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Prepared By: Saulo Nogueira

Approved By: Nicole Podesta

Report Highlights:

Post forecasts that milk production in 2022 will reduce about five percent, to 23.7 million metric tons (MMT), while in 2023 it is expected to grow around 3.6 percent, reaching 24.5 MMT. Milk consumption in Brazil is expected to fall around four percent, but recover in 2023 by three percent. For dairy products like cheese, milk powder and butter, production is set to reduce in 2022 by between one and five percent, due to elevated production costs, low milk availability and reduced consumer demand. Part of this fall in production will be recovered in 2023, as milk availability increases and consumer demand expands. The consumption of such products will experience a drop between three to six percent in 2022, but is expected to recover in 2023. The Brazilian dairy sector will continue facing the challenges of high production costs in 2023, as well as unpredictable weather and economic conditions.

Fluid Milk

Dairy, Milk, Fluid	2021		2022		2023	
Market Begin Year	Jan 2021		Jan 2022		Jan 2023	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Cows In Milk	16646	16646	16896	16896	0	17065
Cows Milk Production	24845	24845	25095	23660	0	24500
Other Milk Production	2980	2980	3004	2970	0	2980
Total Production	27825	27825	28099	26630	0	27480
Other Imports	0	0	0	0	0	1
Total Imports	0	0	0	0	0	1
Total Supply	27825	27825	28099	26630	0	27481
Other Exports	0	12	0	12	0	12
Total Exports	0	12	0	12	0	12
Fluid Use Dom. Consum.	11120	11120	11231	10564	0	10874
Factory Use Consum.	16510	16498	16668	15854	0	16395
Feed Use Dom. Consum.	195	195	200	200	0	200
Total Dom. Consumption	27825	27813	28099	26618	0	27469
Total Distribution	27825	27825	28099	26630	0	27481

Production, Supply, and Distribution

Units: 1000 MT (except Cows in milk: 1000 Heads).

Product classification HTS: 0401.10; 0401.20.

Note: PS&D data for fluid milk are reported in 1,000 metric tons and not in 1,000 kiloliters. One liter of cow's milk weighs approximately 1.03 kg.

Production

Post estimates milk production in 2022 will reduce by around five percent, to 23.7 million metric tons (MMT). In 2023, on the other hand, production is expected to grow around 3.6 percent, reaching 24.5 MMT. Brazil's milk production tends to follow the cyclical weather patterns that impact pasture conditions, which is the main cattle feed used in Brazil (grass or grazed forage), especially in open pasture and semi-confinement systems. Milk producers have a wide range of production practices and management strategies. Farm systems vary from low input grazing to high input confinement systems. Typically, there is a fall in production during the Brazilian autumn months, i.e. from April until June, due to the dry season that results in poorer pasture conditions. Conversely, milk production is greater during the summer months when heavier rainfall provides abundant pasturelands.

In calendar year 2022, milk production has followed a pattern similar to that of 2021, yet

at lower volumes (around eight percent lower), as shown in the graph below. The exception has been from June to August, when production in 2022 grew faster than in 2021. The overall fall in production in 2022 is due unfavorable climatic conditions that resulted in poorer pasture conditions, as well as lower consumer demand, the standstill of the economy, low consumer disposable income and elevated milk retail prices. Although milk production in 2023 is expected to grow, producers will face difficulties due to elevated production costs, including animal feed. Climatic effects of *La Ninã* may also impact pasture production, though experts though it is expected to predict that it will be milder in 2023 than in 2022.



Figure 1: Milk Supply by Month 2020-2022

Data source: Milkpoint. Prepared by OAA - Brasilia.

Herd Size

Brazil's cow herd size has been recovering since 2021, after falling numbers from 2013-2021. In 2022, the size of the milk cow herd is expected to increase around 1.5 percent, to around 16.9 million head. In 2023, the herd is expected to increase around one percent, reaching around 17 million head. The higher prices of milk in 2022 are providing incentives for ranchers to increase their quantities of cows. (For a more detailed explanation on the cow herd dynamics see 2021 Brazil Annual GAIN Report on Livestock - BR2021-0032)

One of the main challenges faced by Brazilian cattle producers has been inflation. For milk and dairy producers, the costs increased for feed (mainly corn and soybeans), fertilizers, diesel, electric energy, and transportation costs. The impact of the rising feed costs has been large, especially to milk producers that use semi- or fully confined

production systems, while farmers that use open pastures for grazing did not experience this rise in costs for feeding their cows. As reported in the previous Brazil Dairy GAIN Report (BR2021-0042), Post observed in the State of Paraná that dairy farmers were using feed other than corn or soybeans due to the rising costs, most considering different forage types that are grown in the region. The impact of inflation has even forced a portion of small milk producers to abandon the activity because they are operating at a loss/deficit, while others are selling their cows to pay their debts. This has been the case especially in the south of Brazil, where the higher land costs and opportunity-costs of lands are making farmers switch from cattle raising/milk production to growing crops. Soybeans and corn are easier to grow and export, global demand is less volatile and high, and prices of these crops are currently at high levels.

Regional Production and Productivity

Milk is produced in all states, across the five regions of Brazil, as shown in the map below. However, most of the production - in 2021, around 67 percent - is concentrated in the South and Southeast regions, the darker colored states of the map. According to the Brazilian Institute of Geography and Statistics (IBGE), total milk production in 2021 was 35.3 million liters (34.2 MMT), an increase of 13 percent compared to the previous year. In 2021, the South produced 11.9 million liters of cow milk, which is 34 percent of national production, while the Southeast produced a similar amount, amounting to around 34 percent of national production. The southeastern state of Minas Gerais is Brazil's largest milk producer, accounting for 28.4 percent of total milk production in 2021. Paraná and Rio Grande do Sul accounted for 12.7 percent and 12.4 percent, respectively.

Shading according to quantity of milk produced.

Region	Million Liters	Participation
Southeast	11,954	34%
Northeast	5,547	16%
North	1,859	5%
Center-West	3,982	11%
South	11,963	34%
Total	35,305	-

Figure 2: Milk Production by Region in 2021

Data source: IBGE







Data source: IBGE.

Figure 4: Milk Production by State

Data Source: IBGE, 2022. Prepared by OAA – Brasilia.

There are currently an estimated 1,822 dairies in Brazil. The state of Minas Gerais has the largest number of dairies, as well as some of the largest operations in the country, with farm sizes averaging 100 hectares. In contrast, the state of Parana has less than half the number of large operations as Minas Gerais. Rio Grande do Sul is the third-largest milk-producing state by volume, due to a large number of medium and small properties, where dairy farms have an average size of 30 hectares.

Figure 5: Milk Productivity by Region

Region	Liters/head
Region	per day
South	10.81
Southeast	6.58
Center-West	4.70
Northeast	2.53
North	1.70
Brazil	5.88

The productivity of cows varies considerably depending on the region of the country. While in the south, each cow produced an average 10.8 liters per day in 2021, in the north cows generated merely 1.7 liters per day each. Different breeds, pasture availability and quality, supplemental feed and production techniques explain these differences. According to IBGE, the average productivity per cow in Brazil (liter/animal/day) has been rising since 2012 and

Data source: IBGE was 5.9 liters per cow per day in 2021.

Cow Breeds

According to research done by Milkpoint, a dairy sector analysis website, in 2022, milk producers prefer the Holstein breed, which is present in 75 of the 100 largest farms in the country. The Girolando breed is used by 20 of the top 100 dairies. A quarter of the 100 biggest dairies report using more than one breed on their farm. With improving genetics and the use of the Holstein breed, productivity is on the rise. Brazil is not a significant importer of live cattle, but a major importer of beef and dairy cattle genetics, and the United States has been the traditional supplier.



Figure 6: Cow Breeds in Top 100 Producers in Brazil

Data source: Milkpoint (Top 100, 2022). Prepared by OAA – Brasilia.

Brazil imports a noticeable amount of cattle genetics, including milk-cow genetics. In 2021, imports grew eight percent in relation to 2020. Most of the milk-cow genetics imported are of Holstein breed, followed by Jersey. The United States is the main supplier of such genetics. Such improvements in cattle genetics result in higher productivity of milk cows.

Figure 7: Cow Breeds by Region



Source: Milkpoint. Prepared by OAA, Brasilia.

Around 64 percent of the dairy farms in Brazil have confinement operations, while 14 percent have a pasture-based system, and 22 percent have mixed systems ('semi-confinado'). In the Northeast region, cows generally have access to pasture, while in the South and Southeast regions, where most Brazilian milk is produced, it is more common to use a confined feeding system, with animals not exposed to grazing throughout the year. Dairy cows on large properties located in the South and Southeast regions are commonly housed in free-stall barns. The compost dairy barn is another system used in many dairy farms and some experts recommend this as a housing method to prevent mastitis. Other farms use the more economical system of loose housing, which is defined as a system where animals are kept loose except for milking and at the time of treatment.

The Brazilian dairy sector has undergone a consolidation process in recent years, which continued during the pandemic crisis. The pie chart below shows the 10 largest dairy producers in terms of milk acquisition in 2021. Recently, the consolidation of national companies allowed them to outgrow the large French multinational Nestle.



Figure 8: Fluid Milk Acquisition by the Main Dairy Producers



Prices



Figure 9: Average Price of Milk Paid to Producers

Data source: CEPEA/Esalq. Prepared by OAA - Brasilia.

Milk Producers

Historically, milk prices paid to producers follow seasonality, related to rainfall and, consequently, the availability of pastures. As shown in the graph above, prices received by milk producers have grown slowly since the onset of the pandemic crisis. Only in the third quarter of 2022 did prices increase significantly: peaking at R\$ 3.5 per liter. The forces behind this recent increase are the low availability of milk in the market and the increasing demand from the dairy industry.

<u>Retail</u>

The graph showing the retail price of UHT milk, adjusted for inflation, shows that the real prices in 2022 have been increasing steadily, but reduced since August. Currently milk prices to consumers are at very high levels, thereby discouraging its consumption.



Figure 10: UHT Milk Retail Price

Data source: CEPEA/Esalq. Prepared by OAA - Brasilia.

Consumption

Post estimates fluid milk consumption in 2022 will fall by around five percent, to 26.6 MMT, which is lower than the forecast from Post's previous projection. For 2023, Post forecasts fluid milk consumption to increase by over 3 percent year-over-year, to 27.5 MMT, considering that Brazil is still likely to continue recovering from its economic recession.

Alternative Milk Drinks – As reported in the previous Gain report, Brazilians have been consuming more alternative milk categories, such as the "dairy drinks". These are

products composed of no more than 50 percent fluid milk and contain flavorful ingredients, such as chocolate, strawberry flavor, starch, or fruit juice, in the formulation. This segment should continue growing in 2022 and 2023. In fact, retailers have been dedicating more shelf space to these products instead of fluid milk.

Condensed Milk - This segment has an important share in the Brazilian dairy sector, using over 1 billion liters of milk per year for its production. Although its consumption fell slightly in 2021 and is expected to follow the same trend in 2022, it is an important ingredient used in bakeries and dessert manufacturers.

Dairy Trade



Figure 11: Dairy Trade Balance

Data source: Secretariat of Foreign Trade (Secex). Prepared by OAA - Brasilia.

Brazil is a net importer of dairy products, as shown in the graph above. The trade deficit grows during winter periods as pasture conditions become worse, thereby reducing the amount of milk produced by cows. The need to import dairy products increases during such periods. Brazil's trade balance for dairy products has been negative for many years, although in 2021 the deficit was smaller (see graph below). However, this reduction in the deficit was due to smaller import values, rather than due to growing exports.



Figure 12: Main Dairy Imports by Quarter

Data source: Trade Data Monitor (TDM), LLC. Prepared by OAA - Brasilia.

Milk powder is the main type of imported dairy product, as shown in the graph above. Besides being practical and versatile, it normally has lower prices abroad, which makes it appealing to import. The current peak in milk powder imports is mainly due to the elevated prices of dairy products in the Brazilian market. The second most imported dairy product is cheese. The other imports are composed of non-fat dry milk, whey protein and butter.

Milk Trade

Brazil imports and exports insignificant volumes of fluid milk. Small volumes of packaged UHT milk imported from Argentina and Uruguay, with 42 tons imported in 2021. Milk production in Brazil is lower-priced and logistics pose challenges to foreigners in sending fresh milk to Brazilian industry or retail. In 2022, the volume should double to 84 tons. In 2023, there is much uncertainty as to the economy's performance, and most analysts suggest that there will be almost no change in volume of milk imports.

Meanwhile, Brazil exports of milk have been rising. In 2022, milk exports should reach 12 thousand tons, which is 2.5 percent higher than the previous year. Export volumes have been growing constantly since 2018, when Brazil exported 6.3 thousand tons. As for 2023, the export volume should be similar to 2022's volume, with any increase likely to be small. If milk production does in fact grow in 2023, a part will be destinated for foreign markets, as the domestic market is unlikely to absorb additional volumes due to the consumer income availability. Production costs remain elevated in 2022 and will take

several months to lower. Brazil exports milk cream (classification HS 0401.10), which can be considered a type of 'fluid milk', however, it is not considered as part of this 'Fluid milk' section's category. Nonetheless, Brazil exported on average 8 thousand MT per year of milk cream, to numerous, mainly developing, countries over the past five years.





Data source: TDM. Prepared by OAA - Brasilia.

Stocks

Current milk and dairy product stocks held by major dairy companies are considered operating stocks to meet short-term demand – usually between two to four months' worth of stocks. There are no government-held stocks of milk or milk products in Brazil.

Brazilian Dairy Industry

Most dairy manufacturers do not focus on a single product, but rather have around three types of dairy products that they produce, according to the market conditions. This flexibility is essential, given that consumer demand is relatively elastic according to price changes, which in turn is dependent on variables that are hard to predict, such as prices of animal feed, electricity, transportation costs, exchange rates, among others. In other words, the dairy industry plans their production for the short-term, and adapts output of the production lines according to the market's behavior. Most maintain around three to four months' worth of products stocks, which they can administer according to the demand from sales channels.

Figure 14: Main Dairy Imports by Month



Data source: TDM. Prepared by OAA – Brasilia.

As milk is the main ingredient for producing dairy products, the price of milk is a determining for the industry's decisions regarding production volumes, pricing, and, consequently, profitability. By acquiring milk at reasonable costs, dairy producers can offer different products also at reasonable prices. On the other hand, if the price of milk is high, the industry will need to increase its prices of dairy products it produces. As most dairy goods have higher price elasticity, raising prices of dairy goods can cause noticeable reduction in consumer demand.

Brazil's Economy in 2022 and 2023

Although Brazil's economy is recovering from the impact of the pandemic crisis, it has been doing so at a pace slower than expected. Although the country's GDP growth in 2022 is expected to be around 1.5 percent, many families continue having financial difficulties. Many Brazilians are still paying off their debts from the previous couple of years, and family income is not recovering to pre-pandemic levels. According to the Ministry of Economy, although unemployment is falling in the country, most new jobs offer lower salaries than before the pandemic crisis. The main programs that allowed families to spend on dairy products were government support programs, first the 'Coronavoucher' and then the current 'Auxílio Brasil' program, which offers families R\$ 600 per month. The new Brazilian government has stated that it will extend this program through until the end of 2023.

Another issue has been inflation in Brazil. The country has had very high inflation rates since 2020, especially for food items. Production costs have increased in all sectors,

forcing companies to increase the final price of their goods. Families are therefore unable to consume as much as before, including in terms of food. In fact, under-nourishment and famine increased in 2022 in Brazil, mainly among the poor class.

In 2023, according to different economic/financial research firms, the Brazilian economy is expected to grow around 2.2 percent. Inflation is expected to fall to around five percent, from the 2022 level of 6.2 percent. Regardless, high production costs will continue being a challenge to the private sector, including the dairy industry. The exchange rate is expected to remain around Real \$ 5 per dollar, compared to around Real \$ 5.2 in 2022, meaning there should be almost no impact on imports and exports of dairy products.

Cheese

Dairy, Cheese	2021		2022		2023	
Market Begin Year	Jan 2021		Jan 2022		Jan 2023	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	0	0	0	0	0	0
Production	790	790	795	744	0	768
Other Imports	32	32	31	34	0	36
Total Imports	32	32	31	34	0	36
Total Supply	822	822	826	778	0	804
Other Exports	5	5	4	5	0	5
Total Exports	5	5	4	5	0	5
Human Dom. Consumption	817	817	822	773	0	799
Other Use, Losses	0	0	0	0	0	0
Total Dom. Consumption	817	817	822	773	0	799
Total Use	822	822	826	778	0	804
Ending Stocks	0	0	0	0	0	0
Total Distribution	822	822	826	778	0	804

Production, Supply, and Distribution

Units in 1000 MT.

Note: cheese classification HTS: 0406.

Production

Note: There are no official statistics on production and consumption of cheese in Brazil. FAS/Brasilia production estimates for cheese are based on trade sources and surveys of sector associations.

Post estimates cheese production in CY 2022 to fall 5.8 percent to 744 thousand MT. In 2023, production is projected to recover some of the reduction, by increasing 3.2 percent,

reaching 768 thousand MT. In recent years, the increase in cheese production was mainly driven by the food service and restaurant sectors. Also, until 2019, cheese prices were more affordable. However, the pandemic crisis caused noticeable inflation and cheese prices became unaffordable to many households.

One of the main factors that allowed many lower-income households to maintain some cheese consumption, despite the economic recession, was the government's financial support to such families during the pandemic crisis. Although production remained stable in 2021, due to the increased domestic demand, in 2022 cheese production became unsustainable due to elevated costs and reducing demand. Cheese production is expected to fall almost six percent this year due to the elevated milk costs, high general production costs and the economic difficulties faced by most Brazilian households. Normally, cheese production uses around 35 percent of all milk production in the country.

Nonetheless, imports are expected to make up for some of the supply in the Brazilian market. Indeed, cheese imports are expected to grow around 6 percent in 2022, and a similar amount in 2023. The family subsidy 'Auxilio Brasil' distributed by the current government is set to continue in the next administration in 2023. This should allow some households to have disposable resources to purchase dairy products.

Consumption

Currently, Brazilians consume around 5.2 kilograms of cheese per person/year, which is almost 40 percent below the global average (according to the UN Food and Agriculture Organization - FAO), meaning there is much potential for consumption growth.

There is a preference for fresh white cheeses in Brazil. Over recent years, fast food service industries have increased demand for "specialty" cheeses (gruyere, camembert, brie, gouda, and cheddar). Demand from the Brazilian fast-food industry increased in 2021, after a drop due to the pandemic's lockdowns that occurred throughout the country. However, their sales recovered – to pre-pandemic levels - since then as these establishments are more affordable to the lower-middle class, and the economic crisis reduced income available. Processed cheeses are also well consumed in Brazil, especially the "requeijão," a type of spreadable, pasteurized processed cheese. It has a variety of uses, including for breakfast, dinner meals and snacks. The other popular types of cheeses in Brazil are mozzarella, "queijo prato" (plate cheese), and "minas frescal" (fresh white cheese). Mozzarella remains the most popular type of maturated and unprocessed cheese consumed in Brazil, accounting for 46 percent of total unprocessed cheese sales in volume. Queijo prato is a Brazilian soft cheese, which is one of the most popular cheeses in Brazil, used especially in sandwiches and lunch dishes.



'Requeijão'

There is fierce competition within the cheese sector, characterized by a high degree of fragmentation. The bulk of sales are concentrated in products offering only low margins, such as mozzarella, "queijo prato", and other semi-hard cheeses, which together account for around 70 percent of all sales. This has stimulated manufacturers to invest in value-added products such as unprocessed cheese fortified with fiber or probiotics and reduced-fat spreadable processed cheese fortified with fiber.

The cheese sector in Brazil is dominated by domestic manufacturers that are launching new products in line with Brazilian needs. In recent years, the industry has reduced product size, for example, in order to make them more affordable to consumers, and to facilitate its consumption in smaller quantities.

Some cheese manufacturers are strengthening their business through acquisitions or joint ventures. This is likely to stimulate small and medium-sized companies to improve their operations by investing in machinery, broadening distribution channels, reducing costs and diversifying their product portfolio. Some of these medium-sized companies are investing in new types of artisanal cheeses, such as:

- "Canastra," a hard cheese of Minas Gerais with geographical indication recognition;
- "Tulha," a hard cheese with a red peel and aged 12 months; and
- "Giramundo," a sweet artisanal cheese with a red peel colored by beets and aged 5 months.



Figure 15: Cheese Sales by Type

Data Source: Euromonitor International, 2021.

Producers of artisanal cheese faced several challenges during the pandemic crisis, as production costs increased and consumer disposable income fell. From 2022 onwards, demand for such cheese is expected to grow slowly as family income experiences a slow recovery.

Prices

Cheese prices have increased considerably since the beginning of the pandemic crisis, with a 32 percent rise since January 2022, mainly due to the increasing cost of milk and other production costs (electricity, transportation, etc.). As shown in the graph below, prices of queijo prato, the second main cheese consumed in the country, increased around 20 percent between June and September of 2020, after which prices levelled off until the end of 2021 (at around R\$ 30 per kilogram). In 2022, however, prices began to increase, reaching a peak in July of R\$ 43 per kilogram. Prices have been on a downward ever since and R\$ 38 per kilogram in September. The market projection is for such prices to continue falling until the end of 2022.

Prices of mozzarella cheese, the most consumed cheese, followed a very similar pattern.



Figure 16: Cheese Prices in 2020-2002

Data source: CEPEA/Esalq. Prepared by OAA – Brasilia.

By adjusting the cheese prices for inflation, one notices how the real price changes behaved since 2020, as shown in the graph below. The real prices grew significantly in 2022, from R\$ 42 in January to R\$ 55 per kilogram in October, i.e. a 31 percent increase. Such an increase becomes burdensome for consumers in a year when the economy is not performing well, and many Brazilians face financial difficulties.

Figure 17: Cheese Retail Prices



It is worth noting that the prices of cheese held a similar pattern when converted to US dollars. The currency exchange remained relatively stable in 2022, so the changes in Reais are reflected directly in US dollars. On one hand, the rising prices of cheese provide an incentive for foreign producers to export to Brazil, as it would be more profitable. However, the Brazilian currency remains devalued, thereby making it expensive for Brazilians to purchase imported cheese.

Trade

Imports

Imported cheese makes up 4 percent of Brazil's total cheese supply. Post expects cheese imports in CY 2022 to reach 34 thousand MT, an increase of 6.3 percent from 2021. As explained above, slow economic recovery and elevated prices of cheese have prevented demand for cheese from growing in 2022. In 2023, imports are projected to increase around six percent, reaching 36 thousand MT. Argentina and Uruguay remain the main suppliers of cheese to Brazil, due to preferential tariff treatment within the MERCOSUL trade union. Cheese imports from Argentina and Uruguay accounted for 80 percent and 15 percent of market share, respectively, in January-October 2022. Most imports are of low-cost cheeses, mainly mozzarella, parmesan, and "prato" cheese. The United States supplies only a small amount of cheese imports, often bulk cheeses for further processing or high-valued cheeses for specialty stores in Brazil. Imports from the United States were 53 MT in 2021, and 35 MT so far in 2022 (January to October).

Figure 18: Cheese Imports



Data source: TDM. Prepared by OAA - Brasilia.

Over the past five years, Brazil imported an average of 30.5 thousand MT of cheese annually, valued at US\$ 130 million. As shown in the graph above, imports fell every year from 2016 to 2019, in part because of the devalued Real currency, which makes imported goods more expensive, but grew 7 percent in 2020 and 3 percent in 2021, due to the growing demand related to the economic recovery and growing food services. The current import statistics indicate that total cheese imports in 2022 will increase around 2 to 3 percent. As for 2023, Post estimates that cheese imports will continue this upward trend, increasing around 6 percent. The main reasons are the prospects of a growing economy, continuation of the subsidies for low-income families, and the suspension of the import tariff for cheese.

Imported cheese is often priced up around two to three times higher than domestic varieties. The high price of imported product from outside Mercosur is due to the 28 percent import tariff that importers pay, as well as the devalued Brazilian currency. However, since March 2022, the import tariff for mozzarella cheese was zeroed, as part of a measure taken by the GOB to tackle inflation (*Resolução Gecex 317/22*). This tariff suspension will remain until the end of 2022, which should provide a small incentive for imported cheese in the Brazilian market. The domestic cheese industry tried to revoke this decision in Congress, but did not succeed.

Exports

The Brazilian dairy sector is not a significant exporter in the global market, due to the high degree of fragmentation, lack of standardized products, as well as inability to compete at various price points. Companies perceive exporting as an occasional, opportunistic activity, depending on surplus product availability. Cheese is one of the main dairy products exported by Brazil, accounting for 21 percent of total dairy exports. On average, Brazil exported US\$ 19 million of cheese per year from 2017 to 2021, with values and volumes on an upward trend.



Figure 19: Cheese Exports

Data source: TDM. Prepared by OAA - Brasilia.

Cheese exports have been growing over the recent years, reaching 4.6 thousand MT in 2021, worth US\$ 23.1 million. Brazil's devalued currency, the Real, has facilitated cheese exports. Most products are of low-cost cheese, and exporters have targeted specific countries like Chile, Russia, and the United States. For 2022, considering the volume of cheese exported from January to October, Post expects exports to reach around 4.5 thousand MT. In 2023, cheese exports should remain relatively stable, yet the potential increase in valuation of the Brazilian currency may lead to a small reduction of such exports.

Stocks

There are no government stocks of cheese in Brazil.

Butter

Dairy, Butter	2021		202	22	2023	
Market Begin Year	Jan 2021		Jan 2	2022	Jan 2023	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	0	0	0	0	0	0
Production	82	82	83	81	0	82
Other Imports	7	7	4	5	0	7
Total Imports	7	7	4	5	0	7
Total Supply	89	89	87	86	0	89
Other Exports	1	1	1	2	0	2
Total Exports	1	1	1	2	0	2
Domestic Consumption	88	88	86	84	0	87
Total Use	89	89	87	86	0	89
Ending Stocks	0	0	0	0	0	0
Total Distribution	89	89	87	86	0	89

Production, Supply, and Distribution

Units in 1000 MT.

Note: Butter classification HTS: 0405.

Production

Note: There are no official statistics on production and consumption of butter in Brazil. FAS/Brasilia production estimates for butter are based on trade sources and surveys of sector associations.

In 2022, butter production is expected to reduce by 1.2 percent, reaching 81 thousand MT, due to reduced demand and lower availability of milk supplies in the market. The elevated cost of milk cost milk fat caused production costs of butter to also increase.

In 2023, production is expected to recover to the same level of 2021, i.e. 82 thousand MT, as demand recovers at households and food services. The expected increase in milk production, together with improving economic condition of the Brazilian economy, should generate greater demand for butter. This should provide an incentive for more production in 2023.

Consumption

The raw material for butter production is milk fat. Brazilian milk generally contains around three to 3.5 percent fat. Thus, the production of skim milk powder generates a surplus of fat, which is used to manufacture the processed cheese "requeijão", butter,

cream cheese, and sour cream. Even the production of long-life wholemilk (UHT milk) generates excess fat, since the product is standardized at around three percent fat. Brazil does not produce significant volumes of skim milk, as whole milk accounts for about 75 percent of milk consumed in the country. As the production of skim milk is limited, the supply of fat to manufacture butter and other items is restricted. Brazil is a large consumer of requeijão, and milk fat is primarily destined to produce this processed cheese spread.



Figure 20: Butter Prices in 2020-2022

Data source: CEPEA/Esalq. Prepared by OAA – Brasilia.

As reported in the previous Brazil Dairy GAIN report (<u>BR2021-0042</u>), demand and sales of butter are projected to fall, by around 4.5 percent, reaching 84 MT. Reduction in consumption is primarily due to the high production costs and prices of butter. Indeed, as shown in the graph above, prices of butter have grown in 2022, from R\$ 32 per kilogram in January to R\$ 40 per kilogram in August, representing a 25 percent increase.

In 2023, consumption is projected to increase, as there should be a slightly higher availability of butter due to larger production and higher imports. Post expects consumption to increase 3.5 percent to 87 MT.

Trade



Figure 20: Butter Imports

In 2022, Post expects imports of butter to be around 30 percent lower than in 2021, reaching around five thousand MT. This volume is close to the average of the past five years.

As for 2023, imports are expected to increase to around seven thousand MT, mainly due to the expected economic recovery. The main suppliers of butter to Brazil are neighboring Argentina and Uruguay, which accounted for 80 percent of total imports in 2022 (January to October), followed by France and New Zealand.

Brazil's export volumes of butter are insignificant. Brazil mainly produces butter for its own consumption and so there is

Data Source: TDM. Prepared by OAA – Brasilia. export. Nonetheless, butter exports have been growing. In 2022, the export volume of butter should be around 140 percent higher than 2021, i.e. around 1,200 tons. In 2023, export volumes should remain stable in relation to 2022, as the Brazilian currency is

expected to gain value.

Stocks

There are no government stocks of butter in Brazil.

Whole Milk Powder

Dairy, Dry Whole Milk Powder	2021		2022		2023	
Market Begin Year	Jan 2021		Jan 2022		Jan 2023	
Brazil	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	0	0	0	0	0	0
Production	594	595	595	568	0	586
Other Imports	52	32	32	66	0	64
Total Imports	52	32	32	66	0	64
Total Supply	646	627	627	634	0	650
Other Exports	6	6	6	6	0	6
Total Exports	6	6	6	6	0	6
Human Dom. Consumption	640	621	621	628	0	644
Other Use, Losses	0	0	0	0	0	0
Total Dom. Consumption	640	621	621	628	0	644
Total Use	646	627	627	634	0	650
Ending Stocks	0	0	0	0	0	0
Total Distribution	646	627	627	634	0	650

Production, Supply, and Distribution

Units in 1000 MT.

Note: Dry Whole Milk Powder classification HTS: 0402.21; 0402.29.

Production

Note: There are no official statistics on production and consumption of WMP in Brazil. FAS/Brasilia production estimates for WMP are based on trade sources and surveys of sector associations.

According to the performance indicators so far in 2022, production of whole milk powder (WMP) should fall by around four percent, reaching 568 thousand MT. Post estimates that part of this reduction should be recovered in 2023: increasing three percent to 586 thousand MT. The poor performance in 2022 is due to the elevated input costs and production costs, which act as a deterrent to producers from increasing their production. The demand should also be reduced due to the high retail prices of milk powder.

The production of whole milk powder is directly related to milk production, which is its main ingredient. And so, given that milk production in Brazil is expected to fall around 5 percent in 2022, the production of WMP should follow a similar trend. In 2021 and 2022, prices have been increasing given that overall production costs are increasing in Brazil, and due to a lower availability of milk in the market. As shown in the graph below, the

price of WMP increased significantly in 2022, from R\$ 25 per kg in January to R\$ 34 in August, a growth of 36 percent.



Figure 21: Milk Powder Prices

If the prices of WMP are adjusted for inflation, as shown in the graph below, it becomes clear that the real prices of milk powder advanced during 2022. Prices increased from R\$ 15.6 in January to R\$ 19.2 per kilogram in October, representing 23 percent growth.

Data source: CEPEA/Esalq. Prepared by OAA – Brasilia.



Figure 22: Milk Powder Retail Prices, adjusted for inflation

Data source: Milkpoint platform. Prepared by OAA - Brasilia.

Consumption

Post forecasts 2022 powdered milk consumption to decrease by 5.6 percent, to 604 thousand MT. As explained above, this decrease is due to the lack of economic growth of the country (thus lower consumer spending) and the high prices of WMP in the market. The average price in Reais is currently almost double the price at the beginning of the pandemic crisis. However, if the prices are adjusted for inflation, the prices are almost the same in March 2020 and October 2022. In other words, the retail price increases of whole milk powder in Brazil followed the general inflation trend. As food inflation in Brazil has been very high since the onset of the pandemic, the prices of milk powder have become very expensive to consumers.

Therefore, Post forecasts consumption to reduce by 5.6 percent in 2022. In contrast, in 2023 consumption should grow around 6 percent, reaching 644 thousand MT, as the economy recovers, and milk prices are expected to decrease gradually.

Trade

Whole milk powder continues to be the main dairy product imported by Brazil and is expected grow 27 percent, to around 66 thousand MT in 2022. As shown in the graph of the 'Dairy Trade' section of this report, whole milk powder is the dairy product most imported by Brazil, accounting for 45 percent of total dairy imports in 2022. For 2023, Post forecasts WMP imports to decrease by 3 percent, to 64 thousand MT, due to the growth in domestic production. Nonetheless, the competitiveness of milk powder imports are projected to be higher in 2023. The import volumes acquired from Argentina and Uruguay represented 94 percent of the total milk powder imported so far by Brazil in

2022. The United States provides a small amount of these imports, around 200 tons in 2021, while no imports were made until October of 2022.



Figure 23: Milk Powder WMP Imports

Data Source: TDM. Prepared by OAA - Brasilia.

Regarding exports, Brazil has so far in 2022 exported a similar amount to that of 2021 and is expected to finish the year with around 5.7 thousand MT. Brazil's exports of WMP go mainly to Algeria, which bought 91 percent of total exports in 2021, and 70 percent in 2022. The export volume should maintain a similar trend in 2023, unless there is a significant change in the Brazilian currency exchange.

Stocks

There are no government stocks of whole milk powder in Brazil.

Nonfat Dry Milk

Production, Supply, and Distribution								
Dairy, Milk, Nonfat Dry	2021		2022		2023			
Market Begin Year	Jan 2021		Jan 2022		Jan 2023			
Brazil	USDA	New	USDA	New	USDA	New		
Diazii	Official	Post	Official	Post	Official	Post		
Beginning Stocks	0	0	0	0	0	0		
Production	164	164	165	157	0	162		
Other Imports	24	24	18	22	0	22		
Total Imports	24	24	18	22	0	22		
Total Supply	188	188	183	179	0	184		
Other Exports	0	0	0	0	0	0		
Total Exports	0	0	0	0	0	0		
Human Dom.	188	188	183	179	0	184		
Consumption								
Other Use, Losses	0	0	0	0	0	0		
Total Dom.	188	188	183	179	0	184		
Consumption								
Total Use	188	188	183	179	0	184		
Ending Stocks	0	0	0	0	0	0		
Total Distribution	188	188	183	179	0	184		

Production, Supply, and Distribution

Units in 1000 MT.

Note: Nonfat Milk Powder classification HTS: 0402.10.

Production

Note: There are no official statistics on production and consumption of NFDM in Brazil. FAS/Brasilia production estimates for NFDM are based on trade sources and surveys of sector associations.

Post forecasts nonfat dry milk (NFDM) production in 2022 to be only 0.6 percent higher than 2021: 165 thousand MT. In 2021, production grew by 1.9 percent, to 164 thousand MT, mainly due to the country's economic recovery and the increase in consumer spending on food and the recovery of the food service industry after the period of lockdowns in 2020. In 2023, Post expects production to remain relatively unchanged, as the prospects for the economy are uncertain, and most likely remain stable.

Consumption

Post forecasts CY 2022 nonfat dry milk consumption to decrease by 2.7 percent, to 183 thousand MT, due to the slower than expected economic recovery, while families continue having limited disposable income. The rising prices of NFDM at the retail level in 2022 also resulted in a lower consumption. In October 2022, prices were R\$ 19 per kilogram, while in January it was R\$ 15.8, deflated for food prices, which represents a 20

percent increase. In 2023, consumption should remain almost unchanged, in line with the economic stability expected.

Trade

Post forecasts CY 2022 nonfat milk powder imports to decrease by eight percent, reaching 22 thousand MT, due to lower consumer demand. In 2023, imports are projected to remain stable at around 22 thousand MT. Although consumer spending should experience a mild increase, most of that change will be met by the increase in domestic production. Brazil's nonfat dry milk imports largely come from Argentina and Uruguay, which together account for 94 percent of total imports. Depending on the type, some companies import from the United States to meet specific demand, such as special milk for infant formulas or milk for special diets. Nonetheless, import volumes from the United States have been falling over recent years, and is expected to fall further in 2022, reaching merely 60 MT (equivalent to US\$ 170 thousand).

Brazil does not have a competitive industry or surplus NFDM supplies to export.



Figure 24: Non-fat Dry Milk Imports

Data Source: TDM. Prepared by OAA – Brasilia.

Stocks

There are no government stocks of nonfat dry milk in Brazil.

Attachments:

No Attachments