

# THE BRAZILIAN DAIRY SECTOR AND THEIR INTERACTIONS WITH INTERNATIONAL TRADE



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## EXECUTIVE SUMMARY

The Brazilian dairy sector, composed of segments that produce milk and their products (such as milk cream, powder milk, yogurt, butter, and cheese), is the 4th largest in the world. Domestically, in 2017, this chain produced R\$ 30.4 billion, making up 5.4% of the Gross Value of National Livestock Production and 17% of Brazilian livestock production. In the industrial stages, in 2016, the dairy sector generated over R\$ 54 billion in production. Currently, milk production is present throughout the national territory and in more than 99% of Brazilian municipalities, according to the Brazilian Institute of Geography and Statistics (IBGE).

Agricultural activity, especially milk production, has peculiar characteristics such as the perishability of milk itself and its derived products such as cheese and butter. For that reason, it is natural that this activity to be concentrated in regions close to dairy industries and large consumer markets. In this context, it is crucial to understand the distribution and location of milk production in different regions of the country. Therefore, to understand the relevance of this sector, it was important to draw the map of milk production in Brazil. In order to do so, different databases were used, taking information at both national and regional levels, state data are also used in some cases.

In the following sections, the dairy chain will be detail according to its links (agricultural or industrial) and its interactions with international trade (trade balance and trade barriers).

### AGRICULTURAL PRODUCTION OF MILK: MINAS GERAIS IS LEADING, BUT THE SOUTH GAIN SPACE

Brazil is currently the 4th largest milk-producer in the world and the dairy production chain represents 5.4% of the gross value of the agricultural sector and 17% of the livestock. Even though milk production is quite disperse (both in the number of producers and in the producing regions), it is important to highlight:

- The herd of milk cows is concentrated in the South and Southeast of the country (56% of the total), as Minas Gerais has the highest number of heads (5 million);

- Over the past two decades, the growth of the herd in the South (Santa Catarina and Paraná state), as well as in the North (Tocantins) and Northeast (Maranhão) regions has accelerated, showing a loss of participation in the Southeastern region. At the same time, this dynamic reveals the expansion of cattle production in the North and the Northeast in the Cerrado biome areas;
- The volume produced reached 33.6 billion liters of milk, in which the state of Minas Gerais is the largest producer with 9 billion liters in 2016;
- In terms of geographic regions, the production volume is concentrated in the Southern and Southeastern regions (71% of the total). At the present time, the production volume in the South is higher than in the Southeast region (12.5 against 11.5 billion liters);
- The value of production reached R\$ 30.4 billion in 2017. In real terms, in the last twenty years, the value of production increased to 4.5% YoY;
- However, the recent economic crisis associated with other internal factors such as the truck driver's strike and political instability have affected the sector. The value of production in real terms is the same as in the 2013 threshold.

## **INDUSTRIAL PRODUCTION OF MILK AND THEIR PRODUCTS: A PICTURE OF THE AGRICULTURAL PRODUCTION**

In 2016, the industrial production of milk and their products was a total of R\$ 54.4 billion, with the value of milk production alone reaching about R\$ 17 billion, while the total dairy production reached R\$ 37.6 billion, representing around 70% of the total production value of this sector. By disaggregating the sector for its products, it is worth to mention:

- In dairy manufacturing, the production of cheeses and other products represents about 50.8% of the total production, reaching around R\$ 28 billion. After this, powdered milk (11%), milk cream (3.9%) and butter (2.1%) stand out, whose aggregate production amounts to approximately R\$ 10 billion.



Table 01

**MILK PRODUCTION (INDUSTRIALIZED) AND THEIR PRODUCTS IN 2016**

PRODUCT	VALUE PRODUCED (R\$ BILLION)	PARTICIPATION (%)
MILK	16,9	31,0%
MANUFACTURE OF DAIRY PRODUCT	37,6	69,0%
MILK CREAM	2,1	3,9%
POWDERED MILK	6,0	11%
WHEY	0,7	1,3%
BUTTER	1,1	2,1%
CHEESE	13,9	25,4%
OTHER PRODUCTS	13,8	25,4%
<b>TOTAL DAIRY SECTOR</b>	<b>54,4</b>	<b>100%</b>

Source: Sidra, IBGE<sup>1</sup>.

- Although the milk market is characterized by the fragmentation of the production side of the raw material (milk) with distribution in all regions of the country, there are few buyers for process this product in the industry. In fact, in 2017, the four largest companies (Nestlé, Laticínios Bela Vista, UNIUM and CCPR/Itambé) received about 60% of the milk produced by the livestock farming, reaching 5.1 billion liters of milk.
- It is estimated that the installed capacity of milk processing of the 14 main dairy companies in the country is 13.8 billion liters per year.

**EXTERNAL TRADE: MODEST BRAZILIAN PARTICIPATION**

Although being the 4th largest producer of milk in the world, Brazil barely ranks as the 12th largest exporter. The European Union dominates this market, followed by New Zealand and the United States. Domestic consumption is still dependent on the external market, even though it has been growing since the 1990s.

1 Available at: <https://sidra.ibge.gov.br/tabela/6705>

Several factors can be attributed to the change that occurred in the 1990s such as commercial opportunities, economic integration, and increasing the investment in the milk production chain. With the creation of the Real Plan and the strengthening of the Brazilian economy, there was also a change in consumption patterns, leveraging production in the dairy sector and helping to transform this product into a commodity.

On the one hand, aside from Venezuela and Saudi Arabia (until 2017), there is no large buyer of Brazilian exports. Sales of domestic dairy products in the foreign market are disperse among different countries and their position in the importation of dairy products change from year to year. On the other hand, only two countries (Argentina and Uruguay) holds, year by year, more than 50% of the Brazilian dairy industry's importing group.

Among the milk products:

- Powdered milk is the most representative for the sector, both in terms of exports and imports. In the year 2017, this product represented 72% of the volume of dairy exported by Brazil, followed by milk cream (17%) and cheese (8%). According to the most recent data, this sequence was maintained in 2018.
- Regarding the importing group, powdered milk accounts for 60% of the volume of imported dairy products in 2017, followed by cheeses (14%) and whey (12%). According to the latest data, this ranking also remains unchanged in 2018.

Table 02

**COMMERCIAL VOLUME, IN TONS, OF THE MAIN DAIRY PRODUCTS  
SOLD BY THE BRAZILIAN INTERNATIONAL GROUP**

PRODUCTS	EXPORTS				IMPORTS			
	2018		2017		2018		2017	
	VOLUME	%	VOLUME	%	VOLUME	%	VOLUME	%
MILK CREAM	2.390	25	3.268	17	0	0	0	0
POWDERED MILK	4.344	45	14.021	72	34.886	54	59.305	60
YOGURT	149	2	16	0	0	0	1	0
WHEY	45	0	29	0	8.600	13	11.530	12
BUTTER	83	1	10	0	1989	3	2.799	3
CHEESE	1.616	17	1.649	8	10.350	16	13.450	14
TOTAL	8.627	89	18.992	97	55.825	87	87.085	88
<b>GRAND TOTAL</b>	<b>9.656</b>	<b>100</b>	<b>19.577</b>	<b>100</b>	<b>64.186</b>	<b>100</b>	<b>99.312</b>	<b>100</b>

Source: Comex Stat<sup>2</sup>.

Finally, Brazil is a country that has the structure to become a major exporter of dairy products; however, it needs firstly, to meet its domestic demand, thus reducing the pressure for imports. In addition, it also needs to identify, understand and circumvent trade barriers to expand its participation in the domestic market and become a more relevant player in the foreign market.

2 Available at: <http://comexstat.mdic.gov.br/pt/geral>

## COMMERCIAL BARRIERS: AN EXTREMELY SEGMENTED MARKET

The obstacles for the Brazilian dairy sector to expand their international insertion begin in the productive process itself:

- The structure of the Brazilian milk and their products are made up of thousands of small producers, leaving them at a disadvantage compared to the large exporters in the international market;
  - Contributing to this difficulty, high tax burdens, bureaucratic fiscal legislation and precarious logistical infrastructure permeate the country, which generally depends on a single modal: road transport;
  - In addition, the received average value by the Brazilian milk producer presents a small profit margin and create more and more difficult for the small and medium, that have difficulty to compet and gain in scale. Two strategies deserve attention to overcome this obstacle: bigger incorporation of technology and better management:
- According to the Scot Index for dairy farming in the state of Minas Gerais in 2016, while farms that adopt médium or high-intensity packages of technologies produce, on average, 25 thousand liters of milk/hectare/year, less intensive industries units recorded an average production of 1.5 thousand liters of milk/hectare/year;
  - Despite these numbers, the adoption of more sophisticated technology is not a guarantee of greater profitability, due their higher cost. In this context, the importance of management is emphasized. For example, a decisive factor for the economic result in the dairy activity is precisely the strategy of when to close the price of the acquisition of the inputs. In 2017, due to higher production costs (mainly the maize), profitability was significantly influenced by the strategy of choosing the best time to close the price of inputs (Table 3).

Table 03

## STATE OF MINAS GERAIS: ECONOMIC RESULT OF DAIRY FARMING

PRODUCTION SYSTEM	EXPORTS						IMPORTS		
	PRODUCTION COSTS (R\$/LITER)			PRODUCER PRICE (R\$/LITER)			MANUFACTURER'S MARGIN (R\$/LITER)		
	2016	2017	VAR. %	2016	2017	VAR. %	2016	2017	VAR. %
Average/high technology (25 thousand liters of milk/hectare/ year)	1.226	1.130	-7.8%	1.245	1.219	-2.1%	0.019	0.088	363.2%
Low technology (1.5 thousand liters of milk/hectare/ year)	1.085	1.047	-3.5%	1.118	1.095	-2.1%	0.033	0.048	45.5%

Source: Scot Consultoria<sup>3</sup>.

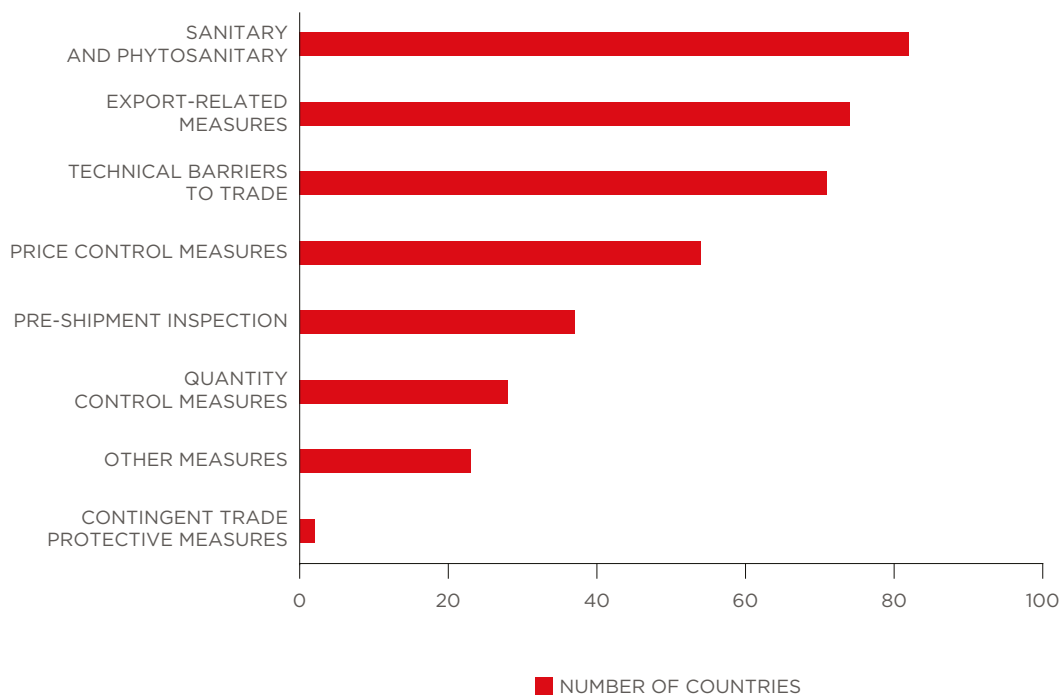
This diagnosis is partially shared by the domestic producers themselves. According to a survey by the Milkpoint portal, production costs are presented as the biggest challenge encountered by Brazilian producers. As domestic production already has a high cost, the price of milk as an input also becomes a problem. Therefore, the foreign market is more competitive and can offer dairy products at prices lower than those practiced internally, resulting in becoming a supplier of raw material.

The obstacles to the exportation of milk and their products are not only internal; several tariff and non-tariff barriers imposed on Brazilian product in the international market:

- Barriers of sanitary and phytosanitary are imposed by 82 countries in Brazil, becoming the non-tariff barrier most adopted by the rest of the world related to the Brazilian dairy sector;
- Other widely adopted barriers are technical barriers to trade (74 countries), export-related measures (71 countries) and price control measures (54 countries).

<sup>3</sup> Available at: <https://www.scotconsultoria.com.br>

Figure 01

**NUMBER OF COUNTRIES ADOPTING NON-TARIFF BARRIERS  
TO IMPORT THE BRAZILIAN DAIRY PRODUCTS**


Source: Trains, UNCTAD (2018)<sup>4</sup>.

Among the major world buyers of the different categories of internationally traded dairy products are countries such as China, Russia, the United States, Mexico, and Japan; all of these countries practice non-tariff barriers to Brazilian industry.

4 Available at: <http://trains.unctad.org/>

Table 04

**MAIN IMPORTERS OF DAIRY PRODUCTS AND NON-TARIFF BARRIERS  
ADOPTED BY THEM TO IMPORT FROM BRAZIL**

	 <b>CHINA</b>	 <b>RUSSIA</b>	 <b>UNITED STATES</b>	 <b>MEXICO</b>	 <b>JAPAN</b>
CONTINGENT TRADE PROTECTIVE MEASURES					
EXPORT-RELATED MEASURES		■	■	■	■
OTHER MEASURES					■
PRE-SHIPMENT INSPECTION		■	■	■	
PRICE CONTROL MEASURES		■	■		■
QUANTITY CONTROL MEASURES	■	■		■	■
SANITARY AND PHYTOSANITARY	■	■	■	■	■
TECHNICAL BARRIERS TO TRADE	■	■	■	■	■

Source: Trains, UNCTAD (2018)<sup>5</sup>.

<sup>5</sup> Available at: <http://trains.unctad.org/>





# 1. BRAZILIAN DAIRY INDUSTRY

## AGRICULTURAL PRODUCTION

The Brazilian dairy sector, made up of milk and their products (such as milk cream, powder milk, yogurt, butter, and cheese), is the 4th largest producer in the chain in the world. In Brazil, the gross value of production (GVP) is about R\$ 30.4 billion, representing 5.4% of the GVP of agriculture and 17% of livestock. Currently, milk production is present throughout all the country and in more than 99% of Brazilian municipalities, according to the Brazilian Institute of Geography and Statistics (IBGE).

To understand the relevance of this sector, it is important to determine the mapping of milk production in Brazil, using different databases with information at both national and regional level, in some cases also state data are shown. Volume and value of production data presented, as well as the size and location of the herd of cows destined for milk production.

This observation is important, since agricultural activity, especially milk production, has peculiar characteristics, such as the perishability of milk itself and derived products such as cheese and butter. Thus, it is natural that this activity is concentrated in regions close to the dairy industries and the large consumer markets. Therefore, it is fundamental to understand the distribution and location of milk production in different regions of the country.

## MILK CHAIN IN THE INITIAL POINT: HERD OF MILK COWS

The number of milk cows in Brazil reached 19.7 million in 2016, according to the Municipal Livestock Research (IBGE, 2018). This value is equivalent to 9% of the entire national cattle herd. The South and Southeast regions concentrate 56% of the milk cow herd, 21% in the South and 35% in the Southeast. Table 1 below shows the growth rate of the herd of milk cows in the largest regions of Brazil between 1996 and 2016.

Table 01

**NUMBER OF HEADS OF MILK COWS, HERD PARTICIPATION  
AND GROWTH RATE FOR BRAZILIAN REGIONS**

REGION	NUMBER OF HEADS IN 2016 (MILLIONS)	PARTICIPATION IN THE HERD IN 2016	ANNUAL GROWTH RATE 1996-2016
SOUTH	4.2	21%	2,60%
SOUTHEAST	6.8	35%	0,40%
MIDWEST	3,1	16%	1,00%
NORTHEAST	3,5	18%	-0,10%
NORTH	2,1	11%	2,80%
BRAZIL	19,7	100%	1,00%

Source: PPM, IBGE 2018<sup>1</sup>.

For the Brazil level, the annual growth rate in the period is 1% YoY, the same value is also found for the Central Western region where it holds about 16% of the national herd. The Southeastern region, the country's main milk producer, has a growth rate below the national average in the period, around 0.4% YoY. The Southern and Northern regions show a faster growth than the national average. In the South, growth is driven by the states of Santa Catarina (4.2% YoY) and Paraná (2.35% YoY), while in the North it is with the state of Tocantins (3.4% YoY). Despite the slightly negative result of the Northeastern region, the state of Maranhão has a growth rate of 3.8% YoY.

The milk cow herd data indicates that much of the national herd is still concentrated in the Southeastern and Southern regions, which are the regions where much of the country's dairy industry is concentrated. Only the state of Minas Gerais, the main dairy producer in Brazil, has 5 million heads, about 25% of the total national herd in 2016. However, the data above shows a recent herd growth in other regions of the country, such as Central-West and North.

The herd growth in these regions can be identified through state data. For example, the State of Goiás owns 11% of the national herd and has grown above the country average. The same goes for the states already mentioned in the South region. Another relevant point in the new dynamics of the herd is the growth in the direction of the states of Tocantins

<sup>1</sup> Available at: <https://sidra.ibge.gov.br/pesquisa/ppm>

and Maranhão. These results show the recent expansion of the Brazilian agricultural frontier, especially livestock farming towards these states, especially in the municipalities that include the Cerrado biome area.

## VALUES AND VOLUME PRODUCTION

In the same way that the herd of milk cows does not present a uniform distribution throughout the states and regions of the country, so does the value and volume of milk production. The volume and value of production data are presented below and, together with the previous herd data, define the map of agricultural milk production in Brazil.

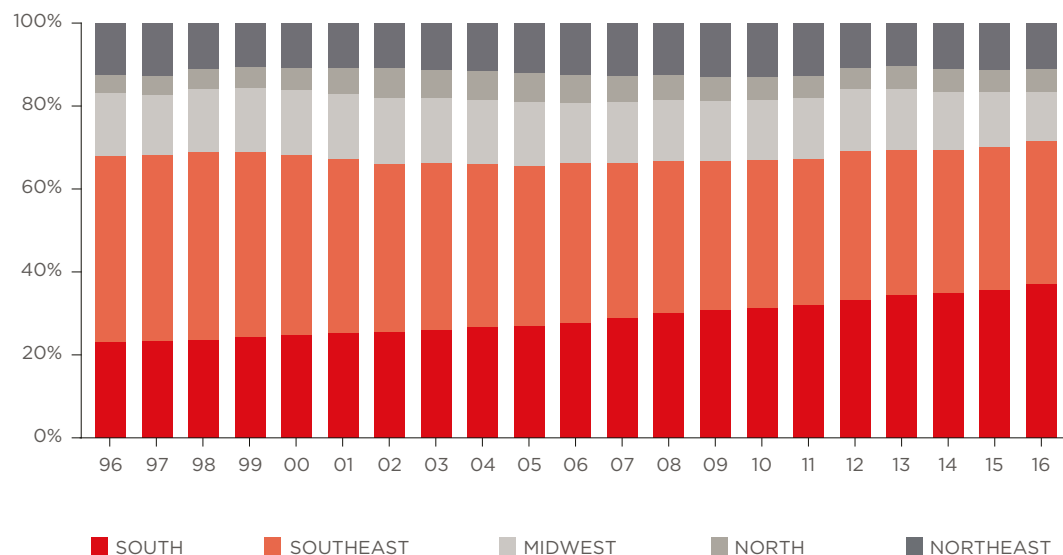
In 2016, Brazil produced 33.6 billion liters of milk. The record production was registered in 2014 when 35.1 billion liters were produced. The history of the last twenty years shows that the volume of production had grown at a rate of 3% YoY. The state with the highest volume of production in 2016, is still Minas Gerais with about 9 billion liters, followed by Paraná and Rio Grande do Sul with around 4.7 and 4.6 billion liters, respectively.

Like the herd of milk cows, the volume of milk produced also presents spatial concentration in the Southern and Southeastern regions. Together the regions represent 71% of the total milk produced in the whole country in 2016, corresponding to 24 billion liters. Since 2014, the Southern region surpassed the Southeast region in production volume: 37% against 34% in the whole of the country.

The Graph 1 following shows the recent history of the participation of each region in the volume of milk production. The Southern, Northern and Central-Western regions gained shares in the volume of production, while the Southeastern and Northeastern regions lost their shares.

The most obvious case is in the Southeastern region, which accounted for 54% of milk production (3.8 billion liters) in 1996. Although this value increased to 11.5 billion liters, its share dropped to 34% of the total. This indicates that other regions are becoming more representative in terms of production volume. As mentioned, this is the case of the Southern and Northern regions, which had 22% and 0.8% respectively in 1996, reaching 37% and 6% in 2016. It can be seen that the volume of production follows the same regional growth trend of the herd milk cows.

Graph 01

**PARTICIPATION (%) OF THE BRAZILIAN REGIONS IN THE VOLUME OF MILK PRODUCTION IN THE PERIOD BETWEEN 1996 AND 2016**

Source: PPM IBGE (2018)<sup>2</sup>.

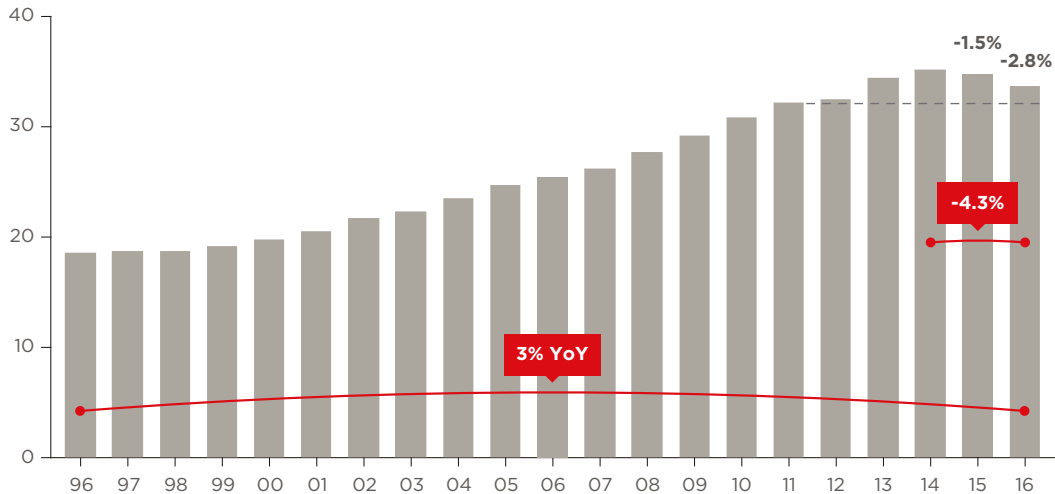
The Graph 2 following shows the history of the production volume in Brazil over the last twenty years. As previously mentioned, production volume increased strongly in the period (3% YoY) until 2014. This growth is justified by the policies of strengthening domestic demand in the period associated with the growth of exports and appreciation of agricultural commodities in the international market.

However, for the recent years, the story is completely different. The data show a strong deceleration of this growth, a stagnation of the volume of production. Between the years of 2014 and 2015 there was a retraction of 1.5%, and from 2015 to 2016 there was a retraction of 2.8%. When considering the whole period the retraction in the volume of production is 4.3%. The results indicate that the volume of production in 2016 reached the same level of 2011 in practicality, about 33 billion liters.

<sup>2</sup> Available at: <https://sidra.ibge.gov.br/pesquisa/ppm>

Graph 02

THE VOLUME OF MILK PRODUCTION BETWEEN 1996 AND 2016 IN BILLIONS OF LITERS



Source: PPM IBGE (2018)<sup>3</sup>.

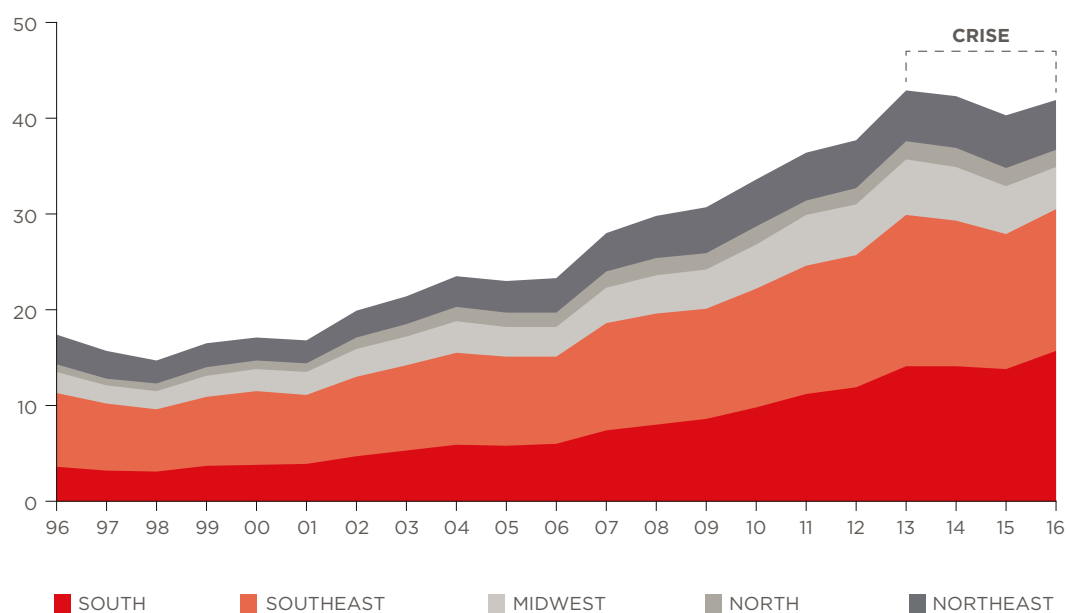
The results of production volume are reflected in the results of the value of milk production. In real terms, discounting the price oscillation during the period, grew especially strong between 2008 and 2013, reaching 4.5% YoY to Brazil. In 2016, the value of production was R\$ 42 billion. Again, the Southern and Southeastern regions represented more than 70% of this value, reaching R\$ 30.5 billion in the same year. The rest of the production value is distributed in the Northeastern, Central-Western and Northern regions, with 12%, 10%, and 4% respectively.

It is worth to highlight, that the value of production, as well as volume, has suffered a strong decline in the recent years. In real terms, the production value of 2016 is very close to the production value of 2012, which was R\$ 38 billion, as shown in Graph 3. Even with the real growth of around 4% between 2015 and 2016, the sector still has not returned to 2013 levels, where the value of production reached about R\$ 43 billion. This result is reflected differently in the different Brazilian regions, which felt the effects of the crisis in different ways. At the same time, the speed at which each region returns to the pre-crisis level is also different.

<sup>3</sup> Available at: <https://sidra.ibge.gov.br/pesquisa/ppm>

The Graph 3 shows that the Southern region is the only region that returned to the level of pre-crisis production value. The Southeastern region, the country's main dairy producer, still feels the effects of the strong downturn in the economy and is below the 2013 level, as well as the Midwestern, Northern and Northeastern regions. These results are not yet conclusive of the effects of the country's economic crisis, in addition to there being a lack of information for the year 2017, the effects of the recent road driver's strike, which affected the whole milk supply chain, have not yet been completely determined. It is very likely that the return to pre-crisis production value levels will not have been achieved in 2017, even though 2018, due to the paralyzation that hit the country's agricultural sector.

**Graph 03**  
**VALUE\* OF MILK PRODUCTION (BILLIONS OF R\$)**



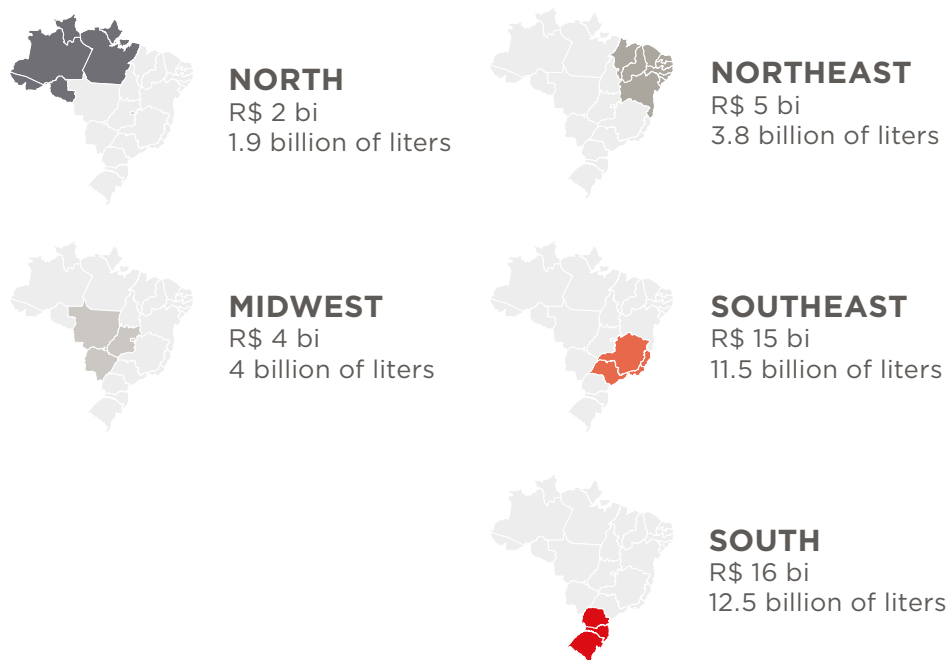
\* Values of reais from 2016.

Source: PPM IBGE (2018)<sup>4</sup>.

4 Available at: <https://sidra.ibge.gov.br/pesquisa/ppm>

These results are due to the serious economic crisis that has affected Brazil in recent years, coupled with a slowdown in the economic growth of Brazil's main buyers of dairy products, such as Venezuela, Saudi Arabia, Angola, and the United States. Another important point is the uncertainties of the internal economic-political scenario that directly affects the expectations of production and consumption of agents in the sector. This leads to a reduction or even stagnation in the volume of domestic production, as presented in this document. The internal factors associated with external factors, such as increased imports, reduced exports, and fluctuations in milk prices, confirm a scenario of constant uncertainty and challenge for milk producers in Brazil.

**Figure 01**  
**VALUE OF PRODUCTION AND VOLUME OF MILK PRODUCED**  
**IN 2016 IN THE BRAZILIAN REGIONS**



Source: PPM, IBGE (2018)<sup>5</sup>.

<sup>5</sup> Available at: <https://sidra.ibge.gov.br/pesquisa/ppm>

In summary, the mapping of milk production in Brazil can be defined as:

- Even though the Southeast still holds a large part of the herd of milk cows in the country, the cattle has grown faster in the Southern Region (the states of Santa Catarina and Paraná), and in the Northern (Tocantins) region;
- The volume of production is concentrated in the Southern and Southeastern regions, Minas Gerais is the major national producer;
- Like the change in the cattle, the volume of production also begins to move towards the South, which is increasing its share in the national production.

Notwithstanding to the growth history, the recent economic crisis has hit the sector strongly, with production and volume levels are still below the 2013 (pre-crisis period).

## INDUSTRIAL DAIRY PRODUCTION

Differently from agricultural milk production, the regional mapping of dairy production in Brazil is limited by the scarcity of regional data and dairy products. The Annual Industrial Survey Company (PIA - Empresa) available at IBGE becomes a starting point to estimate the size of the dairy industry.

The Table 2 following presents the value of industrial production of milk and their products for 2016. The total value of industrial production was R\$ 54.4 billion, with the value of milk production reaching about R\$ 17 billion. Meanwhile, total dairy production reached R\$ 37.6 billion, representing about 70% of the dairy industry's total production value.

This result is interesting from the point of view of the value added in the milk production chain. Dairy manufacturing involves a greater number of steps in the production process when compared to the industrial production of milk. The result reflects the level of technological intensification in the segment, so it is natural that when using and adding technology that the production value of this segment would be higher than the segment of industrial milk.

The production of cheeses and other products, which together account for about 50.8% of total production, amounts to around R\$ 28 billion. Subsequently, powder milk (11%), milk cream (3.9%) and butter (2.1%) are important in mentioning, which together amount to around R\$ 10 billion.



Table 02

**MILK PRODUCTION (INDUSTRIALIZED) AND THEIR PRODUCTS IN 2016**

PRODUCT	VALUE PRODUCED (R\$ BILLION)	PARTICIPATION (%)
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BUTTER	1,1	2,1%
CHEESE	13,9	25,4%
OTHER PRODUCTS	13,8	25,4%
<b>TOTAL DAIRY SECTOR</b>	<b>54,4</b>	<b>100%</b>

Source: IBGE<sup>6</sup>.

Another point that is worth to mention is that in the dairy industry there is a small number of buyers of dairy agriculture production. The market is characterized by a fragmentation on the production side with distribution in different regions of the country; there are however, few buyers for processing in the industry. Table 3 presents the ranking of the main dairy companies in 2017. It should be highlighted that the four largest companies receive approximately 60% of the milk declared in the research, reaching a total of 5.1 billion liters of milk. It is estimated that the installed capacity of milk processing of the main dairy companies in the country is 13.8 billion liters per year.

<sup>6</sup> Available at: <https://sidra.ibge.gov.br/tabela/6705>

**Table 03**  
**VOLUME, IN THOUSAND LITERS, RECEIVED BY THE BRAZILIAN DAIRY INDUSTRIES**

COMPANY	MILK RECEPTION IN 2017			
	PRODUCERS	THIRD PARTYS	TOTAL	%
NESTLÉ	1048000	646400	1694400	20
LATICÍNIOS BELA VISTA	869357	452971	1322328	15
UNIUM <sup>7</sup>	679654	460003	1139657	13
CCPR/ITAMBÉ	939444	56209	995653	12
EMBARÉ	382813	186472	569285	7
AURORA	475000	13000	488000	6
CCGL	437203	1870	439073	5
JUSSARA	297186	97546	394732	5
DANONE	178837	199814	378651	4
VIGOR	254802	57873	312675	4
DPA BRASIL	39495	206943	246438	3
CENTROLEITE	217851	0	217851	3
FRIMESA	204945	9368	214313	2
CONFEPAR/CATIVA	180293	11811	192104	2
<b>TOTAL OF RANKING</b>	<b>6204880</b>	<b>2273431</b>	<b>8605160</b>	<b>100</b>

Source: Leite Brasil (2018)<sup>8</sup>.

<sup>7</sup> Intercooperação de Lácteos das Cooperativas Frisia, Castrolanda e Capal

<sup>8</sup> Available at: <http://www.leitebrasil.org.br/estatisticas.htm>



## TRUCK DRIVERS STRIKE AND THE MILK SECTOR

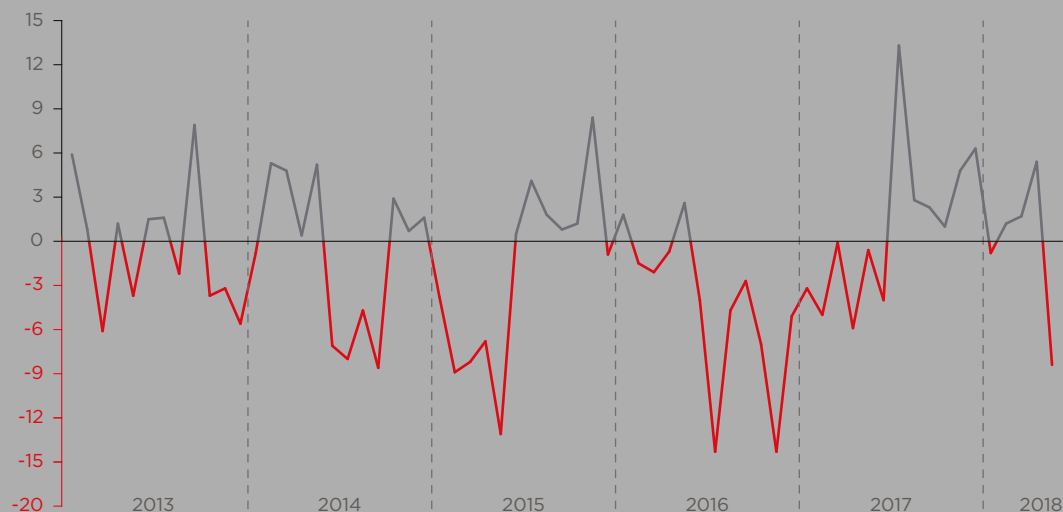
The month of May 2018 in Brazil was marked by a strike held by Brazilian truck drivers. Although it was decentralized, the movement reached several points throughout the country with the blockade of roads and impediment of the transport of inputs and products. The agricultural sector, especially the dairy sector, is extremely dependent on the road transport modal. At the same time, the perishability of milk and their products made the activity of the milk production chain directly affected by the truck drivers' paralyzation of the roads.

The impact of the truck drivers strike is still uncertain in the most diverse segments of Brazilian agriculture. According to the CNA (Brazilian Confederation of Agriculture and Livestock), during the first five days of the strike, there was a complete interruption in milk collection by the largest dairy companies operating in the country, which resulted in the discarding of 280 million liters. In monetary amounts, this loss is estimated at around R\$ 360 million. In addition to discarding the milk, there was a shortage of feed for the animals. With the lack of food, producers had to reduce milk production per animal. By adopting this practice, the producer takes time to get back to the previous level of production. It is estimated that the average milk yield per cow would need one to two months to normalize. In order to elucidate this discussion, Graph 4 (below) shows the monthly variation of the industrial dairy production index from January 2013 to May 2018, precisely the month of the truck drivers' strike.

Graph 04

### VARIATION IN THE INDUSTRIAL PRODUCTION INDEX OF DAIRY PRODUCTS

Base: same month as previous year = 100



Source: PIM IBGE (2018)<sup>9</sup>.

It is important to note that the index presented in Graph 4 consistently refers to the same month of the previous year. Thus, it can be seen that in most of the months of 2013 the monthly variation of the index was negative, which means that in comparison to 2012 the production of dairy products was in decline. The situation gets worse in 2014 and, despite the slight improvement in the second half of 2015, the index goes down in 2016 (following the recession of the Brazilian economy). The impact of the truck drivers strike is seen by the May 2018 result which shows a decline of 8.4% over the same period last year (which was also negative, see May 2017). The definitive results will still come in the coming months but have already begun to be felt throughout the agricultural and dairy sector, so it is possible to infer that the logistical vulnerability and dependence on a single modal represents one of the fragile points of this chain.

9 Available at: <https://sidra.ibge.gov.br/pesquisa/pim-pf-brasil>

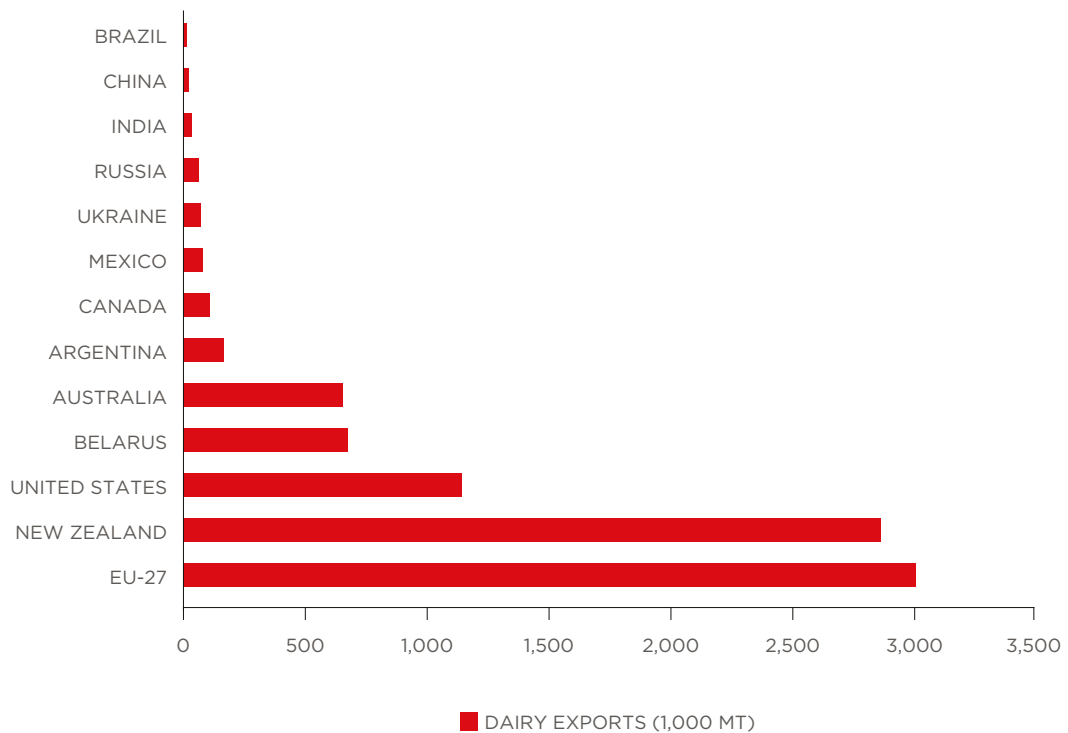




## 2. TRADE BALANCE OF THE BRAZILIAN DAIRY SECTOR

Despite being the 4th largest dairy producer in the world, Brazil is only the 12th exporter; the European Union dominates the market, followed by New Zealand and the United States (see Graph 5). Even though it is growing and making itself relevant since the 1990's, when there was an evolution in the production and commercialization of dairy products in Brazil strengthening this chain of production: we are dependent on the external market.

**Graph 05**  
**LARGEST DAIRY EXPORTING COUNTRIES BY 1,000 MILLION OF TONNES**



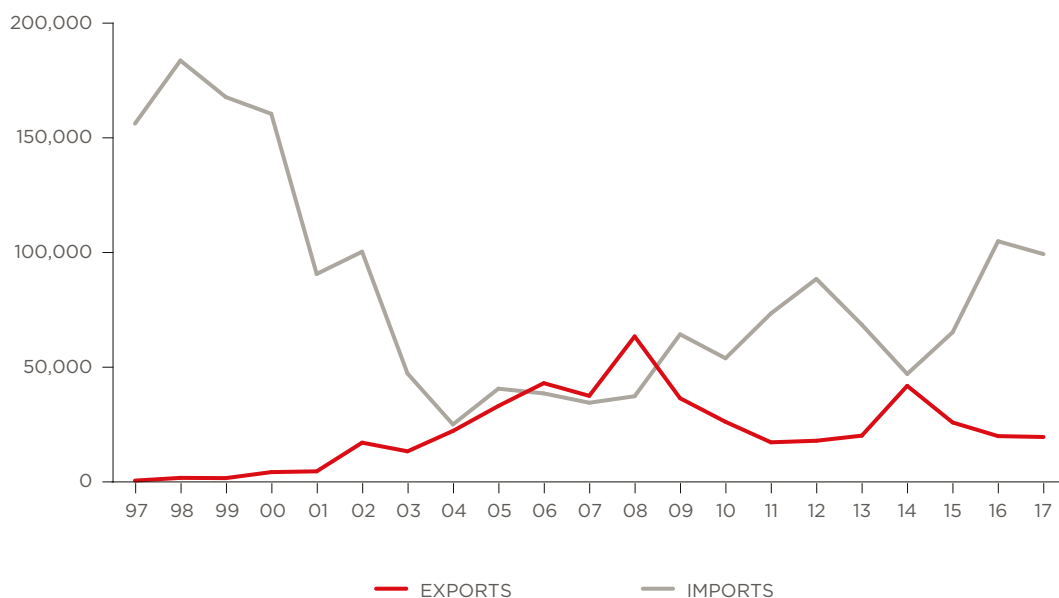
Source: Index Mundi (2018)<sup>1</sup>.

<sup>1</sup> Available at: <https://www.indexmundi.com/agriculture/>

Several factors are attributed to the change that occurred in the 1990s, such as commercial opportunities and economic integration, resulting in an increase in the investment in the milk production chain. With the creation of the Real Plan and the strengthening of the Brazilian economy, there was also a change in consumption patterns, leveraging the dairy sector production, and helping transform this product into a commodity.

On the supply side, as shown in Graph 6, this development began mainly in 2002, when exports from this segment more than tripled, going from about 5 tons sold in 2001 to approximately 17 tons in 2002. Another important point was the possibility of the distribution of milk and their products by supermarkets and the marketing of long-life milk, increasing the shelf-life of the product. Although this phenomenon continued to grow until 2008, when it reached its apex of surpassing 63 thousand tons exported, as a result of the world economic crisis, it fell sharply to 36 thousand tons in 2009, with a resumption of production until 2014.

**Graph 06**  
**EVOLUTION OF BRAZILIAN DAIRY EXPORTS IN TONS (1997 - 2017)**



Source: Comex Stat (2018)<sup>2</sup>.

<sup>2</sup> Available at: <http://comexstat.mdic.gov.br/pt/geral>



From the perspective of the demand, it is noticed that the evolution in the production also contributed to that the dairy market began to be able to be supplied internally. From 1999 onwards, there was a sharp fall in sales, falling from 168 thousand tons to 25 thousand in 2004, the lowest volume ever imported by Brazil during the time period presented. In the Brazilian trade balance, there was a surplus remaining between 2006 and 2008, revealing the existing dependence to supply domestic demand. However, even with the global economic crisis, Brazilian dairy imports have not diminished.

A convergence of exports and imports was observed in 2014, but since then, what has been seen is a drop in exports, coupled with an increase in imports resulting in an increasingly wide deficit in the trade balance of the dairy production chain. Even though it is a potential producer, in addition to having adequate natural conditions for dairy production, one can observe this growth scenario of the importation of products of this segment in Brazil. The most recent data shows a trade deficit for the dairy sector for 2017. For the year in question, a total volume of 19 thousand tons was exported by the dairy sector, representing a little over US\$ 58 million. This same year there were 99 thousand tons imported, equaling US\$ 328 million, which represents a deficit of 80 thousand tons and almost US\$ 27 million.

For the year 2018, the same trend is observed until the month of June. Up to that point, exports reached almost 10 thousand tons, totaling almost US\$ 26 million, in contrast, almost 65 thousand tons have already entered the country, representing almost US\$ 204 million. Thus, imports have already exceeded exports by 55 thousand tons of dairy products and 178 million dollars.

All of these volume imported are mostly from Uruguay and Argentina, but also bought from countries such as France, New Zealand, and the United States. However, imports from other countries in the world do not exceed 15% (see Table 4).

**Table 04**  
**TOTAL DAIRY IMPORTS VOLUMES OF BRAZIL, IN TONNES,**  
**FOR THE YEARS 2016, 2017 AND 2018**

	2016		2017		2018	
	VOLUME	%	VOLUME	%	VOLUME	%
ARGENTINA	40484	39	42007	42	33764	53
URUGUAY	52622	50	46752	47	21696	34
OTHER COUNTRIES <sup>3</sup>	11808	11	10554	11	8726	14
<b>TOTAL</b>	<b>104914</b>	<b>100</b>	<b>99312</b>	<b>100</b>	<b>64186</b>	<b>100</b>

Source: Comex Stat (2018)<sup>4</sup>.

Only considering the first trimester of 2018, the balance of the dairy trade was negative, but demonstrated a decrease of 46% in the deficit when compared to the same period of the previous year. In the second trimester, it is necessary to consider a new milestone in terms of perspective for the dairy sector: the truck drivers strike. With the paralyzation, the supply of inputs for milk production and transportation was compromised.

The first semester of 2018, as a whole, a rise in the price was observed in milk received by producers, the cumulative increase was 26.2% in real terms. In June, the competition for dairy products as a raw material grew because the availability of milk was reduced after the strike. In relation to exports, the high exchange rate contributed to the volume exported during the month of June, but when compared to the same period of 2017 the sale of dairy products fell by 73.8%.

Regarding the Brazilian exports, despite Venezuela and Saudi Arabia until 2017 (see Table 5), there is not a large buyer. Sales of dairy products are disperse between different countries and the ranking that these countries occupy in the importation of Brazilian dairy products varies from year to year. While the import group of the Brazilian dairy industry is composed of 18 countries, two of which (Argentina and Uruguay) account for more than 50% of all that is bought by us every year, the export agenda does not reveal a great partner and does not as importing.

<sup>3</sup> This category includes: Chile, France, New Zealand, Paraguay, United States, Netherlands, Finland, Italy, Canada, Germany, United Kingdom, Denmark, Switzerland, Portugal, Poland, Spain, Nigeria, and Austria.

<sup>4</sup> Available at: <http://comexstat.mdic.gov.br/pt/geral>

Table 05

**TOTAL DAIRY EXPORTS VOLUMES OF BRAZIL, IN TONNES,  
FOR THE YEARS 2016, 2017 AND 2018**

COUNTRIES	2016		2017		2018	
	VOLUME	%	VOLUME	%	VOLUME	%
ANGOLA	691	3	472	2	1554	16
VENEZUELA	5663	28	2919	15	606	6
SAUDI ARABIA	3616	18	2911	15	0	0
TRINIDAD AND TOBAGO	1062	5	1296	7	875	9
PARAGUAY	633	3	920	5	843	9
PHILIPPINES	877	4	1103	6	768	8
UNITED ARAB EMIRATES	1781	9	1925	10	624	6
UNITED STATES	540	3	2380	12	457	5
OTHER COUNTRIES	5101	26	5650	29	3928	41
<b>TOTAL</b>	<b>19.963</b>	<b>100</b>	<b>19.576</b>	<b>100</b>	<b>9.656</b>	<b>100</b>

Source: Comex Stat (2018)<sup>5</sup>.

The two groups together are composed of 39 products categorized by the Mercosur Common Nomenclature (NCM Code), of which 13 (see Attachment 1) account for 97% of the volume of all dairy exported in 2017 and 89% by June of 2018, in addition to 88% of all dairy products imported by Brazil in 2017 and 87% by June 2018, thus being quite representative in presenting a panorama of foreign trade in this sector. These 13 products were rearranged into 5 major categories, which are: milk cream, powder milk, whey, butter, and cheeses. The Table 6 shows the share of these products in the Brazilian trade balance.

The Powder Milk category is the most representative for the sector, both in terms of exports and imports. In the year 2017, this category accounted for 72% of the volume of dairy products exported by Brazil, followed by milk cream with 17% and cheese with 8%: this sequence was continued in 2018. Related to the import group, Powder Milk has

5 Available at: <http://comexstat.mdic.gov.br/pt/geral>

a participation of 60% in the volume of dairy imported in 2017, followed by Cheese with 14% and Whey with 12%. This ranking remains unchanged in 2018. The butter category contributes, timidly, to the deficit of this trade balance.

**Table 06**  
**COMMERCIAL VOLUME, IN TONS, OF THE MAIN DAIRY PRODUCTS MARKETING BY THE BRAZILIAN INTERNATIONAL GROUP**

PRODUCTS	EXPORTS				IMPORTS			
	2018		2017		2018		2017	
	VOLUME	%	VOLUME	%	VOLUME	%	VOLUME	%
MILK CREAM	2390	25	3268	17	0	0	0	0
POWDER MILK	4344	45	14021	72	34886	54	59305	60
YOGURT	149	2	16	0	0	0	1	0
WHEY	45	0	29	0	8600	13	11530	12
BUTTER	83	1	10	0	1989	3	2799	3
CHEESE	1616	17	1649	8	10350	16	13450	14
TOTAL	8627	89	18992	97	55825	87	87085	88
<b>GRAND TOTAL</b>	<b>9656</b>	<b>100</b>	<b>19577</b>	<b>100</b>	<b>64186</b>	<b>100</b>	<b>99312</b>	<b>100</b>

Source: Comex Stat (2018)<sup>6</sup>.

As the largest volumes sold belong to the categories of Powder Milk, Milk Cream and Cheeses, the highest marketed values also accompany these categories (see Table 7). The sector was responsible for moving until June 2018 almost US\$ 26 million in exports and in 2017 reached just over US\$ 58 million, the categories considered are responsible for 89% and 98% of that total, respectively. On the other hand, imports have already reached almost US\$ 204 million for the same period of 2018 and in the end 2017 they reached just over US\$ 328 million, a deficit of approximately US\$ 270 million.

<sup>6</sup> Available at: <http://comexstat.mdic.gov.br/pt/geral>

Table 07

**INTERNATIONAL TRADE VALUE, IN MILLIONS OF DOLLARS, OF THE MAIN DAIRY PRODUCTS MARKETED BY THE BRAZILIAN GROUP**

PRODUCTS	EXPORTS				IMPORTS			
	2018		2017		2018		2017	
	VALUE	%	VALUE	%	VALUE	%	VALUE	%
MILK CREAM	5,45	21,12	7,68	13,20	0,00	0,00	0,00	0,00
POWDER MILK	8,56	33,16	40,77	70,10	101,21	49,64	196,64	59,93
YOGURT	0,22	0,86	0,03	0,05	0,00	0,00	0,01	0,00
WHEY	0,04	0,14	0,04	0,07	10,82	5,31	13,21	4,03
BUTTER	0,47	1,83	0,07	0,13	11,36	5,57	13,60	4,14
CHEESE	8,32	32,23	8,26	14,21	44,38	21,77	56,34	17,17
TOTAL	23,07	89,33	56,86	97,76	167,77	82,29	279,80	85,28
<b>GRAND TOTAL</b>	<b>25,83</b>	<b>100</b>	<b>58,16</b>	<b>100</b>	<b>203,88</b>	<b>100</b>	<b>328,09</b>	<b>100</b>

Source: Comex Stat (2018)<sup>7</sup>.

In the category of Powder Milk, is responsible for 33% of all dairy products exported in 2018 and 70% in 2017, secondly there is the Cheese category with 32% and 14%, respectively, and finally have Milk Cream at 21% of everything sold by June 2018 and 13% in 2017. In relation to imports, the most demanded category is also responsible for the higher costs, in 2017 of all that was spent on external purchases of dairy, 50% belongs only to the category of Powder Milk, in 2018 this participation rises to 60%. Cheeses are also important in making up this group, accounting for 22% in 2018 and 17% in 2017. Butter and Whey added together are 11% and 8%, respectively.

For the month of June 2018, the most exported dairy products in Brazil were cheeses, representing 63.5% of the total exported. The main buyers were Argentina with 27%, Chile with 20% and Russia with 16%. In relation to imports, powder milk maintains itself as the most imported category, with a 65.5% share of total dairy imports for the month of June

<sup>7</sup> Available at: <http://comexstat.mdic.gov.br/pt/geral>

and followed by cheeses with a 31.4% share. Meanwhile, Argentina has 57% and Uruguay has 30% continuing to lead the total share of dairy sales to Brazil. Even with the increase in exports the trade balance of dairy products for the month of June remains negative.

Brazil is a country that has the structure to be a major exporter of dairy products, but first needs to meet domestic demand, resultingly reducing pressure for imports. In addition, it needs to identify, understand and circumvent trade barriers to dominate not only the domestic market but also to become a strong player in the foreign market.







### 3. BARRIERS TO THE COMMERCIALIZATION OF DAIRY PRODUCTS IN BRAZIL

The perishability of milk and their products contributes to the difficulty of access to new markets. According to Kolling (2017)<sup>1</sup>, the barriers to the industry start in the cost of production and transportation, mainly because the Brazilian milk and dairy structure is made by thousands of small producers, leaving them at a disadvantage compared to the major exporters of the international market. Other points to be considered are high tax burdens, bureaucratic fiscal legislation, and precarious logistical infrastructure throughout the country that depend on a single modal exclusivity.

The Brazilian logistic vulnerability was completely revealed amid the truck drivers strike, according to data from the milk bulletin of CEPEA (2018)<sup>2</sup> showing that from May 25 to June 15 in 2018, the price of UHT (long-life) milk marketed in São Paulo jumped from R\$ 2.45/liter to R\$ 3.15/liter, registering an accumulated increase of 29.3%. The price hike represented the alternative that companies found to replenish stocks and try to standardize their marketing.

Even with policies developed by the Federal Government, such as Healthy Milk in 2015, aimed at improving the quality of Brazilian dairy products and the Map Milk project, designed by the National Rural Apprenticeship Service (SENAR) and the Ministry of Agriculture, Livestock and Food Supply (MAPA), there are still internal difficulties that contribute to Brazilian producers having difficulty accessing and expanding the external dairy market.

The average of the net price paid to the producer has suffered oscillations over time. In August 2016 (see Graph 7), it reached the peak of R\$ 1.68, the highest value paid during the analyzed period. Climate factors contributed to this scenario. From then on, the price decline until January 2017, when it stabilized during the next five months and fell again, closing 2017 at R\$ 1.02, a decrease of 38% when compared to August 2016. The fall of 2017 is justified by the increase in milk production in the Brazilian market. This supply injection, coupled with a contraction in demand for milk last year, explains the behavior of this series of prices. The amount paid to producers remained stable during the first months of 2018, but with the decrease in supply due to the truck drivers' strike, the value has risen and closed June 2018 at R\$ 1.31, up 31% when compared to January of the same year.

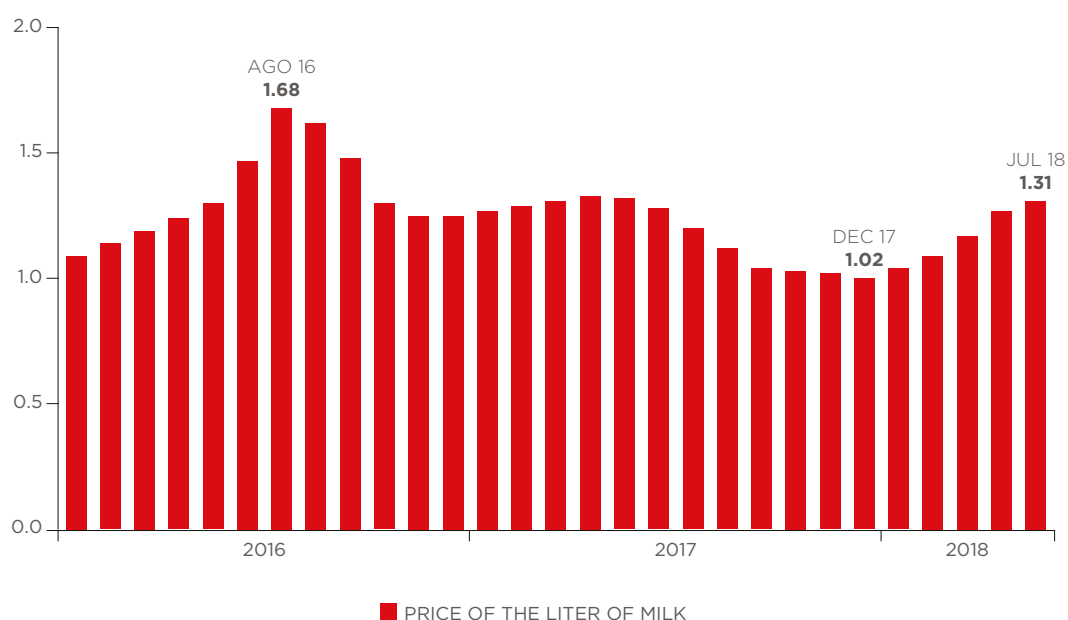
1 Available at: <https://www.univates.br/bdu/bitstream/10737/1966/1/2017MarcioHenriqueKolling.pdf>

2 Available at: <https://www.cepea.esalq.usp.br/br/categoria/boletim-do-leite.aspx>

Although the reduction of production costs for dairy cattle during 2017, the producer faces a scenario where the decline in the price of milk is higher than the fall in costs. In addition, the price increase in the second quarter of 2018 is mainly aimed at repairing the losses occurred during the truck drivers' strike and adjusting the equilibrium price of the market, due to the reduction in supply.

Graph 07

**AVERAGE NET PRICE OF THE LITER OF MILK PAID TO THE BRAZILIAN PRODUCER IN REAL AMOUNTS OF 2018**



Source: CEPEA (2018)<sup>3</sup>.

Facing this scenario of contraction of the price received more intensely than the reduction of production costs, how have producers reacted to maintain their activity economically sustainable? Through two strategies: technological intensification and improvement in property management.

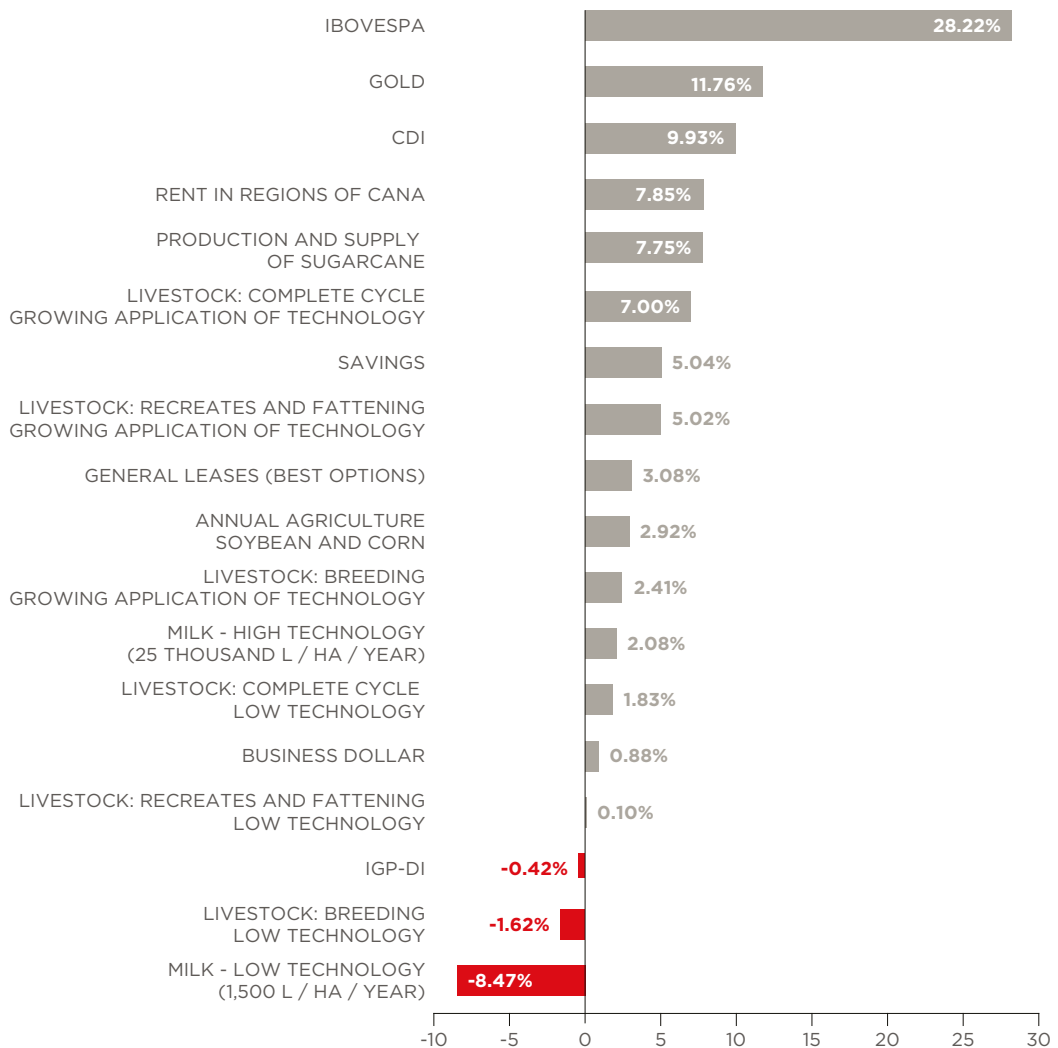
According to the Scot Consultoria Index, the reduction in dairy production costs was 7.9%, while prices paid to producers reduced by an average of 9.0% over the same period. However, the net impact of these two contractions (price received and costs of production) was not homogeneous among producers. The reduction of production costs had a greater impact on productive units using more sophisticated technology packages,

<sup>3</sup> Available at: <https://www.cepea.esalq.usp.br/br/indicador/leite.aspx>

since a reduction in the prices of feed and concentrate (corn and meal) and fertilizers was observed. Although the average profitability of milk production in 2017 fell short of the results of 2016, production units using simpler technologies presented the worse results. In the case of dairy cattle, the average productivity was 1,5 thousand liters/ha/year, there was an average loss of 8.5% in 2017 (see Graph 8).

Graph 08

**AVERAGE RETURNS OF AGRICULTURAL ACTIVITIES AND ECONOMIC INDICATORS IN 2017**



Source: Scot Consultoria<sup>4</sup>; B3; Banco Central; FGV.

4 Available at: <https://www.scotconsultoria.com.br>

Table 08

## STATE OF MINAS GERAIS: ECONOMIC RESULT OF DAIRY FARMING

PRODUCTION SYSTEM	EXPORTS						IMPORTS		
	PRODUCTION COSTS (R\$/LITER)			PRODUCER PRICE (R\$/LITER)			MANUFACTURER'S MARGIN (R\$/LITER)		
	2016	2017	VAR. %	2016	2017	VAR. %	2016	2017	VAR. %
Average/high technology (25 thousand liters of milk/hectare/ year)	1.226	1.130	-7.8%	1.245	1.219	-2.1%	0.019	0.088	363.2%
Low technology (1.5 thousand liters of milk/hectare/ year)	1.085	1.047	-3.5%	1.118	1.095	-2.1%	0.033	0.048	45.5%

Source: Scot Consultoria<sup>5</sup>.

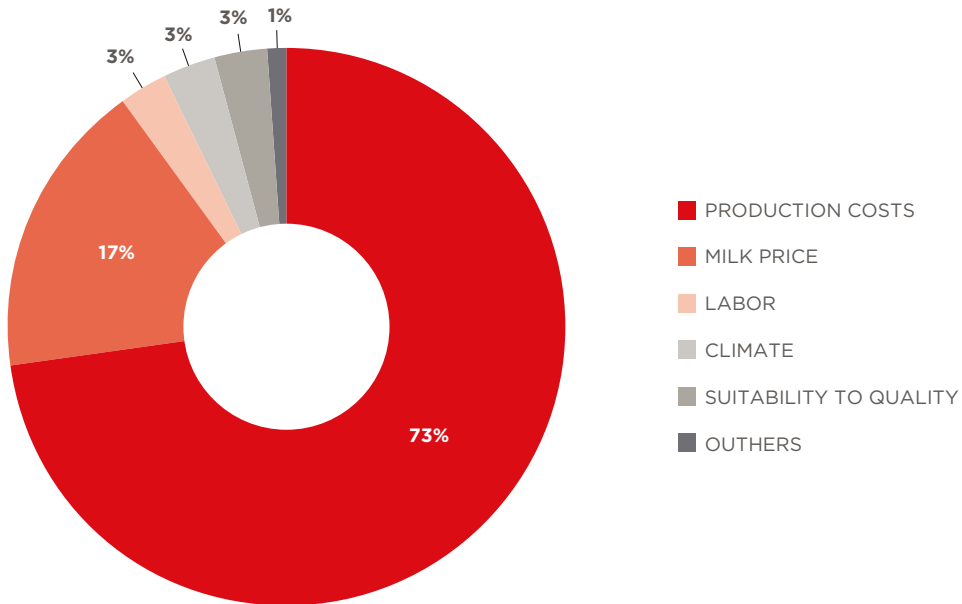
Given these numbers, it is clear that the adoption of more sophisticated technology is not a guarantee of greater profitability. In this context, the importance of management is emphasized. For example, a decisive factor for the economic result in the dairy activity is precisely the strategy of when to close the price of the acquisition of the inputs. In 2017, due to higher production costs (mainly the maize), profitability was significantly influenced by the strategy of choosing the best time to close the price of inputs. Naturally, this situation was aggravated in 2018 by the unfolding of the truck drivers' strike

Interestingly, the importance of technology and management is not yet at the top of the concerns of producers. In a reality survey by the Milkpoint portal (see Graph 9), production costs are presented as the biggest challenge encountered by Brazilian producers. Therefore, problems of logistics, expensive inputs and low profitability make up the challenging scenario of milk production in Brazil, especially for small and medium producers who are eventually pushed out of the activity and are left only to those capable of winning large scale. As domestic production already has a high cost, the price of milk as an input also becomes a problem. Therefore, the external market is more competitive and can offer dairy products at prices lower than those practiced internally, becoming a supplier of raw material.

<sup>5</sup> Available at: <https://www.scotconsultoria.com.br>

Graph 09

CHALLENGES ENCOUNTERED BY MILK PRODUCERS IN BRAZIL (%)



Source: Adapted from Milkpoint (2016)<sup>6</sup>.

In addition to production costs, there are other factors that contribute to the Brazilian dairy industry being hampered, even at the start, in the race for foreign trade. Furthermore, to internal barriers, there is a wide range of instruments used by governments to define their trade policy, such as import tariffs, export subsidies, import quotas and voluntary export restrictions, and are used as measures. Even with great potential dairy production, Brazil still faces difficulties and ends up stumbling over these barriers, which are stronger in the agricultural sector and especially for that segment in question.

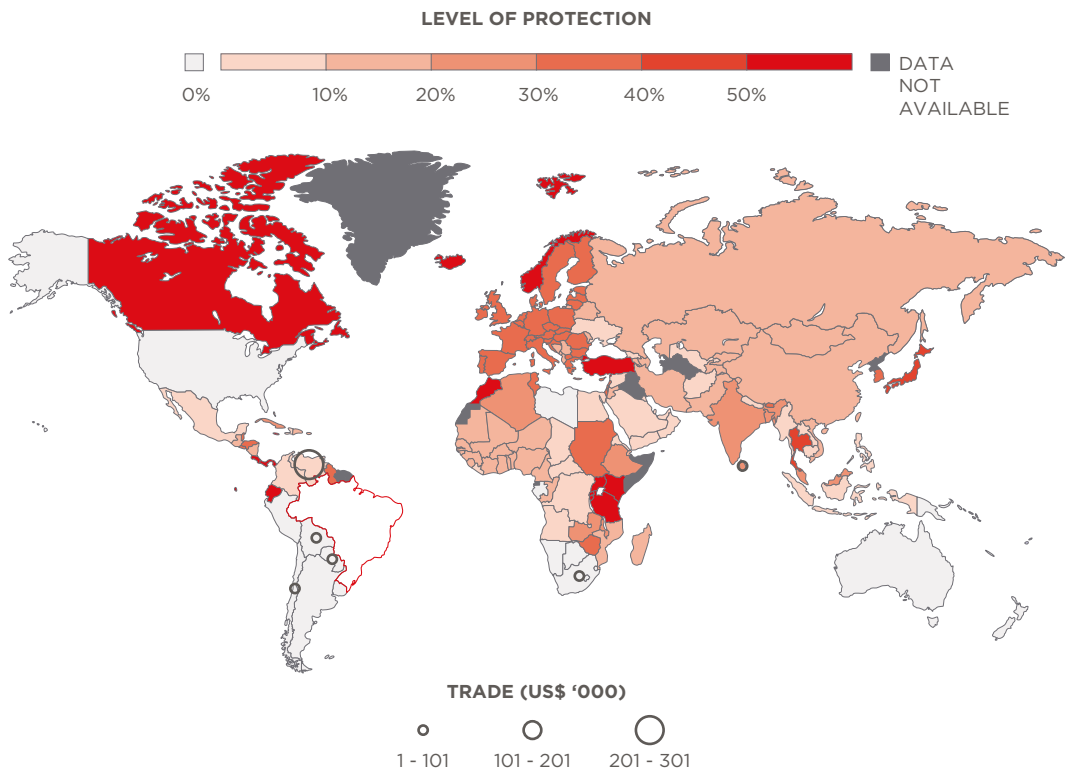
Incentive policies, such as the subsidies offered to cattle farmers in the European Union, hamper Brazilian competitiveness and become barriers to access to the external market. In addition to the lack of systematic protection via incentives, which hampers competition and directly affects the final price of the product offered, strong trade barriers are imposed on Brazil and are lighter on neighbor countries e.g Uruguay.

<sup>6</sup> Available at: <https://www.milkpoint.com.br/noticias-e-mercado/giro-noticias/pesquisa-desafios-2016-custo-de-producao-e-o-maior-desafio-da-atividade-neste-ano-98732n.aspx>

The tariff barriers are still common practice in Brazilian dairy products in the international market. In some countries, the barriers remain so high that they make export unviable. The Figure 2 below shows the level of tariff protection for the milk and milk cream market (non-concentrated, with no added sugar or coloring matter).

Figure 02

**LEVELS OF PROTECTION APPLIED TO BRAZILIAN MILK AND MILK CREAM IN THE INTERNATIONAL MARKET**



Source: Adapted from Macmap (2018)<sup>7</sup>.

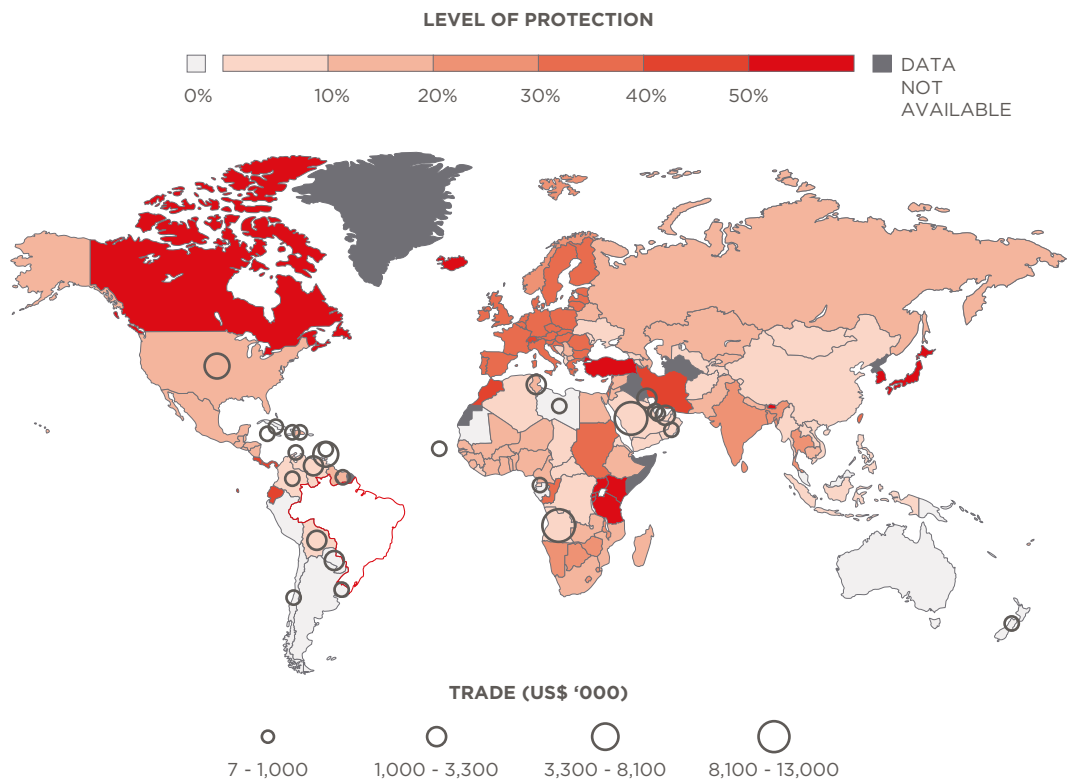
It is possible to observe that most countries of the world impose tariff barriers on Brazilian products. Countries like Canada, Peru, Turkey, Zimbabwe, Tanzania, Japan, and Thailand are among the countries that have the highest rates.

<sup>7</sup> Available at: <http://www.macmap.org/QuickSearch/FindTariff/FindTariff.aspx>

The Figure 3 shows the level of tariffs applied to Brazilian powdered milk, the level of restriction is very similar to the milk and milk cream market, with tariff barriers applied by most countries in the world.

Figure 03

### LEVELS OF PROTECTION APPLIED TO BRAZILIAN POWDER MILK IN THE INTERNATIONAL MARKET

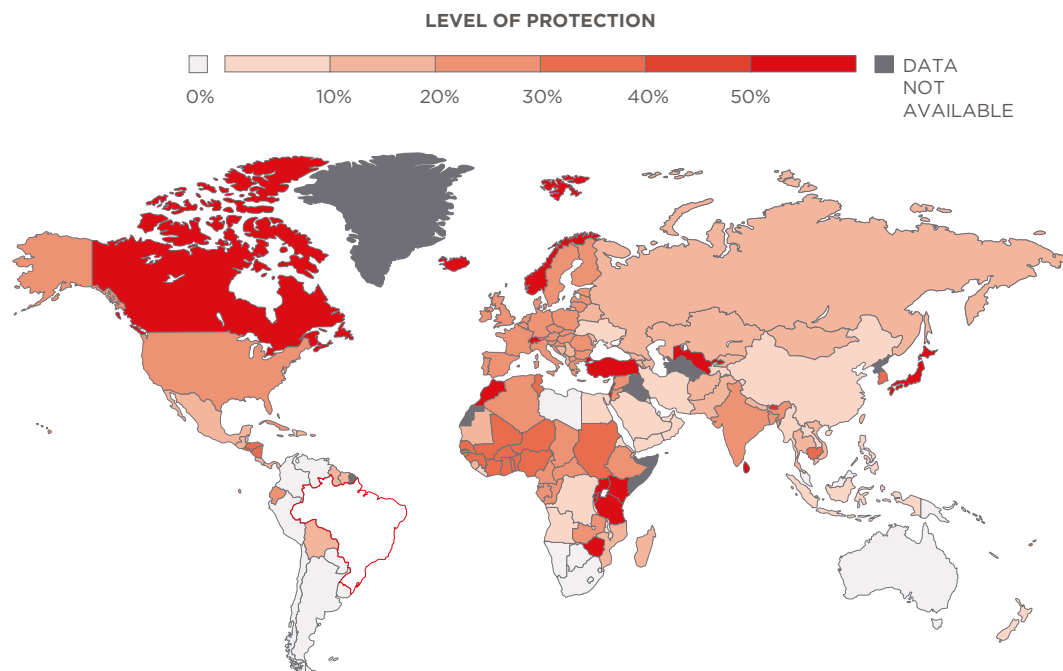


Source: Adapted from Macmap (2018)<sup>8</sup>.

The Figures 4, 5, 6 and 7 (following) show the tariff barriers imposed on Yogurt, Whey, Butter and Cheese imported from the Brazilian dairy market.

<sup>8</sup> Available at: <http://www.macmap.org/QuickSearch/FindTariff/FindTariff.aspx>

Figure 04

**LEVELS OF PROTECTION APPLIED TO BRAZILIAN YOGURT  
IN THE INTERNATIONAL MARKET**

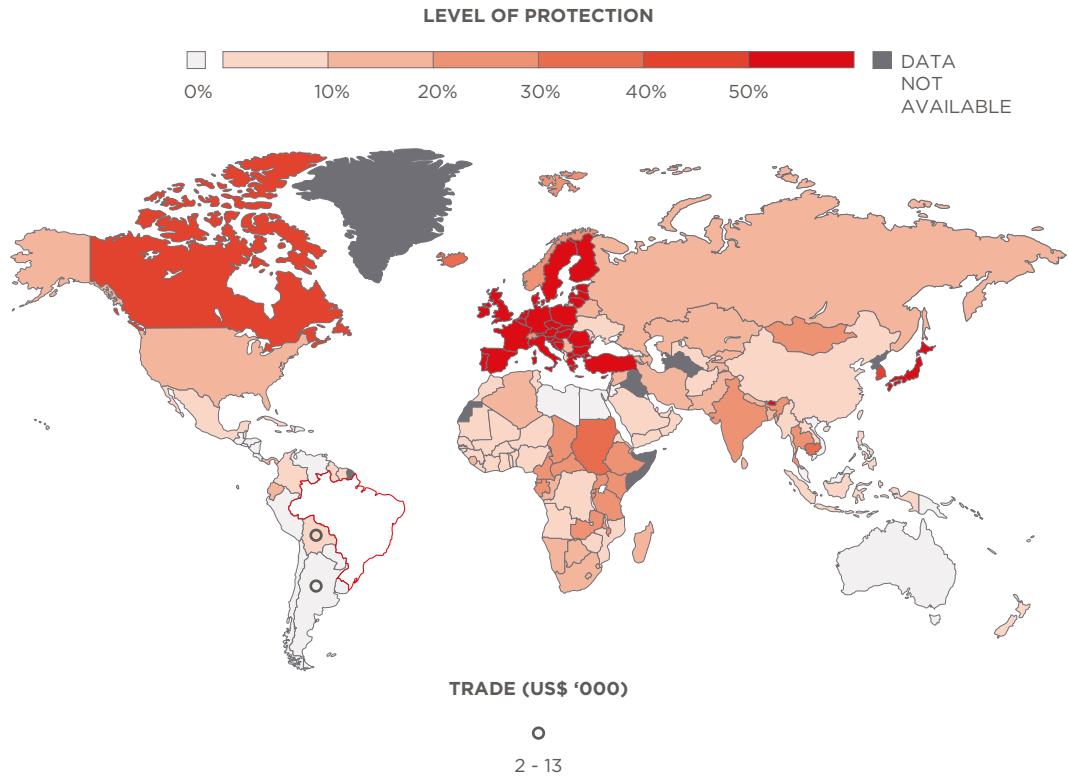
Source: Adapted from Macmap (2018)<sup>9</sup>.

9 Available at <http://www.macmap.org/QuickSearch/FindTariff/FindTariff.aspx>



Figure 05

**LEVELS OF PROTECTION APPLIED TO BRAZILIAN WHEY  
IN THE INTERNATIONAL MARKET**

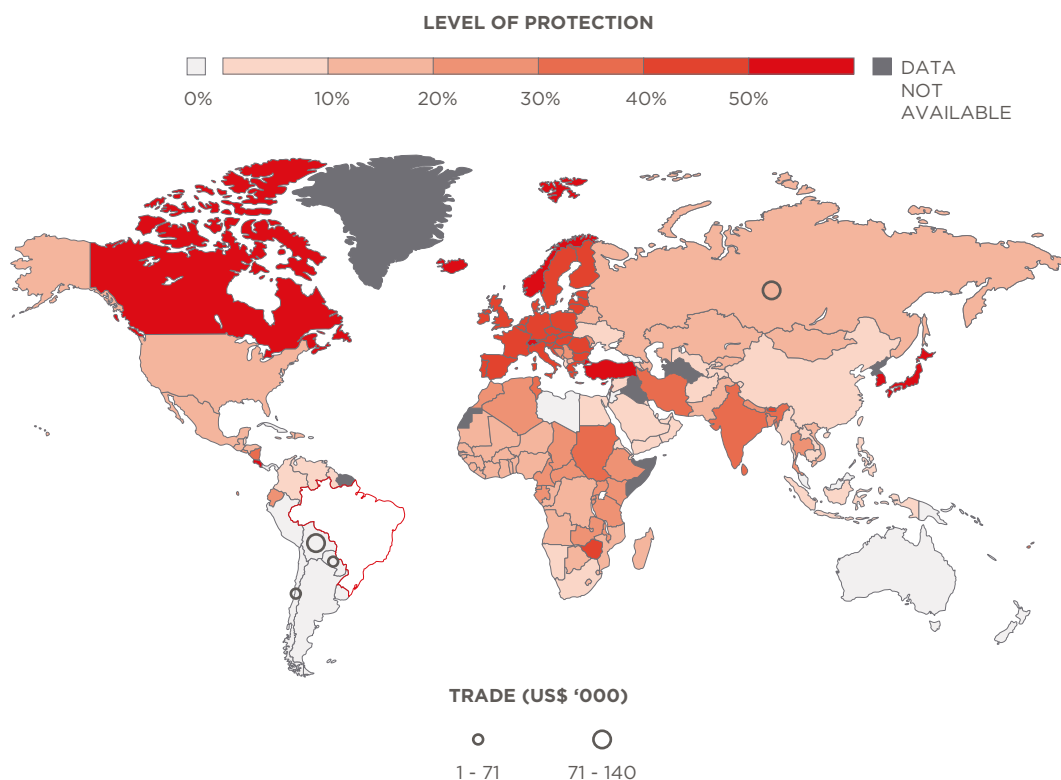


Source: Adapted from Macmap (2018)<sup>10</sup>.

<sup>10</sup> Available at: <http://www.macmap.org/QuickSearch/FindTariff/FindTariff.aspx>

Figure 06

### LEVELS OF PROTECTION APPLIED TO BRAZILIAN BUTTER IN THE INTERNATIONAL MARKET



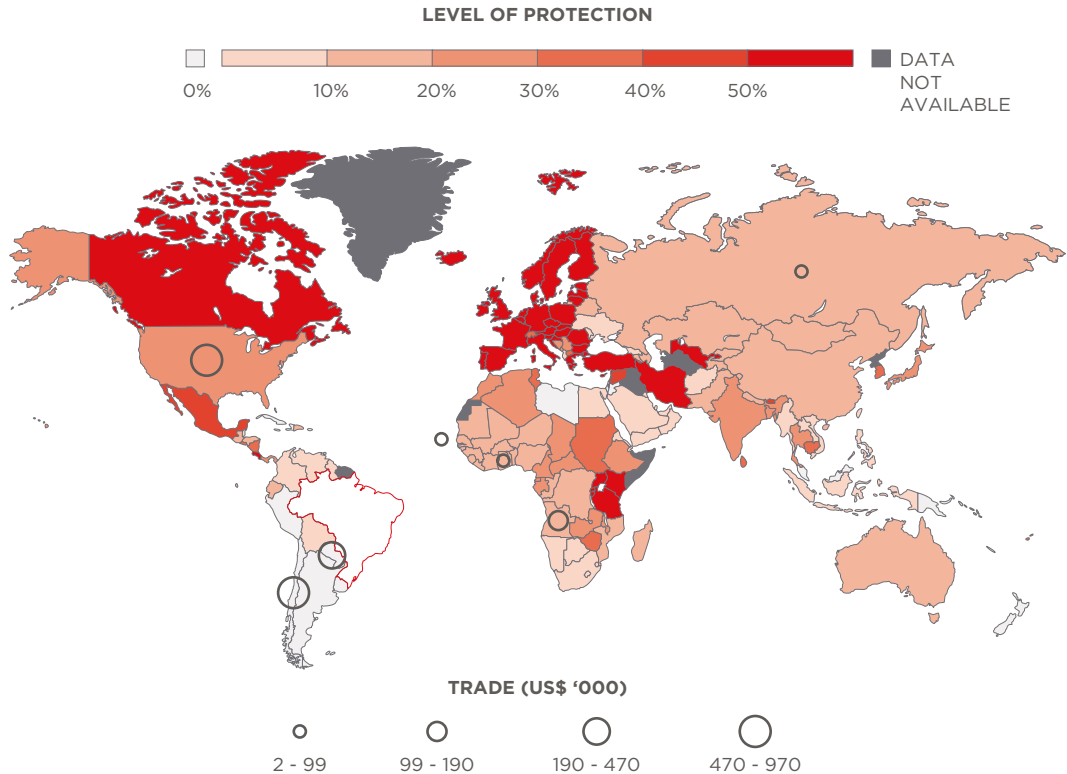
Source: Adapted from Macmap (2018)<sup>11</sup>.

Among the dairy products, the markets that suffer the most in Brazil with tariff barriers are Whey, Butter, and Cheeses. Like all other categories already mentioned, these categories are charged by most of the countries of the world, but in addition they perceive barriers with an even higher level of protection coming from countries of the European Union. The Cheese market is the most heavily affected, with high-level protection barriers practiced in Mexico and stronger barriers from countries such as the United States and Australia. India, in particular, has high barriers in regards to Brazilian Butter.

<sup>11</sup> Available at: <http://www.macmap.org/QuickSearch/FindTariff/FindTariff.aspx>

Figura 07

# LEVELS OF PROTECTION APPLIED TO BRAZILIAN CHEESE IN THE INTERNATIONAL MARKET



Source: Adapted from Macmap (2018)<sup>12</sup>.

Another major obstacle encountered is the non-tariff barriers that cover technical, environmental, sanitary requirements, minimum price policies, etc. This type of barrier has taken the place of tariff barriers particularly by stronger economies that use such a measure to protect themselves internally.

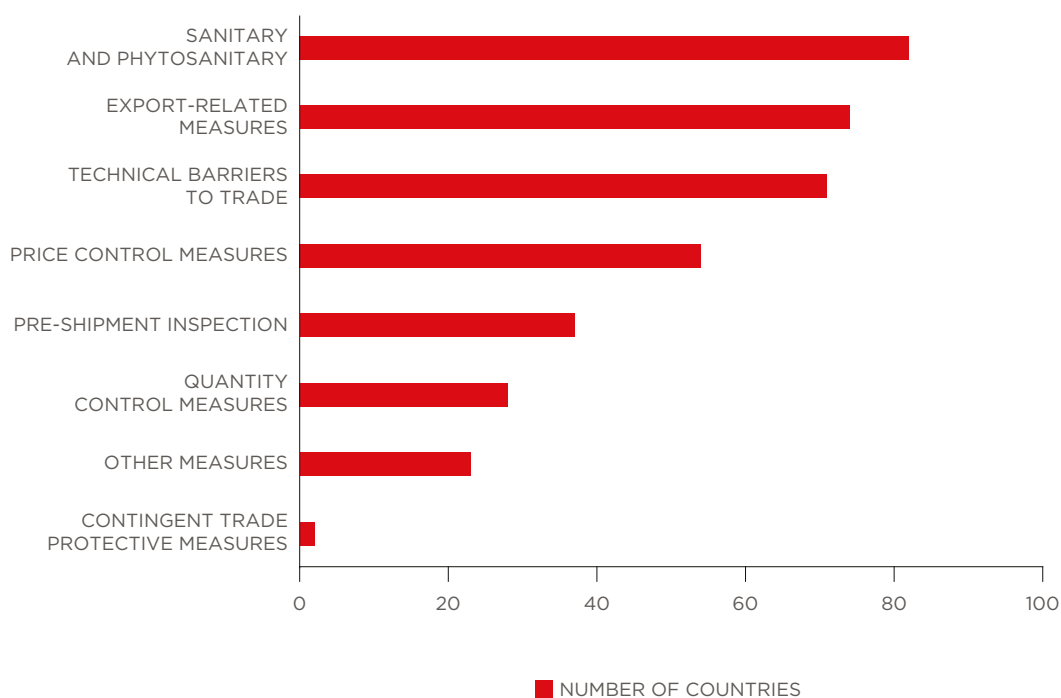
In addition to all the trade barriers practiced, the Brazilian dairy export group still has non-tariff barriers. Non-tariff barriers can be categorized by: Sanitary and Phytosanitary [SPS] [A], Technical Barriers to Trade [TBT] [B], Pre-shipment inspection [INSP] [C], Contingent trade protective measures [CTPM], Control measures [PC] [F], Other measures [OTH] [G,H,I,J,K,L,M,N,O], Export-related measures [EXP] [P].

<sup>12</sup> Available at: <http://www.macmap.org/QuickSearch/FindTariff/FindTariff.aspx>

In relation to the number of barriers, Sanitary and Phytosanitary barriers are imposed by 82 countries on Brazil, becoming the non-tariff barrier most adopted by the rest of the world in relation to the Brazilian dairy sector, see Graph 10. Other barriers widely adopted are Technical Barriers to Trade (74 countries), Export-related measures (71 countries) and Price control measures (54 countries). The total number of countries applying non-tariff barriers to the Brazilian dairy sector is 84.

Graph 10

### NUMBER OF COUNTRIES ADOPTING NON-TARIFF BARRIERS TO THE IMPORT OF BRAZILIAN DAIRY PRODUCTS



Source: Trains, UNCTAD (2018)<sup>13</sup>.

Among the main world buyers of the different categories of internationally traded dairy products are countries like China Russia, United States, Mexico and Japan, all these countries practice non-tariff barriers to Brazilian industry (see Table 8). Among the most used barriers are Technical Barriers to Trade and Sanitary and Phytosanitary barriers.

<sup>13</sup> Available at: <http://trains.unctad.org/>

Table 08

**MAIN IMPORTERS OF DAIRY PRODUCTS AND NON-TARIFF BARRIERS  
ADOPTED BY THEM TO IMPORT FROM BRAZIL**

					
	CHINA	RUSSIA	UNITED STATES	MEXICO	JAPAN
CONTINGENT TRADE PROTECTIVE MEASURES					
EXPORT-RELATED MEASURES		■	■	■	■
OTHER MEASURES					■
PRE-SHIPMENT INSPECTION		■	■	■	
PRICE CONTROL MEASURES		■	■		■
QUANTITY CONTROL MEASURES		■		■	■
SANITARY AND PHYTOSANITARY		■	■	■	■
TECHNICAL BARRIERS TO TRADE	■	■	■	■	■

Source: Trains UNCTAD (2018)<sup>14</sup>.

To reach the foreign market, Brazil first needs to become more competitive and strengthened internally. Improving infrastructure and logistics to reduce transport costs, and reducing reliance on just one modal, so that events such as the truckers' strike are not so damaging to the entire economy, especially for a sector that has high perishability like the dairy. Reducing tax burdens and reducing bureaucracies also help small producers reach new markets. As the sector relies on the large-scale participation of small and medium-sized producers, collaborative support is also needed so that together they can achieve greater competitiveness and cost reduction, both for internal marketing by offering raw material, and for promoting the external market.

<sup>14</sup> Available at: <http://trains.unctad.org/>



# ATTACHMENT 1

## PRESENTATION AND DESCRIPTION OF THE 13 PRODUCTS ANALYZED ACCORDING TO THE MERCOSUR COMMON (NCM) NOMENCLATURE

CODE NCM	DESCRIPTION
04015021	Milk cream UHT (Ultra High Temperature) with a fat content by weight of more than 10%, not concentrated nor containing added sugar or other sweetening matter.
04015029	Other milk creams, with a fat content, by weight, exceeding 10%, not concentrated nor containing added sugar or other sweetening matter.
04021010	Powder milk, granules or other solid forms, with a fat content, by weight, not exceeding 1,5%, of an arsenic, lead or copper content, taken individually, of less than 5 ppm, concentrated or of sugar/other sweeteners.
04022110	Fat milk, in powder, of a fat content, by weight, exceeding 1.5%, not containing added sugar or other sweetening matter.
04029900	Other milks, cream, concentrated, sweetened.
04031000	Yogurt.
04041000	Whey, whether or not modified, whether or not concentrated or containing added sugar or other sweetening matter.
04051000	Butter
04061010	Mozzarella cheese, fresh (uncured).
04061090	Other fresh cheeses (uncured), including cottage cheese, etc.
04063000	Processed cheese, other than grated or powdered.
04064000	Molded pasta cheeses and other cheeses that have veins obtained using Penicillium roqueforti.
04069010	Cheeses, with a moisture content of less than 36.0% by weight (hard mass).





## ATTACHMENT 2

AGGREGATION OF THE 13 PRODUCTS ANALYZED ACCORDING TO ITS MERCOSUR COMMON NOMENCLATURE (NCM) AND ITS PARTICIPATION IN THE BRAZILIAN FOREIGN TRADE GROUP

CATEGORY	NCM	DESCRIPTION NCM
MILK CREAM	04015021	Milk cream UHT (Ultra High Temperature) with a fat content by weight of more than 10%, not concentrated nor containing added sugar or other sweetening matter.
	04015029	Other milk creams, with a fat content, by weight, exceeding 10%, not concentrated nor containing added sugar or other sweetening matter.
POWDER MILK	04021010	Powder milk, granules or other solid forms, with a fat content, by weight, not exceeding 1.5%, of an arsenic, lead or copper content, taken individually, of less than 5 ppm, concentrated or of sugar/other sweeteners.
	04022110	Fat milk, in powder, of a fat content, by weight, exceeding 1.5%, not containing added sugar or other sweetening matter.
	04029900	Other milks, cream, concentrated, sweetened.
YOGURT	04031000	Yogurt.
WHEY	04041000	Whey, whether or not modified, whether or not concentrated or containing added sugar or other sweetening matter.
BUTTER	04051000	Butter.
CHEESE	04061010	Mozzarella cheese, fresh (uncured).
	04061090	Other fresh cheeses (uncured), including cottage cheese, etc.
	04063000	Processed cheese, other than grated or powdered.
	04064000	Molded pasta cheeses and other cheeses that have veins obtained using <i>Penicillium roqueforti</i> .
	04069010	Cheeses, with a moisture content of less than 36.0% by weight (hard mass).



## ATTACHMENT 3

### LIST OF ABBREVIATIONS

ACRONYM	DESCRIPTION
CCPR	COOPERATIVA CENTRAL OF THE RURAL PRODUCERS OF MINAS GERAIS
CEPEA	CENTER FOR ADVANCED STUDIES IN APPLIED ECONOMICS
CNA	BRAZILIAN CONFEDERATION OF AGRICULTURE AND LIVESTOCK
EU	EUROPEAN UNION
GVP	GROSS VALUE OF PRODUCTION
IBGE	BRAZILIAN INSTITUTE OF GEOGRAPHY AND STATISTICS
MAPA	MINISTRY OF AGRICULTURE, LIVESTOCK, AND SUPPLY
MT	MILLIONS OF TONS
NCM	MERCOSUR COMMON NOMENCLATURE
PIA	ANNUAL INDUSTRIAL SURVEY COMPANY
PPM	MUNICIPAL LIVESTOCK RESEARCH
SENAR	NATIONAL RURAL APPRENTICESHIP SERVICE
UHT	ULTRA HIGH TEMPERATURE
UNCTAD	UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT







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