked by economic uncertainties, continued high external demand, high retail prices, and slightly increased domestic consumption of beef.

Brazilian Meat Consumption 2021 Forecast



Some analysts indicate that given high domestic prices, restricted cattle supply, and ample export demand, domestic consumption could fall to levels below the 1990s. According to the latest data from the National Supply Company (CONAB), Brazilian consumption of beef decreased five percent in 2020. Therefore, considering the current economic scenario, a shift towards purchasing less-expensive meats, primarily chicken, has been evident. The price of chicken in 2020 remained the most affordable from the three main meats and that continues to be the case in 2021.

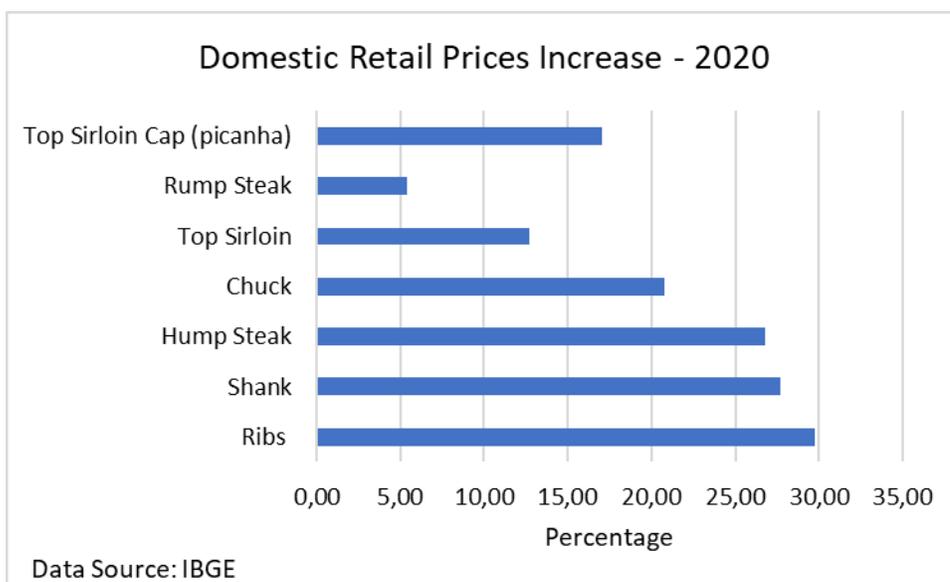


Data Source: IBGE

The Brazilian economy has been greatly affected by the pandemic with official GDP for the third quarter of 2020 (the latest data available) showing a cumulative contraction of 3.4 percent. The International Monetary Fund (IMF) projects that 2020 will end at a 4.5 percent retraction. For 2021,

the Brazilian economy is expected to recover, and the IMF forecasts a 3.6 percent growth. The economic recovery, however, will depend on how the pandemic evolves in 2021 and at this point it is already known that a new variant of the Coronavirus has originated in the North of Brazil, in Manaus, and it is believed to be spreading quickly. The pandemic resurgence, the return to stricter social isolation measures, delays in a nation-wide vaccination plan, and other domestic fiscal challenges are factors that should be kept in mind and can impact total GDP for 2021. This economic scenario significantly impacts domestic consumption of beef. In 2020, the government granted a voucher to poor families due to the Covid-19 pandemic. As of February 7, the government had not defined if the “Corona voucher” will be renewed in 2021. Due to the pandemic, many families lost their jobs – ramping the unemployment rate in Brazil in 2020 to 14.3 percent.

In 2020, Brazilian consumers saw retail prices of beef increase an average of 18 percent. The Brazilian Institute of Geography and Statistics (IBGE) monitors retail prices for different cuts of beef across country, and the data for 2020 shows that select cuts – mostly consumed by lower income families – were the ones which increased the most when compared to other grades of cuts, as shown in the following table. Post anticipates that prices are likely to remain elevated until mid-2022.

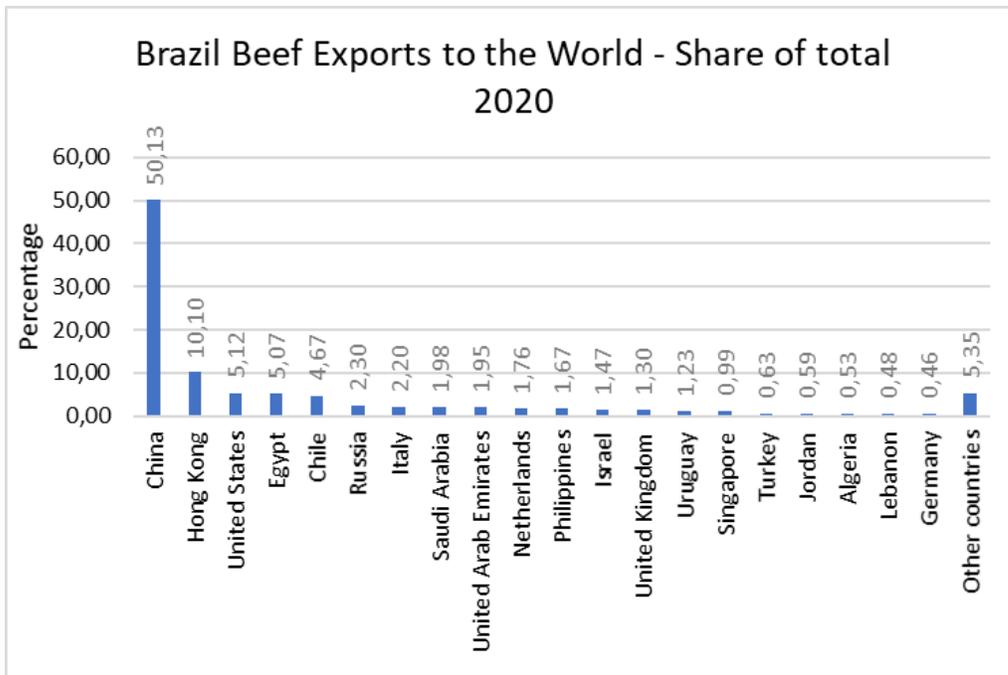


2.3 – Trade

Exports

For 2021, Post forecasts a seven percent increase in exports, mainly due to continued strong Chinese demand. In 2021, Post forecasts exports will represent 26 percent of total production. The impact of Covid-19 pandemic in several of Brazil’s traditional beef markets will maintain high export prices.

Brazil closed last year with a record US\$ 8.05 billion in exports of beef and veal to the world, a 13 percent increase in value from the prior year. In 2020, Brazil exported 25 percent of all its production. The top markets for Brazilian beef were, in order: China, Hong Kong, and the United States. When considering the European Union as a block, it surpasses the United States, assuming the third position with total imports from Brazil in the amount of US\$ 526.7 million, and comprising 6.5 percent of all Brazilian beef exports. Chinese demand in 2020 was 50 percent of total exports, followed by Hong Kong with 10 percent of exports, and the United States was the destination of 5.12 percent of all Brazilian beef exports.



Data Source: Brazil Ministry of Economy, via Trade Data Monitor

Egypt decreased its imports of both Brazilian cattle and beef in 2020. Other countries that also decreased beef imports from Brazil were Chile, and Russia. Overall, China increased its beef imports from Brazil by 50 percent clip when compared to 2019. Brazil has been the main beneficiary of rising protein import demand from China, in the wake of the outbreak of the African Swine Fever that decimated the Chinese swine herd. During 2020, Brazil had many slaughterhouses temporarily delisted by the Chinese sanitary authorities due to allegations of the presence of the Coronavirus in the packaging of different meats. Nevertheless, that did not have a marked impact on export volumes. In 2021, as China works to rebuild its herd, Brazilian exports could decrease somewhat, directly impacting beef prices in Brazil.

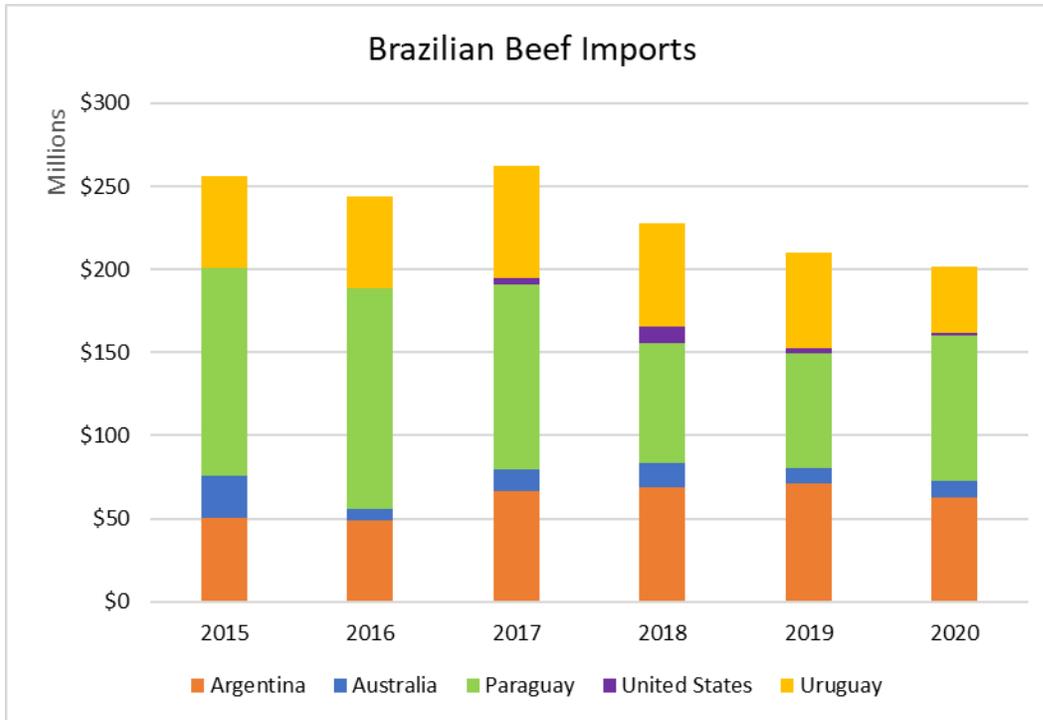
Brazil Exports to the World
Commodity: PSD-Meat, Beef and Veal,
 Annual Series

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, via Trade Data Monitor

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 total supply. Brazil's main suppliers of beef are: Paraguay, Argentina, and Uruguay, these are all neighboring members of the Mercosur trade bloc, which facilitates and lowers costs of transportation. Together, these three countries represented 94.6 percent of total imports in 2020. Brazil also imported from Australia, Japan, and the United States, summing a total of 6 beef suppliers. The United States represented 0.55 percent of total beef imports from Brazil in 2020.



Data Source: Brazil Ministry of Economy, via Trade Data Monitor

The United States is facing an uphill battle in maintaining and expanding U.S. 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 March 31, 2021, agreeing to continue trade while negotiating new export certificate language. In June 2020, MAPA requested new changes to the Bovine Spongiform Encephalopathy (BSE) certificate attestation. Both certificate requests are burdensome and duplicative and come at a time when the Brazilian beef industry is exporting approximately \$500 million in beef and beef products to the United States.

3. SWINE

Animal Numbers, Swine Market Year Begins Brazil	2019		2020		2021	
	Jan 2019		Jan 2020		Jan 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Total Beginning Stocks (1000 HEAD)	38427	38427	37850	37850	37350	37350
Sow Beginning Stocks (1000 HEAD)	2975	2975	3005	3005	3010	3010
Production (Pig Crop) (1000 HEAD)	42250	42250	43525	43525	44515	44515
Total Imports (1000 HEAD)	1	1	2	2	1	1
Total Supply (1000 HEAD)	80678	80678	81377	81377	81866	81866
Total Exports (1000 HEAD)	9	9	5	5	5	5
Sow Slaughter (1000 HEAD)	140	140	140	140	140	140
Other Slaughter (1000 HEAD)	41460	41460	42710	42710	44110	44110
Total Slaughter (1000 HEAD)	41600	41600	42850	42850	44250	44250
Loss and Residual (1000 HEAD)	1219	1219	1172	1172	1136	1136
Ending Inventories (1000 HEAD)	37850	37850	37350	37350	36475	36475
Total Distribution (1000 HEAD)	80678	80678	81377	81377	81866	81866
(1000 HEAD)						

3.1 – Production

Pig Numbers

Post forecasts the Brazilian pig crop to increase only two percent in 2021. This forecast is due to higher costs of production caused by a spike in animal feed costs. Factors supporting the two percent growth in the pig crop include high export demand expectations, mainly due to the continued impact of African Swine Fever outbreaks in the Chinese and several European herds. In addition, there is a forecast three percent growth in domestic consumption, the result of the high prices for beef, the preferred source of protein for Brazilians. 2021 should be another record year for production, following a record in 2020. Post estimates pig crop growth for 2020 at three percent.

The following map shows the top three producing states and municipalities, 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. 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

Post forecasts production costs will remain high in 2021, due to elevated prices of animal feed. 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.

Prices for Santa Catarina State - R\$/kilogram													
	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
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
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
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

Data Source: EMBRAPA Avian and Swine Central Intelligence

EMBRAPA's index for swine production costs, called *ICPSuínos*, shows that nutrition (feed) costs increased a cumulative 42.05 percent in 2020 in Santa Catarina. Swine producers saw their total cost of production increase a cumulative 47.28 percent in the year, mainly due to the cost of animal feed. In the Brazilian pork industry, as most of production is done intensively, nutrition costs accounted for 81.61 percent of total costs in 2020. For 2021, Post believes that the costs of production will be near the same levels of 2020.

Swine Production Costs - 2020		
Item	Value	Percentage of total
Nutrition (feed)	+42.05%	81.61%
Maintenance/ Financial/ Funrural	+1.66%	3.55%
Transportation	+0.09%	2.90%
Labor	0.00%	2.90%
Capital Cost	+0.98%	2.90%
Others	+0.98%	2.27%
Depreciation	+0.51%	2.12%
Sanity	+0.97%	1.31%
Eletric Energy/ Heating	+0.04%	0.44%
Total	+47.28%	100%

Data Source: EMBRAPA Swine and Poultry, ICPSuínos

Regarding the costs of animal feed, the governor of Santa Catarina held a meeting with the Ministry of Agriculture on February 1st, 2021 to request a replenishment of Conab's stocks of corn in the state, which per the Governor are "significantly below the minimum necessary to provide security for our [livestock and dairy] producers." The state government is looking at ways to facilitate corn imports into Brazil. Santa Catarina is important in the Brazilian swine industry as it is an OIE foot-and-mouth disease free zone without vaccination since 2007 – the only state in Brazil with such a status. Santa Catarina, along with Rio Grande do Sul state, is free of classical swine fever.

In 2020 there was wide variation in prices paid to producers in Santa Catarina. In Chapecó, the reference city for the state of Santa Catarina for live swine, in the first semester, integrated producers received stable prices, whereas in the third and fourth quarters prices received increased. Independent producers, however, were more affected by market conditions, suffering the first semester with decreased demand due to reduced social gatherings caused by the pandemic, but in the second semester saw higher prices due to exports. Despite the high costs of animal feed, the industry is expected to expand production due to the high premiums paid for exports.

3.2 – Trade

For 2021, Post forecasts that Brazil will maintain the level of live swine exports and imports as previous years. Despite being among the top five producers of swine in the world, Brazil does not focus its trading operations on exporting live swine. Brazil primarily sends hogs to its most important traditional market, Argentina. Brazilian imports of live swine are focused on genetic improvement and the United States is the key supplier to the Brazilian market.

Exports

Brazil ranked as the eight largest exporter of live hogs in 2019 (the most recent year of complete data – competitor data is not available for 2020 yet). In 2020, the estimate is that Brazil ranked as the ninth largest exporter.

Brazil Exports to the World
Commodity: 0103, Swine, Live
 Annual Series

Partner	Unit	2015	2016	2017	2018	2019	2020
Argentina	USD	1.284.950,00	1.460.607,00	2.931.910,00	4.243.501,00	5.333.750,00	2.537.214,00
Bolivia	USD	82.833,00	229.085,00	555.494,00	162.828,00	302.351,00	238.648,00
Canada	USD	-	5.748,00	-	-	-	-
Mexico	USD	-	-	-	-	997,00	-
Norway	USD	-	-	-	518,00	319,00	69,00
Panama	USD	-	-	-	-	238,00	-
Paraguay	USD	885.173,00	523.160,00	690.939,00	695.913,00	832.943,00	1.075.916,00
United States	USD	-	3.382,00	-	-	-	-
Uruguay	USD	-	-	-	-	49.676,00	-
Total	USD	2.252.956,00	2.221.982,00	4.178.343,00	5.102.760,00	6.520.274,00	3.851.847,00

Data Source: Brazil Ministry of Economy, via Trade Data Monitor

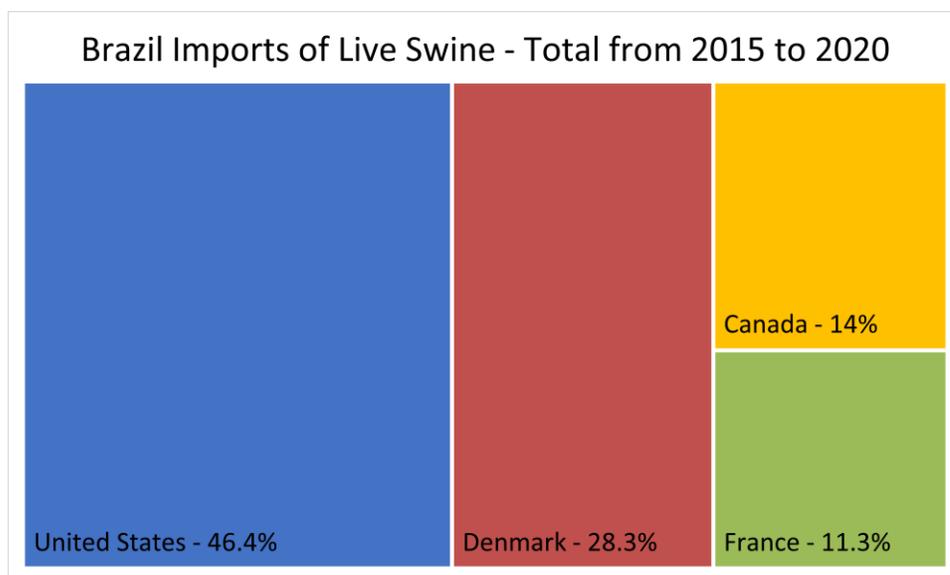
When looking into the export data in more detail, one notices that Brazil exports both live animals for slaughter as well as for purebred breeding for genetic improvement. From the traditional markets where Brazil exports live swine, Argentina corresponds to 73.7 percent all exports in the past six years. In 2020, there was a significant decrease in Argentina’s imports of live swine, which Post believes was likely a consequence of the pandemic. Paraguay, another of Brazil’s Mercosur partners, is the second largest market with 19.50 percent of the total over the same period. Considering the location of the top three swine producing Brazilian states, marked in yellow on map below, and the main export markets, it becomes clear that physical proximity, along with import duties, are the key factors to these purchases. Argentina has only imported from a different supplier once in six years, and Paraguay used Brazil as its sole supplier in the period.



Source: IBGE

Imports

In 2019, Brazil ranked in 18th position in global imports of live swine, and for 2020 it is estimated it ranked in the 17th position, demonstrating that importing live swine is not a key component of Brazil's trade balance. 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 accounts for over 46 percent of total imports over the past six years.



Data Source: Brazil Ministry of Economy, via Trade Data Monitor

4. PORK

Meat, Swine Market Year Begins	2019		2020		2021	
	Jan 2019		Jan 2020		Jan 2021	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Slaughter (Reference) (1000 HEAD)	41600	41600	42850	42850	44250	44250
Beginning Stocks (1000 MT CWE)	0	0	0	0	0	0
Production (1000 MT CWE)	3975	3975	4125	4125	4250	4250
Total Imports (1000 MT CWE)	2	2	2	2	5	5
Total Supply (1000 MT CWE)	3977	3977	4127	4127	4255	4255
Total Exports (1000 MT CWE)	861	861	1178	1178	1230	1230
Human Dom. Consumption (1000 MT CWE)	3116	3116	2949	2949	3025	3025
Other Use, Losses (1000 MT CWE)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT CWE)	3116	3116	2949	2949	3025	3025
Ending Stocks (1000 MT CWE)	0	0	0	0	0	0
Total Distribution (1000 MT CWE)	3977	3977	4127	4127	4255	4255

(1000 HEAD) ,(1000 MT CWE)

4.1 – Production

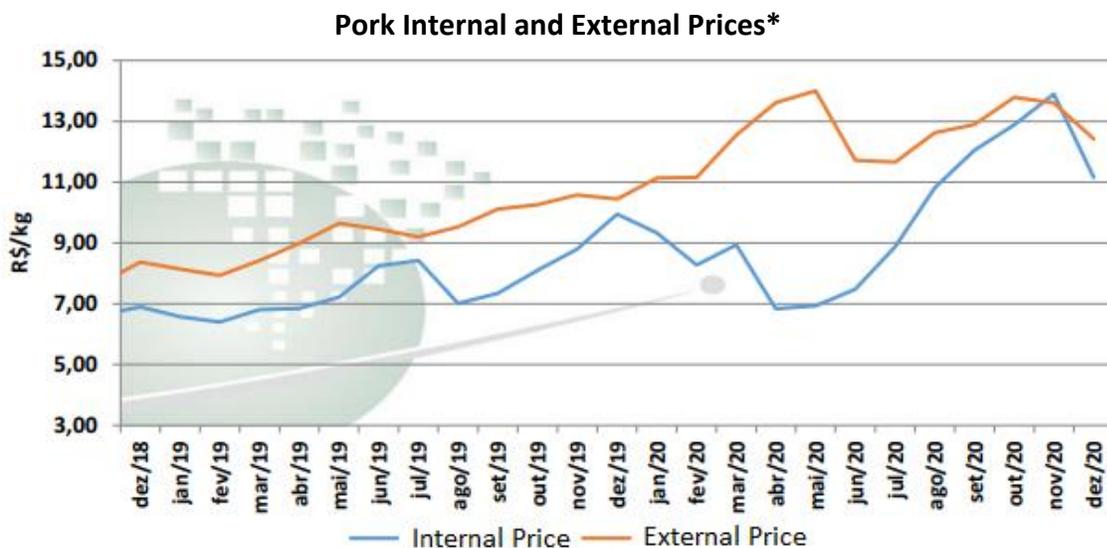
Post estimates that pork production for 2020 grew at three percent. Post forecasts production will also grow at three percent in 2021, reaching 4.25 million tons in Carcass Weight Equivalent (CWE). The Brazilian Association of Animal Protein (ABPA) recently published its forecast production for 2021 at 4.4 million tons CWE with their assessment of the swine industry slightly more optimistic than Post's. The Post forecast is 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 96 kilograms CWE per slaughtered pig.

Since the outbreak of African Swine Fever 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 the unfilled demand in China and Hong Kong. Producers benefited from a favorable exchange rate in 2020 for most of the year and have targeted production for foreign markets. The industry is investing in order to take full advantage of current overseas demand while domestic demand is limited by the impact of international prices. In 2020, the Brazilian Association of Animal Protein (ABPA) reports that 15 new exporting plants received authorization to export to destinations such as Chile, the Philippines, Singapore, Vietnam, and South Africa.

4.2 – Consumption

Post estimates 2020 domestic consumption at 2.9 million tons (CWE) due to an increase in internal market prices, which drove consumers away from purchasing pork. Post forecasts 2021 domestic demand to reflect three percent growth due to increased animal feed costs driving pork prices up. Post forecasts domestic pork consumption to represent 15 percent of total domestic meat consumption. The Brazilian Association of Animal Protein (ABPA) also forecasts domestic growth at three percent. The outlook of economic recovery and the possibility of reinstating payment of the Corona voucher in 2021 are driving the forecasted increase in consumption.

Pork demand was affected by the reduced social gatherings in the first months of the pandemic in Brazil. This was a result of the closure of many traditional domestic markets for pork products, such as restaurants, bars, diners, hotels, and other similar businesses. This resulted in an increased supply of these products in the consumer retail market, resulting in lower prices for consumers. As prices decreased, local sales rose, as consumers switched from high-priced beef. Beef is typically the preferred source of protein in Brazil. As the pandemic persisted, less strict social gathering rules came into force – alleviating the burden on producers. However, more economic insecurity arose, as unemployment began to climb. 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.



Data source: CEPEA, Swine Bulletin, December 2020

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

January, 2021 was marked by decreased demand for pork, as normally expected this time of year. Domestically, demand typically drops due to the end of the holiday season in which families purchase more pork. Internationally, a seasonal drop off in China’s import demand is also expected. In order to benefit from the increased demand for the Chinese New Year, exporters sent cargos to the region before the end of 2020. This reduced demand caused prices to drop 4 percent, according to the Center for Advanced Studies in Applied Economics of the University of São Paulo (CEPEA) when compared to December 2020. Although expected, this reduction left slaughterhouses and producers operating with excess supply.

4.3 – Trade

Exports

Post forecasts a four percent increase in exports in 2021. This forecast is down from the previous Post forecast as Post expects continuation of the current scenario, especially high costs of feed. Despite China’s efforts to rebuild its herd after the African Swine Fever (ASF) outbreak in 2018, the persistence of ASF is maintaining import demand 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. From this record export volume, China accounted for a little over half of total pork shipments, followed by Hong Kong, with 16.4 percent of total exports, and Singapore, with total 5.2 of the total exports. Chinese imports increased 106 percent in volume when comparing

to 2019. Other countries that also increased purchases of Brazilian pork were Vietnam, which grew 198 percent 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 as a whole accounted for 80 percent of total exports, a 67 percent increase in volume from 2019. Market analysts in Brazil believe demand from Asia for pork and poultry will remain strong in 2021. There is also an expectation that the import quota for Mexico be renewed in 2021.

Furthermore, the Brazilian industry is monitoring the outbreak of ASF in Germany. Currently ASF is reportedly only found in wild boars. Germany was the fourth largest supplier to the Chinese pork market in 2020, and is one of Brazil’s most important competitors.

Brazil Exports to the World
Commodity: PSD-Meat, Swine,
Annual Series

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

Data Source: Brazil Ministry of Economy via Trade Data Monitor

Imports

Brazil is not a major importer of pork. In 2020, it ranked 37th in global imports of pork, whereas it ranked in fourth place in exports, falling behind only the EU, the United States, and Canada. In 2020, Brazil only imported pork from five countries, summing a total 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.

Brazil Imports from the World
Commodity: PSD-Meat, Swine,
 Annual Series

Partner Country	Unit	2015	2016	2017	2018	2019	2020
Italy	USD	5.615.136,00	6.108.361,00	8.354.888,00	7.697.877,00	8.680.851,00	8.372.233,00
Spain	USD	4.819.722,00	5.568.157,00	6.396.232,00	7.868.818,00	7.485.112,00	5.540.643,00
Portugal	USD	541.470,00	505.616,00	478.034,00	596.218,00	661.832,00	509.680,00
Paraguay	USD	-	-	-	-	-	363.477,00
France	USD	50.659,00	15.707,00	22.546,00	29.341,00	22.486,00	47.377,00
Hungary	USD	-	-	2.228,00	-	-	-
Argentina	USD	27.124,00	-	-	1.016,00	-	-
Brazil	USD	-	-	-	-	30,00	-
Chile	USD	108.092,00	72.731,00	333.075,00	-	-	-
TOTAL	USD	11.162.203,00	12.270.572,00	15.587.003,00	16.193.270,00	16.850.311,00	14.833.410,00

Data Source: Brazil Ministry of Economy via Trade

Attachments:

No Attachments