SOJA CHECK
A BVRIO TOOL

The Brazilian Soy Industry

AN OVERVIEW

Brazil is the largest producer of soybeans in the world. In 2023 the country produced 162 million tons, exporting nearly 63% to a global market.

According to a report by Center for Advanced Studies in Applied Economics (Cepea), in 2022, the total GDP of the soybean production chain reached US$ 120 billion and it generated over 2 million jobs.[1]

This thriving industry is not without its problems however, with a number of associated environmental and social problems, including deforestation of the Cerrado and the Amazon, pressure on indigenous lands and agrarian conflicts. Concerns about the sustainability of soybean production have increased, leading to initiatives to certify and track sustainable soybeans with the aim of reducing environmental effects and encouraging more sustainable agricultural practices. In addition, Brazilian producers and exporters must continually adapt due to the significant effects of fluctuations in international soybean prices and global trade policies.

Planted area (2022/23)
44,600
million hectares[2]

Production volume (2022/23)
162
million tons[3]

Average Productivity (2022/23)
3.5 tons
per hectare[4]

Exports (2023) -
102
million metric tons[5]

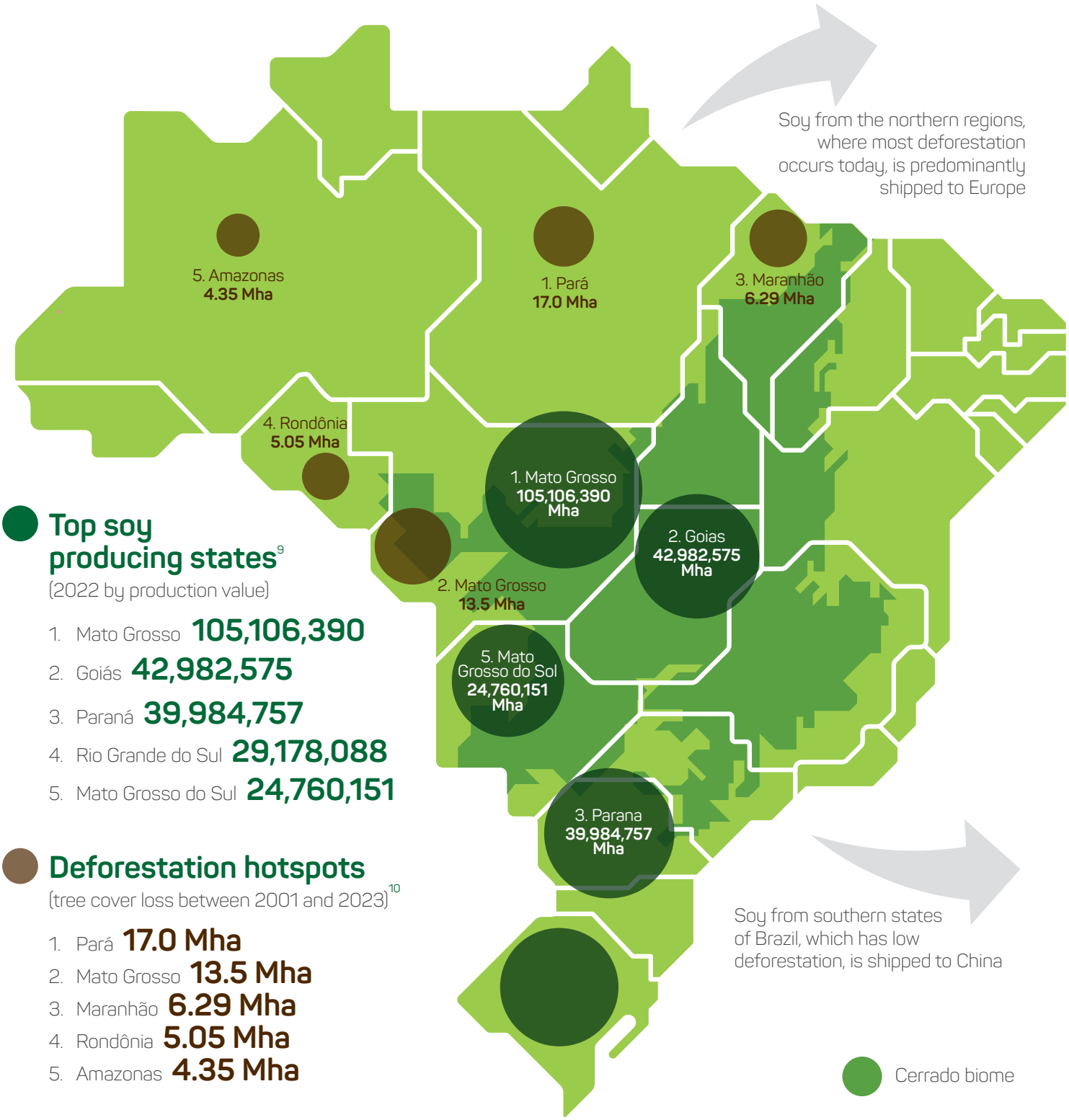
Worldwide soy contribution (2023)[6]
39%

[1] Center for Advanced Studies in Applied Economics (Cepea) and Brazilian Association of Vegetable Oil Industries (Abiove). Soybean and biodiesel chain: GDP, jobs and foreign trade – First Results and methodology. 2023. Available at: https://www.cepea.esalq.usp.br/en
[2] https://ipad.fas.usda.gov/countrysummary/Default.aspx?id=BR&crop=Soybean
[3] https://ipad.fas.usda.gov/countrysummary/Default.aspx?id=BR&crop=Soybean
[4] https://ipad.fas.usda.gov/countrysummary/Default.aspx?id=BR&crop=Soybean
[5] https://www.ams.usda.gov/sites/default/files/media/Brazil_Overview_2023.pdf
[6] https://fas.usda.gov/data/production/commodity/2222000

A countrywide industry

The first soy production in Brazil is cited to have taken place in the early 1900s, growing rapidly from the first official record of 450 tons in 1941, to over 15 million metric tons in the 1970s, when it was established as the main crop of the Brazilian agribusiness.[7]

From these beginnings in the Southern regions, the development of new varieties soon allowed cultivation to move into central and northern Brazil. Now, nearly all states produce some soy.[8]



Top soy producing states[9]

(2022 by production value)

1. Mato Grosso **105,106,390**
2. Goiás **42,982,575**
3. Paraná **39,984,757**
4. Rio Grande do Sul **29,178,088**
5. Mato Grosso do Sul **24,760,151**

Deforestation hotspots

(tree cover loss between 2001 and 2023)[10]

1. Pará **17.0 Mha**
2. Mato Grosso **13.5 Mha**
3. Maranhão **6.29 Mha**
4. Rondônia **5.05 Mha**
5. Amazonas **4.35 Mha**

[7] Antonio E (2013) Explanations for the Rise of Soybean in Brazil. A Comprehensive Survey of International Soybean Research - Genetics, Physiology, Agronomy and Nitrogen Relationships. InTech. Available at: http://dx.doi.org/10.5772/51678.
[8] https://ipad.fas.usda.gov/countrysummary/images/BR/cropprod/Brazil_Soybean.png
[9] https://www.ibge.gov.br/explica/producao-agropecuaria/soja/br
[10] https://www.globalforestwatch.org/dashboards/country/BRA/

Soy associated deforestation

Growing demand for soy globally has resulted in a continuous expansion of the area under cultivation in Brazil. This expansion has been identified as a major driver of deforestation, resulting in substantial destruction of natural habitats, loss of biodiversity and greenhouse gas emissions. The Amazon Soy Moratorium significantly reduced deforestation in the Amazon, but this has resulted in leakage of deforestation and conversion activities to a species rich tropical savanna known as the Cerrado. More than 50% of the native vegetation in the Cerrado has now been cleared and over the last decade in the Matopiba region, 0.5–0.8 Mha of soy has been planted on recently converted land each year.

Demand-side calls to action such as the 2017 Cerrado Manifesto have raised the profile of the Cerrado amongst food retailers, food manufacturers and food service companies that have soy embedded in their products, and more recent initiatives such as the Innovative Finance for the Amazon, Cerrado and Chaco (IFACC), Forest Positive Coalition of the Consumer Goods Forum and the UK and French Soy Manifestos, all share the objective of driving deforestation – and conversion-free (DCF) soy production in the region.

Alongside this, in December 2022, the EU reached an agreement on a new law to prevent companies from placing commodities linked with deforestation and forest degradation onto the EU market, or exporting them from the EU, known as the EU Deforestation Regulation (EUDR). While the regulation initially only includes forests, thereby excluding much of the Cerrado, it is widely expected that 'other forested land' will be included in the first update, and that this will bring the Cerrado under the regulation.

While there is growing demand for land to expand agricultural production, it is widely recognised that the expansion of agricultural production can happen without further clearing of native vegetation in the Cerrado. Initiatives such as the Responsible Commodities Facility **https://sim.finance/responsible-commodities-facility/** [12], which BVRio provides service to, are offering incentives to soy farmers to produce deforestation free soy on already cleared land.

Soy and Scope 3 emissions

The Science Based Targets Initiative mobilises the private sector to take urgent climate action by setting targets to reduce their carbon emissions. This includes a target for Scope 3 emissions, that is, emissions that a company is indirectly responsible for, up and down its value chain. For companies with soy embedded in their products, their Scope 3 emissions include those from land use change, crop production, transport and processing.

For example, soy produced in the Cerrado biome has an average carbon footprint of 1.00 t t−1 (CO2 equivalent per tonnes of soy equivalent) with around half the emissions coming from land use change. Soy produced specifically in the Matopiba states (Maranhão, Tocantins, Piauí and Bahia) has an average carbon footprint of 2.32 t t -1, with over two-thirds of this due to land use change emissions. When food sector companies come to include these emission factors in their Scope 3 calculations, the source of the soy becomes very significant.

Export destinations

(by total value - June 2024)[11]

1. China

$9.74B

2. United States

$3.23B

3. Netherlands

$1.07B

4. ArgentiAna

$960M

5. Singapore

$783M

Soy uses

Animal Feed

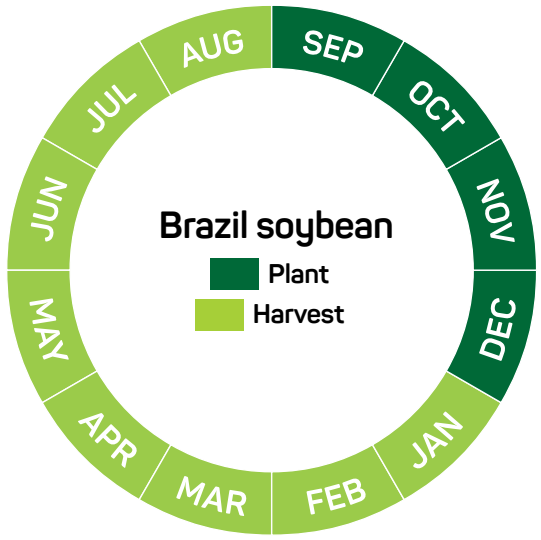
Soybean oil for biodiesel

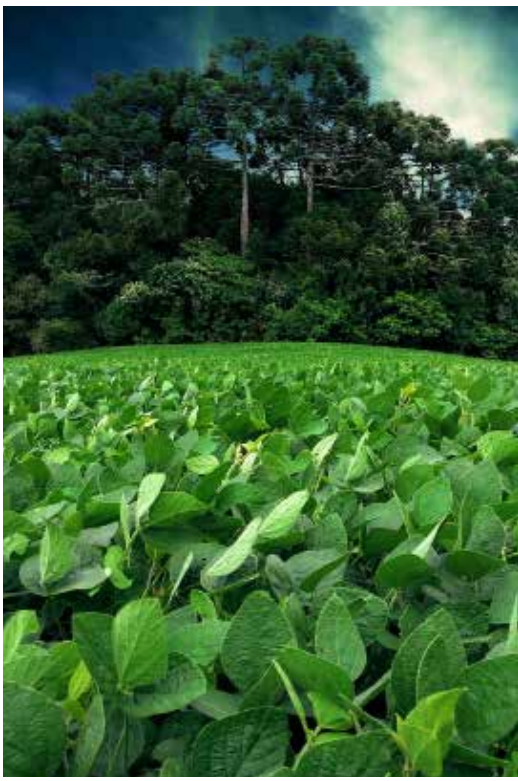
Food items

[11] https://oec.world/en/profile/country/bra
[12] https://sim.finance/responsible-commodities-facility/

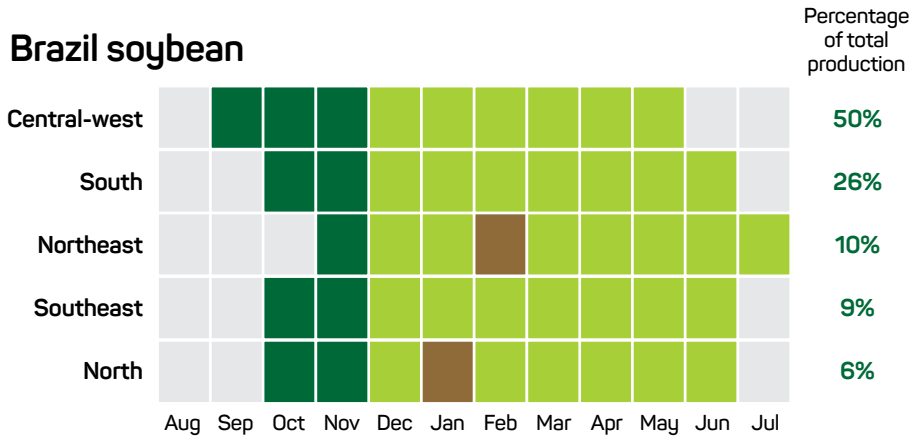
Typical farming calendar for soy producers

Main Crop - Soy - Oct to May
Interim Crops - typically cotton or corn - May to Oct





Brazil soybean



https://ipad.fas.usda.gov/countrysummary/Default.aspx?id=BR&crop=Soybean

SojaCheck is a free and simple to use map-based tool designed to meet the complex due diligence requirements of soy importation from Brazil. The system checks soy farms in the Cerrado region of Brazil to assess if soy has been produced without deforestation or conversion of native vegetation, as well as assessing Brazilian Forest Code related indicators and other compliance checks, enabling informed decision making related to commodity sourcing and supply chains.

Who the tool is for:

- Soy producers (in Brazil) who want to show buyers that they have not cleared native vegetation after a cut-off date of 31 December 2020
- Soy buyers (worldwide) who want to check that producers have not cleared native vegetation after a cut-off date of 31 December 2020
- Consumer goods companies (worldwide) that want to verify that they soy they are using, or that is embedded in products they are purchasing, is deforestation and conversion free (by asking their supplier to provide verification through the tool)
- Civil society, government authorities, and other users interested in farm level deforestation and conversion in the Cerrado

The project is funded by the **Waterloo Foundation**.

https://soja.bvrio.org