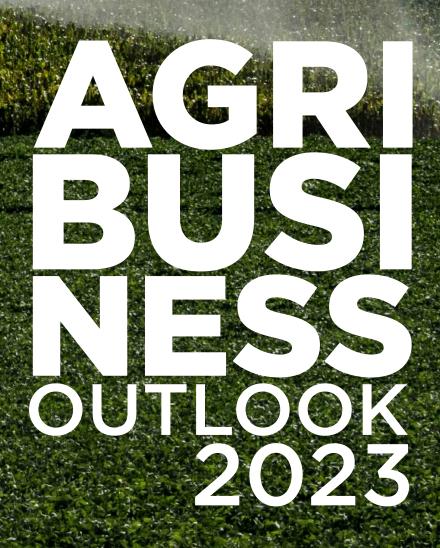




RO GRANDE DO SUL







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Diversification and modernization of the production



Gustavo Mansur/ Palácio Piratini

Rio Grande do Sul is one of the most diversified states in Brazil, both in terms of agriculture and livestock. This is the result of the existing climate and soil conditions, as well as the hard work of farmers who have the background and knowledge of the different cultures, races and ethnicities that make up the people of Rio Grande do Sul. There are more than 35 production chains of great importance and relevance in the state, many of which occupy the top positions in the country's production rankings. And the figures presented in this Outlook for Agriculture and Livestock in Rio Grande do Sul give an idea of the strength of grain production, livestock, fruit and vegetable production, forestry and so many other sectors that are important for the economy of Rio Grande do Sul and its development.

Likewise, this raw material base allows the state to have a strong agro-industrial sector, be it cereals, meat, dairy products, cellulose and wood, wines, juices and sparkling wines, yerba mate, tobacco and, more recently, extra virgin olive oil and pecans.

By presenting the work and data of this Outlook, the Secretariat of Agriculture, Livestock, Sustainable Production and Irrigation wants to record all the prosperity of Rio Grande do Sul's agribusiness and the vocation of our people to work, innovate and continue to be the locomotive of the state's economy.

A work that generates positive figures and that is built every day by many hands. By the public authorities, through structuring actions, but also in partnership with the productive sectors, the representative organizations, the companies and the community of Rio Grande do Sul.

The challenge now is to continue this remarkable production and modernization in line with the trends and demands of the national and international markets. It is also necessary to continue to improve and develop new public policies, based on the figures of the sectors, in order to promote the agribusiness of the state.

Giovani Feltes, Secretary of Agriculture, Livestock, Sustainable Production and Irrigation

Harvest rewards and a glimpse into the future

The countryside is the place where determination, daring and hope, come together every cycle, every harvest, to produce the wealth that moves our state and our country forward. The government also reaps what it sows for the benefit of the people it serves. In recent years, the State Government of Rio Grande do Sul has reaped the rewards of the serene and productive sowing of our management.

Inspired by the entrepreneurial spirit of the people of Rio Grande do Sul, we implemented a plan of fiscal adjustment and structural reforms that has become a model for Brazil. We offered our state a coherent and reliable agenda, a seed from which everyone could work.

From this seed grew the Forward Program. We have created the fiscal space to resume investment and have invested record amounts in agriculture and in areas related to our production, such as infrastructure. We are improving public services on different fronts and in different places, combining public and private investment so that the state can accelerate its economic growth in a way that is well distributed across the territory, benefiting both rural and urban areas.

The government's attention is also focused on what is our biggest challenge: drought management. We have launched the Drought Overcoming Program, which includes measures to support farmers in Rio Grande do Sul, such as the cancellation of debts from the Seed Exchange Program for more than 40,000 families and the payment of new rounds of SOS Drought, with a focus on small producers. This is a long-



Gustavo Mansur/ Palácio Piratini

term challenge in the face of climate change, and one that requires diverse and robust public policies. Behind the figures and data presented in this Outlook, there is a government working tirelessly to consolidate the achievements of agriculture and to qualify public policies for the sector. The future unites us, and the future of Rio Grande passes through the countryside.

> Eduardo Leite, Governor of the State of Rio Grande do Sul



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METHODOLOGICAL NOTES

The information gathered by the research team and presented in this publication refers to 2022, the 2022/23 harvest and in some cases, other years, from various official and private bodies that produce agricultural data.

The Animal Health Control and Information Division (DCIS) of Seapi's Animal Health Surveillance and Defense Department obtained information on: beef and dairy cattle farming, swine farming, poultry farming, sheep farming, equideoculture, fish farming and apiculture. In the Inspection Division of Plant-Based Products (Dipov), of the Department of Plant Defense, data were collected on state winemaking.

From the Brazilian Institute of Geography and Statistics (IBGE), through its automatic retrieval system (Sidra), data were extracted from the following surveys: Municipal Agricultural Production (PAM); Municipal Livestock Survey (PPM); Forestry and Plant Extraction Production (PEVS) and from the Systematic Survey of Agricultural Production (LSPA). Preliminary data have been collected at the technical meetings on Agricultural Statistics of the State (Reagro), in which IBGE is building its database.

Valuable information was obtained from the Ministry of Agriculture and Livestock (MAPA) regarding the Gross Value of Agricultural Production - VBP (CGPOP/DAEP/SPA/MAPA), as well as Foreign Trade, through the "Foreign Trade Statistics of Brazilian Agribusiness - Agrostat". Additional information on foreign trade was taken from the "Comex Stat" portal of the Ministry of Industry, Foreign Trade and Services.

We also consulted the "Monitoring of the Brazilian Grain Harvest" published by the National Supply Company (Conab), as well as the entity's National Register of Storage Units (SICARM).

The Gross Domestic Product (GDP) figure for the State of Rio Grande do Sul

was obtained from the Department of Economics and Statistics (DEE) of the State Secretariat for Planning,



Governance and Management (SPGG).

From Emater/RS systematized data was retrieved in the work commissioned by Seapi: "Survey of Commercial Fruit Growing in RS - 2023" and "Survey of Commercial Olive Growing in RS -2023", as well as specific information on various crops.

The Rio Grande do Sul Rice Institute (Irga) has released reports on rice production. Data on the purchase of corn from other federative units (UF's) was obtained from the Treasury Department (Sefaz).

Information on fish farming was obtained from the Cooperativism Department of the Rural Development Secretariat. Ceasa/RS technical management provided information on the marketing of fruit and vegetables.

We would like to thank the following private and public entities from the state of Rio Grande do Sul and as well as national entities for providing statistical information for this publication: The Federation of Agricultural Cooperatives the Poultry Farming (Fecoagro). Association (Asgav), the Swine Breeders Association (Acsurs), the Swine Products Industry Association (SIPS), the Fund for the Defense and Development of Animal Health (Fundesa), the Association of Companies (Ageflor/RDK Forestry Logs), the Association of Intercity Timber Industries (Sindimadeira), the Brazilian Animal Protein Association (ABPA). the Tobacco Growers Association of Brazil (Afubra), the Brazilian Institute of Pecan Growing (IBPecan), the Brazilian Institute of Olive Growing (Ibraoliva), the Brazilian Fish Breeders Association (Peixe BR), the Brazilian Association of Sheep Breeders (Arco) and the Brazilian Institute of Equideoculture (IBEqui).

To all the public servants and employees of private institutions who work day in, day out in the search for statistical data on agriculture in Rio Grande do Sul and Brazil, our thanks and recognition for their work.



AGRIBUSINESS IN THE ECONOMY OF RIO GRANDE DO SUL

THE STATE'S GROSS DOMESTIC PRODUCT - GDP (2022) WAS AROUND **R\$ 594**

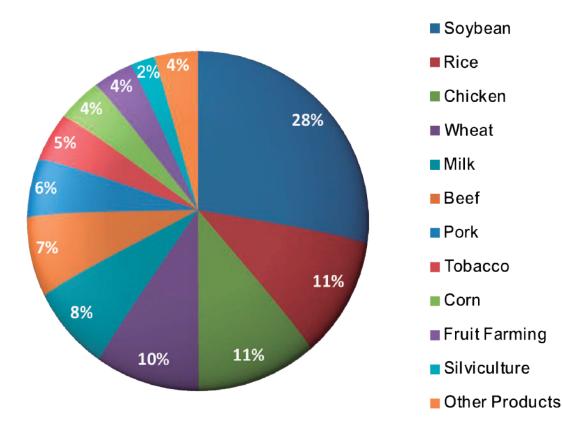
BILLION

THE GROSS VALUE OF AGRICULTURAL PRODUCTION - GPV (2022) HAS REACHED



The Gross Value of Agricultural Production in 2022 was lower than in the previous year due to poor grain harvests, especially soybeans and corn, as a result of the severe drought in the state. Nevertheless, agribusiness accounted for 73% of exports and continues to be the main driver of Rio Grande do Sul's economy.

Main agricultural products of the state, based on Gross Production Value (GPV)



Sources: SPGG-RS/DEE (2022); CGPOP/DAEP/SPA/MAPA (2022); PAM/IBGE (2021); PEVS/IBGE (2021); SEAPI (2022).





EXPORTS 2022

MAIN AGRICULTURAL PRODUCTS AND THEIR DESTINATIONS

In 2022, the state of Rio Grande do Sul exported agricultural products to 201 countries, with a value of US\$ 15.8 billion. Below is a list of the main products and main export destinations.

PRODUCTS	MILLION US\$	%		
SOYBEAN COMPLEX	5,563.7	35.2%		
MEAT	2,749.1	17.4%	29%	CHINA
FORESTRY PRODUCTS	2,163.8	13.7%		EUROPEAN UNION
TOBACCO AND DERIVED PRODUCTS	1,976.4	12.5%	42%	 UNITED STATES INDIA
CEREALS, FLOUR AND CEREAL-DERIVED PRODUCTS	1,788.6	11.3%	16%	ISLAMIC REPUBLIC OF IR OTHER COUNTRIES
OTHER PRODUCTS	1,558.7	9.9%	4% 4% 5%	
TOTAL	15,800.3	100%		

AGRICULTURAL MACHINERY AND EQUIPMENT

During the period, US\$ 587.8 million worth of agricultural machinery and equipment was exported to

countries.

COUNTRY **MILLION US\$** % PARAGUAY 157.3 26.8% UNITED STATES 97.2 16.5% ARGENTINA 86.8 14.8% URUGUAY 51.5 8.8% BOLIVIA 41.0 7.0% OTHER COUNTRIES 153.9 26.2% τοται 587.8 100%

MANURE AND FERTILIZERS

In 2022, US\$ 100.3 million worth of fertilizers were exported to 17 countries. Below are the top destinations for the state's exports, as well as the types of fertilizers exported.

	2% 1% / 1%		PRODUCTS	MILLION US\$	%
			NPK	71.7	71.5%
			NITROGEN FERTILIZERS	19.7	19.6%
26%	2007	ARGENTINA	PHOSPHORUS FERTILIZER	5.1	5.1%
	39%	URUGUAY	POTASSIUM FERTILIZER	2.3	2.3%
		■ PARAGUAY ■ CHILE	ANIMAL OR VEGETABLE FERTILIZERS	1.6	1.6%
		BOLIMAOTHER COUNTRIES	TOTAL	100.3	100%
	31%		Sources: Agrostat	:/MAPA (2022); Com	,

IMPORTS 2022

MAIN AGRICULTURAL PRODUCTS AND THEIR ORIGINS

In 2022, the state of Rio Grande do Sul imported agricultural products from 97 countries, valued at US\$ 1.03 billion. Below is a list of the main imported products with their respective origins.



AGRICULTURAL MACHINERY AND EQUIPMENT

During this period, US\$ 160.2 million worth of agricultural machinery and equipment was imported from 33 countries.

COUNTRY	MILLION US\$	%
UNITED STATES	82.4	51.4%
CHINA	23.9	14.9%
INDIA	14.5	9.1%
GERMANY	11.3	7.0%
ITALY	8.8	5.5%
OTHER COUNTRIES	19.3	12.0%
TOTAL	160.2	100%

MANURE AND FERTILIZERS

			PRODUCTS	MILLION US\$	%
	15%	SAUDI ARABIA	NPK	1,358.2	38.7%
			POTASSIUM FERTILIZER	1,097.0	31.2%
44%	14%	RUSSIA	NITROGEN FERTILIZERS	878.5	25.0%
		MOROCCO	PHOSPHORUS FERTILIZER	174.7	5.0%
8	10% 9%	GERMANYOTHER COUNTRIES	ANIMAL OR VEGETABLE FERTILIZERS	2.1	0.1%
			TOTAL	3,510.6	100%

Sources: Agrostat/MAPA (2022); Comex Stat/ME (2022); SEAPI (2023). 14 | AGRIBUSINESS OUTLOOK | 2023





TRADE BALANCE 2022

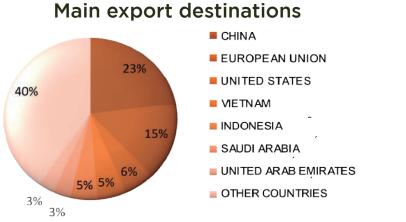
In 2022, Rio Grande do Sul's total exports amounted to approximately US\$ 22 billion, of which US\$ 16.5 billion was related to agribusiness, responsible for 73.1% of exports, guaranteeing the state's positive trade balance. The total imports of Rio Grande do Sul amounted to about US\$ 16 billion, of which US\$ 4.7 billion (29.4%) were related to the agribusiness sector, mainly due to fertilizers, which amounted to US\$ 3.5 billion, representing 74.7% of all imports from this sector.

Total State Exports (US\$ billion)	Agribusiness Exports (US\$ billion)	Agribusiness Share (%)		
22.6	16.5	73.1%		
Total State Imports (US\$ billion)	Agribusiness Imports (US\$ billion)	Agribusiness Share (%)		
16.0	4.7	29.4%		
Trade	Balance			
6.6	11.8			
Note: The values of agribusiness exports and imports were obtained from the sum of agricultural products, fertilizers, and agricultural machinery and equipment				

EXPORTS 1st SEMESTER OF 2023

In the first half of 2023, agricultural products were exported to 194 countries, valued at US\$ 7.1 billion. The table below shows the main products on the state's export list. The top export destinations are shown in the chart.

MAIN PRODUCTS - MILLION US\$					
PRODUCTS	2022	2023	%		
SOYBEAN COMPLEX	1,900.2	2,195.3	15.5%		
MEAT	1,277.6	1,323.0	3.6%		
TOBACCO AND DERIVED PRODUCTS	881.9	1,063.4	20.6%		
CEREALS, FLOUR AND CEREAL- DERIVED PRODUCTS	1,085.0	992.6	-8.5%		
FORESTRY PRODUCTS	955.7	828.8	-13.3%		
OTHER PRODUCTS	818.9	737.2	-10.0%		
TOTAL	6,919.2	7,140.4	3.2%		



Sources: Agrostat/MAPA (2022 e 2023); Comex Stat/ME (2022 e 2023); SEAPI (2023).

AGRIBUSINESS OUTLOOK | 2023 | 17



6.65 MILLION HECTARES PRODUCTION OF

12.71 MILLION TONS GROSS PRODUCTION VALUE - GPV R\$ 38.42

BILLION

The drought during the summer months severely damaged the 2022/23 crop. Although production of 12.71 million tons was still 36% higher than the 2021/22 crop, it was significantly lower than the 2020/21 crop. According to IBGE data 187,300 hectares were irrigated (only 2.8% of the total area planted), with an average yield 66.1% higher than in non-irrigated areas. Soy is grown in 435 municipalities

In 2022, Rio Grande do Sul exported soy complex products to 49 countries for a – total value of US\$ 5.56 billion, making it the fourth-largest exporter of soy complex products in the country that year. Moreover, soy complex products represent the main export category of the agribusiness sector, accounting for about 35% of the sector's exports in 2022.

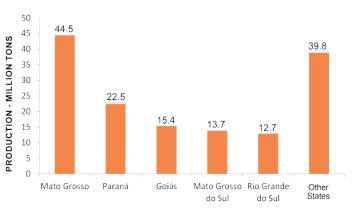
Municipalities with the largest production

Rain-fed Cultivation	lr	rigated Cultivation
Dom Pedrito	1st	Itaqui
São Gabriel	2 nd	Dom Pedrito
Vacaria	3rd	São Borja
Muitos Capões	4 th	Cruz Alta
Palmeira das Missões	5 th	São Luiz Gonzaga
Tupanciretã	6 th	Santa Bárbara do Sul
Santana do Livramento	7 th	Boa vista do Cadeado
Santa Vitória do Palmar	8 th	Santo Augusto
Júlio de Castilhos	9 th	Jóia
Rosário do Sul	10 th	Tupanciretã
	Dom Pedrito São Gabriel Vacaria Muitos Capões Palmeira das Missões Tupanciretã Santana do Livramento Santa Vitória do Palmar Júlio de Castilhos	Dom Pedrito 1 st São Gabriel 2 nd Vacaria 3 rd Muitos Capões 4 th Palmeira das Missões 5 th Tupanciretã 6 th Santana do Livramento 7 th Santa Vitória do Palmar 8 th Júlio de Castilhos 9 th

EXPORTS

MAIN DESTINATIONS						
	COUNTRY	VALUE (MILLION US\$)	WEIGHT (tons)	%		
1st	CHINA	2,896.0	4,626,652.4	52%		
2 nd	INDIA	568.3	394,857.2	10%		
3rd	ISLAMIC REPUBLIC OF IRAN	501.7	780,259.9	9%		
4 th	SPAIN	287.8	593,022.4	5%		
5 th	SOUTH KOREA	228.8	447,699.0	4%		
	OTHER COUNTRIES	1,081.2	2,094,770.2	19%		
	TOTAL	5,563.7	8,937,261.1	100%		

LARGEST PRODUCING STATES - 2022/2023 Crop



Sources: LSPA/IBGE (2023); CGPOP/DAEP/SPA/MAPA (2023); Agrostat/MAPA (2022); REAGRO-RS (2023); SEAPI (2023).

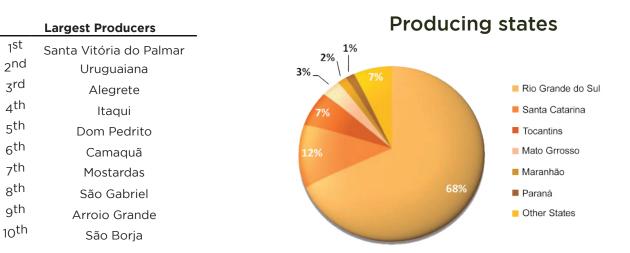




				RI	CE
SOWN AREA 839.97 THOUSAND HECTARES	PRODUCTION OF 7.24 MILLION TONS		R\$	PRODUC LUE - GPV 11.4 BILLION	
EXPORTS	COUNTRY		DESTINATIONS VALUE (MILLION US\$)	WEIGHT (tons)	
The state exported a total of US\$ 637.9 million worth of rice to 65 countries in 2022.	1 st 2nd 3rd 4th 5th 	MEXICO SENEGAL VENEZUELA COSTA RICA CUBA OTHER COUNTRIES TOTAL	152.9 83.8 70.5 49.3 48.7 232.6 637.9	446,767.7 226,365.6 202,890.7 149,556.5 116,077.2 555,514.0 1,697,171.7	24% 13% 11% 8% 8% 36% 100%

The state of Rio Grande do Sul is the largest rice producer in the country, where 176 municipalities are responsible for 68.15% of the national production. The varieties developed by the Rio Grande do Sul Rice Institute (Irga) were the most planted, accounting for 64.5% of the total sown in this harvest, with the 424 RI variety standing out. Below are the results by region.

The State's Regions	Sown Área (ha)	Productivity (tons/ha)	Production (tons)
CAMPAIGN	122,548	8.96	1,096.300
CENTRAL	112,051	8.34	920,312
WESTERN BORDER	251,096	8.77	2,078 850
OUTER COASTAL PLAIN	93,927	8.08	758,741
INNER COASTAL PLAIN	122,767	8.63	1,058,861
SOUTHERN ZONE	137,583	9.64	1,326,921
TOTAL	839,972	8.79	7,239,985



Sources: IRGA (2023); CGPOP/DAEP/SPA/MAPA (2023); Agrostat/MAPA (2022); LSPA/IBGE (2023); REAGRO-RS (2023); SEAPI (2023).

AGRIBUSINESS OUTLOOK | 2023 | 21



816.94 THOUSAND HECTARES **PRODUCTION OF**

3.95 MILLION TONS GROSS PRODUCTION VALUE - GPV

R\$ 5.47

The 2022/23 corn crop produced 3.95 million tons, about 35% less than initially expected due to the prolonged drought. However, it was 31% higher than the previous crop, which was the most affected by the lack of rain in the last four years. There is a significant difference of almost 2.5 times between the average yield of rainfed corn, which was 4.02 tons per hectare, and the average yield of irrigated corn, which was 9.91 tons

per hectare. The total irrigated area was 113,553 hectares (13.7%). Corn for silage occupied an area of 386,64 thousand hectares with a production of 9.06 million tons.

For the first time, the opening of the corn harvest took place in the lowlands, demonstrating the viability of growing irrigated corn using furrow-tillagetechnology.

ACQUISITION

COUNTRY

EGYPT

OF IRAN

SAUDI ARABIA

MALASIA

VIETNAM

OTHER COUNTRIES

TOTAL

2nd SLAMIC REPUBLIC

1st

3rd

⊿th

5th

--

In order to satisfy the domestic demand for corn in the state in 2022, 3.37 million tons were purchased, with an expenditure of more than R\$ 4 billion reais.

MAIN DESTINATIONS

(MILLION US\$) (tons)

37.8

34.1

23.1

23.0

7.8

9.2

134.9

WFIGHT

108,633.0

65,530.8

64.037.3

22.070.0

28,017.9

375,999.7

375.999.7

%

28%

25%

17%

17%

6%

7%

100%

CORN IMPORTS					
	COUNTRY	VALUE (MILLION US\$)	WEIGHT (tons)		
1st	ARGENTINA	55.1	218,047.3		
2 nd	PARAGUAY	43.1	189,105.8		
	TOTAL IMPORTS	98.2	407,153.0		
		VALUE (MILLION R\$)	WEIGHT (tons)		
	PURCHASES OF CORN FROM OTHER STATES OF BRAZIL	4,124.0	2,966,628.0		
	GRAND TOTAL		3,373,781.0		

EXPORTS

The state exported a total of US\$ 134.9 million worth of corn to 21 countries in 2022.

	Largest Producers				Largest Producers			
Rain-fed Cultivation				Irrigated Cultivation				
1st	Vacaria	6th	Venâncio Aires	1st	São Luiz Gonzaga	6th	São Borja	
2nd	Muitos Capões	7th I	n Doutor Maurício Cardoso		Cruz Alta	7th Santo Antônio das Missões		
3rd	Bom Jesus		São Francisco de Paula	2110		, en c		
4th	Esmeralda	9th	Lagoa Vermelha	3rd	Palmeira das Missões	8th	Boa Vista do Cadeado	
5th	Caxias do Sul	10th	São Lourenço do Sul	4th	São Miguel das Missões	9th	Coronel Bicaco	
0.01		10111		5th	Santa Bárbara do Sul	10th	Tupanciretã	

Sources: LSPA/IBGE (2023); CGPOP/DAEP/SPA/MAPA (2023); SEFAZ (2022); Agrostat/MAPA (2022); REAGRO-RS(2023); SEAPI (2023).







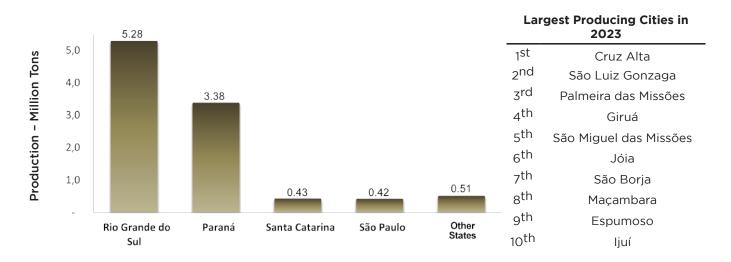
PRODUCTION OF



5.29 MILLION TONS (2022) GROSS PRODUCTION VALUE - GPV

> **R\$ 9.4** BILLION (2022)

Good weather conditions and the work of wheat growers resulted in record wheat production in Rio Grande do Sul, accounting for 52.6% of the country's production. The chart below shows the top producing states for 2022.



IBGE's estimate for the 2023 wheat harvest is 1.49 million hectares, with an expected production of 4.80 million tons. Wheat is grown in 379 municipalities of Rio Grande do Sul.

Information on other winter cereals is presented in the table below:

OTHER WINTER CROPS				
Cereal	Area 2022	Production 2022	Area 2023	Production 2023
Cerear	(thousand ha)	(thousand tons)	(thousand ha)*	(thousand tons)*
White oats	360.1	913.0	365.8	863.9
Canola	56.8	108.6	59.9	106.9
Rye	1.6	2.5	1.3	2.0
Barley	42.0	142.6	38.5	117.5
Triticale	6.5	20.8	7.8	23.1
Total	467.0	1,187.7	473.4	1,113.4

* Forecast from LSPA - 2023/May

Sources: LSPA/IBGE (2022 e 2023); CGPOP/DAEP/SPA/MAPA (2022); REAGRO-RS (2023); SEAPI (2023).



47.56 THOUSAND HECTARES **PRODUCTION OF**

68.58 THOUSAND TONS GROSS PRODUCTION VALUE - GPV R\$ 351.1 MILLION

The production of beans in the state takes place in two harvests. The first was obtained in a harvested area of 28,330 hectares, which generated a production of 40,680 tons, similar to the previous year's harvest. As for the second harvest, due to the drought, there was a reduction in the area planted compared to the previous

year, reaching 19,200 hectares, with a corresponding production of 27,800 tons. It's worth noting that irrigation is more common in the second crop than in the first, accounting for 14% of the area planted. The graph below shows the production of each type of bean in the first harvest.

Bean Varieties - First Crop 30% Black bean Colored bean

Note: In the 1st crop, black-eyed beans account for less than 1% of production.

In the 2nd crop, black beans account for practically 100% of production.

Rain-fed Cultivation Irrigated Cultivation 1st 1st Muitos Capões Carazinho 2nd 2nd Vacaria Getúlio Vargas 3rd 3rd Bom Jesus Silveira Martins 4th 4th Esmeralda lvorá 5th Monte Alegre dos Campos 5th 6th 6th Camaquã 7th 7th Rolante 8th 8th Venâncio Aires gth 9th São Lourenço do Sul 10th Boqueirão do Leão 10th

Largest Producers Second Crop

Rain-fed Cultivation			Irrigated Cultivation		
1st	Dois Irmãos das Missões	1st	Santo Augusto		
2 nd	Sertão	2 nd	Chiapetta		
3rd	Boa Vista das Missões	3rd	Coronel Bicaco		
4th	Trindade do Sul	4 th	Palmeira das Missões		
5 th	Três Palmeiras	5 th	Cruz Alta		
6 th	Victor Graeff	6 th	Júlio de Castilhos		
7 th	Nonoai	7 th	Entre-ljuís		
8 th	Seberi	8 th	Carazinho		
9th	Lajeado do Bugre	9th	Tapera		
10 th	São José do Ouro	10 th	Ibirubá		

Sources: LSPA/IBGE (2023); CGPOP/DAEP/SPA/MAPA (2023); REAGRO-RS (2023); SEAPI (2023).

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Largest Producers First Crop





TOBACCO

HARVESTED AREA

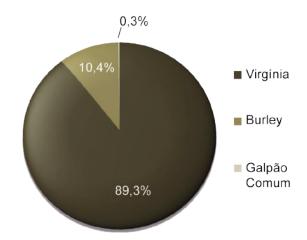
148.11 THOUSAND HECTARES

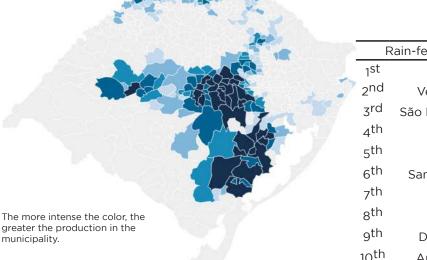
EXPORTS

In 2022, the state exported tobacco and its derived products to 89 countries. generating revenues of about US\$ 2.163 billion. In this sense, Rio Grande do Sul is the largest exporter of this crop in the country.

MAIN DESTINATIONS					
	COUNTRY	VALUE (MILLION US\$)	WEIGHT (tons)	%	
1st	BELGIUM	571.3	135,837.2	26%	
2 nd	CHINA	453.3	73,534.8	21%	
3rd	UNITED STATES	143.2	34,792.1	7%	
4 th	INDONESIA	77.6	16,374.3	4%	
5 th	TURKEY	63.8	19,613.2	3%	
	OTHER COUNTRIES	854.7	244,788.4	39%	
	TOTAL	2,163.8	524,940.1	100%	

Tobacco is currently produced in 200 municipalities in Rio Grande do Sul. It is one of the most labor-intensive production chains in rural areas. There are about 66,200 tobaccogrowing families in the state and three types of tobacco are grown. There are 86,280 greenhouses used by tobacco growers. Beside is a breakdown of the share of each variety in tobacco production, according to the Brazilian Tobacco Growers' Association (AFUBRA):





Largest Producers Rain-fed Cultivation Irrigated Cultivation 1st Barão do Triunfo Camaquã 2nd Venâncio Aires Canguçu 3rd São Lourenço do Sul São Lourenço do Sul 4th Canguçu Cristal 5th Vale do Sol Pelotas 6th Santa Cruz do Sul Arroio do Padre 7th Candelária Mariana Pimentel 8th Pelotas Restinga Sêca gth Dom Feliciano Dona Francisca 10th 10th Arroio do Tigre lvorá

> Sources: REAGRO-RS (2023); SEAPI (2023); Agrostat/MAPA (2022); AFUBRA (2023); CENSO AGRO/IBGE (2017).

AGRIBUSINESS OUTLOOK | 2023 | 29

PRODUCTION OF

290.27 THOUSAND TONS VGROSS PRODUCTION VALUE - GPV

R\$ 5.25 BILLION



966.5 THOUSAND HECTARES PRODUCTION VALUE FORESTRY

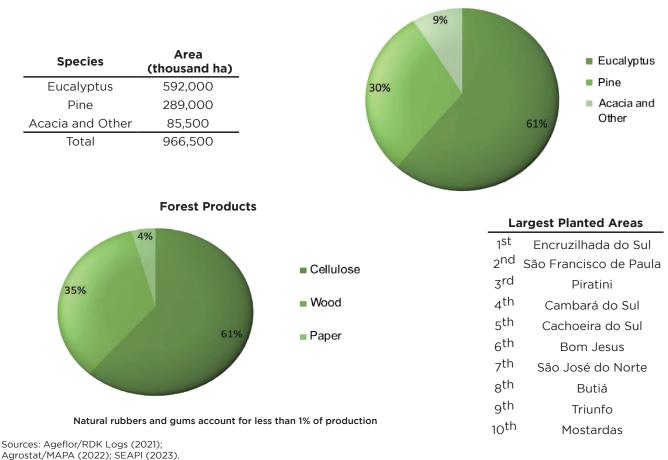
> **R\$ 2.4** BILLION (2021)

LARGEST EXPORTER OF FOREST PRODUCTS

Rio Grande do Sul exported forest products to 139 countries, generating revenues of US\$ 1.976 billion, making it the fourth largest exporter of forest products in the country.

MAIN DESTINATIONS						
	COUNTRY	VALUE (MILLION US\$)	WEIGHT (tons)	%		
1st	CHINA	407.9	1,745,986.8	21%		
2 nd	UNITED STATES	297.1	495,311.0	15%		
3rd	JAPAN	196.9	324,861.2	10%		
4 th	ITALY	168.7	309,562.2	9%		
5 th	UNITED ARAB EMIRATES	108.0	155,479.8	5%		
	OTHER COUNTRIES	797.8	2,243,253.3	40%		
	TOTAL	1,976.4	5,274,454.2	100%		

The importance of the planted forest sector is recognized by the high level of employment generation and income circulation in various segments of the economy. There are 65,000 direct jobs generated by planted forests in the state. The southern region, Campos de Cima da Serra and Depressão Central stand out. The value of forest production in the state reached R\$ 2.4 billion in 2021, an increase of 24% compared to the previous year.



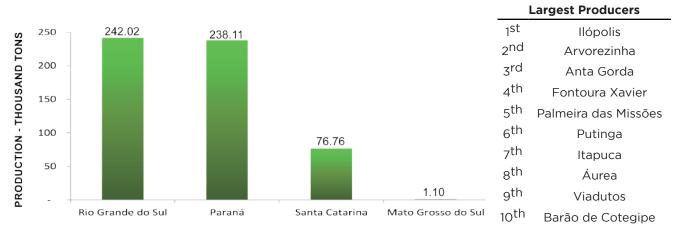






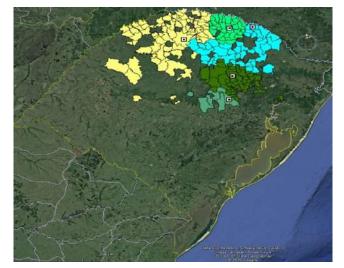
	RODUCTION OF		GROSS PRODUCTION VALUE - GPV		
28.02 2 THOUSAND HECTARES	58.04 THOUSAND TONS		R\$ 3	09 Llion	.53
		MAIN [DESTINATIONS		
The state exported		COUNTRY	VALUE (MILLION US\$)	WEIGHT (tons)	%
yerba mate to 33 countries	1 st	URUGUAY	57.2	26,891.1	81%
in 2022, generating US\$	2 nd	ARGENTINA	10.1	6,006.6	14%
70.32 million in revenue,	3rd	SPAIN	0.8	323.6	1%
making it the largest	4th	CHILE	0.5	288.8	1%
exporter of the crop in the	5th	UNITED STATES	0.4	166.1	1%
		OTHER COUNTRIES	1.2	502.7	2%
country.		TOTAL	70.3	34,178.9	100%

Currently, yerba mate is produced in 185 municipalities of Rio Grande do Sul. The state has 7,242 yerba mate producers and was the largest producer in the country in 2021 as can be seen in the graph below.



DISTRIBUTION OF THE YERBA MATE INDUSTRY IN THE STATE

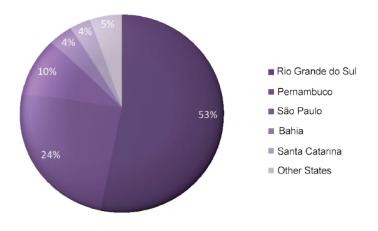
Pro	duction Clusters	Municipalities	%
1st	Alto Taquari	46	22.33
2 nd	Missões/Celeiro	80	38.83
3rd	Região dos Vales	8	3.88
4 th	Alto Uruguai	30	14.56
5th	Nordeste Gaúcho	42	20.39
	Total	206	100



Sources: REAGRO-RS (2023); Agrostat/MAPA (2022); PAM/IGBE(2021); SEAPI (2023). AGRIBUSINESS OUTLOOK | 2023 | 33

HARVESTED ARE	4	PRODUCTION OF		GROSS PRODUC VALUE - GP	
47.15 THOUSAND HECTARES		907.66 THOUSAND TONS		R\$ 1.8 BILLION	86
WINE (THOUSAND LI	TERS) 195,032	SPARKLING WINE (THO LITERS)	OUSAND	OTHER GRAPE PRO (THOUSAND LITI	
FINE WINE	47,512	SPARKLING WINE BASE	11,534	GRAPE MUST	126,048
TOTAL	242,543	SPARKLING WINE	98	GRAPE PULP	388
GRAPE JUICE (THOUSANI		TOTAL OTHER WINES AND J (THOUSAND LITEI		OTHER BY- PRODUCTS (GRAPE/ WINE)	30
SWEETENED GRAPE JUIC		CONCENTRATED GRAPE JUICE	29,893	ORGANIC GRAPE JUICE	589
TOTAL	35,327	WINES	67		89
		TOTAL	29,959.550	TOTAL	127,145

Rio Grande do Sul accounts for 53% of the country's grape production. It is largely responsible for the production of the country's wines, sparkling wines and juices. The chart below shows the largest grape producing states in Brazil.



The area under cultivation for table grapes was 3,888 hectares, with a production of 66,186 tons (9% of the total).

Sources: LSPA/IBGE (2023); CGPOP/DAEP/SPA/MAPA (2023); SEAPI (2023); REAGRO-RS (2023); EMATER (2023).

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Municipalities with the largest production

	Grapes for processing	Grapes for table consumption		
1st	Bento Gonçalves	1 st	Flores da Cunha	
2 nd	Alpestre	2 nd	Caxias do Sul	
3rd	Veranópolis	3rd	Farroupilha	
4 th	Farroupilha	4th	Nova Pádua	
5 th	Vale Real	5th	São Marcos	
6 th	Caxias do Sul	6 th	Bento Gonçalves	
7 th	Cotiporã	7 th	Ametista do Sul	
8 th	Alto Feliz	8 th	Campestre da Serra	
9th	Antônio Prado	9th	Nova Roma do Sul	
10 th	São Marcos	10 th	Pelotas	





HARVESTED AREA

15.96 THOUSAND HECTARES PRODUCTION OF

556.49 THOUSAND TONS

APPLE

GROSS PRODUCTION VALUE - GPV

> **R\$ 1.12** BILLION (2021)

Rio Grande do Sul exported apples to 39 countries in 2022, generating US\$ 20.4 million in revenue. The state is the largest exporter in the country with 83% of the exported volume.

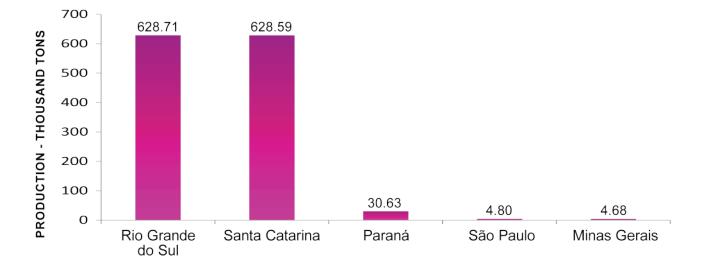
	MAIN DESTINATIONS					
	COUNTRY	VALUE (MILLION US\$)	WEIGHT (tons)	%		
1st	BANGLADESH	9.2	14,013.2	45%		
2 nd	ÍNDIA	7.1	10,444.3	35%		
3rd	IRLANDA	1.8	2,140.7	9%		
4 th	REINO UNIDO	0.9	1,274.2	4%		
5 th	FRANÇA	0.8	677.4	4%		
	OUTROS	0.6	770.7	3%		
	TOTAL	20.4	29,320.6	100%		

Apples are produced in 47 municipalities of the state, almost all of them located in the Serra, Nordeste and Campos de Cima da Serra regions. The production chain is highly technological in terms of production, post-harvest, marketing and export.

The chart below shows the largest fruit producing states in 2021, according to IBGE. The states of Rio Grande do Sul and Santa Catarina are responsible for 97% of the national production.

Municipalities with the largest production

	Rain-fed Cultivation		gated Cultivation
1st	Vacaria	1st	lpê
2 nd	Bom Jesus	2 nd	Antônio Prado
3rd	Muitos Capões	3rd	São Marcos
4 th	Caxias do Sul	4 th	Flores da Cunha
5 th	São Francisco de Paula	5 th	Esmeralda
6 th Monte Alegre dos Campos		6 th	Pelotas
7 th	São José dos Ausentes	7 th	Arroio do Padre
8 th	Campestre da Serra	8 th	-
9 th	Veranópolis	9 th	-
10 th	lpê	10 th	-



0	RA	N	GE

20.40 320 THOUSAND THOU		CTION OF GROSS PRODUCTION VALUE - GPV DSAND DNS GROSS PRODUCTION VALUE - GPV MILLION				
In 2022, the state expor			VALUE (MILLION US\$)			
orange juice to 19 countr			NETHERLANDS	7.1	4,580.1	73%
generating US\$ 9.74 millior						
revenue.						

Due to the drought, orange production was down 10% to 40% from the previous year, depending on the region.

There are approximately 8,000 producers in the state, 98% of which are family citrus farms. In addition, there are also six juice concentrate industries.

The Alto Uruguai region is the largest producer of juice oranges, with Valencia, Hamlin, Rubi, lapar 73 and other varieties dominating.

In the Vale do Caí, Serra and Fronteira Oeste regions, the production of table oranges stands out, with the Umbigo varieties: Monte Parnas, Baía, Baianinha, Navelina, as well as Salustiana and Céu (without acid).

To satisfy the local demand, Rio Grande do Sul buys oranges from the central region of the country, especially during the summer months.

winda

	nicipalities with the rgest production	10	
1 st	Alpestre	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	an we want
2 nd	Aratiba		
3rd	Liberato Salzano		
4 th	Itatiba do Sul		
5 th	Planalto		
6 th	Arvorezinha		
7 th	Harmonia		
8 th	Mariano Moro		
9th	Rosário do Sul	The more intense the color tone, the greater	
10 th s	ão José do Hortêncio	the production in the municipality.	

Sources: LSPA/IBGE (2023); CGPOP/DAEP/SPA/MAPA (2023); Agrostat(2022); SEAPI (2023); EMATER (2023); CENSO AGRO/IBGE (2017). 38 | AGRIBUSINESS OUTLOOK | 2023







GROSS PRODUCTION

Municipalities with the

largest production

Montenegro

Pareci Novo

São José do Sul

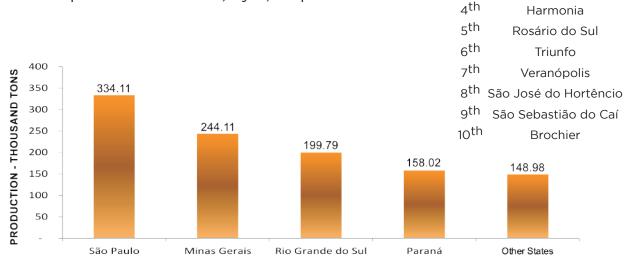
1st

2nd

3rd

HARVESTED AREA 12.30 THOUSAND HECTARES	production of 169.17 THOUSAND TONS	R R	VALUE - GPV 5 257.95 MILLION (2021)
		States	Area (ha) - 2021
Rio Grande do Su	al has the	Rio Grande do Sul	13,373
largest tangerine grow	wing area	Minas Gerais	12,969
in the country, with r	nore than	São Paulo	10,191
13,000 hectares, rep		Paraná	9,027
almost a guarter of th		Paraíba	1,810
		Other states	8,037
Brazil.		Total	55,407

Rio Grande do Sul is one of the largest tangerine producers in the country. In 2021, it was the third state with the highest production, as shown in the graph below. Currently, according to Emater/RS, tangerines are grown in 403 municipalities of the state, by 4,581 producers.



In the south of the country, tangerines are known as bergamots or "mexericas". The excellent climatic conditions in Rio Grande do Sul have favored the development of its production, which justifies the large area planted.

The main production region is located in the Vale do Rio Caí, where the varieties Montenegrina, Caí, Ponkan, Satsuma Okitso and Murcott stand out. In the same region, there are industries producing essential oils from tangerines, which are an important source of employment and income for the local economy.

The western border of the state, close to Uruguay and Argentina, is an important cluster for the production and export of seedless tangerines.

BANANA

HARVESTED AREA

12.16 THOUSAND **PRODUCTION OF**

142.47 THOUSAND

GROSS PRODUCTION

R\$ 501.76 MILLION

On the north coast of the state, one

family farmers is prominent.

and the second second

Despite good local production, Rio

currently 2,831 banana producers in the

		A. C.
Mun	icipalities with the largest production	
1st	Três Cachoeiras	
2 nd	Morrinhos do Sul	
3rd	Mampituba	
4th	Dom Pedro de Alcântara	
5 th	Três Forquilhas	
6 th	Terra de Areia	
7 th	Torres	
8 th	Maquiné	
9 th	Itati	
10 th	Osório	The more intense the color tong the
		The more intense the color tone, the greater the production in the municipality

Sources: LSPA/IBGE (2023); CGPOP/DAEP/SPA/MAPA (2023); EMATER (2023); SEAPI (2023); CENSO AGRO/IBGE (2017). 42 | AGRIBUSINESS OUTLOOK | 2023

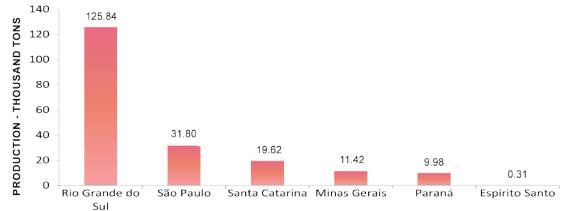




HARVESTED AREA PRODUCTION (
	170.01	رV	ALUE - GPV
11.65	130.81		200 00
THOUSAND	THOUSAND	K\$	288.02
		- MI	LLION (2021)
HECTARES TONS			
		States	Area (ha) - 2021
Rio Grande do Su	I has the	Rio Grande do Sul	11,389
largest peach-growin	a area in	São Paulo	1,431
the country, with m		Santa Catarina	1,200
		Paraná	829
11,000 hectares, rep		Minas Gerais	603
more than 70% of	the area	Espírito Santo	44
harvested in Brazil.		Total	15,496

Peach growing is very popular and is present in 364 municipalities of the country. Current data from Emater/RS indicate that there are 2,368 producers of table peaches and 1,002 producers of peaches for industrial processing.

In the graph below, you can see the production of the Brazilian states for the year 2021, as well as a table with the largest producing municipalities in Rio Grande do Sul.



Largest Producers - Table
consumption

	consumption		processing
1st	Pinto Bandeira	1st	Pelotas
2 nd	Farroupilha	2 nd	Canguçu
3rd	Caxias do Sul	3rd	Morro Redondo
4 th	Antônio Prado	4 th	Piratini
5 th	Pelotas	5 th	Jaguarão
6 th	Campestre da Serra	6 th	Cerrito
7 th	Ipê	7 th	Santo Expedito do Sul
8 th	Flores da Cunha	8th	
9th	Bento Gonçalves	9th	
10 th	Nova Pádua	10 th	

Sources: REAGRO-RS (2023); PAM/IBGE (2021); SEAPI (2023); EMATER (2023).

Largest Producers - Industrial

PEACH

WATERI	MELON		
IARVESTED AREA	PRODUCTION OF		PRODUCTION
8.24	166.35	VA	LUE - GPV
			152.43
THOUSAND	THOUSAND		
HECTARES	TONS	MILLION (2021)	
The advance	of the sovbean	State Rio Grande do Norte	Area (ha) - 2021
	of the soybean the droughts of	State Rio Grande do Norte Bahia	Area (ha) - 2021 14,704 13,253
crop, as well as t	he droughts of	Rio Grande do Norte	14,704
crop, as well as t the past three yea	the droughts of ars, were factors	Rio Grande do Norte Bahia	14,704 13,253
crop, as well as t the past three yea in the decline	the droughts of ars, were factors of watermelon	Rio Grande do Norte Bahia Rio Grande do Sul	14,704 13,253 10,418
crop, as well as t the past three yea	the droughts of ars, were factors of watermelon	Rio Grande do Norte Bahia Rio Grande do Sul São Paulo	14,704 13,253 10,418 8,577

In 2023, watermelon production decreased by 17.5% compared to the previous year due to severe drought during the spring and summer seasons. Nevertheless, Rio Grande do Sul remains one of the largest watermelon producers in the country. The graph below shows the production of all Brazilian states for 2021.



The largest producing communities in the State in 2023 are listed below.

Municipalities with the largest production					
	Rain-fed Cultivation	lr	rigated Cultivation		
1st	Triunfo	1st	Encruzilhada do Sul		
2 nd	Bagé	2 nd	São Jerônimo		
3rd	Rio Pardo	3rd	Rio Pardo		
4 th	Rosário do Sul	4th	Arroio dos Ratos		
5 th	Arroio dos Ratos	5 th	Pedro Osório		
6 th	São Francisco de Assis	6 th	Barão do Triunfo		
7 th	Montenegro	7 th	Arroio Grande		
8 th	Rio Grande	8 th	Charqueadas		
9th	Cacequi	9th	General Câmara		
10 th	Encruzilhada do Sul	10 th	Taquari		

Sources: REAGRO-RS (2023); PAM/IBGE (2021);

SEAPI(2023).

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HARVESTED AREA

4.39 THOUSAND HECTARES PLANTED AREA

6.85 THOUSAND HECTARES **PRODUCTION ESTIMATE**

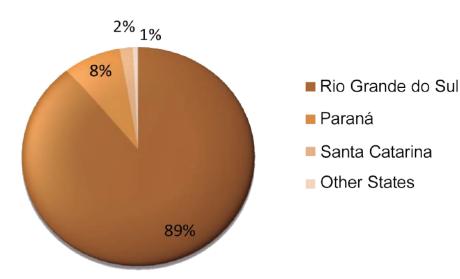
5.17 THOUSAND TONS I IN 2023

The yield of the 22/23 crop was higher than the previous year, but lower than the 20/21 crop. The drought affected yields somewhat. Irrigation is an important practice for productivity and quality.

Rio Grande do Sul is responsible for the largest national production of pecans. The crop is distributed in different regions of the state and, according to Emater/RS, there are 1,502 pecan producers in 2023.

The nurseries registered with Pró-Pecã, as well as other information about this crop, can be found at: https:// www.agricultura.rs.gov.br/pro-peca

The graph below shows the percentage of production in the Brazilian states for the 2021 harvest, according to IBGE, as well as a table showing the largest producing municipalities in Rio Grande do Sul.



Municipalities with the largest production

1st	Cachoeira do Sul				
2 nd	Anta Gorda				
3rd	Santa Maria				
4 th	Dom Pedrito				
5 th	Rio Pardo				
6 th	Caxias do Sul				
7 th	Antônio Prado				
8 th	General Câmara				
9th	Santa Cruz do Sul				
10 th	Viamão				

Sources: REAGRO (2023); IBPecan (2023); SEAPI (2023); PAM/IBGE(2021); EMATER (2023).

OLIVE GROWING

PLANTED AREA 6.20 THOUSAND HECTARES

HARVESTED AREA

4.30 THOUSAND HECTARES PRODUCTION OF

5.27 THOUSAND TONS OF FRUIT

Rio Grande do Sul has the largest area planted with olive trees in the country. Of the 6,200 hectares planted, it is estimated that only 4,300 hectares were 4 years old or older in the 22/23 harvest.

In 2023, 580,200 liters of olive oil were produced, an increase of 29% over 2022 production. This increase in production was due to the entry of new olive groves, new technologies and improved management, as well as the confirmation of the resistance of olive trees to drought.

Extra virgin olive oils from Rio Grande do Sul are of excellent quality and have won hundreds of awards in various international competitions.

For more information, visit: https://www.agricultura.rs.gov.br/prooliva

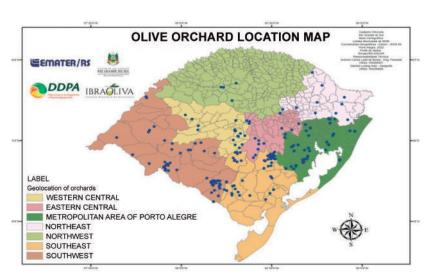
OLIVE OIL PRODUCTION 2023: 580,228 LITERS 22 INDUSTRIES and 93 BRANDS

Largest Olive Oil Producers in 2023

1st	Pinheiro Machado
2 nd	Canguçu
3rd	Caçapava do Sul
4 th	Encruzilhada do Sul
5 th	Cachoeira do Sul
6 th	Dom Feliciano
7 th	Bagé
8 th	Sant'Ana do Livramento
9th	São Gabriel
10 th	Viamão

Largest Planted Areas

1st	Encruzilhada do Sul			
2 nd	Canguçu			
3rd	Pinheiro Machado			
4 th	Bagé			
5 th	Cachoeira do Sul			
6 th	Viamão			
7 th	São Gabriel			
8 th	Dom Pedrito			
9th	Sentinela do Sul			
10 th	Caçapava do Sul			



Sources: SEAPI (2023); IBRAOLIVA (2023); EMATER (2022).

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OTHER FRUITS

Rio Grande do Sul has a climate that allows the cultivation of fruit species for temperate, subtropical and even tropical zones. According to IBGE and Emater/RS, here is information about some of these species:

CULTIVATION	PLANTED AREA (ha)	PRODUCTION (thousand tons)	NUMBER OF PRODUCERS
AVOCADO	554	4.47	175
PINEAPPLE	464	4.50	164
PLUM	1,891	30.40	1,040
BLACKBERRY	322	3.38	470
KHAKI	2,518	46.78	1,308
FIG	1,140	7.65	669
RASPBERRY	41	0.33	196
GUAVA	420	4.63	233
KIWI	186	2.50	154
LEMON	1,523	18.31	907
MANGO	101	1.13	18
PASSION FRUIT	284	5.03	208
MELON	1,203	10.97	763
BLUEBERRY	74	0.358	69
STRAWBERRY	581	23.55	2,577
NECTARINE	60	0.95	74
PEAR	487	7.45	157
ΡΥΤΑΙΑ	144	1.59	276

Sources : LSPA - IBGE (2023) ; EMATER (2023).

CEASA

FRUIT TRADE 2022

Compared to 2021, there was an average 20% increase in fruit prices. The huge increase in input prices in 2022, which increased production costs, was a major factor. As a result, there was an average 3.5% decrease in fruit sales.

	TRADE OF THE MAIN FRUITS IN CEASA/RS - 2022						
RANKING	PRODUCTS	TONS	MILLION (R\$)	ANNUAL AVERAGE PRICE PER KILOGRAM			
1 st	ORANGE	40,316	115.59	R\$ 2.86			
2 nd	BANANA	39,977	156.68	R\$ 3.91			
3rd	WATERMELON	28,180	49.59	R\$ 1.75			
4th	PAPAYA	24,385	168.21	R\$ 6.90			
5th	APPLE	20,195	125.19	R\$ 6.19			
6 th	TANGERINE	17,942	56.86	R\$ 3.16			
7 th	PINEAPPLE	17,149	63.67	R\$ 3.71			
8 th	MANGO	13,196	51.67	R\$ 3.92			
9 th	LEMON	9,287	33.61	R\$ 3.62			
10 th	MELON	7,164	34.92	R\$ 4.87			
11 th	GRAPE	4,806	34.25	R\$ 7.12			
12 th	AVOCADO	4,688	24.95	R\$ 5.32			
13 th	PEAR	4,041	23.79	R\$ 5.88			
14 th	PEACH	3,777	20.08	R\$ 5.31			
15 th	PERSIMMON	2,981	15.24	R\$ 5.10			
16 th	STRAWBERRY	2,898	41.94	R\$ 14.46			
17 th	PLUM	2,821	18.78	R\$ 6.65			
18 th	PASSION FRUIT	1,983	13.53	R\$ 6.82			
19 th	KIWI	714	8.28	R\$ 11.59			
20 th	COCONUT	670	2.11	R\$ 3.89			
21 st	GUAVA	389	2.77	R\$ 7.09			
22nd	NECTARINE	191	1.71	R\$ 8.95			
23 rd	FIG	111	1.11	R\$ 9.93			

Source: CEASA/RS (2023). 54 | AGRIBUSINESS OUTLOOK | 2023



VEGETABLE TRADE 2022

Compared to 2021, there was a significant average increase in vegetable prices, of about 30%, due to the significant increase in production costs during 2022. In this sense, there has been an average reduction of 11% in the sale of vegetables.

TRADE OF THE MAIN VEGETABLES IN CEASA/RS - 2022

RANKING	PRODUCTS	TONS	MILLION (R\$)	ANNUAL AVERAGE PRICE PER KILOGRAM
1st	ΤΟΜΑΤΟ	66,069	337.60	R\$ 5.11
2 nd	ΡΟΤΑΤΟ	47,188	164.33	R\$ 3.48
3rd	SWEET POTATO	26,351	71.32	R\$ 2.71
4th	ONION	20,102	81.78	R\$ 4.06
5 th	CABBAGE	18,345	41.28	R\$ 2.25
6 th	CARROT	15,988	62.94	R\$ 3.94
7th	CHAYOTE	11,029	29.04	R\$ 2.63
8 th	CUCUMBER	10,760	40.66	R\$ 3.78
9th	PUMPKIN	10,756	31.43	R\$ 2.92
10 th	BEET	9,896	31.19	R\$ 3.15
11th	CAULIFLOWER	8,602	14.46	R\$ 1.68
12 th	BELL PEPPER	7,697	53.65	R\$ 6.97
13 th	CASSAVA	7,333	15.13	R\$ 2.06
14 th	LETTUCE	6,494	29.28	R\$ 4.50
15 th	ZUCCHINI	5,768	19.16	R\$ 3.32
16 th	BROCCOLI	5,466	32.18	R\$ 5.89
17 th	GARLIC	2,896	56.08	R\$ 19.36
18 th	SWEET CORN	2,671	9.99	R\$ 3.74
19 th	KALE	2,600	8.81	R\$ 3.39
20 th	EGGPLANT	1,814	8.43	R\$ 4.65
21 st	RADISH	920	3.58	R\$ 3.90
22 nd	ARUGULA	745	6.94	R\$ 9.31
23 rd	GINGER	630	4.70	R\$ 7.45
24 th	SPINACH	311	1.11	R\$ 3.56
25 th	TURNIP	115	293.33	R\$ 2.55



Source: CEASA/RS (2023). AGRIBUSINESS OUTLOOK | 2023 | 55



VEGETABLES

Data on the main olive crops in Rio Grande do Sul, including leafy vegetables, roots, bulbs, tubers and fruits, taken from the IBGE's Systematic Survey of Agricultural Production (LSPA) and the Survey of Commercial Olive Cultivation in Rio Grande do Sul, conducted by Emater/RS.

CULTIVATION	AREA PLANTED (ha)	PRODUCTION (thousand tons)	NUMBER OF PRODUCERS
CASSAVA	8,221	125.56	5,640
LETTUCE	6,194	93.46	3,681
GARLIC	1,453	11.58	700
POTATO (1st and 2nd crops)	16,934	468.16	879
SWEET POTATO	11,061	154.38	3,183
BEET	1,061	29.54	1,464
ONION	6,081	156.72	3,728
CARROT	1,460	48.50	1,093
KALE	518	8.88	1,541
CABBAGE-BROCCOLI	11,897	172.24	2,079
CAULIFLOWER	1,609	29.66	1,445
SWEET CORN	2,484	31.29	1,131
CABOTIA PUMPKIN	3,518	32.22	1,567
BELL PEPPER	298	7.79	957
RADISH	438	6.26	602
CABBAGE	2,333	84.88	2,409
ARUGULA	742	7.93	1,257
ΤΟΜΑΤΟ	1,945	100.04	3,095

Sources : LSPA/IBGE (2023); EMATER (2023).

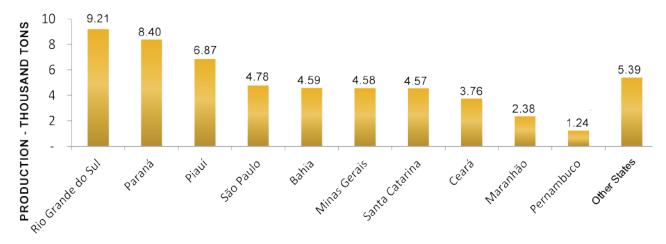


PRODUCTION OF

9.21 MILLION OF KILOGRAMS (2021) **19,697** APICULTURISTS REGISTERED AT SEAPI IN 2022 GROSS PRODUCTION VALUE - GPV R\$ 131.49 MILLION (2021)

	MAIN DESTINATIONS				
		COUNTRY	VALUE (MILLION US\$)	WEIGHT (tons)	%
In 2022, Rio Grande do	1st	UNITED STATES	7.15	1,964.2	70.86%
Sul exported bee products	2 nd	GERMANY	1.26	338.5	12.52%
to 30 countries, generating	3rd	CANADA	1.19	313.0	11.76%
revenues of US\$ 10.1 million.	4 th	NETHERLANDS	0.18	46.8	
	5 th	UNITED KINGDOM	0.16	42.4	1.56%
		OTHER COUNTRIES	0.15	41.9	1.53%
		TOTAL	10.09	2,746.8	100,0%

The state is one of the largest honey producers in the country. The graph below shows the production for 2021, the year in which Rio Grande do Sul was the top producer in the country.



Currently, there are about 438,000 hives registered with SEAPI.

The main bee blooms in the state are: eucalyptus, wild flora (fields, forests, marshes, crops and orchards), citrus fruits, blooms in the Campos de Cima da Serra region, among others.

Sources: PPM/IBGE (2021); SEAPI (2022); Agrostat/MAPA (2022).

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Municipalities with the largest production

1 st	Santiago
2 nd	Bagé
3rd	Sant'Ana do Livramento
4 th	Dom Pedrito
5 th	Cambará do Sul
6 th	São Gabriel
7 th	Venâncio Aires
8 th	Taquari
9 th	Antônio Prado
10 th	Caxias do Sul





BEEF CATTLE FARMING

A DECLARED HERD OF

10.08 MILLION CATTLE (2022) **1.82** MILLION HEAD OF LIVESTOCK FOR SLAUGHTER (2022) GROSS PRODUCTION VALUE - GPV

BILLION (2022)

Municipalities with the largest

cattle herd

Alegrete

Santana do Livramento

Uruguaiana

Dom Pedrito

Rosario Do Sul

Sao Gabriel

Bage

Quarai

Santiago

São Francisco de Assis

1st

2nd

3rd

4th

5th

6th

7th

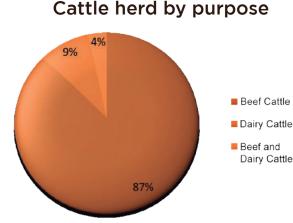
gth

gth

10th

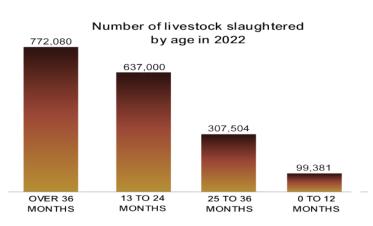
MAIN DESTINATIONS FOR BEEF MAIN DESTINATIONS FOR LEATHER AND SKINS VALUE VALUE WEIGHT WEIGHT COUNTRY % COUNTRY % (MILLION (MILLION US\$) (tons) (tons) US\$) 1st CHINA 220.3 34,701.0 49.7% 1st CHINA 64.4 18,870.3 20.1% 2nd UNITED KINGDOM 71.4 14.235.8 16.1% 2nd UNITED STATES 40.1 2.736.8 12.5% 3rd UNITED STATES 42.4 7,101.3 9.6% zrd ITALY 33.7 10,796.4 10.5% 4th 4th URUGUAY 15.9 3,634.1 3.6% HONG KONG 29.4 2,235.1 9.2% 5th NETHERLANDS 5th 1,415.6 1.9% 8.3 MEXICO 24.1 1,332.9 7.5% OTHER COUNTRIES 21,837.1 19.1% 84.77 -- OTHER COUNTRIES 128.79 29,859.3 40.2% TOTAL 443.0 82,924.8 100% TOTAL 320.5 65,830.8 100%

In 2022, Rio Grande do Sul exported beef to 92 countries, generating US\$ 442.96 million. In the same year, leather and skins were exported to 59 countries, worth US\$ 320.51 million.



The Agregar RS Carnes Program, coordinated by Seapi, aims to increase the number of slaughterhouses slaughtering under official health control and to promote the development and competitiveness of the meat production chain. The program has 110 qualified companies, of which 61 are with the State Inspection Service (SIE), 38 with the Municipal Inspection Service (SIM) and 11 with the Federal Inspection Service (SIF). Agregar grants a 3.6% presumptive credit on the value of the invoice for the entry of animals for slaughter and another 4% ICMS credit on the value of the invoice for the sale of meat. With these benefits, the tax on beef, sheep and buffalo meat in Rio Grande do Sul is

approximately 2%.



Sources: SEAPI (2023); CGPOP/DAEP/SPA/MAPA (2022); Agrostat/MAPA (2022).

DAIRY CATTLE FARMING

A DECLARED HERD OF

_()7 MILLION HEAD OF DAIRY CATTLE (2022) **PRODUCTION OF**

BILLION LITERS OF

MILK PER YEAR (2021)

GROSS PRODUCTION VALUE – GPV

BILLION (2022)

WEIGHT

25 TO 36

MONTHS

%

Municipalities with the largest cattle herd

In 2022, Rio Grande do Sul exported dairy products to 45 countries, generating revenues of US\$23.8 million and maintaining its third place in the ranking of exporting states in the country. In turn, imports reached US\$ 132 million in 2022, practically doubling compared to the previous year. The entry of milk powder and other dairy products, mainly from Uruguay and Argentina, continues to be a major concern for the sector in 2023. Below are the main destinations and origins of our exports and imports.

Santo Cristo Crissiumal Campina das Missões Cândido Godoi Três Passos

MAIN ORIGINS OF IMPORTS VALUE

13 TO 24

MONTHS

COUNTRY

		DRI DESIMAN	0110		
	COUNTRY	VALUE	WEIGHT	%	
	COUNTRI	(MILLION US\$)	(tons)	70	
1st	ALGERIA	13.6	3,528.0	57.0%	
2 nd	URUGUAY	3.4	4,808.8	14.3%	1

MAIN EXPORT DESTINATIONS

zrd

4th

5th

ALGERIA	13.6	3,528.0	57.0%		COUNTRY	(MILLION US\$)	(tons)	%
URUGUAY	3.4	4,808.8	14.3%	1st	URUGUAY	124.0	29,806.0	94.0%
CHILE	3.0	736.1	12.5%	2 nd	ARGENTINA	5.3	1,626.6	4.0%
ARGENTINA	1.3	670.4	5.4%	3rd	ITALY	1.6	154.8	1.2%
CUBA	1.1	287.6	4.6%	4 th	UNITED STATES	1.1	151.1	0.8%
OTHER COUNTRIES	1.48	774.0	6.2%		TOTAL	132.0	31,738.6	100%
TOTAL	23.8	10,804.8	100%					
		530,312						
Number o animals b age grou	У			235,86		993	128.644	
							120,044	

Dairy production is of great social and economic importance, being present in almost every municipality of Rio Grande do Sul.

0 TO 12

MONTHS

OVER 36

MONTHS

Approximately 40,000 properties have dairy farming as their primary source of income.

Of the 240 structures created for the industrialization of milk in the State, 69% are in the Municipal Inspection System - SIM, 13% in the Coordination for the Inspection of Products of Animal Origin - CISPOA and 18% in the Federal Inspection System - SIF.

Increasing professionalization through the introduction of new technologies on dairy farms is the trend and also a necessity for producers to continue in business.

Sources: SEAPI (2023); PPM/IBGE (2021); CGPOP/DAEP/SPA/MAPA (2022); Agrostat/MAPA (2022); EMATER (2022).





POULTRY FARMING

SLAUGHTER OF **858.01**MILLION POULTRY (2022)

THE GROSS PRODUCTION VALUE - GPV - OF CHICKEN MEAT WAS **R\$ 10.91** BILLION (2022)

THE GROSS PRODUCTION VALUE - GPV - OF EGGS WAS

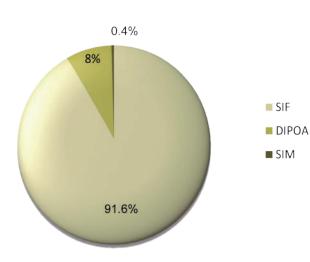


In 2022, Rio Grande do Sul exported chicken meat to 131 countries, generating revenues of US\$1.51 billion and maintaining the state's position as the third largest exporter of chicken meat in the country. The state is also the second largest national exporter of turkey meat, with annual revenues of US\$78.54 million.

	MAIN DESTINATIONS						
	COUNTRY	VALUE (MILLION US\$)	WEIGHT (tons)				
1st	1UNITED ARAB EMIRATES	215.3	102,728.8	14.3			
2 nd	SAUDI ARABIA		93,451.5				
3rd	CHINA		44,779.1	6.7			
4 th	JAPAN	97.2	40,872.0	6.4			
5th	NETHERLANDS	85.5	31,158.5				
	OTHER COUNTRIES	797.5	442,092.4	52.8			
	TOTAL	1,510.4	755,082.4	100.0			



Percentage of slaughter per inspection level



Municipalities with the largest production

1st	Nova Bréscia		
2 nd	Tupandi		
3rd	Marau		
4 th	Estrela		
5th	Boa Vista do Sul		
6 th	Westfália		
7 th	Fagundes Varela		
8 th	Progresso		
9th	Marques de Souza		
10 th	Harmonia		

Sources: SEAPI (2023); CGPOP/DAEP/SPA/MAPA (2022); Agrostat/MAPA (2022).

SWINE FARMING

SLAUGHTER OF

MILLION SWINES

1.05 MILLION TONS OF

PRODUCTION OF

PIGMEAT (2022)

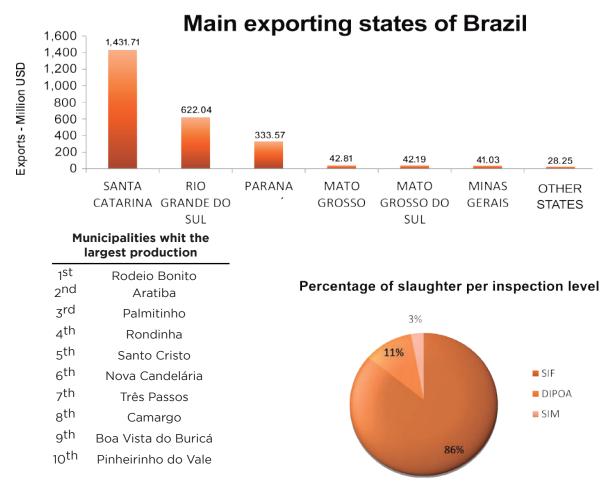
2022. Rio Grande In do Sul exported pork to countries 77 generating US\$ 622 million in revenue, maintaining the state's position as the secondlargest pork exporter in the country.

MAIN DESTINATIONS						
	COUNTRY	VALUE (MILLION US\$)	WEIGHT (tons)	%		
1st	CHINA	417.5	163,206.9	67.1		
2 nd	HONG KONG	41.8	21,351.0	6.7		
3rd	SINGAPURE	33.9	13,948.0	5.4		
4 th	VIETNAM	30.1	13,386.9	4.8		
5th	THAILAND	17.6	6,797.0	2.8		
	OTHER COUNTRIES	81.2	46,669.6	13.1		
	TOTAL	622.0	265,359.4	100.0		

GROSS PRODUCTION VALUE - GPV

BILLION (2022)

Both slaughter and production of pork increased by 16% compared to 2021. However, the gross value of production decreased by more than 9% due to lower prices on the domestic market. The increase in production costs, especially corn and soybean prices, was a challenge for the production chain.



Sources: SEAPI (2023); SIPS (2021); CGPOP/DAEP/SPA/MAPA (2022); Agrostat/MAPA (2022).

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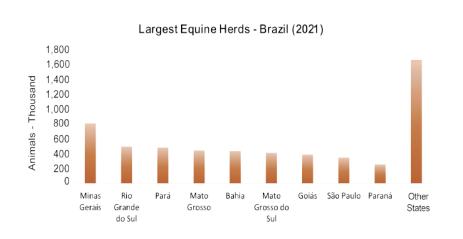


EQUIDEOCULTURE



The equine breeds present in the state are: Appaloosa, Arabian, Brazilian Equestrian, Breton, Campeiro, Criollo, Hanoverian, Holsteiner, Lusitano, Mangalarga, Mangalarga Marchador, Paint Horse, Percheron, Pony, English Thoroughbred and Quarter Horse.

According to the Brazilian Institute of Equine Culture (IBEqui), the sector contributes approximately R\$ 35 billion to the Brazilian economy and generates three million direct and indirect jobs.



Municipalities with the largest equine herds

1st	Santana do Livramento
2 nd	Uruguaiana
3rd	Alegrete
4 th	Dom Pedrito
5 th	Bagé
6 th	Rosário do Sul
7 th	Quaraí
8 th	São Gabriel
9th	Aceguá
10 th	Lavras do Sul

TOTAL DECLARED HERD 2022

MESOREGIONS OF RIO GRANDE DO SUL	TOTAL	%
SOUTHWEST	156,059	36%
SOUTHEAST	73,536	17%
METROPOLITAN AREA OF PORTO ALEGRE	56,431	13%
NORTHWEST	54,031	13%
WESTERN CENTRAL	39,706	9%
NORTHEAST	26,563	6%
EASTERN CENTRAL	23,140	5%

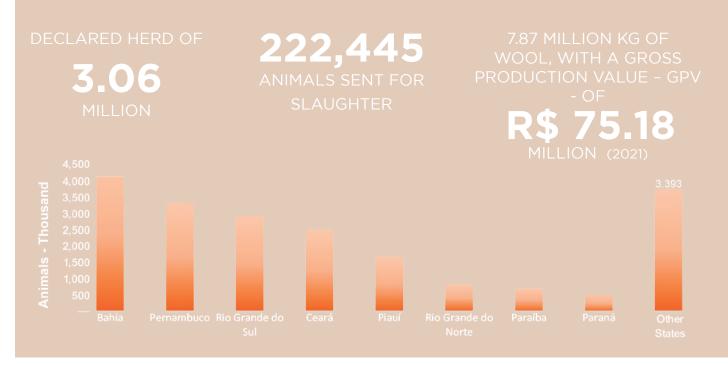


EQUINE MOVEMENTS 2022

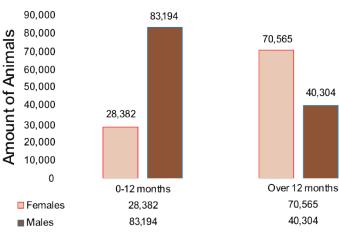
PURPOSE		Highest Equine Movement Municipalities	
 Rodeo / Sports 224,070		1st Caxias do Sul	
Exhibition and Fair	4,641	2nd Santa Maria	
Fair / Auction	2,027	3rd Esteio	
Exhibition	3,664	4th Porto Alegre	
Total	234,402	5th Canguçu	

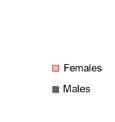
Sources: SEAPI (2022); PPM/IBGE (2021); IBEqui (2023). **AGRIBUSINESS OUTLOOK | 2023 | 69**

SHEEP FARMING



SHEEP SLAUGHTER BY AGE AND SEX





SHEEP BREEDS IN RIO GRANDE DO SUL

AUSTRALIAN MERINO IDEAL CORRIEDALE **ROMNEY MARSH** HAMPSHIRE DOWN TEXEL ILE DE FRANCE SUFFOLK KARAKUL LACAUNE SANTA INES BORDER LEICESTER POLL DORSET DORPER CREOLE WHITE DORPER DOHNE MERINO

Municipalities with the largest sheep herds

1st	Santana do Livramento		
2 nd	Alegrete		
3rd	Quaraí		
4 th	Uruguaiana		
5 th	Rosário do Sul		
6 th	Dom Pedrito		
7 th	Pinheiro Machado		
8 th	Bagé		
9 th	Piratini		
10 th	Herval		

In Rio Grande do Sul, beef breeds predominate with 45%, followed by mixed breeds with 38% and wool breeds with 16%. Dairy breeds represent less than 1% of the total sheep herd.





GOAT FARMING

HERD OF

43,6 THOUSAND DECLARED GOATS (2022) MILK AND MEAT ARE PRODUCED BY GOAT FARMING

BREEDS: BOER, ANGLONUBIAN KALAHARI, SAANEN and SAVANNA

Herd Distribution by Mesoregion

TOTAL DECLARED HERD 2022				
MESOREGIONS OF RIO GRANDE DO SUL	TOTAL			
SOUTHEAST	17,281	39.62%		
SOUTHWEST	9,113	20.89%		
NORTHWEST	6,878	15.77%		
METROPOLITAN AREA OF PORTO ALEGRE	4,552	10.44%		
EASTERN CENTRAL	3,109	7.13%		
NORTHEAST	1,712	3.92%		
WESTERN CENTRAL	976	2.24%		



BUFFALO FARMING

HERD OF 50,3 THOUSAND DECLARED BUFFALOES (2022)

BREEDING IN THE STATE AIMS TO PRODUCE DE

MILK AND MEAT

BREEDS:

MURRAH, MEDITERRANEAN AND JAFARABADI ARE THE MOST COMMON BREEDS IN THE STATE.

Brazil has the largest herd of buffalo in the West. Buffalo mozzarella is one of the finest cheeses in the world.

TOTAL DECLARED HERD 2022

MESOREGIONS OF RIO GRANDE DO SUL	TOTAL	%
SOUTHWEST	14,764	29.35%
METROPOLITAN AREA OF PORTO ALEGRE	14,626	29.08%
SOUTHEAST	6,101	12.13%
NORTHEAST	5,853	11.64%
EASTERN CENTRAL	4,101	8.15%
WESTERN CENTRAL	3,671	7.30%
NORTHEAST	1,188	2.36%

Herd Distribution by Mesoregion



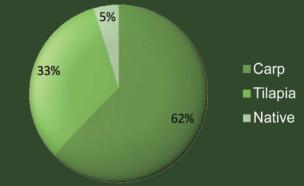
FISH FARMING

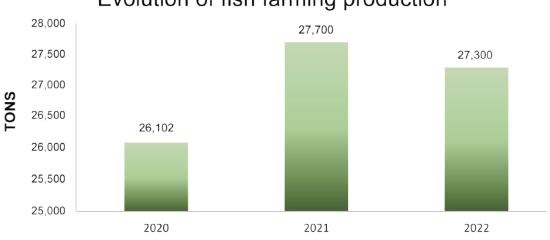
IN 2022, THE AQUACULTURE SECTOR CHAMBER WAS ESTABLISHED AT SEAPI

IN THE STATE STANDS OUT THE CARP PRODUCTION, THE LARGEST IN THE COUNTRY IN TURN, TILAPIA ACCOUNTED FOR THE MAJORITY OF FISH SLAUGHTERED IN MEAT PACKING PLANTS

In 2022, 2,059 Animal Transit Guides (GTAs) were issued for the movement of fish in Rio Grande do Sul. This represents an increase of 33% compared to 2021. However, the number of producers declaring their fish farming to the Agricultural Defense Inspectorate of Seapi is still low.

Species produced in the state in 2022





Evolution of fish farming production

MUNICIPAL RANKING BY PURPOSE

Largest Producers Slaughters 1st 1st Derrubadas Horizontina 2nd 2nd Tenente Portela Chapada zrd zrd Tucunduva Guaporé 4th 4th Ajuricaba Santa Rosa 5th 5th Santa Rosa Rolante 6th 6th São Lourenço do Sul Panambi 7th 7th Guaporé Ajuricaba gth 8th Tenente Portela Três de Maio gth 9th ljuí Roca Sales 10th 10th Senador Salgado Filho Taquarucu do Sul

The biggest fish sales period of the year is the Holy Week holiday. The sector faces the challenge of increasing consumption at other times of the year.





IRRIGATION

Given the frequent droughts that occur in the state, with losses in summer crop production, irrigation has become increasingly fundamental for increasing productivity and incomes, stabilizing production and strengthening production chains. Specifically, rain fed corn has experienced a significant decline in production for the fourth consecutive year, highlighting the need to expand the irrigated area.

The implementation of irrigation systems has increased among producers. The main obstacles continue to be the cost (interest) of financing, the lack of an adequate supply of electricity and the difficulty of expanding water storage in the face of environmental regulations.

MAJOR IRRIGATED CROPS IN THE STATE IN THE 2022/23 HARVEST				
Crops	Irrigated area (ha)	Percentage of land irrigated (%)		
Rice	839,972	99.9		
Soybean	187,378	2.8		
Corn (grain)	113,553	13.7		
Beans (2nd crop)	2,757	14.3		
Corn (silage)	4,055	1.0		
Tobacco	2,446	1.6		

MAJOR IRRIGATED CROPS IN THE STATE IN THE 2022/23 HARVEST

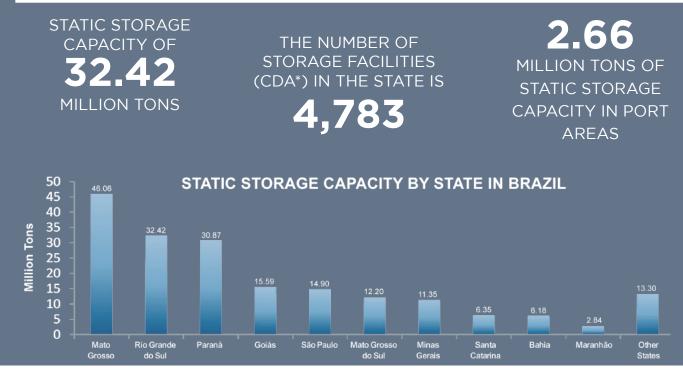
With the exception of rice, which is surface irrigated by flooding, the other percentages of irrigated crops in Rio Grande do Sul are still low.

PRODUCTIVITY (KG/HA) OF IRRIGATED AND RAINFED CROPS IN THE 2022/23

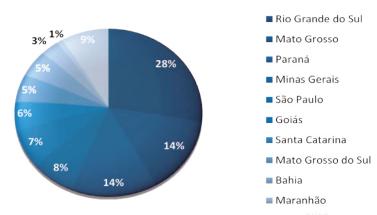
HARVEST					
		Irrigated Rain-fed		Increased	
_		rea (ha)		P	Productivity (%)
	Rice	8,790	2,383		269%
	Soybean	3,118	1,877		66%
	Corn (grain)	9,914 4,022		146%	
	Beans (2nd crop)	1,930 1,369			41%
	Торассо	2,683	1,948		38%
	Corn (silage)	14,700	23,270		92%
R		TIES IN	THE STATE BY TYPE OF IRI	RIGA	TION SYSTEM IN USE
	CENTER PIVOT	SPRI	NKLER, SELF- PROPELLED AND LOCALIZED		SURFACE
1 st	São Borja	1 st	Pelotas	1st	Santa Vitória do Palmar
2 nd	Itaqui	2 nd	Canguçu	2 nd	Uruguaiana
3rd	São Luiz Gonzaga	3rd	São Lourenço do Sul	3rd	Itaqui
4 th	Cruz Alta	4 th	Santa Rosa	4 th	Alegrete
5 th	São Miguel das Missões	5 th	Campina das Missões	5 th	Dom Pedrito
6 th	Dom Pedrito	6 th	Ibiraiaras	6 th	Camaquã
7 th	Palmeira das Missões	7 th	Santo Cristo	7 th	Mostardas
8 th	Santo Antônio das Missõe	s 8 th	ljuí	8 th	São Gabriel
9 th	Jóia	9th	Antônio Prado	9 th	Arroio Grande
10 th	Santa Bárbara do Sul	10 th	Entre-ljuís	10 th	São Borja

Sources: Atlas Irrigação/ANA (2021); SEAPI (2022); IRGA (2022); REAGRO/RS (2022). AGRIBUSINESS OUTLOOK | 2023 | 77





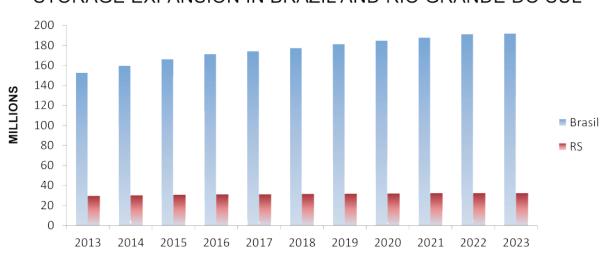
Percentage of Storage Capacity by State of Brazil



The state of Rio Grande do Sul has a static grain storage capacity of 32.4 million tons, which represents 17% of the national storage capacity of 192.1 million tons.

The number of warehouses in the state is 4,783 units, which represents 28% of the total number of warehouses in the country, which is 17,383 units.

Emater/RS also develops projects free of charge so that producers can invest in drying and storage on their farms.



STORAGE EXPANSION IN BRAZIL AND RIO GRANDE DO SUL

Sources: SICARM/CONAB (2023); SEAPI (2023). 78 | AGRIBUSINESS OUTLOOK | 2023



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