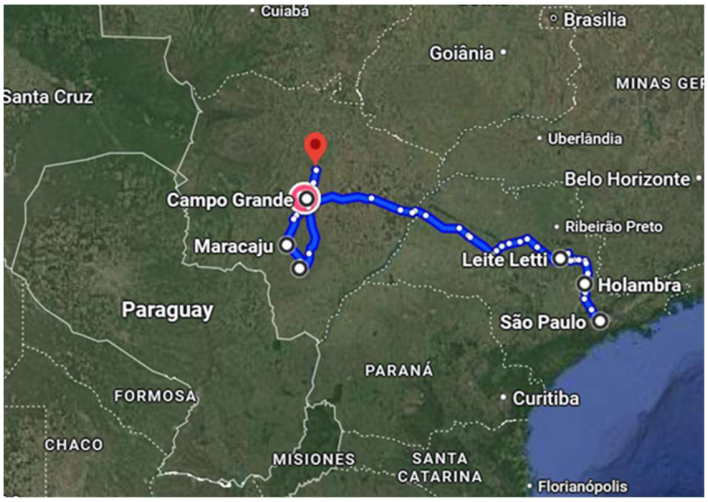
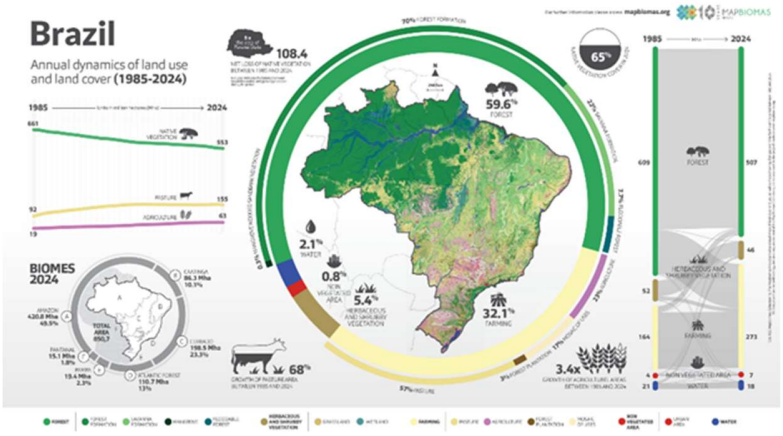
Dear reader,
After spending a week in Chile from 14 to 24 October for the International Dairy Federation congress on behalf of ZuivelNL, my wife Mirjam and I made a short tour through the regions of São Paulo and Mato Grosso. Through the Nuffield Scholar program, we received invitations from several Brazilians to visit them. It was fascinating to learn more about Brazilian agriculture during this short trip. I am happy to share the insights we gathered with interested readers.



(Partially) debunked preconceptions:
"The production of ethanol from corn displaces food production."
"Ethanol production is small-scale and temporary."
"Brazil will produce more food by converting nature into farmland."
"As NL (EU) we can push for more sustainable soybean production."
"Brazilians are not concerned with preserving their natural environment."

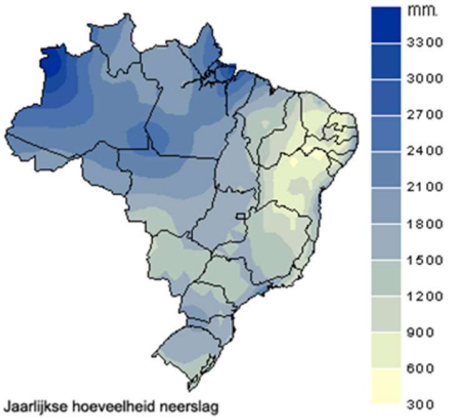
Brazil in numbers
Total: 851 million ha (the Netherlands is 4.2 million ha)
66.3% (564 million ha) of the land area is covered by native vegetation.
10.4% (88 million ha) is located in strictly protected areas.
13.8% (117 million ha) are regularized indigenous territories.
25.6% (217 million ha) are areas designated for preservation on rural properties.
16.5% (140 million ha) are uncultivated and unregistered lands.
30.2% (257 million ha) is used for agriculture and livestock, divided as follows:
7.8% (66 million ha) for the production of grains, fruit, vegetables, and crops
1.2% (10 million ha) covered with planted forests
21.2% (180 million ha) are pastures, of which 8% are native and 13.2% are planted.
3.5% (30 million ha) of Brazilian territory is used for urban purposes, including housing, recreation, infrastructure, and other uses.

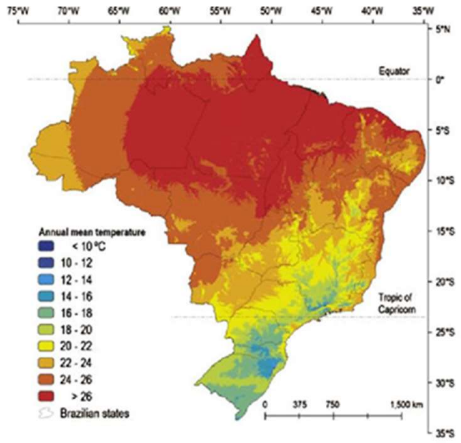
Production:
Beef: 9 billion kg
Milk: 36 billion liters
Grains: 78 million ha
Soybeans: 48 million ha
Corn: 22 million ha
Sugar cane: 9 million ha
Cotton: 2.5 million ha
Coffee: 2.5 million ha
Rice: 1.5 million ha
Ethanol: 35 billion liters



Animals:
Beef cattle: 215 million
Dairy cattle: 15.5 million
Pigs: 44.4 million
Goats: 12.9 million
Sheep: 21.8 million
Poultry: 1.6 billion

Climate in Brazil
Brazil has a predominantly tropical climate, making it highly suitable for agriculture, which takes place mainly in the central part of the country. Due to high average temperatures and abundant summer rainfall, there is never a shortage of water. Even in the “driest” areas, rainfall totals are similar to the Netherlands (900 mm). What stands out is that the “winter” is about 5°C cooler and much drier. This directly affects which crops can be grown and how many crop cycles can be achieved per year. Where irrigation is available, the growing season is shortened, and farmers can grow up to three crops per year.

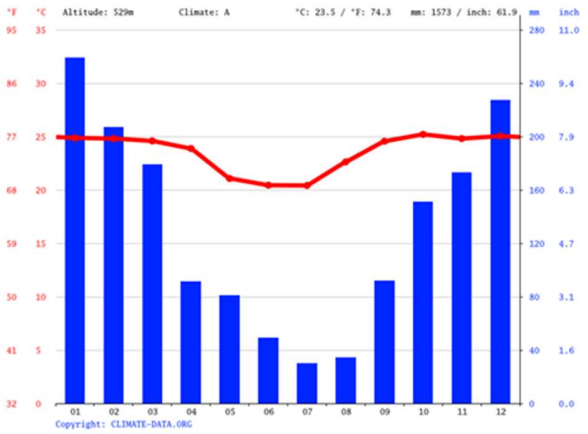




Report Brazil, Nuffield ’25, www.biodiversityindairy.com, Wilco Brouwer de Koning

The cropping season

Depending on the region, two or three crops can be grown.
15 September – Grass desiccation with glyphosate
1 October – Soy planting
Jan/Feb – Soy harvest
Jan/Feb – Same day after soy harvest, corn is planted along with Brachiaria grass
July – Corn harvested for silage
August – Corn harvested for grain



Where irrigation is present, the corn growing season is shortened by 30 days. This allows for a third crop, which is still relatively new in Brazil and under development. Water reservoirs and irrigation systems are increasingly being built. This will raise production in coming years, though the largest increase will come from converting pastureland into cropland.

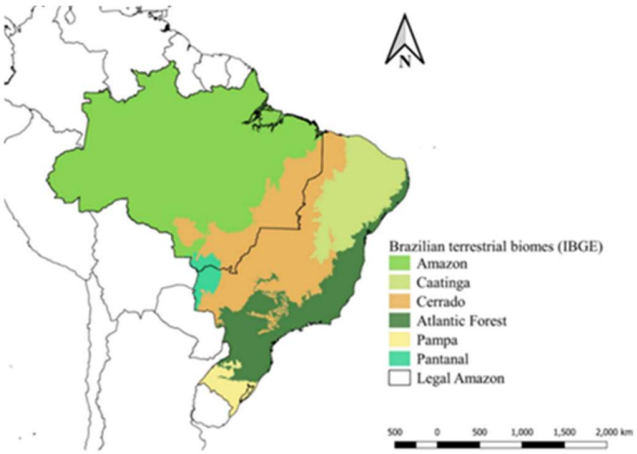
Labor

There is no shortage of people who can work in Brazil, yet labor is becoming a growing challenge due to politics. Voting is compulsory, and to gain political support the current president provides relatively high unemployment benefits and free cooking gas for low-income households. Currently, 5 million families receive this support, with plans to expand to 15 million.

Labor costs average €750 per month, of which at least €200 is tax. Many farms provide housing for employees; on one farm with 2,000 dairy cows, 350 people (employees and families) lived there, including a church. The farm also provided a bus to transport workers to the nearest town 20 minutes away.

Rules on nature preservation

Brazil has very clear rules on preserving natural areas. The entire country is divided into three categories of preservation. In agricultural regions, every farmer must keep 20% of their land as nature. In transition zones this is 35%, and in nature zones 80%. Most farmers meet the requirement on their own land, but it is also possible to rent nature areas nearby.

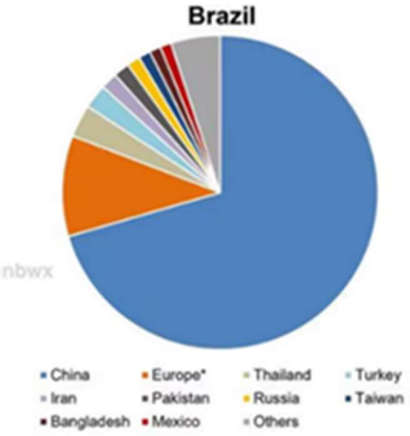


We visited a farm with 1,000 ha of soy, 1,000 ha of eucalyptus with grass for cattle, 500 ha of eucalyptus forest, and 1,500 ha of pasture. They also had 1,000 ha of natural land to comply with regulations. These natural areas are usually located around rivers and must match the historic local ecosystem; if it is not a natural wetland, grazing is not allowed. In areas like the Pantanal and Amazon, 80% of a farm must remain natural.

It is still legally possible to convert nature to farmland, though heavily debated. Many Brazilians find a total ban unfair, arguing everyone has the right to become a farmer. One person told us: “Is it only the responsibility of Brazilians to preserve the rainforest? Or is it the responsibility of the whole world? And if it is shared, should the inhabitants of these areas not be financially compensated for limiting their development? After all, the Western world has already developed, with far-reaching consequences for all of us.”

Soy

Soy is currently the most profitable crop. As corn yields increase through irrigation, the difference is narrowing. Soy is critically important to Brazil—so much so that a new 2,400 km highway is being built from the Pacific to the Atlantic, running from Chile through Argentina, Paraguay, and Brazil to eastern ports. This will reduce transport time by 15 days and costs by 30–40%, boosting competitiveness, especially against the US.



Most soy is exported to China. Asked whether deforestation-free soy is relevant in Brazil, most simply laughed: “If China thinks it’s important, it becomes important. What goes to the EU is negligible.” Some private traders do supply deforestation-free soy to specific customers.

Brachiaria grass

Brachiaria is the dominant grass species used in Brazil because it has deep roots and handles drought well. It is also planted with corn as an intercrop and later terminated to maintain soil structure. All crops are grown under no-till systems, possible only through the use of glyphosate. There was no indication that Brazil intends to stop using it: “It’s cheap, good for the soil (no tillage), and reduces labor. Why stop?”

Food or Fuel or Fuel and Feed?

The “feed vs fuel” debate does not exist in Brazil. Production increases 1.5% annually, and demand grows more slowly, creating surpluses of sugar cane and corn. Rapid expansion of massive ethanol plants has followed. The largest plant, in Sinop, produces 500 million liters per year and requires roughly 1 million tons of corn (250,000 ha).

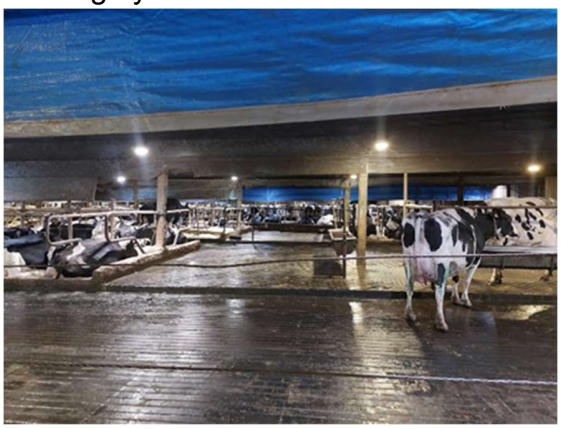
Ethanol is cheap at the pump—we filled our car for €0.62 per liter. Although mileage is slightly lower than gasoline, the price advantage is huge. With rising irrigation, wheat may also increasingly be used for ethanol.

Ethanol production generates DDG (Dried Distillers Grains), an excellent feed for poultry, pigs, and cattle. This is contributing to growth in livestock farms.

Dairy farming: modern large-scale versus small-scale

Brazil has many small dairy farms but also highly modern large-scale ones. Nearly all are multifunctional, often combining dairy with soy and beef cattle—sometimes up to 40,000 head of beef cattle. Dairy herds range from 200 to 5,000 cows.

Roughage is mostly homegrown, and irrigation investments support expansion. Beef cattle are rarely sold off because they require less labor and complement the dairy operation well.
Cows are housed indoors in open barns with fans or fully enclosed barns with cooling systems.



Two barn types dominate: deep-bedded compost barns and sand-bedded freestalls. Since building permits are not required, large barns pose no issue. Heifers are sometimes grazed, though tick problems are leading to more indoor housing. Hunting is prohibited, contributing to wildlife spread of disease and parasites.
Roughage consists mainly of corn silage,

supplemented with alfalfa, hay, soy, brewers' grains, and wheat. All feeding is TMR; there are no concentrate feeders. Yields are high at 35–50 liters per cow per day, supported by lower component percentages, BST every 12 days (+4 liters), 3x milking, intensive genetics (including embryo transfer), and high corn and concentrate intake.

A2 milk is well established, and one farm we visited had its own processing facility, selling A2 dairy products within 300 km of São Paulo.

Manure digestion

Digesters are becoming more popular, even on “small” farms with 200 cows. Subsidies are

available, and systems are simple—covered lagoons with a basic engine. Two farms we visited plan to invest soon in a New Holland system converting methane into fuel for tractors and trucks.

Land

Land prices vary widely—from €500/ha in the Pantanal to €18,000/ha in developed cropping areas. Irrigation adds extra value. Many suitable but undeveloped areas are still

grazing land and can be purchased for about €4,000/ha. High interest rates around 15% (net 10% with 5% inflation) are a challenge.

Beef production is shifting from extensive grazing to large feedlots using corn and soy, reducing labor and land needs per animal.

If you have any questions or comments after reading this report, feel free to contact me.

Regards,

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