# MONITOR

OCTOBER 2022

REPÓRTER BRASIL

# FOREST TURNED INTO ANIMAL FEED

**Soy and corn used as animal feed are increasing deforestation in Brazil**

# MONITOR #17

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October 2022


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**Monitor** is a **Repórter Brasil**'s bulletin that publishes studies on supply chain.


This publication was supported by World Animal Protection.


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# INTRODUCTION

Meat consumption in the world keeps growing. The global average is 34.1 kg *per capita*,[1] a number that jumps to 60 kg when considering only the population of developed countries. But a survey by FAO (Food and Agriculture Organisation of the UN) indicates that by 2030 this number should increase by 14%[2] compared to the period 2018-2020.

Although they still consume less meat than rich countries, low- and middle-income countries — such as Brazil — are currently the ones that most contribute to the growth of world consumption. By 2030, it should grow 30% in Africa, 18% in Asia-Pacific, 12% in Latin America, 9% in North America and 0.4% in Europe.[3]

To meet the growing demand for animal protein and maintain competitive prices, agribusiness makes use of intensive production methods, characterised by the raising of cattle, pigs, goats and poultry in confined environments. This practice means that more than 70% of the 80 billion land animals raised globally are kept and slaughtered in industrial breeding systems.[4] Besides the cruel treatment imposed on animals, confinement systems are also related to a huge ecological footprint in their supply chain.

Considering the large volume of animals raised for slaughter, feeding these herds also requires large areas for cultivating corn and soybeans. The main use of these grains is in formulating the feed used in intensive breeding systems,[5] composed, according to data obtained from Abiove (Brazilian Association of Vegetable Oil Industries), of 60% corn, 20% soybean and 20% of other micronutrients, such as vitamins and minerals.

Although it represents a minor part of the feed, soy is an essential ingredient to ensure the growth of animals — especially poultry and pigs raised on intensive farms and which have been genetically selected to have their growth accelerated.

Brazil is currently the largest producer of soybean and the third largest producer of corn on the planet. But it is not only in planting that the country stands out. Companies with Brazilian capital are today among the largest meat industries in the world. In this context, they are responsible for a large part of the demand for grains for the manufacture of animal feed.

Brazilian multinational JBS, global leader in the production of animal protein,[6] is one of the largest buyers of grains for the production of feed,[7] a process carried out by the company itself in its factories. Thus, the meat business is closely linked to the soy business in the supply chain of this sector giant.

The global appetite for meat and its direct relationship with grain production exacts a high environmental price. In Brazil, livestock in the Amazon and soy and corn crops in the Cerrado, grown mainly to serve as the basis for feeding chickens, pigs and other animals, are among the main drivers of deforestation, and put these unique ecosystems at risk.[8]

A world leader in soybean production, the country concentrates most of its soybean crops in the state of Mato Grosso.[9] Vast extensions of corn are also planted there, especially in winter.[10] It is no coincidence that this is also the state with the highest consumption of pesticides.[11]

The deforestation of forests and Cerrado directly impacts the local fauna, which has not even been fully catalogued. Every two days, a new animal or plant species is discovered in the Amazon basin area,[12] one of the most biodiverse regions in the world, which covers territories in eight countries — but most of which is in Brazil.[13]

Almost two thousand species of fish, 60 species of reptiles, 35 different types of mammals and around 1.8 thousand species of birds are already known in the Amazon.[14] If scientific discoveries continue at the current pace, it will still be hundreds of years before the complete list of fauna and flora in the biome is described.

The advance of productive activities over the forest, however, makes many of these species vulnerable as soon as they are known. Milton's titi (Plecturocebus Miltoni), a primate first described in 2014, is one of them: it only exists in the interfluve of the Roosevelt and Aripuanã rivers, between the states of Mato Grosso and Amazonas, a region pressured by fires and deforestation.[15] The destruction puts the animal at risk of extinction since it lives exclusively in the treetops.

In the Cerrado, the most biodiverse savannah on the planet and with a high proportion of species that only occur in the region,[16] deforestation has already consumed almost 50% of the native vegetation, exterminating a large part of the ants and termites that used to serve as food for the giant armadillo (Priodontes maximus), and leading the mammal to attack beehives of beekeepers in order to satisfy its hunger.[17]

Science has already shown that climate change has made the Cerrado hotter and drier, an imbalance that also harms the survival of native species, both animals and plants, mainly due to reduced rainfall and increased dry season. Because they depend on water from dew and rain for their survival, bees are usually one of the main ones affected by this process[18] — a problem that comes with an extra warning, since 50% of the local species only occur there.[19]

A recent study conducted by the WWF[20] analysed 486 endangered species in the Cerrado and the Amazon. It found that 484 of them have lost part of their habitat as a result of deforestation.

Currently, it is estimated that among the 8 million plant and animal species that exist on our planet, 1 million are at risk of extinction, the highest alert level in the history of humanity according to IPBES[21] (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services), an intergovernmental structure whose mission is to strengthen public preservationist policies.

**BESIDES TAKING THE SPACE OF NATIVE FLORA AND FAUNA, LEADING TO THE EXTINCTION OF SPECIES AND THE DESTRUCTION OF BIOMES, OILSEED CROPS ALSO CONTRIBUTE TO GLOBAL WARMING**

Besides taking the space of native flora and fauna, leading to the extinction of species and the destruction of biomes, oilseed crops also contribute to global warming. According to FAO, the production and processing of grains for feed, as well as their transportation, were responsible for 31% of all greenhouse gas emissions associated with agriculture and livestock in 2021.[22]

Deforestation of the Amazon and Cerrado are the main drivers of Brazil's CO2 emissions. In 2020, while the world was reducing its carbon footprint

due to the low economic activity caused by the Covid-19 pandemic, the so-called "land use changes", which are the conversion of forest and Cerrado into pasture or crops, increased by 24% the volume of greenhouse gases released into the atmosphere by Brazil in relation to the previous year.[23]

Since 1980, the volume of soybean cultivated in Brazil has increased by 680%[24] — a large part of this expansion has occurred through the conversion of native forest areas into crops. And although studies show that it is already possible to maintain the production rhythm without new deforestation,[25] **Repórter Brasil** shows in this report that areas of recent deforestation continue to give way to soybean plantations. And the industry's controls are not enough to exclude this consequence from its supply chains.

Our investigation found evidence that soybean suppliers to Bunge and Amaggi — which, in turn, sell grains to JBS and its subsidiary Seara Alimentos — have deforested areas in the Amazon, contrary to the principles of the Soy Moratorium, and in the Cerrado, to make way for their agricultural activities. Corn producers who sell directly to the processing plant have also produced on irregular farms, including those that have been interdicted.

In their defence, the companies say that at the time of purchase, the farms complied with the social and environmental requirements adopted by their procedures for raw material acquisition.

But such procedures have blind spots and still cannot fully prevent the risk of acquiring grains planted in recently deforested or illegal areas. Soy or corn from such areas may be sold through a third party — sometimes another farm belonging to the same owner — which makes it difficult to trace the origin of the commodity. This type of manoeuvre is known as "grain laundering".

In practice, the companies have eminently reactive policies, which rely on satellite monitoring of farms and inspection by public bodies to block suppliers. But agencies such as Funai,[26] Ibama,[27] and ICMBio[28] have been undergoing a process of dismantling for years,[29] which has drastically reduced their capacity to act. Furthermore, "grain laundering" also calls into question the efficiency of the purchasing policies adopted by companies.

At the same time, the reduction in the demand for grains remains a secondary agenda — if not an issue that is completely ignored — for the main global companies operating in the meat supply chain.

# TRACING THE GRAINS

JBS slaughters 4.4 billion heads of poultry annually — it is the sole leader in poultry slaughtering worldwide, according to the publication Watt Poultry International.[30] In the Brazilian market, its chicken and derivatives are sold under the Seara brand, which according to the company has more than nine thousand integrated poultry and pork suppliers in the country.[31]

According to the Brazilian Agricultural Research Corporation (Embrapa) sources, during the 45 days of its life until slaughter — a cycle that in several cases is abbreviated to less than 40 days — a bird consumes an average of 4.8 kg of feed. Therefore, the total volume of inputs required to feed the entire flock of animals at JBS is enormous. The mixture that they eat is prepared by the company itself, which ensures to cherish the "quality of the inputs".[32]

With Brazil leading the world ranking in poultry slaughtering — second place is also Brazilian BRF, owner of the Sadia and Perdigão brands —, market observers see a trend of geographical change in this industry.

Brazilian production, traditionally concentrated in the three Southern states (Rio Grande do Sul, Santa Catarina and Paraná) is expanding towards the Centre-West, which has attracted new slaughter plants precisely because companies want to be closer to suppliers of feed inputs, such as soy and corn. Since the volumes of grain needed to feed the animals are much higher than the meat produced, it is cheaper to transport chicken cuts than soy and corn.

**THE CENTRE-WEST REGION HAS ATTRACTED NEW SLAUGHTER PLANTS PRECISELY BECAUSE COMPANIES WANT TO BE CLOSER TO SUPPLIERS OF FEED INPUTS, SUCH AS SOY AND CORN**

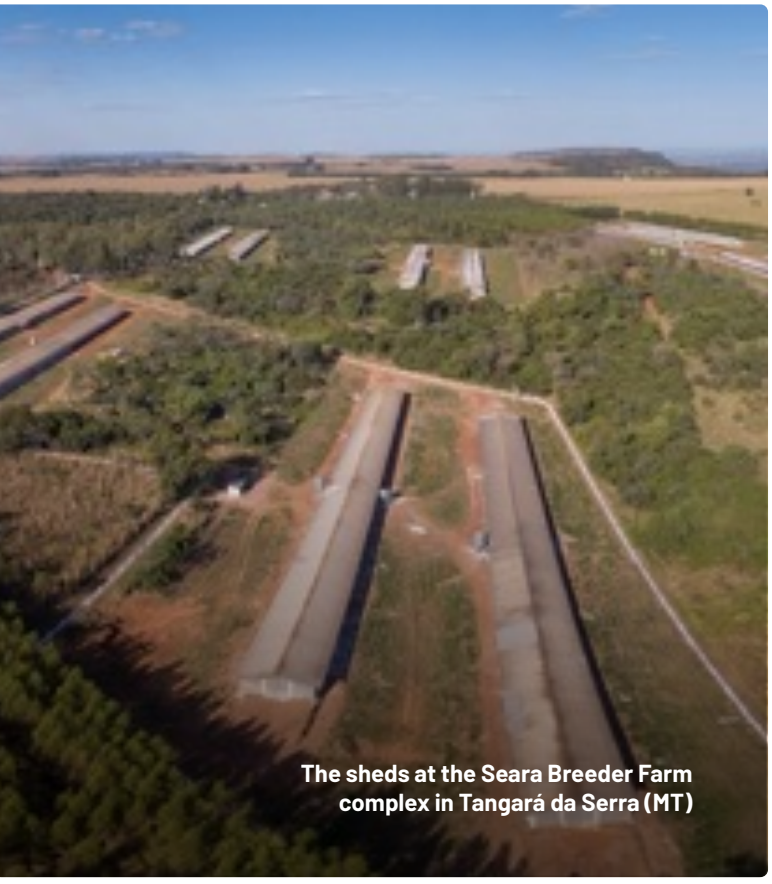
Seara's arrival in Tangará da Serra-MT is a good example of this movement. JBS acquired the unit in 2015,[33] making it the company's first poultry slaughter operation in the state. At that time, the plant had more than 200 integrated farms supplying animals, with a daily slaughter capacity of 90,000 birds.

But sources interviewed by **Repórter Brasil** indicate that JBS plans to double the slaughtering capacity of its Tangará da Serra plant, which also produces animal feed. The company did not comment on the issue.

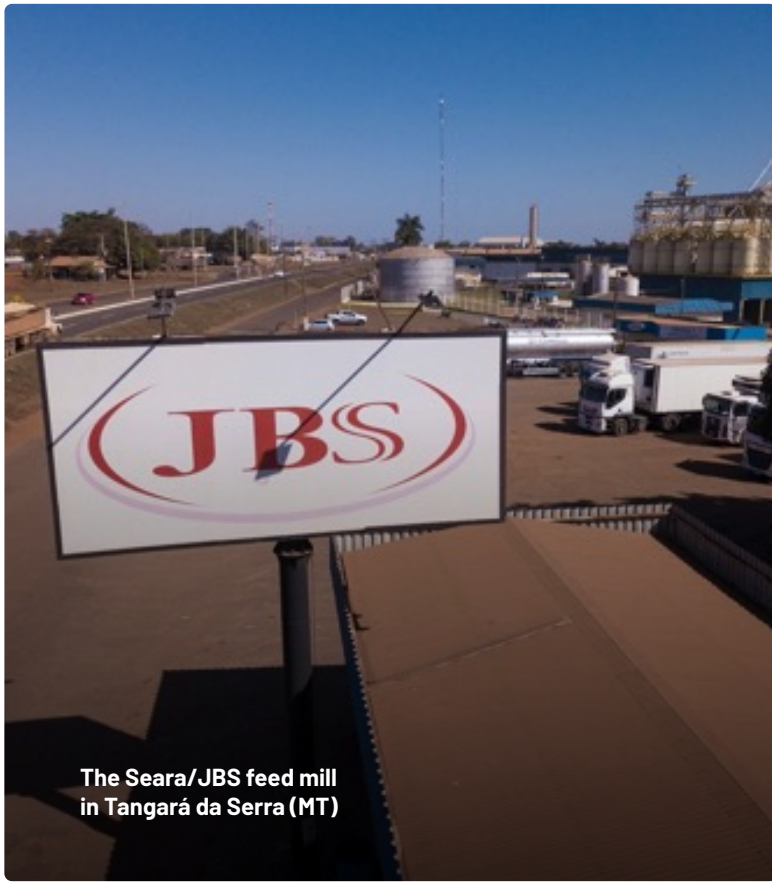
As it stands today, the JBS/Seara headquarters in Tangará da Serra is divided into three units. The largest of these is the farm complex, or Breeder Farm, which has 24 sheds for raising poultry and is located 14 kilometres from the city centre, in the rural area.

There is also a small poultry hatchery on the margins of highway MT-358, in addition to the feed mill, located on the same road, a few kilometres further on, also outside the urban perimeter.

This unit is the final destination of soybean meal and corn supplied by farmers and trading companies to JBS/Seara. There, the already ground grains are processed and go through an enrichment process to later serve as feed on the Breeder Farm — and also for the company's integrated producers, who receive weekly loads of feed, according to local sources.



The sheds at the Seara Breeder Farm complex in Tangará da Serra (MT)




The Seara/JBS feed mill in Tangará da Serra (MT)

# INDUSTRY AGREEMENTS

In 2006, Greenpeace revealed that soy was taking over the Amazon and that all the major trading companies that supplied the grain worldwide had their chains contaminated by deforestation.[34] This denunciation was the starting point for the signing of the Soy Moratorium, a sector agreement to halt deforestation associated with soybean in the biome. The document was drafted by representative organisations such as Abiove and the National Association of Cereal Exporters (ANEC), with the participation of civil society organisations such as Greenpeace and WWF.

The signatories of the Moratorium commit not to purchase soybean produced in the Amazon biome in areas deforested after July 22, 2008. All the large trading companies of the sector operating in Brazil have endorsed the pact. This includes multinational giants such as Bunge, Cargill, ADM, Cofco and Brazilian Amaggi.

Other companies that do not work directly in soybean production, but use this commodity in their chain, such as JBS, have indirectly adhered to the agreement. "For trading companies that operate specifically in the Amazon biome, JBS also requires them to be signatories of the Soy Moratorium", the meat giant informed Repórter Brasil. Although the results of this pact are positive, audits show that each year the volume of samples that disrespect the Moratorium increases[35] — that is, the area planted with soybean in recently deforested lands.

There are also other problems. The Cerrado biome, for instance — the one most impacted by grain planting —,[36] is not part of the ecosystems protected by the Soy Moratorium. And corn, the main component of animal feed, is uncovered by any type of sustainability agreement.

Although formally excluded from the Moratorium, the Cerrado is an object of concern, according to

soybean companies. According to the newspaper Valor Econômico, in September 2021,[37] Amaggi claimed to have already tracked — and guaranteed that there was no deforestation after 2017 — 99% of its direct suppliers from the Amazon and the Cerrado, and 30% of its indirect ones. The company has committed to zero deforestation in its supply chain by 2025.

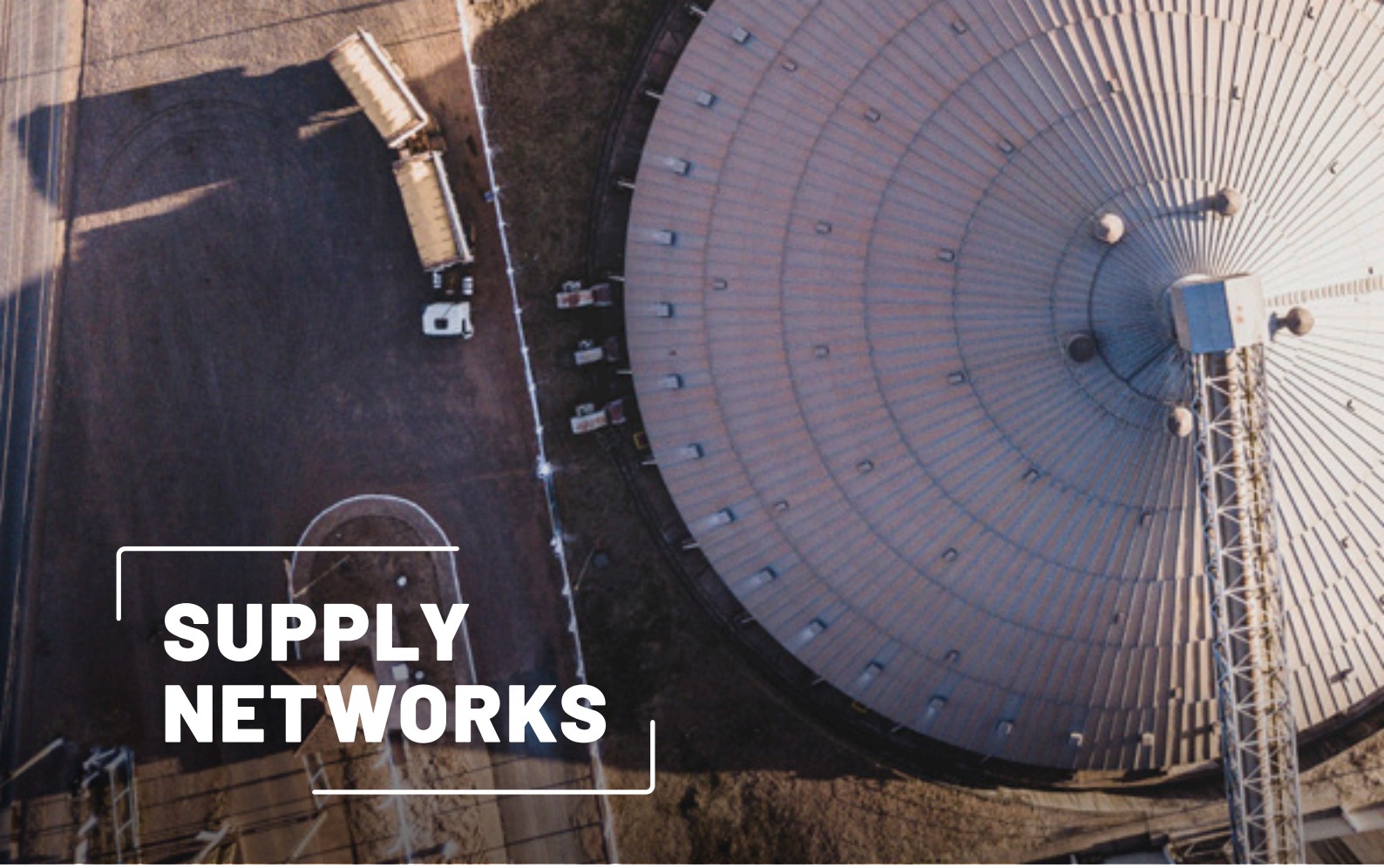
Bunge, in turn, says it has achieved monitoring 64% of the indirect products it produces in the Cerrado — in May 2022, the company celebrated the data,[38] which represented double the amount achieved in the previous year. The goal is to monitor 100% of direct and indirect purchases made in risk areas in the Cerrado by 2025, "the date of its global commitment to deforestation-free chains worldwide", says the company.[39]

**ALTHOUGH THE RESULTS OF THIS PACT ARE POSITIVE, AUDITS SHOW THAT EACH YEAR THE VOLUME OF SAMPLES THAT DISRESPECT THE MORATORIUM INCREASES**

As for corn, there are policies such as the Pará Grain Protocol,[40] an initiative of the Federal Prosecution Service that establishes five criteria for trading grains in the state. Among them is the obligation to issue an invoice, be enrolled in the Rural Environmental Registry (CAR), have no Ibama interdictions on the property, not be included in the list of degrading labour and labour analogous to slavery, and respect the proportionality between production and capacity of the area, to avoid the "grain laundering" from an irregular area.

But despite the commitments publicly assumed by Amaggi, Bunge and JBS, **Repórter Brasil** identified cases that show that the three companies are still linked, in their business network, to suppliers that expand planting in the Amazon in violation of the Soy Moratorium.

**Deforested area for farming on farm in Tapurah (MT), within the amazon biome**



# SUPPLY NETWORKS

When JBS announced the purchase of Bunge's margarine operation at the end of 2019, the Administrative Council for Economic Defence decided to investigate whether the acquisition would bring harm to competition. It is in the records of the Concentration Act Number 08700.001134/2020-14, concerning the deal between the giants, that it is recorded that Bunge is Seara's supplier of corn grain and soybean meal — items that the meatpacker uses for "animal feed".

Among the thousands of pages available for public consultation, there are records of supply prior to the process and an indication that the relationship would continue after the merger. The rapporteur of the case, council member Sérgio Costa Ravagnani, records: "Additionally, Bunge will also supply Seara with soybean meal and corn grain".

He then goes on to explain: "The [merger] operation results in vertical integrations involving the supply of soy meal and corn grain, as provided for in the Supply Agreement. Nevertheless, these products will be used in segments outside the scope of the Operation (animal feed and special refined oils)".

One of the supply routes between companies is between Bunge's soybean crushing plant in Nova Mutum, and Seara Alimentos in Tangará da Serra. **Repórter Brasil** visited the plant in Nova Mutum (MT) at the end of July and confirmed with several truck drivers waiting at the unit's loading and unloading yard that soybean meal is frequently transported from there to the JBS/Seara feed mill located in Tangará da Serra. "It goes out every day", said a truck driver on condition of anonymity.

According to local employees of Bunge Nova Mutum, "between three and four loads" of meal are sent daily from that unit to the JBS feed mill.

Trucks wait for loading and unloading at Bunge's unit in Nova Mutum (MT)

The journey of little more than 280 kilometres that separates Bunge's soy crushing plant in Nova Mutum to the JBS/Seara feed mill takes between five and six and a half hours, depending on the truck model. The charterer receives R$ 100 per ton of meal transported — but fuel costs and taxes eat up a substantial chunk of income. "In my truck, which is a double-trailer, I carry 36 tons, which gives R$ 3,600 in total, but after discounts, there's only R$ 800 left", explained another driver.

Bunge's supply from Nova Mutum to JBS is only interrupted during plant maintenance — a process that lasts about 48 hours and was occurring during the visit by **Repórter Brasil**. During this interval, shipments to JBS are made by the plant in Rondonópolis, also in Mato Grosso, according to a company employee who spoke on the condition of anonymity.

**Repórter Brasil** also found evidence that there is another supplier of inputs for JBS's feed: Amaggi. According to a decision handed down in case number 100038337.2021.8.11.0003, in which the grain trading company and Seara are defendants, a carrier was hired to carry out "the transportation of soybean meal, which left the city of Lucas do Rio Verde (MT) in September 2020 for the city of Rolândia (PR)".

In Lucas do Rio Verde,[41] Amaggi has a soybean crushing plant that produces soybean meal and oil, now processed in a newly opened biodiesel plant.[42] Seara has a chicken production unit in the municipality of Rolândia, in Paraná.

Amaggi is also the main soybean crusher in the Tangará da Serra region, where Seara has a feed processing and poultry slaughtering unit.

Several truck drivers interviewed by **Repórter Brasil** at the Amaggi freight yard in Lucas do Rio Verde confirmed the route from there to Paraná. Several of them also said they had already done the route to Tangará da Serra, but according to records made in the company's system by a company employee, this route has not been used "for more than two months".

Bunge and Amaggi claim that their operations follow all sustainability criteria required by law and industry agreements. JBS also stresses that all its grain purchase contracts are guided by the commitment to socio-environmental responsibility. However, there are limitations in the companies' controls that allow poultry raised for slaughter to be fed with grains contaminated by deforestation.

**Truck driver inspects soybean meal at the Amaggi plant in Lucas do Rio Verde (MT)**

**Aerial view of the JBS/Seara factory in Tangará da Serra (MT)**

# CASE STUDIES

## *Case 1*
## *João Luiz Lazarotto, Tapurah (Amazon)*

João Luiz Lazarotto is a soybean producer in Tapurah,[43] in the central region of Mato Grosso. In 2019, he sold soybeans to both Bunge in Nova Mutum (MT) and Amaggi in Lucas do Rio Verde (MT), according to invoice data accessed by **Repórter Brasil**.

He plants the grain in an area of 2.5 thousand hectares registered in the Rural Environmental Register (CAR) under the name União Farm – a farm located in the Amazon biome and opened between 1980 and 2004, according to satellite images. This property, therefore, complies with the Soy Moratorium criteria.

**Repórter Brasil** discovered, however, that João Luiz Lazarotto has registered another property in the CAR under the name União Farm II, in an

**União Farm (top half) and União Farm II (bottom half)**

area contiguous to the south of União Farm, also within the Amazon biome.

União Farm II remained untouched until basically 2012 when Agropecuária Lazarotto — a company owned by João Luiz Lazarotto and his family — received a permit for logging within the area.

After years of selective logging, in 2017 the farm received authorisation for the deforestation of 689 hectares located in the western portion of its territory. The deforestation was accompanied by the controlled burning of the deforested perimeter, authorised in 2018.

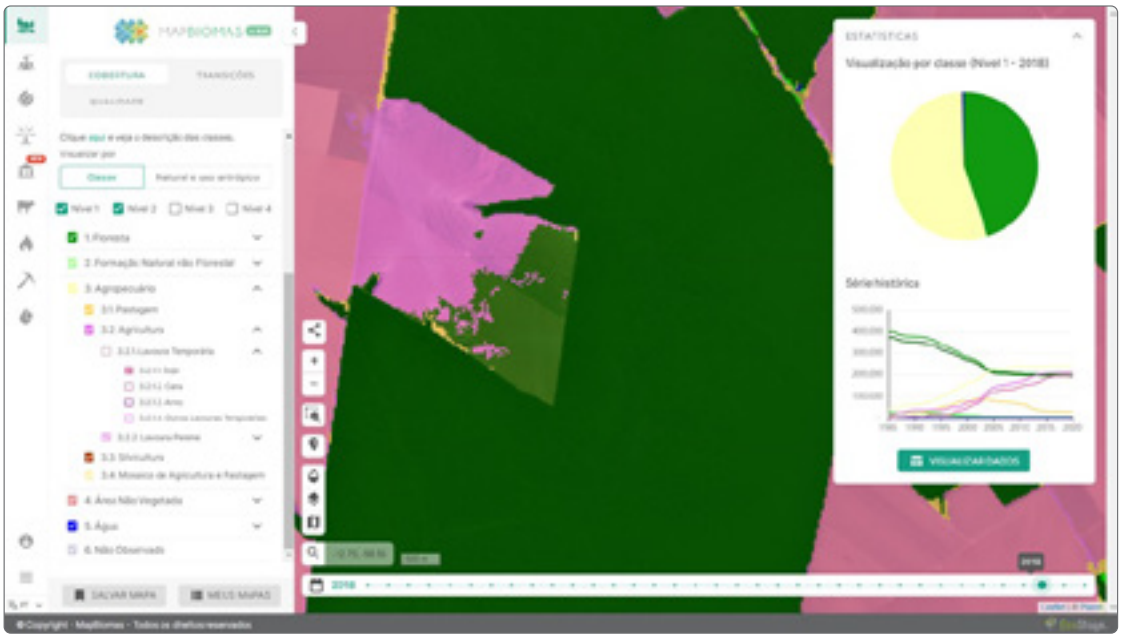
**Deforested area inside the União Farm II**



**Evolution of deforestation at União Farm II between 2017 (left) and 2018 (right)**

In 2020, the company was fined by the State Secretariat of Environment of Mato Grosso (Sema-MT) on this second farm for "clear-cutting in 2018, without authorisation from the competent environmental agency, 9 ha of native vegetation in an area subject to special preservation". The area appears as not interdicted in the most recent list of Sema.44

Data on land use and land cover from the MapBiomas platform indicate that, as early as 2018, soybean planting began in the recently deforested area of União Farm II. The same situation was repeated in the following harvests, according to MapBiomas[45] — whose available analysis data go up to 2020 — and the Global Forest Watch platform[46] — which also covers 2021.



**MapBiomas Land Use and Land Cover map in 2018**

**Deforested area inside Fazenda União II**

**Global Forest Watch: Soybean planting data in 2021**

But João Luiz Lazarotto, as well as the other members of his family who are partners in Agropecuária Lazarotto, do not have state registration in the União Farm II, a document required to market agricultural production. In other words, to sell the grain from this area, they would need to use invoices originating from another property.

The invoices and other documents that link João Luiz Lazarotto to Bunge and Amaggi point to União Farm as the establishment of origin of the soybeans purchased.

**Repórter Brasil** visited the area and found that the two farming areas in the União and União II farms, which are just over 1 kilometre apart, are joined by a narrow strip of cultivated land to the east of both properties. It is an area about 200 metres wide that runs from the deforested area on União II to União, running parallel to a side dirt road. At the end of July, straw from a harvested corn crop could be seen at the site — both in the area where the forest was cut down and in this strip of land.

**The red rectangle highlights the tillage corridor linking the two farms. Source: Satélite Planet, image captured on 03/07/2022**

This tillage corridor gives internal access to the deforested area in União II, allowing its management, as well as the transportation of grains to the silos, which are located in União.

That is, there is a clear risk of contamination of Bunge and Amaggi's supply chain — and, therefore, also of JBS's poultry production — with soybean from União Farm II, planted in an area deforested in 2018, and, therefore, in disagreement with the Moratorium's precepts.

Cases that raise suspicions about "soybean laundering", as this type of manoeuvre is known, have already been revealed previously by **Repórter Brasil**,[47] including cases involving Bunge's supply chain.

When questioned, the companies sent explanations. Bunge said it "does not comment on commercial relations with specific producers" and did not inform whether it still maintains commercial relations with João Luiz Lazarotto. But it assured that it "strictly follows Soy Moratorium procedures" and that audits carried out as part of the pact showed "100% compliance with the commitment".

Amaggi confirmed the acquisition of grains from that supplier, both in 2019, with products coming from União Farm, and in 2022, of lots "from other

farms of the producer". The 2019 purchase was validated by Amaggi's criteria because an on-site inspection showed that the area under Sema's interdiction at that time was not being cultivated.

Amaggi, however, did not present a concrete answer on how to avoid the problem of soybean laundering, which may have occurred in the case of União II, in areas that were not interdicted because they had authorisation to deforest — but do not fit into the Soy Moratorium criteria. The full explanations can be read at the end of this report.

João Luiz Lazarotto was also contacted through his lawyer, Fernando Araújo. By phone, he asked the reporter to send questions by WhatsApp, but they were never answered and the producer's representative stopped answering the calls.

## *CASE 2*
## *Wilson Carniel, Brasnorte (Cerrado)*

The Dona Josefa, São Miguel do Rio Preto and Emília Farm, registered in the name of Wilson Carniel, in Brasnorte, in northern Mato Grosso, is in a transition zone. It is in the Cerrado biome, but only 10 kilometres from the border with the Amazon.

The farm has 2,600 hectares and in 2018 received authorisation to deforest 611 hectares within its perimeter. If it were inserted in the Amazon biome, that would already be enough to prohibit the sale of grains to the trading companies that are signatories of the Soy Moratorium — despite that, in 2019 both Bunge and Amaggi bought

**Perimeter of the farm**

**The dark area over the red area indicates the illegally deforested perimeter with soybean incidence**

soybeans from the property, as shown by data from invoices accessed by **Repórter Brasil**.

But there is another complicating factor. The area deforested at Dona Josefa exceeded the authorised limit by 98.7 hectares — 68.5 hectares being within the property's Legal Reserve area and 30.2 hectares in a special preservation area.

For this reason, Carniel was fined by Sema-MT two years later, in 2020, when the area was also interdicted by the environmental agency.

The area illegally deforested on the farm was destined for soybean cultivation, according to satellite images analysed by a specialist consulted by **Repórter Brasil**. The images confirm that the grain was planted in the three years following the cutting of the native Cerrado vegetation — 2019, 2020 e 2021.

Between February and May 2019, the Amaggi unit in Brasnorte (MT) received soybeans from Dona Josefa, São Miguel do Rio Preto and Emília farm. The unit is a storage warehouse. This means that the soybeans it acquires can be sent for processing at other company units, including the aforementioned Lucas do Rio Verde (MT) plant.

Also in 2019, Bunge in Nova Mutum (MT) received soybeans from the Dona Josefa, São Miguel do Rio Preto and Emília Farm.

Amaggi confirms the purchase, but since the interdiction on the area was only enforced in 2020, it justified that at the time of the acquisition there was "no irregularity against the Company's marketing criteria". Bunge did not comment on the specific case.

**Repórter Brasil** tried to contact the producer and his representatives but had not heard back by the time this report was completed.

Although both Amaggi and Bunge mention in their clarifications concern with monitoring purchases and preserving the Brazilian Cerrado, this case demonstrates the double standard of sustainability employed by the main agribusiness trading companies in comparing the Amazon and the Cerrado. In addition, both companies say they use geomonitoring systems in their procurement checks, but the case of Wilson Carniel was not detected, indicating that there are loopholes to be addressed.

## *CASE 3*
## *Direct corn suppliers to JBS*

If for soybean there is at least Moratorium coverage for grains planted in the Amazon biome — and an express concern by companies to apply protection criteria to Cerrado areas with oilseed crops — corn cultivation is done with no other demand than the legal ones.

**Repórter Brasil** also accessed data from invoices that show the direct supply of corn, without intermediation, between producers in Nova Mutum-MT, in the Brazilian Cerrado, and JBS. The company confirms that it makes this type of purchase and that it applies an assessment of "compliance with social and environmental criteria" for these contracts.

Although there was evidence of irregularities in the production of corn on deforested land, JBS said that all cases presented by **Repórter Brasil** complied with the company's social and environmental criteria. According to JBS, "three farms received an environmental interdiction at

a later moment [after purchase]" and after the interdiction, they did not sell to the company again.

Illegal deforestation of the properties, however, had already occurred before the JBS trades. In other words, no monitoring measures of their own were adopted, independent of government oversight, to block such deals.

## *Jair Carafini*

Between 2019 and 2020, Jair Carafini sold threshed corn from São Marcos Farm, in Nova Mutum, to Seara Alimentos in Várzea Grande-MT. Two years earlier, in 2017 and 2018, the farm was illegally deforested over an area of two hectares — in 2021, he was fined by the Mato Grosso State Secretariat for the Environment[48] and had the area interdicted for production.

He was also fined (Notice of Violation Number. 20043291) and had an interdiction (Number. 20044208) issued on another property, São Francisco farm, in Diamantino, also in Mato Grosso, for cutting down 13 hectares in 2018, in a permanent preservation area.[49]

Jair Carafini responds to a Public Civil Action[50] in which the Federal Prosecution Service requests the interdiction of a farm where "deforestation has apparently been taking place for years".[51]

He is also the target of a judicial execution in which the government has obtained the seizure of his assets to settle debts registered in the active debt arising from unpaid fines.[52]

The producer's lawyer, Luiz Pedro Franz, said that the questions sent by **Repórter Brasil** to the producer by message and telephone would not be answered.

## *Odair Mantovan*

In 2018 and 2019, the producer sold threshed corn from Filadélfia farm, also in Nova Mutum, to Seara Alimentos in Várzea Grande-MT. Court Case Number. 1001718-22.2018.8.26.0022 confirms, through truck drivers' testimony, that the Nova Mutum property also sent goods to Seara Alimentos in Amparo-SP in 2018.

In 2015, the National Institute for Space Research (INPE) issued an alert (Prodes) pointing to deforestation on this property.[53] In 2020, he was fined (NV Number 200432697) and had the area interdicted (Number 200442134) for destroying 2.15 hectares of native vegetation in a preservation area.[54]

According to the farmer's lawyer, Alex Brescovit, it is a case of cleaning the area and the producer has already requested the rectification of the CAR to include this situation, which is still under analysis by the authorities.

## *Lucildo Caneppele*

In 2018, invoices indicate that this producer sold threshed corn from Sobradinho farm in Nova Mutum to Seara Alimentos in Várzea Grande-MT. He had illegally deforested 3.5 hectares in the Legal Reserve Area of this farm in 2016, according to a notice of violation (Number 200431982) and interdiction term (Number 200441658), issued by Sema-MT in 2020.[55]

**Repórter Brasil** contacted the producer but had not received a reply until the publication of this report.

# AGENDAS FOR THE FUTURE

At least since 2014, the JBS group says it contractually requires social-environmental commitments from feed input suppliers.[56] However, the above cases reveal the purchase of corn and soybean from farms with illegal deforestation in the Cerrado, in addition to farms with deforestation in the Amazon in disagreement with the Soy Moratorium, and show weaknesses in the origination and monitoring policies of the company and the trading companies that intermediate this supply, such as Bunge and Amaggi.

The impact of the gaps in socio-environmental policies of grain purchases by large companies is already known. A report launched in February this year by Instituto Centro Vida (ICV),[57] an environmental organisation from Mato Grosso, shows the direct relationship between grain production and illegal deforestation.

"Between August 2008 and July 2019, rural properties with soybean cultivation accounted for 20% of deforestation in Mato Grosso, which is the largest producer of the commodity in Brazil (...) Of this total, 92% was carried out illegally, that is, without the authorisations of environmental agencies", the document points out.

For a portion of the State covered by the Amazon biome, this indicates a serious failure in the application of the Soy Moratorium. But it also points out the urgent need to expand the geographical scope of this agreement: "The Moratorium is admittedly an instrument that has worked well in relation to soybean-related deforestation in the Amazon. But in the case of Mato Grosso, part of this devastation is associated with cultivation in Cerrado areas, which are not covered by the Moratorium", says Ana Paula Valdiones, coordinator of ICV's Environmental Transparency Programme.

According to the study, the total rates of illegal deforestation are similar in both biomes, but

illegal deforestation in soybean farms located in the Cerrado was almost double compared to soybean farms located in the Amazon.

Another study, in this case, conducted by Imaflora — an organisation that also monitors the impacts of agricultural production on the environment — investigated the origination policies of the main grain trading companies operating in the Brazilian market. Among the seven companies analysed, only two have a total commitment to the three biomes most affected by oilseed cultivation: Amazonia, Cerrado and Chaco. Four of them are partially committed to these biomes, and one does not even mention them. Imaflora does not disclose company names in the analysis results, but the companies analysed were ADM, Amaggi, Bunge, Cargill, Cofco, Louis Dreyfus Company and Viterra.

One of the main recommendations made by the ICV report involves structuring an expanded protocol for grains in Mato Grosso. The idea would be that restriction criteria adopted by the Soy Moratorium cover "the whole state, applying to grain suppliers located in its three biomes" — besides Amazonia and Cerrado, the state also includes part of Pantanal, where there are still few soybean plantations, but expansion has been intense in recent years.[58]

Something similar is done in neighbouring Pará. The report also advocates that this broader control protocol should also include other grains used in the manufacture of animal feed, such as corn.

## *A strengthened Forest Code*

Another important mechanism to reduce the scenario of environmental destruction caused by grain cultivation is the Brazilian Forest Code, which regulates the felling of native forests. In the Amazon, rural properties need to keep 80% of the original vegetation standing, while in the Cerrado, this rate is 35%.

However, many farmers declare their properties in a partitioned form in the Rural Environmental

**Silo under construction at Fazenda União, in Tapurah (MT)**

Register (CAR) — which is contrary to the regulation of this instrument. Thus, instead of a single farm, the land is converted, at least on paper, into several smaller farms that border each other. As the evidence shows, this is the case of União and União II farms, which should be considered, in practical terms, as a single farm.

The partitioned declaration hinders the correct application of the Forest Code. Also, from the point of view of the Soy Moratorium, the partitioned CAR declaration creates loopholes for non-compliance with the agreement.

That is why ICV proposes that the companies' monitoring should no longer focus exclusively on the areas planted during that harvest, but rather on the entire property. It also points out the need to "identify irregularities in continuous areas belonging to the same owner", which occurs in João Luiz Lazarotto's properties.

"We know that 34% of illegal deforestation in properties with soybean plantations is directly related to those cultivation areas. But part of deforestation occurs not in the place where the grain is planted, but in another area, destined to other uses and not associated to soybean production at that moment", says Valdiones.

"In addition, it is necessary to bear in mind that the process of planting soy after deforestation is not immediate, it takes some years before the devastated site becomes a crop", she adds.

## *System under pressure*

Besides improvements in traceability and purchase criteria, there are other possible paths for the sector. In addition to avoiding the deforestation of the forest and other biomes, and compromising the habitat of wild animals, there are more and more groups that defend the need to change the way animal protein is produced and consumed. This is because deforestation is associated with supply chains whose purpose is to supply the ever-increasing demand for meat. Even grains, as seen in this report, are produced mostly to feed animals, mainly poultry and pigs, raised in industrial and intensive systems.

"It is unsustainable because we have stopped using land that could produce and feed people with diversified, high-quality food and used it to grow grain to manufacture poultry feed on an industrial scale, raised largely in inadequate conditions and with low levels of animal welfare", exemplifies José Ciocca, manager of Sustainable Agriculture at World Animal Protection.

In April this year, World Animal Protection published a report, produced in partnership with the consultancy Tasting The Future, listing the hidden problems of intensive industrial animal farming.[59] The document addressed five major areas of impact: increased disease risks (chronic and infectious human diseases); inadequate human diets; unsafe food (adulteration, fraud, spoiled or contaminated); environmental contamination and degradation (including risks to food safety); and occupational risks (unhealthy working conditions, low wages or impacts on physical and psychological integrity).

Ciocca points out that approximately 2/3 of the soybean produced in Brazil is destined to become poultry and pork feed. "Sustainability implies lower animal production. We need to reduce consumption to be able to work in a more sustainable production system, in which

animals are raised with high levels of welfare and fed with by-products of grains used for human consumption", he says, recalling the chronic stress and diseases to which animals are exposed when raised in these industrial and intensive systems.

There are other problems arising from the size that animal protein production has taken on: the indiscriminate use of antibiotics in animal husbandry, as well as the use of pesticides and fertilizers in crops, from where the inputs for food come.

"About 3/4 of the antibiotics consumed in the world are used in agriculture, especially in pigs and poultry,[60] including in a preventive way, to prevent them from getting sick. And this has generated a frequent public health concern, which is resistance to antibiotics", recalls Ciocca.

Following the same logic, the intensive planting of soy to produce animal feed requires the use of pesticides, which also bring a series of socio-environmental impacts. That is, the supply chain for animal feed directly and indirectly affects human health.

## *Transparency*

Above any other recommendation, there is a call for greater transparency in grain production — whether in the internal policies of large companies, in sector agreements or in the application of public policies to minimise impacts.

In its study, Imaflora points out that some of the trading companies' origination policies are "conditional", with actions that may or may not be applied, depending on a circumstantial decision by the company to prioritize them at certain times. Five of the seven policies analysed also "do not make reference to the verification of progress in relation to the commitments undertaken".

According to the report, "verification should follow good practices to define sampling and audit intensity; establish and adopt methods to detect risks, harms and non-compliance with commitments; ensure the competence and independence of the assessment team; engage stakeholders; and provide transparency regarding the scope, metrics, process and results of verification".

**ONE OF THE MAIN RECOMMENDATIONS MADE BY THE ICV REPORT INVOLVES STRUCTURING AN EXPANDED PROTOCOL FOR GRAINS IN MATO GROSSO**

In other words, transparency in relation to the application of these policies is fundamental — a conclusion that ICV has also reached: "We need to have access to monitoring and audits on the grain chain, so that society as a whole, besides the companies and bodies involved in the agreements, knows the results and the scope of the agreements", Valdiones concludes. ■

Tree trunks near the farm entrance in Tapurah (MT), within the amazon biome

# APPENDIX

## Full explanations

**JBS**

JBS requires that 100% of its grain procurement contracts meet social-environmental criteria in all Brazilian biomes. In the case of purchases from trading companies, the contracts require that their supplier farms are not located in areas of illegal deforestation; are not under federal or state interdictions; are not located in conservation units or on indigenous or quilombola lands; or do not use labour under conditions analogous to slavery. Additionally, for those that operate specifically in the Amazon biome, JBS also requires that they are signatories to the Soy Moratorium.

The trading companies mentioned by the investigation are all signatories to the Soy Moratorium and follow the social-environmental criteria established in contracts signed with JBS. As Repórter Brasil did not provide access to the documents that support its investigation, it was not possible to deepen the analysis and verify in detail the alleged irregularities for the cases involving these alleged purchases.

In the cases of purchases from producers by JBS, mentioned by the NGO's investigation, the farms that supplied grains to the company were in compliance with JBS's social-environmental criteria at the time of purchase. Three of them received an environmental interdiction at a later stage and currently, after the interdiction, they have no commercial relationship with JBS. Two other farms mentioned have no record of a commercial relationship with JBS.

**Bunge**

Bunge does not comment on commercial relations with specific producers.

With regard to our operations in the Amazon biome, we have strictly followed the Soy Moratorium procedures since its inception. In all audits, conducted by third parties, Bunge obtained 100% compliance with the commitment.

Bunge does not purchase grain from illegally deforested areas and, in priority regions of Brazil, has advanced traceability and monitoring of its direct and indirect purchases — we have more than 12,000 farms monitored, reaching more than 16 million hectares. Our monitoring uses state-of-the-art satellite technology and can identify changes in land use and planting on each farm we source from.

Bunge is committed to a sustainable supply chain and to respecting the legislation in force. Through its Supplier Relationship Policy, it maintains strict control over social-environmental criteria in its operations throughout Brazil. The monitoring actions include daily and automatic checks of the lists of interdicted areas, the Ministry of Labour and Employment and the Soy Moratorium, in addition to other legal requirements and formally assumed commitments.

In addition, we make our experience and technology available to our partners. In 2021, the company launched the Bunge Sustainable Partnership, an unprecedented programme that helps grain retailers implement supply chain verification systems, including farm-scale satellite monitoring, in the Cerrado region. Dealers can adopt independent imaging services or use Bunge's geospatial monitoring framework at no cost. By engaging the dealers, Bunge, which already tracks and monitors 64% of its indirect procurement in the Cerrado, expects to reach 100% by 2025.

Bunge is committed to achieving deforestation-free supply chains by 2025. We were the first to announce the most ambitious commitment of our scale in our industry, and we will continue to use our market position to lead industry progress in this direction. This commitment extends to all regions where we operate, including direct and indirect supply.

Using our protocols, Bunge is a leader in providing deforestation-free products to the marketplace, going beyond current consumer demand. Our soy certification portfolio includes Round Table on Responsible Soy (RTRS), Biomass Biofuel Sustainability Voluntary Scheme (2BSvs), and ProTerra, among others.

We also aim to be leaders in transparency in our industry, helping to raise the bar for industry performance by regularly monitoring and disclosing progress on our commitments and performance. Since 2016, we have published regular updates on traceability and our commitment to non-deforestation. We are the only company in our industry to produce such reports over this period. Our latest sustainability report can be viewed here.

Bunge will continue working to promote advanced standards and develop practical and sustainable approaches. This is part of our strategy and we will remain committed to this journey.

**Amaggi**

In view of the information provided by Repórter Brasil and the questions received, AMAGGI, after the best efforts to investigate the facts, informs:

*1. Sales process and guarantee of purchase conformity*

All the purchases in question (as detailed in item 2) were made in accordance with Amaggi's commercialisation criteria.

Amaggi does not sell grains from production areas that are subject to:
• Interdictions by IBAMA and state environmental agencies;
• Indigenous Lands and Full Protection Conservation Units;
• Areas deforested after 2008 in the Amazon Biome and not in compliance with the Soy Moratorium;
• Areas that do not comply with the Pará's Green Grain Protocol;
• Slave Labour Dirty List.

The entire process of verification of the criteria, especially the Soy Moratorium and Green Grain Protocol commitments, is verified annually through third-party audits. These marketing criteria are guaranteed for all purchases.

To ensure compliance with these marketing criteria, Amaggi has the ORIGINAR platform, which guarantees, through geospatial and automated analysis, compliance with social-environmental requirements. When, during the grain trading process, any risk is detected in an area or rural property, Amaggi performs on-site monitoring to verify and ensure that the soybean acquired by the Company does not come from an area whose restrictions violate its trading criteria.

Amaggi is also publicly committed to remaining in compliance with the Soy Moratorium in the Amazon Biome and to achieving by 2025 a 100% tracked and monitored grain chain free of deforestation and conversion of native vegetation for agricultural production, considering all its operations in all biomes where it is present, including the Cerrado.

According to the latest annual Progress Report published by Amaggi, 99% of the volume of soybeans sourced and tracked by the Company from direct and indirect suppliers after 2017 are free of deforestation and native vegetation conversion.

*2. Detailing the compliance of the trading*

In view of the questioning regarding the commercialisation of soybean meal and corn in Tangará da Serra-MT, Amaggi confirms that this commercialisation will take place in 2019, in total alignment with its trading criteria, and there is no record in our systems of other commercialisations in the following years.

Regarding the questions regarding the origination of grains from União Farm in 2019 with the rural producer João Luiz Lazarotto, Amaggi confirms that this commercialisation took place. And, according to the company's marketing criteria, due to the state interdiction detected in the area of this farm, Amaggi started on-site monitoring with the issuance of a detailed report (with photos and geographical coordinates) in which it was evident that there was no agricultural production in the interdicted area — and that, therefore, the environmental restrictions detected were being complied with by the producer.

On-site monitoring (at the farm of origin) with the production of a photographic inspection report is one of the initiatives adopted by Amaggi to ensure the regular origination of grains in cases of identified risk.

Based on the company's trading criteria, no restrictions have been identified on União Farm since 2021, nor has any interdiction been imposed on the property by the environmental authorities, a situation that persists to this day.

Even though no irregularities were detected, the company did not purchase soybean from União Farm in 2022; soybean purchases from João Luiz Lazarotto in that year were from lots coming from the producer's other farms, according to traceability records in the company's ORIGINAR system.

Regarding controls and monitoring of possible irregularities on the properties where it sources grains, Amaggi clarifies that, in addition to on-site inspections (when necessary), the Company's traceability is carried out through its internal ORIGINAR system, at farm level, keeping internal records of the origin of the grains, even though it is not possible to identify this traceability through tax documentation.

Amaggi keeps its traceability records at farm level in its internal systems.

Regarding the questioning about a possible violation of the commitment of the Soy Moratorium in the Amazon in case of acquisition of soybean from João Luiz Lazarotto's farm, Amaggi informs that, up to now, União Farm is not part (and never has been) of the Amazon Soy Moratorium List, which is elaborated by the Soybean Working Group (GTS), which counts on the participation of non-governmental organisations, associations and signatory companies.

It should be noted that the commitment of the Soy Moratorium in the Amazon is not to acquire soybeans from areas deforested in the Biome after 2008. Therefore, for a property to be included in the List, soybean planting in areas deforested after 2008 must have been verified, a criterion that allows the annual mapping performed by GTS to detect the commitment violation and include the property in the Moratorium List.

Regarding the question about the producer Wilson Carniel, according to the best efforts of verification in view of the information available, Amaggi informs that it acquired soybeans from the producer in 2019, and there was no irregularity in this acquisition that goes against the Company's sales criteria. Between 2020 and 2022, there is no record of soybean sales on behalf of the Dona Josefa, São Miguel do Rio Preto and Emília Farm, in Brasnorte-MT, or on behalf of Wilson Carniel.

**Rural producers**
**Odair Mantovan**

Audio sent by lawyer Alex Brescovit via mobile phone application: "It is a mistake on the part of the analysis of the last CAR, which has already been rectified and is under analysis by SEMA. I believe that this deforestation will no longer appear, because it was a clean-up", said Alex Brescovit. "As for the sale of grain [to Seara], it is very likely that he sold grain to the company mentioned".

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OCTOBER 2022

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