



 **RAPID RESPONSE #7**

**[CATTLE]**

**Monitoring  
deforestation  
in Brazilian  
supply chains**



**MIGHTY  
EARTH**

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\*The Case 7.7 is not published in this report

## Abbreviations

**AFi** – Accountability Framework Initiative

**CA** – Conservation area

**CAR** – *Cadastro Ambiental Rural* / Rural Land Registry

**CNPJ** – *Cadastro Nacional da Pessoa Jurídica* / Brazilian National Registry of Legal Entities

**CPP** – *Compromisso Público da Pecuária* / Public Livestock Commitment

**CRI** – Climate Rights International

**DETER** – *Detecção de Desmatamento em Tempo Real* / Real-Time Deforestation Detection

**DPaP** – *Do Pasto ao Prato* mobile app and initiative

**EUDR** – European Union Deforestation Regulation

**GTA** – *Guia de Trânsito Animal* / Animal Transportation Guides

**IBAMA** – *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* / Brazilian Institute of Environment and Renewable Natural Resources

**INPE** – *Instituto Nacional de Pesquisas Espaciais* / National Institute for Space Research

**IT** – Indigenous Territory

**PRODES** – *Projeto de Monitoramento do Desmatamento na Amazônia Legal por Satélite* / Project for Monitoring Deforestation in the Legal Amazon by Satellite

**SIE** – *Serviço de Inspeção Estadual* / State Inspection of Slaughterhouses

**SIGEF** – *Sistema de Gestão Fundiária* / Land Tenure Management System

**SIF** – *Serviço de Inspeção Federal* / Federal Inspection of Slaughterhouses

**SNCI** – *Sistema Nacional de Certificação de Imóveis Rurais* / National Rural Property

Certification System

**TAC** – *Termo de Ajustamento de Conduta* / Conduct Adjustment Agreement

**ZDC** – Zero Deforestation and Conversion

**Brazilian states mentioned in this report:**

**MT** – Mato Grosso • **MS** – Mato Grosso do Sul

**PA** – Pará • **RO** – Rondônia • **SP** – São Paulo

**TO** – Tocantins

# EXECUTIVE SUMMARY

Mighty Earth's new *Rapid Response #7* investigation has found that Brazilian beef giant JBS bought cattle from two farms linked to nearly 1,400 hectares of deforestation in the Amazon rainforest in 2025, after the identification of the deforestation alert by Brazil's satellite monitoring system DETER. The transaction is confirmed by animal transportation documents (known as 'GTAs') verified by our team.

One of these cattle ranches, Fazenda Jaguari (Case 7.2), in Cumaru do Norte, state of Pará, had 1,063 hectares of deforestation caused by fire detected by the official DETER satellite monitoring system on September 9, 2025, and directly supplied cattle to the JBS Redenção and JBS Santa Maria das Barreiras slaughterhouses in October and November 2025.

Fazenda Esperança (Case 7.1), located in Pau d'Arco in Pará, had 325 hectares of deforestation caused by fire detected by the DETER system on August 30, 2025, and supplied cattle directly to JBS Redenção and JBS Santana do Araguaia slaughterhouses in September and December 2025.

JBS did not reply to our contact aiming to alert and clarify these commercial links, but the evidence of GTAs showing that the company bought cattle from both direct farms after deforestation was detected indicates blind spots in the company's monitoring system.

Also, the Jaguari and Esperança farms are located 30 to 40 kilometers from the threatened Indigenous territories of Las Casas and Kayapó, respectively. In the region we also found Durlicouros leather tannery in Xinguara in Pará - Latin America's second-largest leather processing facility.

Our investigations also found 2,992 ha of recent deforestation at Fazenda Real Forte (Case 7.4) inside the protected Kapôt Nhĩnore Indigenous Land in Pará in the Amazon. Animal transport guide documents show Fazenda Real Forte sold 17,473 cattle between June 2020 and August 2023 to two JBS slaughterhouses in Redenção and Santana do Araguaia in Pará.

Furthermore, at Fazenda Asa Branca (Case 7.3) in Rondon do Pará in Pará, DETER satellite images detected 329 hectares of recent deforestation. Our research found previous commercial relations between this farm and the slaughter plant of JBS in Marabá, which likely sent cow hides to JBS' adjacent leather tannery in the same city.

## Rapid Response

Mighty Earth, in partnership with Aid Environment, and drawing on data collected through the Do Pasto ao Prato mobile app initiative, together with additional research from Repórter Brasil, publishes this report as part of its Rapid Response program. This program monitors recent deforestation in Brazil's cattle and soy supply chains. Rapid Response seeks to halt deforestation at its early stages by urging companies to drop slaughterhouses and stop trading with suppliers involved in recently verified fires or land clearing. By swiftly ending business with actors contributing to deforestation, we can prevent further environmental destruction and stop hundreds of hectares of forest loss from turning into thousands.

The reports are published quarterly and serve to pressure national and international meatpackers, traders and retailers operating in Brazil to take swift action and issue a rapid response to halt deforestation and land conversion. The program also alerts international retailers, public prosecutors, feed manufacturers, financial institutions and other key players to the deforestation risks in Brazil's beef and soy supply chains, encouraging them to act urgently. 

At a critical time when the exclusion of leather from the scope of commodities in the European Deforestation Regulation (EUDR) is being considered, this case (7.3) demonstrates that leather traceability depends on transparent Brazilian cattle supply chains, and opacity at the earliest production stages - i.e. on indirect cattle farms - highlights the likelihood of cow hides from deforested areas entering global markets.

Beef companies such as JBS control much of the cattle supply chain, and its profitable co-product leather can move into international markets after initial processing in Brazil and be exported to Europe through ports such as Santos near São Paulo. Studies show companies such as Howe Leather import JBS leather, process it in Europe, and supply it for car seats and upholstery used by major automakers - such as Audi, Ford, Jaguar Land Rover, Nissan, Porsche and Volkswagen, according to Aid Environment. Recent information from JBS indicates that the company is merging with Viva Couros (Vicopa and Varcouros), creating a giant leather company operating in Brazil and worldwide.

All these cases are among seven cases Mighty Earth highlights in its latest *Rapid Response #7* report, in partnership with Aid Environment and Repórter Brasil. Together, they represent 6,472 hectares - or more than 9,000 soccer fields - of recent deforestation and conversion on cattle farms with potential direct or indirect links to JBS plants in the Amazon and Cerrado biomes. Our team of researchers also found beef products from these slaughterhouses were sold in supermarkets in Brazil by four of the country's major retailers: Carrefour, Grupo Mateus, Grupo Pão de Açúcar and Sendas-Assaí.

More widely, we found JBS slaughterhouses supplying beef products to the mentioned Brazilian supermarkets were linked to 67,542 hectares of deforestation and land conversion across the Amazon, Cerrado and Pantanal biomes between 2023 and 2025. Our investigation also found that the total area destroyed over this period in properties supplying JBS, Marfrig<sup>1</sup> and Minerva Foods' slaughterhouses exceeds 109,034 hectares. Of this total, 38% is located in the Cerrado biome, 33% in the Amazon, and 29% in the Pantanal biome.

Using the Do Pasto ao Prato (dPaP) mobile app, our team of researchers scanned and investigated 621 fresh, frozen, and processed beef products collected between December 2024 and September 2025 in 61 Brazilian supermarkets. By combining this information with Animal Transportation Guides (*'Guia de Trânsito Animal'*, or GTAs) covering seven Brazilian states, we identified 528 direct and 1,579 indirect cattle farm suppliers with records of deforestation linked to 33 slaughterhouses owned by JBS, Marfrig and Minerva Foods. Extrapolating from these findings, we estimated that between 2023 and 2025, a total of 18,708 hectares of native vegetation was cleared by potential direct suppliers, and 56,749 hectares by potential indirect suppliers to those same 33 slaughterhouses owned by Brazil's three largest meatpackers.

We found that JBS's slaughterhouse in Redenção in Pará in the Amazon was the most exposed to deforestation between 2023 and 2025, based on its potential direct suppliers. When indirect suppliers are considered, Minerva Foods' plant in Paranatinga in Mato Grosso shows the highest exposure. We found French-based retailer Carrefour sold beef products in its Brazilian stores sourced from both of these high-deforestation-risk slaughterhouses during the period analyzed.

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1 In late October 2024, Minerva Foods completed the acquisition of 13 industrial plants and a distribution center owned by Marfrig in Brazil, Argentina and Chile. These operations were not included in this overall deforestation analysis. Source: « Minerva completes acquisition of Marfrig assets in Brazil and other South American countries, » Minerva Foods, press release, October 29, 2024

We urge Carrefour, Grupo Mateus, Grupo Pão de Açúcar and Sendas-Assaí to investigate their direct and indirect links to these cases and to suspend any farms identified as suppliers connected to recent deforestation and conversion. These farms still contain more than 17,000 hectares of highly vulnerable native forest and suspending them would send a clear message that deforestation is unacceptable.

We urge retailers to immediately disclose, on a public platform, the volume and origin of their beef and leather products - including details on slaughterhouses, lists of direct and indirect supplying farms, and the share of beef and leather products sourced from verified Zero Deforestation and Conversion (ZDC) supply chains. In addition, we urge them to report and publicly track all alleged cases of deforestation, land conversion, and human rights violations through a public grievance mechanism. The same urgent request applies to JBS, Marfrig, and Minerva Foods, in line with recommendations from the Accountability Framework Initiative (AFi).

# DEFORESTATION LINKED TO LEATHER

Livestock production provides valuable outputs beyond meat, particularly hides and skins, which are essential to the global leather industry and often represent an even more profitable co-product.<sup>2</sup> Leather derived from cattle sustains a wide range of sectors, including footwear, furniture, automotive interiors, and fashion, thereby reinforcing the economic importance of livestock. However, these benefits come with significant environmental costs. Cattle ranching remains a major driver of tropical deforestation, especially in the Amazon, where forests are cleared to create pastureland.<sup>3</sup> As a result, the leather industry lies at the crossroads of economic opportunity and environmental responsibility.

This report highlights the case of Fazenda Asa Branca (case 7.3), where 329 hectares of deforestation were recorded in 2025, with potential links to the JBS slaughterhouse in Marabá (PA). This facility is located about one kilometer from a JBS-owned tannery (see picture below), suggesting that hides from cattle raised on this farm and potentially slaughtered at the JBS plant may also be processed by JBS's tanneries. According to JBS, more than 90 percent of the hides it processes originate from its own slaughterhouses.<sup>4</sup> Pará is the Amazon state with the highest deforestation rate in Brazil.



**Figure 1. Location of JBS's slaughterhouse and tannery in Marabá, Pará.**

Between 2024 and 2025, seven of Brazil's ten states with the highest tree cover loss exported leather to the European Union (EU), according to new evidence published by Earthsight in March 2026.<sup>5</sup> These states accounted for nearly one fifth of the EU's total

2 Textile Exchange (2025) *Materials Market Report 2025*, Textile Exchange: Burbank, CA, United States

3 Global Canopy (2023) *2023: A watershed year for action on deforestation (Forest 500 Annual Report)*, Global Canopy: Oxford, United Kingdom

4 JBS360, Rastreabilidade. Conheça a história do seu produto, see: <https://jbs360.com.br/pt/index.html>

5 "European leather sector tries to evade responsibility despite clear ties to deforestation," *Earthsight*, March 31, 2026.

leather imports from Brazil. Data from the same period show that more than a million cattle were transported from Pará to major leather-exporting states in Brazil, further increasing the bloc's exposure to deforestation-risk leather. Despite this, the European Commission is reportedly considering removing leather from the scope of the European Union Deforestation Regulation (EUDR), a move that follows intense lobby by the European leather, according to Earthsight.<sup>6</sup>

In 2025, Earthsight revealed that luxury fashion brand Coach was linked to illegal cattle ranching in Pará through Frigol, a Brazilian meatpacker that purchased cattle raised on illegally deforested land and laundered from within the Apyterewa Indigenous Territory.<sup>7</sup> According to this investigation, Pará's largest leather exporter to Europe, Durlicouros, is supplied by Frigol. Between 2020 and 2023, Durlicouros shipped over 14,700 tons of leather to Italy, nearly a quarter of which was purchased by two tanneries that supply Coach and several other major luxury fashion brands.

Despite these links, Durlicouros and the Italian tanneries hold a certification from the Leather Working Group (LWG).<sup>8</sup> The LWG '100% traceability' only applies to tannery-level traceability and does not cover indirect cattle suppliers, where most deforestation risk occurs.<sup>9</sup>

Investigations by Climate Rights International (CRI) and Repórter Brasil in 2025 found that farms responsible for deforestation often rely on workers subjected to conditions legally defined as "analogous to slavery."<sup>10</sup> Lured by false promises of good jobs, these workers end up in remote areas, facing long hours, harsh conditions, low pay, threats and the daunting distances they would have to travel by foot to escape prevent them from leaving.<sup>11</sup> Since 1995, inspectors have rescued over 17,000 people from such conditions, mostly in heavily deforested parts of the Amazon. CRI's report describes workers rescued from remote ranches in Pará, including a 15-year-old on a farm in São Félix do Xingu, living in unsafe conditions without sanitation, clean water, or protection. Isolated and exploited, they faced dangerous work, toxic chemicals, and fear of retaliation. The investigations traced links between deforestation, labor abuse, and Indigenous land invasions in the Brazilian cattle sector to the supply chains of major global fashion and footwear brands active in Europe, the United States, and other foreign markets, through tanneries operated by Durlicouros, JBS, Marfrig, Mastrotto, Minerva Foods, and Viposa.

Another investigation by Stand.earth Research Group, commissioned by CRI, identified 24 international brands linked to tanneries operated by one or more of these six companies in 2023 and 2024. These include athletic footwear and apparel brands such as Adidas, Asics, Converse, New Balance, Nike, Puma, Reebok, Rockport, The North Face, and Vans, as well as fashion and apparel brands including Calvin Klein, Clarks, Coach, ECCO, H&M, Hugo Boss, Kate Spade, Kompanero, Lacoste, M&S, Michael Kors, Ted Baker, Timberland, and Tommy Hilfiger.<sup>12</sup>

6 "European leather sector tries to evade responsibility despite clear ties to deforestation," Earthsight, March 31, 2026.

7 "What Europe's designer handbags are costing the Amazon rainforest," Earthsight, June 24, 2025

8 "What Europe's designer handbags are costing the Amazon rainforest," Earthsight, June 24, 2025

9 Leather Working Group (n.d.) *Durlicouros Ind. e Com. de Couros Exportação e Importação Ltda (DUR103)*. <https://www.leatherworkinggroup.com/get-involved/our-community/certified-suppliers/durlicouros-ind-e-com-de-couros-exportacao-e-importacao-ltda-dur103/> (Accessed: 9 April 2026).

10 Climate Rights International (2025) *Before It's Too Late: Curbing Cattle-Driven Deforestation and Rights Abuses in Brazil*, CRI: Berkeley, CA, United States; "New cases reinforce link between slave labor and major Brazilian meatpackers," Repórter Brasil, Daniela Penha and André Campos, October 9, 2025

11 Climate Rights International (2025) *Before It's Too Late: Curbing Cattle-Driven Deforestation and Rights Abuses in Brazil*, CRI: Berkeley, CA, United States

12 Climate Rights International (2025) *Before It's Too Late: Curbing Cattle-Driven Deforestation and Rights Abuses in Brazil*, CRI: Berkeley, CA, United States

## Traceability and risk exposure

In addition to JBS' tannery in Marabá in Pará, this *Rapid Response #7* report highlights several other tanneries located 40 to 250 km away from slaughterhouses potentially linked to deforestation: JBS's tannery in Colíder (MT); Durlicouros tannery in Xingua (PA); and Curtume Blubras tanneries, in both cities of Sinop (MT), and Bataguassu (MS). Curtume Blubras (also known as Blubrasil) counts Viposa, Vancouros, and Viva among its shareholders. Viva was formed in 2023 from the merger of Viposa and Vancouros.<sup>13</sup>

The Environmental Investigation Agency (EIA) found widespread links to leather linked to cows from illegal deforestation in the Jaci-Parana Extractive Reserve in Rondônia that supplied JBS suppliers and the leather companies Vancouros and Viposa.<sup>14</sup>

More recently, in late 2025, JBS and Viva announced their merger to create JBS Viva, a leather giant with 50% JBS ownership and 50% to Viva ownership, comprising 31 industrial plants and 11,000 employees across Brazil, Uruguay, Argentina, Mexico, Italy and Vietnam.<sup>15</sup> These developments signal not only market concentration risks but also heightened responsibility for supply chain traceability.

In Brazil, a tannery's sourcing footprint typically spans hundreds of kilometers through multiple slaughterhouses, which themselves source cattle across vast regional supply areas. Evidence shows that these slaughterhouse catchment areas concentrate the vast majority of production and associated impacts: up to 88% of historical deforestation – and as much as 90% of future deforestation – occurs within these cattle supply zones, meaning that around 80–90% of cow hides processed by tanneries are effectively embedded in a regional, not local, sourcing system.<sup>16</sup>

Mighty Earth, Earthsight, CRI, EIA, Repórter Brasil and Stand.earth, among others show how cow hides from deforested areas may enter leather supply chains, albeit through varying configurations. In this report, over 1,000 hectares of recent deforestation detected at Fazenda Jaguari (Case 7.2) highlights the fragility of direct monitoring and the opacity of indirect sourcing in fragmented supply chains, where reliance on independent tanneries severely limits visibility and complicates accountability for deforestation-linked inputs. By contrast, Fazenda Asa Branca (Case 7.3) reveals that even vertically integrated models fail to close those traceability gaps.

Crucially, despite these differences, the cases reveal the same underlying problem: leather traceability is intrinsically linked to the beef supply chain, where traceability breakdowns occur at the earliest stages. This upstream opacity—characterized by complex networks of indirect suppliers and limited monitoring—prevents tracing leather back to its precise geographic origin, particularly once raw cow hides are processed into intermediate products like wet-blue leather – tanned hides that have undergone initial tanning but require further finishing, dyeing, and drying.

13 "Viposa e Vancouros se unem e criam empresa de R\$ 3,1 bi," *Globo*, Cleyton Vilarino, September 18, 2023

14 Environmental Investigation Agency (2022) *Deforestation in the driver's seat: Illegal cattle ranching, Amazon deforestation, and the automotive leather industry*. EIA: Washington DC, United States [https://eia.org/wp-content/uploads/2022/12/EIA\\_US\\_Brazil\\_Leather\\_report\\_1022\\_US\\_Format\\_FINAL\\_EDITS\\_09-02-23.pdf](https://eia.org/wp-content/uploads/2022/12/EIA_US_Brazil_Leather_report_1022_US_Format_FINAL_EDITS_09-02-23.pdf)

15 "JBS Couros e VIVA se unem para criar líder global no segmento". JBS Mediaroom, November 26, 2025.

16 Sant'Anna School of Advanced Studies (2024) *Socio-economic and environmental analysis of the effects of Regulation (EU) 2023/1115 on the European leather sector*. <https://eadd8vb9ax9.exactdn.com/wp-content/uploads/Full-Report-Analysis-of-the-effects-of-the-EUDR-on-the-European-leather-sector.pdf>

## Implications for global markets and EUDR

Overall, several studies illustrate how deforestation risks propagate from local production systems to global markets. There is evidence that leather from cattle raised on deforested land in Brazil enters international value chains, supplying industries such as automotive manufacturing and luxury fashion. The Fazenda Asa Branca (Case 7.3) case exemplifies downstream integration, with trade flows potentially linking JBS leather exports to European automotive leather producers. Meanwhile, the Fazenda Jaguari case (Case 7.2) highlights the role of intermediary tanneries in channeling potentially deforestation-linked leather into the European fashion industry.

Including leather alongside beef within the European Union Deforestation Regulation (EUDR) is essential to avoid a significant regulatory gap that would weaken the effectiveness of the EU's deforestation policy framework, and to incentivize greater transparency and sustainability across cattle and leather supply chains. Technical expertise and tools are already available to improve transparency in cattle supply chains. As a result, the leather sector is well positioned to ensure a fully traceable hides' supply that meets the requirements of the EUDR. However, industry stakeholders must commit to implementing these solutions effectively.<sup>17</sup>

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17 Carbonfact (2025) *The life cycle assessment of leather*. <https://www.carbonfact.com/blog/knowledge/leather-carbon-impact>

# LINKS BETWEEN BRAZILIAN RETAILERS, SLAUGHTERHOUSES AND DEFORESTATION

From December 28, 2024, to September 15, 2025, a team of consumers, volunteers, and researchers collected data on 621 beef products from 61 retail stores in Brazil, using the Do Pasto ao Prato (dPaP) mobile app. Beef products were sampled from stores owned by the following retail groups:

- **Carrefour (37 stores):** Atacadão, Carrefour Bairro, Carrefour Hiper, Sam's Club
- **Grupo Mateus (2 stores):** Mateus Supermercados, Mateus Hipermercados
- **Grupo Pão de Açúcar (11 stores):** Pão de Açúcar, Extra <sup>18</sup>
- **Sendas-Assaí (11 stores):** Assaí Atacadista

These stores were located across 22 municipalities in 13 Brazilian states. The codes of the Federal Inspection of Slaughterhouses (*Serviço de Inspeção Federal, SIF*) and the State Inspection of Slaughterhouses (*Serviço de Inspeção Estadual, SIE*), both sanitary registries, or the numbers of the Brazilian National Registry of Legal Entities (*Cadastro Nacional da Pessoa Jurídica, CNPJ*) associated with each identified beef product, provided information on the meatpacker and location of the slaughterhouse where the meat was processed. Using the collected codes, we linked the 621 scanned beef products to 98 slaughterhouses across 17 states across Brazil.

Table 1 shows the number of beef products identified in our sample by retailers, while Table 2 indicates the number of slaughterhouses operated by each meatpacker.

**Table 1. Number of beef products per retailer linked to meatpackers**

Retailer	JBS	Marfrig*	Minerva Foods	Other	Total	
Grupo Pão de Açúcar	16	26	5	20	67	11%
Carrefour	258	28	10	72	368	59%
Grupo Mateus	11	1	0	11	23	4%
Sendas-Assaí	124	18	0	21	163	26%
<b>Total</b>	<b>409</b>	<b>73</b>	<b>15</b>	<b>124</b>	<b>621</b>	<b>100%</b>
	66%	12%	2%	20%	100%	

\*This analysis does not account for Marfrig's sale of its meat processing plants to Minerva Foods as most products found in supermarkets were produced before the deal was finalized.

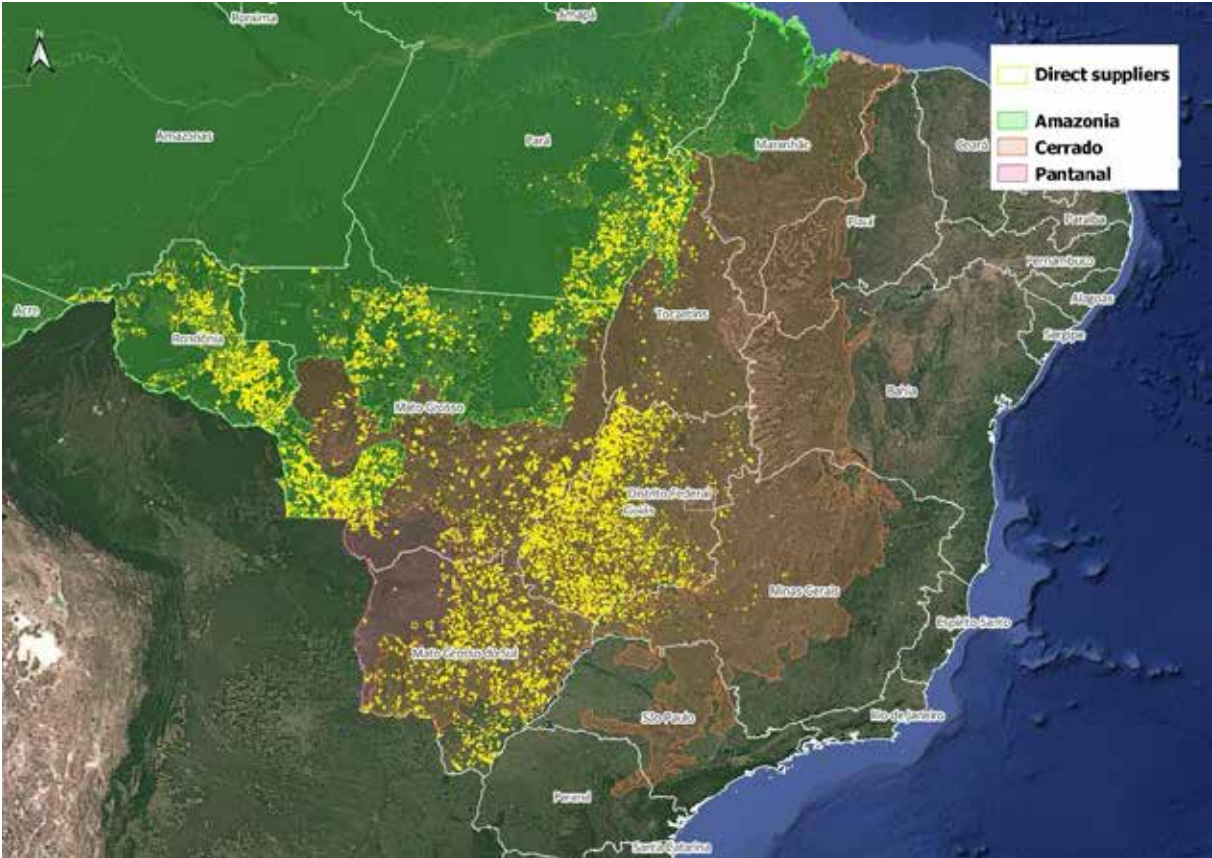
<sup>18</sup> Since March 14, 2024, i.e., after the start of our investigation, Casino Group has held 22.5% of Grupo Pão de Açúcar's capital (compared to previously 41%), which means it lost control of the company. See: Groupe Casino (2024) *Notice of Meeting, Ordinary and Extraordinary Annual General Meeting*, Groupe Casino: Saint-Étienne, France

**Table 2. Number of slaughterhouses per retailer linked to meatpackers**

Retailer	JBS	Marfrig	Minerva Foods	Other	Total*
Pão de Açúcar	9	8	5	6	27
Carrefour	32	4	4	30	69
Grupo Mateus	8	1	-	9	17
Sendas-Assaí	28	3	-	13	43
<b>Total*</b>	<b>37</b>	<b>9</b>	<b>6</b>	<b>46</b>	<b>98</b>
<b>In the Legal Amazon</b>	<b>18</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>32</b>

\*As some slaughterhouses are linked to multiple retailers, these duplicates have been removed to calculate the total.

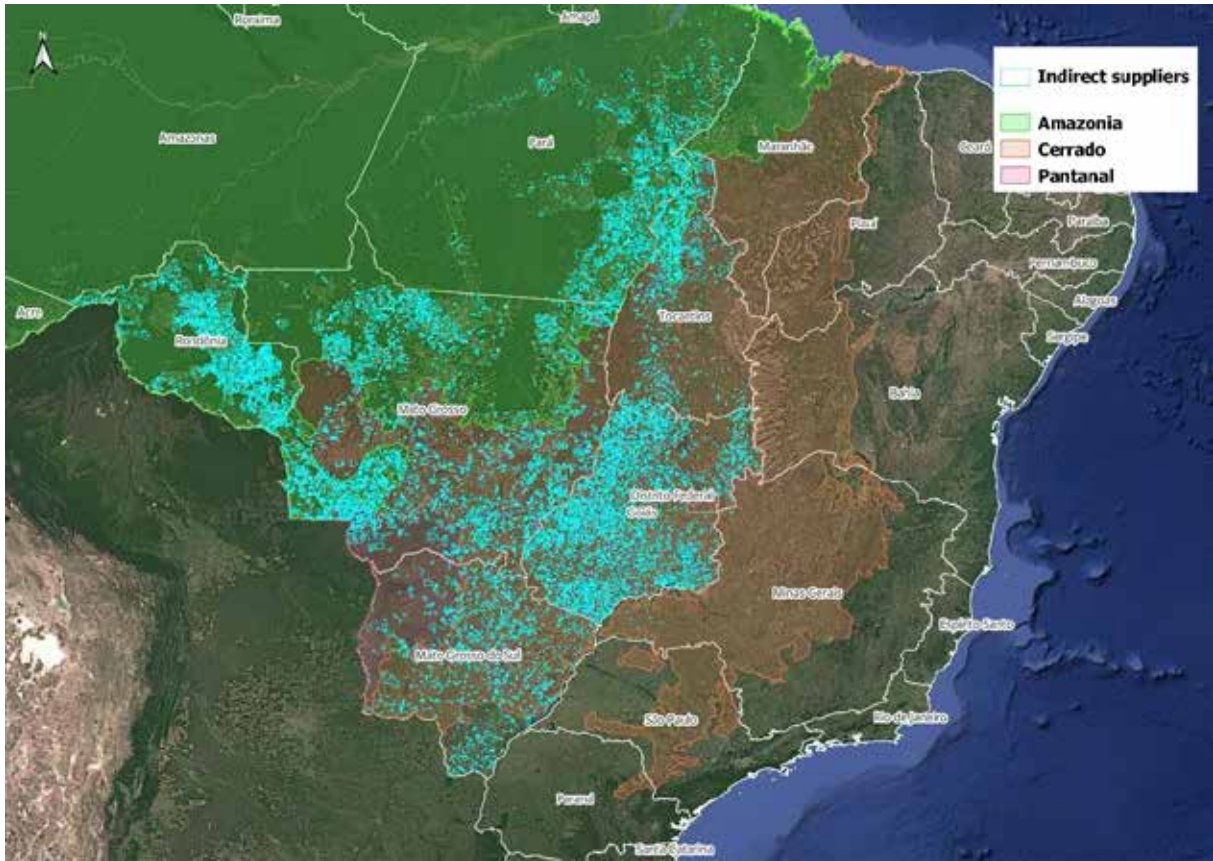
For the 52 JBS, Marfrig, and Minerva Foods slaughterhouses identified in the sample (Table 2), our analysis identified 25,032 direct cattle suppliers (Figure 1) and 75,716 indirect suppliers (Figure 2). This was achieved by cross-referencing official land tenure registration data (SIGEF) with a sample of GTAs from 2017 to 2025.



**Figure 1. Cattle farms that directly supplied the JBS, Marfrig, and Minerva Foods slaughterhouses identified in our sample from 2017 to 2025.**

Source: Aid Environment (2026)

Once the potential direct and indirect suppliers to these 52 slaughterhouses were identified, we overlaid deforestation data onto the properties’ polygons (areas)-see our “Methodology” for more information.



**Figure 2. Cattle farms that indirectly supplied JBS, Marfrig, and Minerva Foods slaughterhouses identified in our sample from 2017 to 2025.**

Source: Aid Environment (2026)

Between August 2023 and September 2025, we found for our sample a total of 109,034 hectares of deforestation and land conversion across the Amazon (33%), Cerrado (38%) and Pantanal (21%) biomes, linked to 528 potential direct suppliers and 1,579 potential indirect suppliers of JBS, Marfrig, and Minerva Foods slaughterhouses. Of this total, 21% occurred on direct suppliers' properties and 79% on indirect suppliers' properties, highlighting the urgent need for progress in supply chain traceability and DCF policies' implementation.

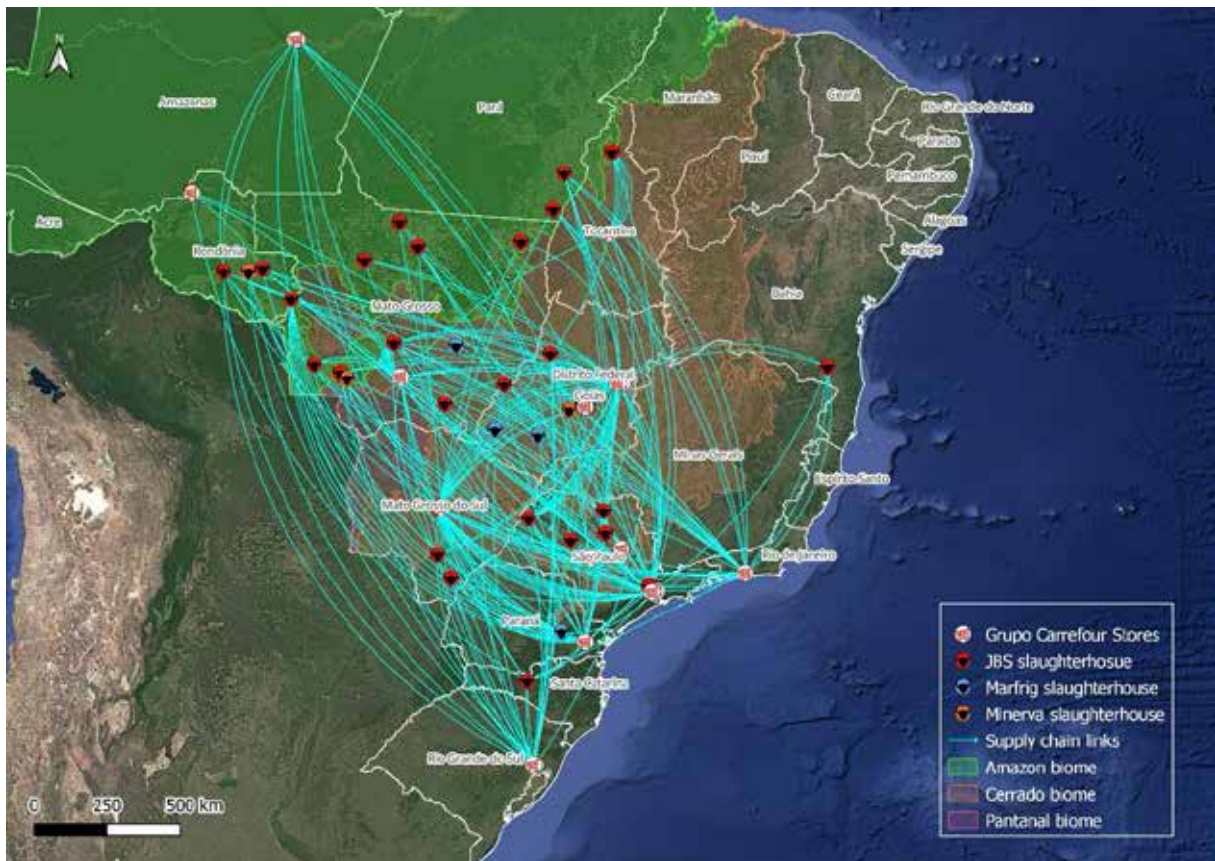
JBS alone is likely responsible for 62% of this total. Of the 52 slaughterhouses analyzed, the five most exposed to deforestation are shown in Table 3 below. Meatpackers must urgently suspend operations with and engage these high-risk farms to address recent and future deforestation risks linked to cattle. Retailers, in turn, must suspend, engage and ultimately blacklist suppliers connected to deforestation, a practice that can no longer be tolerated.

**Table 3. Slaughterhouses exposed to the highest deforestation rates (in hectares) between August 2023 and September 2025 in a sample of direct and indirect suppliers**

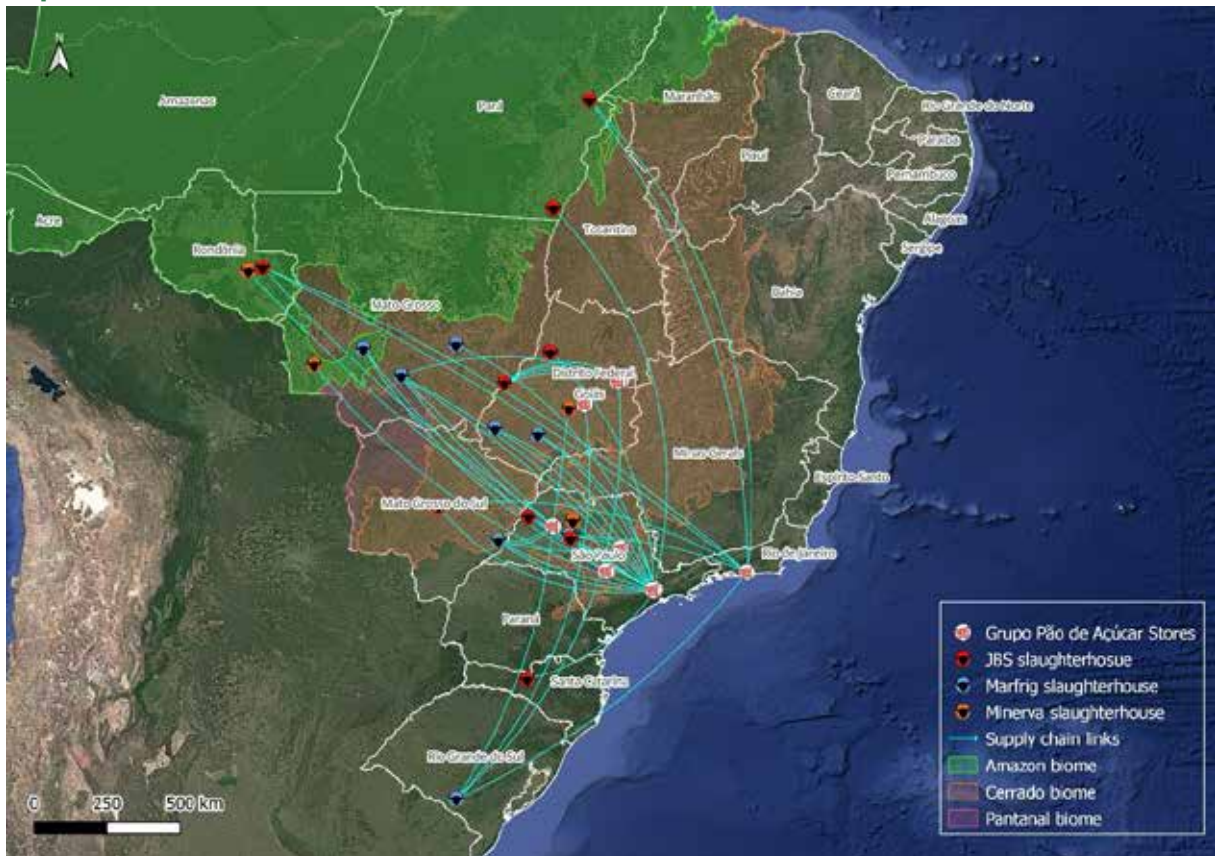
Meatpacker	Municipality	State	Direct Suppliers	Indirect Suppliers	Total
JBS	Campo Grande*	MS	3,974	9,489	<b>13,463</b>
JBS	Barra do Garças	MT	832	8,763	9,595
JBS	Araguaína	TO	1,123	6,889	8,013
JBS	Redenção	PA	2,568	4,274	6,842
Minerva Foods	Paranatinga	MT	9	10,929	10,938

\* Numbers referring to two different slaughterhouses operated by JBS in Campo Grande (MS)

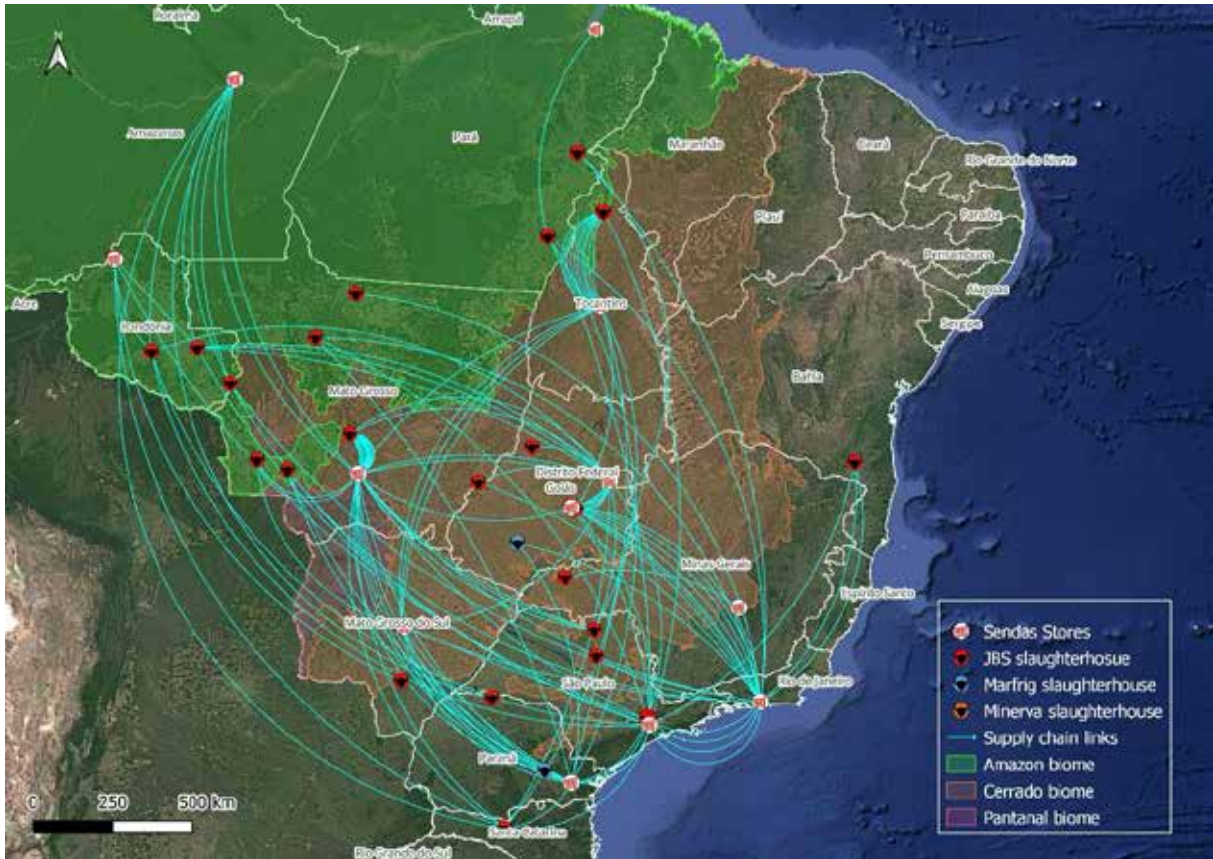
Figures 3–6 (below) illustrate the links between retail stores in Brazil where beef products were sampled and the 33 slaughterhouses whose direct and indirect cattle suppliers were linked to deforestation between 2023 and 2025.



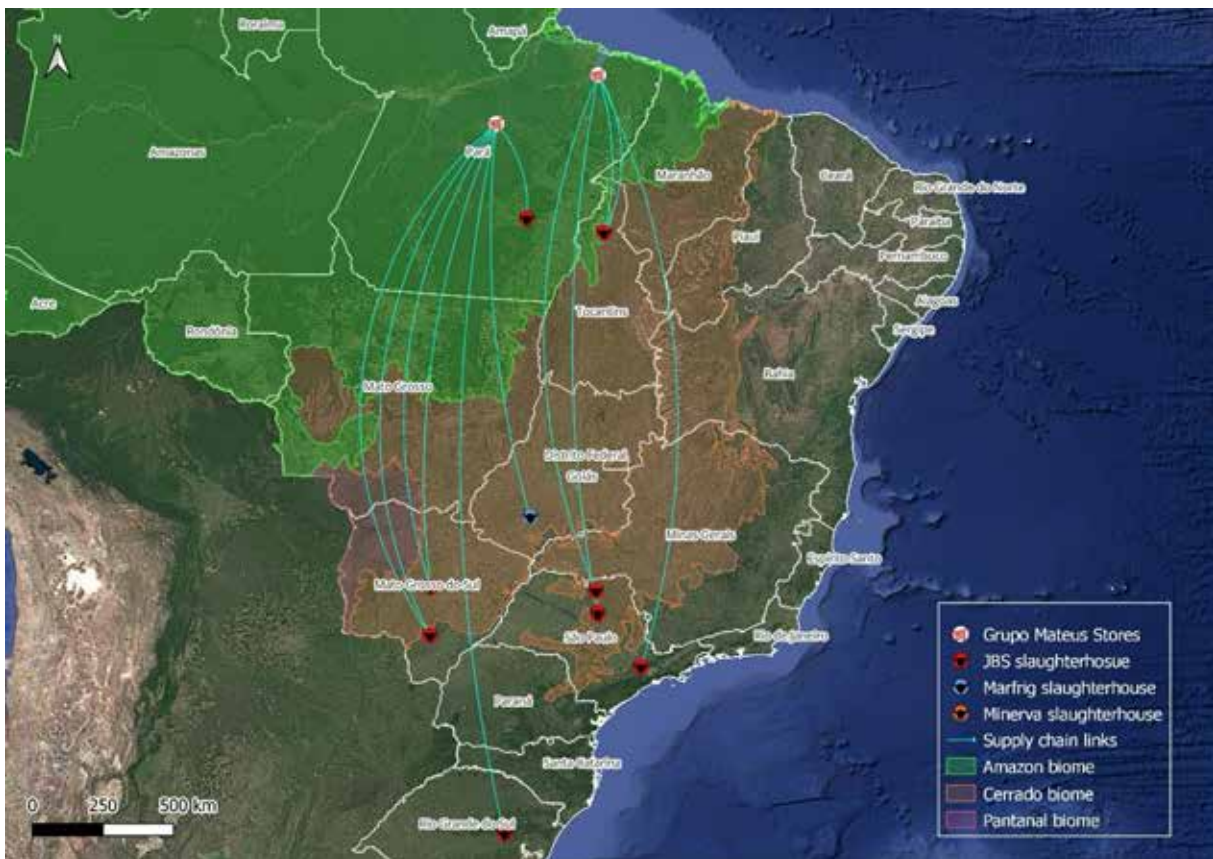
**Figure 3. Links between Carrefour stores products, JBS, Marfrig and Minerva Foods slaughterhouses, and direct and indirect suppliers with deforestation (August 2023 to September 2025).** Source: Aid Environment (2026)



**Figure 4. Links between Grupo Pão de Açúcar retail stores products, and JBS, Marfrig and Minerva Foods slaughterhouses, and direct and indirect suppliers with deforestation (August 2023 to September 2025).** Source: Aid Environment (2026)



**Figure 5. Links between Sendas-Assaí stores products, JBS/Marfrig/Minerva Foods slaughterhouses, and direct/indirect suppliers with deforestation (August 2023 to September 2025).** Source: Aid Environment (2026)



**Figure 6. Links between Grupo Mateus stores products, and JBS, Marfrig and Minerva Foods slaughterhouses, and direct and indirect suppliers with deforestation (August 2023 to September 2025).** Source: Aid Environment (2026)

# CASE STUDIES: RECENT DEFORESTATION IN THE BRAZILIAN BEEF SUPPLY CHAIN

To select the case studies, we considered a sample of potential direct and indirect suppliers to the targeted 33 slaughterhouses linked to the meat products we identified in 61 Carrefour, Grupo Pão de Açúcar, Grupo Mateus and Sendas-Assaí supermarkets across Brazil. We reviewed recent deforestation on direct and indirect supplier properties to identify potential case studies. The analysis first considered deforestation alerts from the Realtime Deforestation Detection system (Detecção de Desmatamento em Tempo Real, DETER) in the Amazon, Cerrado and Pantanal biomes between August 2024 and January 2026. Deforestation alerts were then visually confirmed for the selected case studies, and the hectares of cleared native forest and vegetation were calculated using Planet satellite imagery.

These seven cases were selected based on criteria that allow us to illustrate the recent, diverse and systemic aspect of native vegetation conversion in the cattle supply chain in Brazil. They include fire and deforestation events potentially linked to the country's leading meat processing companies and retailers, prioritizing the Amazon biome (with one case in the Cerrado), as well as direct and indirect cattle suppliers with a significant area of native vegetation at risk in rural property. The case study descriptions include the location, the size of deforestation, the type of vegetation, "Before and After" satellite imagery, among other data, as well as their supply chain links to slaughterhouses, CO<sub>2</sub> emissions and the sample of beef products collected in the supermarkets of the target retailers. We found 6,472 hectares of recent deforestation associated with these seven case studies. Table 4 summarizes the seven selected case studies, which are detailed below.

**Table 4. Summary of seven case studies linking deforestation to potential direct and indirect suppliers to slaughterhouses and retailer stores**

Case	Property	Municipality, state	Meatpacker	Retailer	Biome	Deforestation (ha)	Tons of CO <sub>2</sub>	Fire alerts	Remaining native vegetation (ha)
7.1	Fazenda Esperança	Pau d'Arco, Pará	JBS	Carrefour, Sendas-Assaí	Amazon	325	184,708	30	360
7.2	Fazenda Jaguari	Cumarú do Norte, Pará	JBS	Carrefour, Sendas-Assaí	Amazon	1,063	529,771	59	6,140
7.3	Fazenda Asa Branca	Rondon do Pará, Pará	JBS	Grupo Pão de Açúcar, Sendas-Assaí	Amazon	329	186,982	8	1,163
7.4	Fazenda Real Forte	São Félix do Xingu, Pará	JBS	Grupo Pão de Açúcar, Carrefour, Sendas-Assaí	Amazon	2,992	1,394,591	330	3,998
7.5	Fazenda Jaraguá	Porto dos Gaúchos, Mato Grosso	JBS	Carrefour, Sendas-Assaí	Amazon	421	193,946	-	468
7.6	Fazenda Vista Alegre	Água Clara, Mato Grosso do Sul	JBS	Grupo Pão de Açúcar, Carrefour, Sendas-Assaí, Grupo Mateus	Cerrado	496	24,934	-	1,588
7.8	Fazenda Santo André	Paranaíta, Mato Grosso	JBS	Carrefour, Sendas-Assaí	Amazon	535 burned + 311 clear cut	480,810	47	1,760
<b>Total</b>						<b>6,472</b>	<b>2,995,742</b>	<b>474</b>	<b>15,477</b>

\*Case 7.7 was not included in this publication.

\* The calculation of CO<sub>2</sub> emissions refers to the "above-ground carbon emissions" according to the cleared vegetation type<sup>19</sup>.

<sup>19</sup> Source: Nogueira et al. (2015). *Carbon stock loss from deforestation through 2013 in Brazilian Amazonia*. The tons of CO<sub>2</sub> emissions are calculated per type of vegetation times the ratio of molecular weight of carbon dioxide to carbon (44/12) times the number of hectares cleared.

## Case 7.1. Fazenda Esperança

### Property: **Fazenda Esperança** Amazon biome

Pau d'Arco (PA) **Property area (ha):** 13,009 • **Property coordinates:** -7.71663,-50.29921  
**CAR:** PA-1505551-27399F9656554293A609A5C075526796 (pending) • **SIGEF/SNCI (Código do Imóvel):** 9501811222706

### Ownership and other linked properties and companies

**Ownership:** Nelson Bertunes

**Other linked properties:** No linked properties found

**Linked companies:** –

**Comments:** –

(1) Data from the Pará State Agricultural Defence Agency (Adepará).

Available at: <https://lookerstudio.google.com/u/0/reporting/69ee14b8-baa2-4af0-bd80-c1b4fb2e66d2/page/67tZE>

### Cleared Area

**August 2025-January 2026 (DETER + visual confirmation):** **325 hectares**

**Remaining native vegetation (ha):** 360 • **Vegetation type:** Submontane dense humid forest

**Number of fire alerts:** 30 • **Priority for Biodiversity Conservation:** Very high

**Fire events:** between August and September 2025

**Inside Forest Code's protected areas:** **320 ha** inside the Legal Reserve

**Nearest Indigenous Territory and Natural Conservation Areas (distance):** Las Casas IT (40 km)

### Environmental fines and embargoes

**Environmental fines & embargoes:** No

**SELO VERDE platform info:** Apt-Deficit in the APP area (41 ha), direct suppliers with deforestation

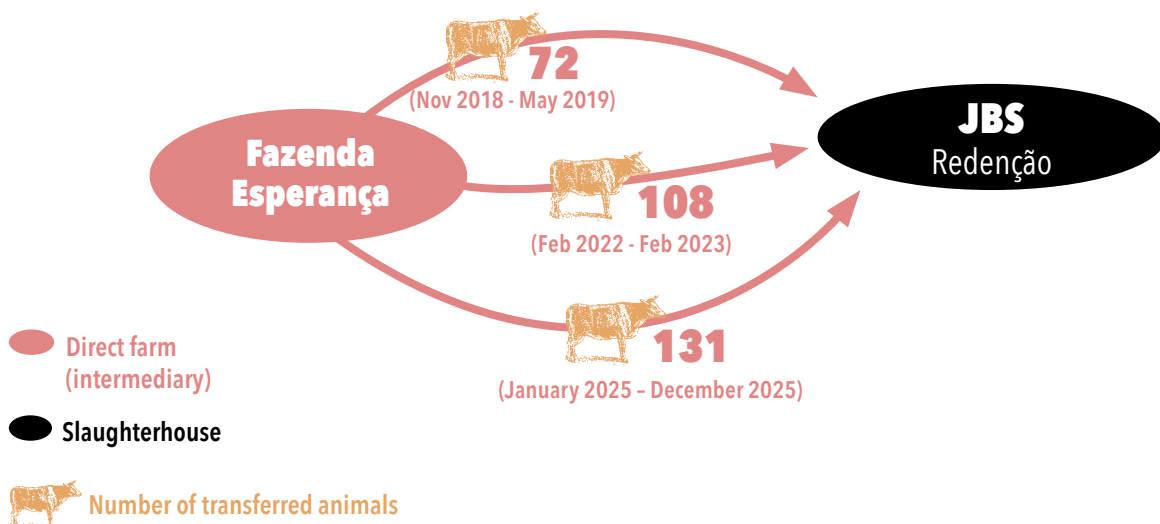
### Supply chain links

**Type of supply connection:** Direct **Meatpacker & Location:** **JBS Redenção and Santana do Araguaia (PA)**

**Heads of cattle sent to the slaughtering plant (period):** Direct: 108 (Feb 2022 - Feb 2023), 72 (November 2018 - May 2019), 131 (January 2025 - December 2025)

**Supplying meat to:** **Carrefour, Sendas-Assaí**

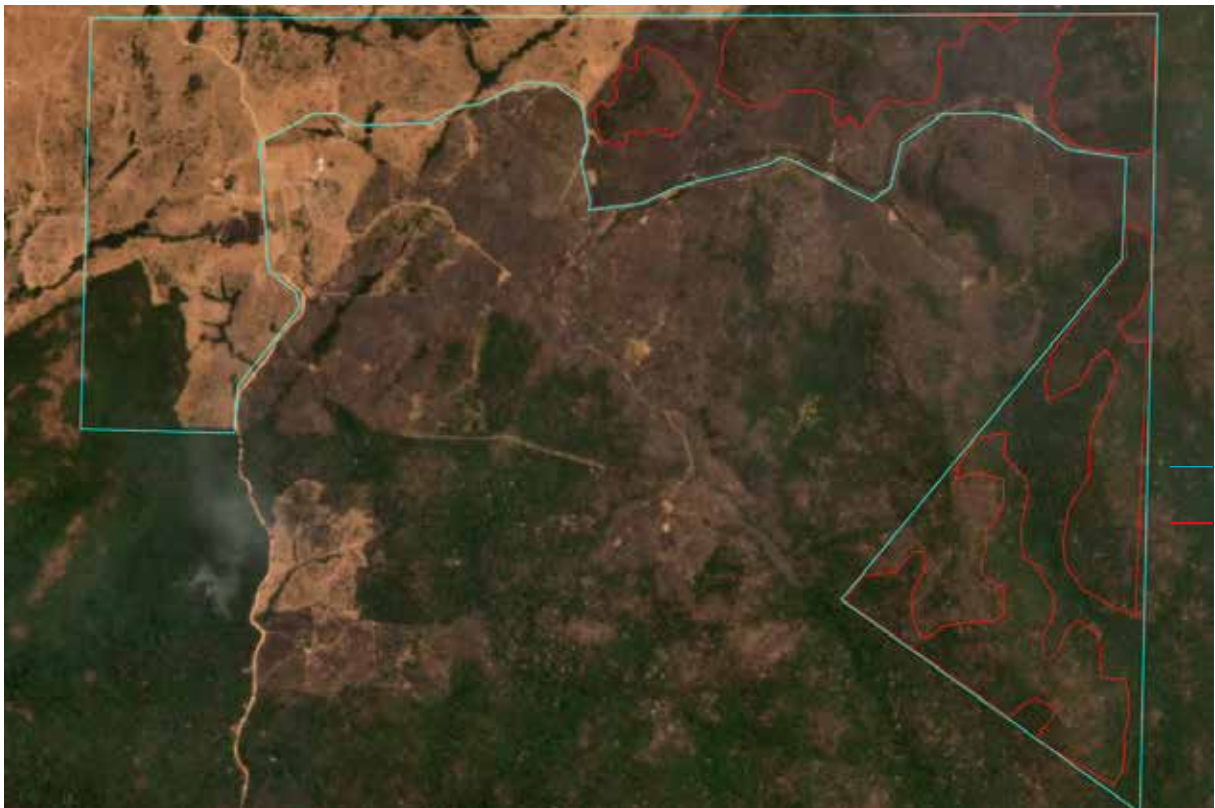
**Nearby tannery location (distance from meatpacker):** **Durlicouros, Xinguara, PA (100 km)**





**Before: August 2025**

Source: Imagery © 2026 Planet Labs PBC



**After: September 2025**

Source: Imagery © 2026 Planet Labs PBC

— limits of the property  
— limits of the deforestation

## Case 7.2. Fazenda Jaguari

### Property: **Fazenda Jaguari** Amazon biome

Cumaru do Norte (PA) **Property area (ha):** 13,009 • **Property coordinates:** -8.49 35, -51.3137  
**CAR:** PA-1502764-D446075F00A64E8DBDFCA2EBA0F770E (active) • **SIGEF/SNCI (Código do Imóvel):** 440240320347

#### Ownership and other linked properties and companies

**Ownership:** Vale Formoso Agropecuária [Sociedade Agropecuária Imaculada Conceição]

**Other linked properties:** Three other linked properties in Cumaru do Norte (PA), totaling 58,858 hectares: Fazenda Vale Formoso (22,156 ha), Fazenda Cabocla (30,811 ha), and Fazenda Da Mata (5,891 ha)

**Linked companies:** AgroSB, Eldorado do Xingu Agrícola Pastoral e Industrial, RPA - Reflorestamento Produtivo da Amazônia, Opportunity Partners Participações, Opportunity Private Equity, Vale Fértil Propriedades Agrícola, Vale Ouro Operações Agrícolas, Vale Sereno Propriedades Agrícolas

**Comments:** Fazenda Cabocla, a linked property with similar ownership, was covered in the Rapid Response Soy and Cattle report published in November 2019. (1) Fazenda Jaguari, the farm under investigation, and Fazenda Cabocla are owned by Vale Formoso Agropecuária S.A./Sociedade Agropecuária Imaculada Conceição Ltd. (2) Both companies seem to be the same legal entity operating under different names/brands according to Brazilian business registry data. (3) In the November 2019 Rapid Response Soy and Cattle report, Sociedade Agropecuária Imaculada Conceição Ltd was referred to as SOMICOL, (1) which was reportedly part of Grupo Amil, one of Brazil's largest health insurance companies, whose owners featured on Forbes' 2019 list of Brazilian billionaires. (4) The president of Vale Formoso Agropecuária, Cristiano Soares Rodrigues, is also the president/director of several other companies, including AgroSB, Eldorado do Xingu SA Agrícola Pastoral e Industrial, and Maeda Agroindustrial. (5) AgroSB has historically been linked to large deforestation in the Brazilian Amazon. (6) The cleared property, Fazenda Jaguari, has direct and indirect supply links to JBS slaughterhouses in Redenção and Santa Maria das Barreiras, both in the state of Pará. In the region, the following leather tanneries can also be found: Curtidora Tocantins in Colinas do Tocantins, a joint venture between Vancouros and Viposa, and the Durlicouros tannery in Xinguara, Pará.

Potential deforestation exposure of Vancouros, Viposa, and Durlicouros has been linked to the European automotive industry. (7) Moreover, Durlicouros, Pará's largest exporter of leather to Europe, can be connected to two Italian tanneries that supply Coach and several other well-known luxury fashion brands. (8).

In 2025, the property directly supplied 2,120 heads of cattle to JBS slaughter plants in Redenção and Santa Maria das Barreira (PA), under the name of the companies Vale Formoso Agropecuária S.A. and Soc. Agrop. Imaculada Conceição. (9)

- (1) [https://www.mightyearth.org/wp-content/uploads/Rapid-Response\\_Soy-and-Cattle\\_Report-7.pdf](https://www.mightyearth.org/wp-content/uploads/Rapid-Response_Soy-and-Cattle_Report-7.pdf); (2) <https://car.semas.pa.gov.br/#/>;  
(3) [https://empresas.serasaexperian.com.br/consulta-gratis/SOCIEDADE-AGROPECUARIA-IMACULADA-CONCEICAO-LTDA-29362985000187](https://empresas.serasaexperian.com.br/consulta-gratis/SOCIEDADE-AGROPECUARIA-IMACULADA-CONCEICAO-LTDA-29362985000187;); (4) <https://forbes.com.br/negocios/2014/06/a-historia-de-sucesso-de-edson-de-godoy-bueno>;  
(5) <https://cnpj.com.br/person/d147d4cb-43bf-4a9a-9f35-7ef6be179231>;  
(6) <https://www.thebureauinvestigates.com/stories/2019-07-02/global-beef-trade-amazon-deforestation>;  
(7) <https://aidenvironment.org/wp-content/uploads/2024/07/Driving-Deforestation.pdf>;  
(8) <https://www.earth-sight.org.uk/news/hidden-price-luxury>;  
(9) Data from Adepará

#### Cleared Area

**August 2025-January 2026 (DETER + visual confirmation): 1,063 hectares**

**Remaining native vegetation (ha):** 6,140 • **Vegetation type:** Open submontane humid forest • **Number of fire alerts:** 59

**Priority for Biodiversity Conservation:** No • **Fire events:** in September 2025

**Inside Forest Code's protected areas:** 1,055 ha inside the Legal Reserve

**Nearest Indigenous Territory and Natural Conservation Areas (distance):** Kayapó Indigenous Territory (30 km)

#### Environmental fines and embargoes

**Environmental fines & embargoes:** Embargo of 4,534 hectares in Fazenda Jaguari for illegal fires in 2018, lifted in 2020 (no longer active). (1) Fine from SEMA (PA). (2)

- (1) <https://dadosabertos.ibama.gov.br/dataset/fiscalizacao-termo-de-embargo>  
(2) <https://dadosabertos.ibama.gov.br/dataset/fiscalizacao-termo-de-embargo>

**SELO VERDE platform info:** Apt - Authorized deforestation after 2008 (129 ha); deficit in the Lergal Reserve (121 ha) and APP (706 ha)

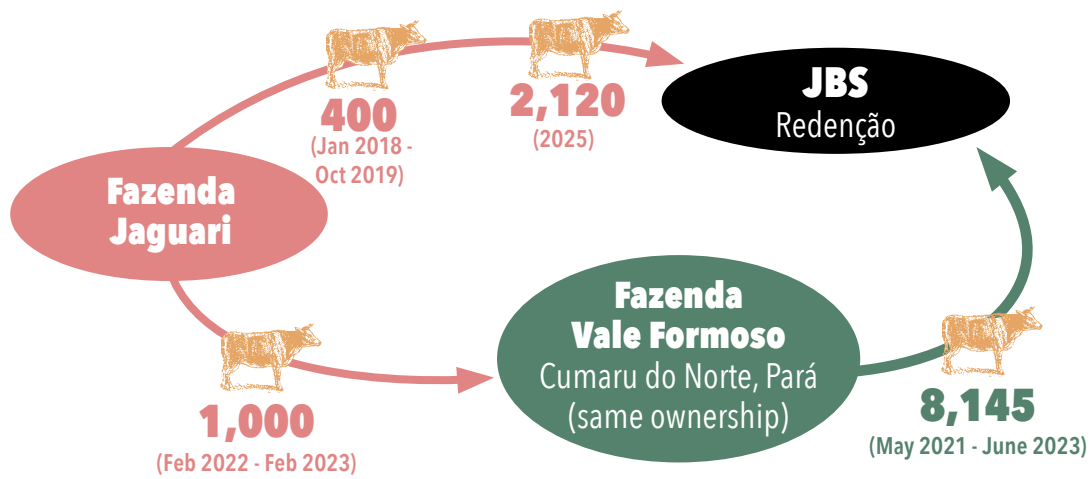
#### Supply chain links

**Type of supply connection:** Direct **Meatpacker & Location:** JBS Redenção and Santa Maria das Barreiras (PA)

**Heads of cattle sent to the slaughtering plant (period):** Direct: 400 (January 2018 - October 2019), 2,120 (2025)  
Indirect: 1,000 (April 2022 - February 2023) -> Fazenda Vale Formoso, Cumaru do Norte, PA (same ownership) -> 8,145 (May 2021 - June 2023),

**Supplying meat to:** Carrefour, Sendas-Assaí

**Nearby tannery location (distance from meatpacker):** Durlicouros, Xinguara, PA (100 km)



● Direct farm (intermediary)   
 ● Indirect farm   
 ● Slaughterhouse   
 🐮 Number of transferred animals



**Fires: September 9, 2025, active fires**

Source: Contains modified Copernicus Sentinel data (2025) processed in Copernicus Browser



**Before: September 2025**

Source: Imagery © 2026 Planet Labs PBC



**Before: October 2025**

Source: Imagery © 2026 Planet Labs PBC

limits of the  
property  
limits of the  
deforestation

## Case 7.3. Fazenda Asa Branca

### Property: Fazenda Asa Branca Amazon biome

Rondon do Pará (PA) **Property area (ha):** 2,355 • **Property coordinates:** -4.61822, -48.01552

**CAR:** PA-1506187-D50A9FA363DC4116AA7B0B5ABD12C2EE (active) • **SIGEF/SNCI (Código do Imóvel):** 9501905341458

### Ownership and other linked properties and companies

**Ownership:** Adalberto Rodrigues de Almeida

**Other linked properties:** One linked property in Rondon do Pará (PA): Fazenda Deus Dara (266 ha) and one linked property in Marabá (PA): Fazenda Verao Vermelho (unknown size)

**Linked companies:** –

**Comments:** The owner of the farm under investigation requested approval (a Rural Environmental License) to operate Fazenda Asa Branca, Asa Branca II, and Deus Dará in 2022.(1)AidEnvironment has analyzed the fact that the JBS Marabá slaughterhouse is geographically located in the same spot as the JBS Marabá leather tannery (see photo, coordinates -5.383840465172842, -49.08373812003921). Considering JBS's vertically integrated supply chain, it is very likely that raw hides and skins of cattle from the deforested farm Fazenda Asa Branca, likely slaughtered at JBS Marabá, according to cattle transfer data, have ended up in JBS's Marabá tannery in Pará.

The JBS leather facility in Marabá is certified by the Leather Group and reportedly supplies the following industries: automotive, footwear, apparel/clothing, athletic footwear, leather goods and upholstery.(2) Earlier Aid Environment research revealed that JBS's slaughterhouse in Marabá, Pará, is one of the JBS-owned slaughterhouses in Brazil's Legal Amazon with a high risk of links to (illegal) Amazon deforestation, next to the JBS slaughterhouses in Colíder, Barra do Garças, Água Boa, Pedra Preta, and Alta Floresta (all in Mato Grosso); as well as JBS Pimento Bueno, Vilhena, and São Miguel do Guaporé in Rondônia.(3)

There is no publicly available shipment data at the municipality level (Marabá). However, the initial stages of leather treatment—from raw hides to wet-blue—typically occur in the tanneries in the Brazilian deforestation frontier (i.e. the Legal Amazon states), often in close vicinity to slaughterhouses.

If wet-blue leather from Legal Amazon states is not directly exported to Europe, it is transported to southern and southeastern Brazil, from where most prepared leather volumes are exported—e.g. from Santos Port, Brazil's largest export port.(4) A 2024 Aid Environment investigation connected Brazilian leather exports to numerous downstream markets in Europe, predominantly Italy, Spain, and the Netherlands.(5) More specifically, the farm in this case study could be linked, for instance, to Howe Leather. Headquartered in Australia, Howe Leather has imported significant volumes of Brazilian leather products since the EUDR cut-off date, supplied entirely by JBS. Between January 1, 2021, and November 30, 2023, the company received 602 million metric tons of crust bovine leather from JBS—mostly (77 percent) in the form of wet blue leather (HS 4104), and the remainder 23 percent as prepared leather (HS 4107). Shipment data shows that imports of JBS-produced leather began in April 2022.

According to Aid Environment 2024's report (5), after initial arrival in Germany (mainly via Hamburg Port, some via Bremerhaven), the imported wet blue leather at Howe Leather is transformed into automotive leather in its cutting and finishing factory in Košice, Slovakia. Howe Leather reportedly produces exclusively for the automotive leather industry,(6) serving brands including: Porsche, Land Rover, Audi, Volkswagen, Ford, Chery, Jaguar, and Nissan.(7) Shipment data also shows that key US-based importers of leather from JBS Brazil include Lear Corp and Kamali Group, both suppliers to the automotive leather industry.(8)

While this does not prove or confirm that the wet-blue and prepared leather originates from JBS Marabá in Pará—as JBS operates numerous tanneries in Brazil—the burden of proof regarding the leather's origin falls on companies such as Howe Leather and Lear Corp, which exclusively source leather from JBS. In 2025, the properties Asa Branca, Asa Branca II and Deus Dará also supplied regional slaughterhouses, including Mercurio Alimentos.(9)

(1) <https://portel.pa.gov.br/wp-content/uploads/2022/01/Aviso-Jornal-Amaz%C3%B4nia-2.pdf>; • (2) <https://www.leatherworkinggroup.com/get-involved/our-community/certified-suppliers/jbs-sa-maraba-jbs106>; • (3) <https://aidenvironment.org/wp-content/uploads/2024/07/Driving-Deforestation.pdf>;

(4) [https://www.researchgate.net/publication/340876754\\_Embedded\\_Deforestation\\_The\\_Case\\_Study\\_of\\_the\\_Brazilian-Italian\\_Bovine\\_Leather\\_Trade](https://www.researchgate.net/publication/340876754_Embedded_Deforestation_The_Case_Study_of_the_Brazilian-Italian_Bovine_Leather_Trade);

(5) <https://dv719tqmsuwvb.cloudfront.net/documents/Hide-on-the-Highway-2.pdf>; • (6) <https://www.howe.com.au/>; • (7) <https://www.thinkstep-anz.com/resrc/case-studies/howe-leather-sustainability-report/>; • (8) <https://www.kamaligroup.com/>; • (9) Data from Adepará

### Cleared Area

**August 2024-January 2026 (DETER + visual confirmation): 329 hectares**

**Remaining native vegetation (ha):** 1,163 • **Vegetation type:** Submontane dense humid forest • **Number of fire alerts:** 8

**Fire events inside Forest Code's protected areas:** – • **Priority for Biodiversity Conservation** Very high

**Nearest Indigenous Territory and Natural Conservation Areas (distance):** –

### Environmental fines and embargoes

**Environmental fines & embargoes:** –

**SELO VERDE platform info:** Inapt – Unauthorized deforestation after 2008 (33 ha), deficit in the APP area (89 ha) and Legal Reserve (15 ha), direct suppliers with deforestation

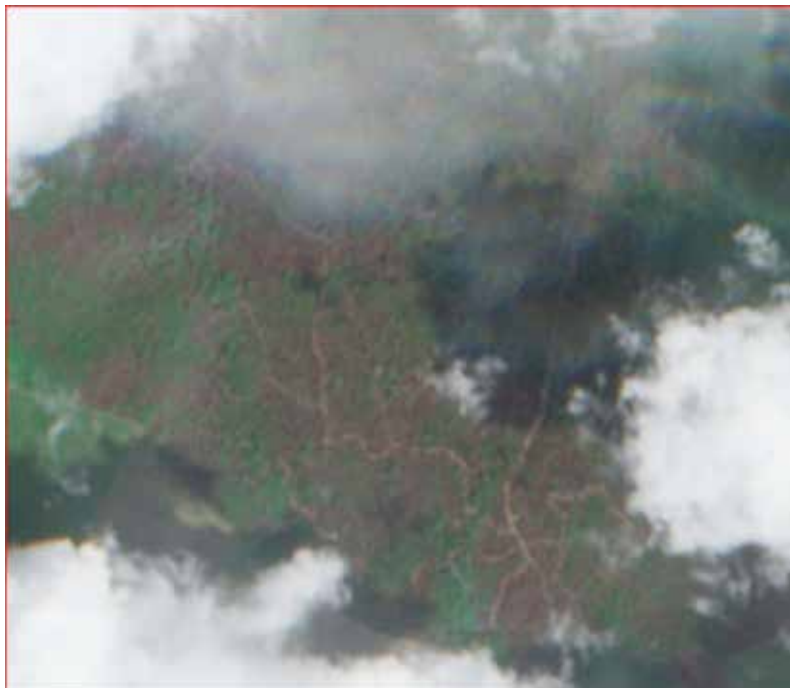
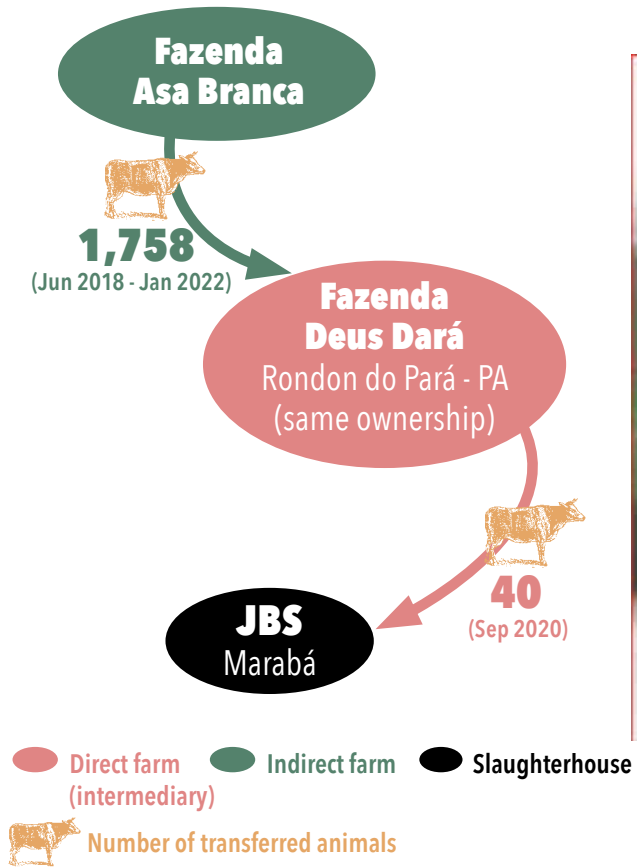
### Supply chain links

**Type of supply connection:** Indirect **Meatpacker & Location:** JBS Marabá (PA)

**Heads of cattle sent to the slaughtering plant (period):** Indirect: 1,758 (June 2018–January 2022) –> Fazenda Deus Dará, Rondon do Pará, PA (same ownership) –> 40 (Sep 2020)

**Supplying meat to:** Grupo Pão de Açúcar, Sendas-Assaí

**Nearby tannery location (distance from meatpacker):** JBS, Marabá, PA (same location)



**Fires: Burned area on December 30, 2024**

Source: Contains modified Copernicus Sentinel data (2025) processed in Copernicus Browser



**Before: November 2024**

Source: Imagery © 2026 Planet Labs PBC



**After: March 2025**

Source: Imagery © 2026 Planet Labs PBC

## Case 7.4. Fazenda Real Forte

### Property: **Fazenda Real Forte** Amazon biome

São Félix do Xingu (PA) **Property area (ha):** 7,989 • **Property coordinates:** -9.51866, -52.10523  
**CAR:** PA-1507300-220FB8D9BFDD4AABAF0FB241A2D76182 (active) • **SIGEF/SNCI (Código do Imóvel):** 440240388812

### Ownership and other linked properties and companies

**Ownership:** Cacílio Paula da Silva Júnior

**Other linked properties:** No linked properties found

**Linked companies:** Nutricampo Produtos Agropecuários (Rondonópolis, MT), veterinary medications

**Comments:** The owner of the cleared farm, Fazenda Real Forte, was named as a defendant in a labor dispute in 2024.(1) In the case, a former cowboy hired by Cacílio Paulo da Silva Júnior filed a labor claim alleging that he had worked for the property for less than a month without formal registration, under degrading conditions, and with daily shifts of 14 hours (4 a.m.-7 p.m.). In court, Cacílio and the former employee reached a settlement: the farmer paid R\$3,000 (US\$565), and the case was closed. That same year, the farm was included among 201 properties that may have to shut down due to their location in a recently demarcated Indigenous territory: the Kapôt Nhĩnore Indigenous Land. The study for the demarcation of the Kapôt Nhĩnore Indigenous Land was presented and approved by Funai. (2)

(1) <https://www.jusbrasil.com.br/processos/785031671/processo-n-000XXXX-7820245080118-do-trt8>

(2) <https://www.comprerural.com/governo-vai-acabar-com-201-fazendas-por-pressao-indigena/>

### Cleared Area

**July 2024-January 2026 (DETER + visual confirmation):** **2,992 hectares**

**Remaining native vegetation (ha):** 3,998 • **Vegetation type:** Contact between savanna and rainforest • **Number of fire alerts:** 330 • **Fire events:** in August and September 2024 • **Inside Forest Code's protected areas:** **2,982 ha** inside the Legal Reserve • **Priority for Biodiversity Conservation:** No • **Nearest Indigenous Territory and Natural Conservation Areas (distance):** Inside the Kapôt Nhĩnore Indigenous Land

### Environmental fines and embargoes

**Environmental fines & embargoes:** Embargo of 471 hectares of Fazenda Real Forte for illegal clearance of native vegetation in 2018, and of 1,837 hectares on the same property and for the same reason in 2006 (IBAMA)

**SELO VERDE platform info:** Inapt - Unauthorized deforestation after 2008 (383 ha), indirect supplier with deforestation

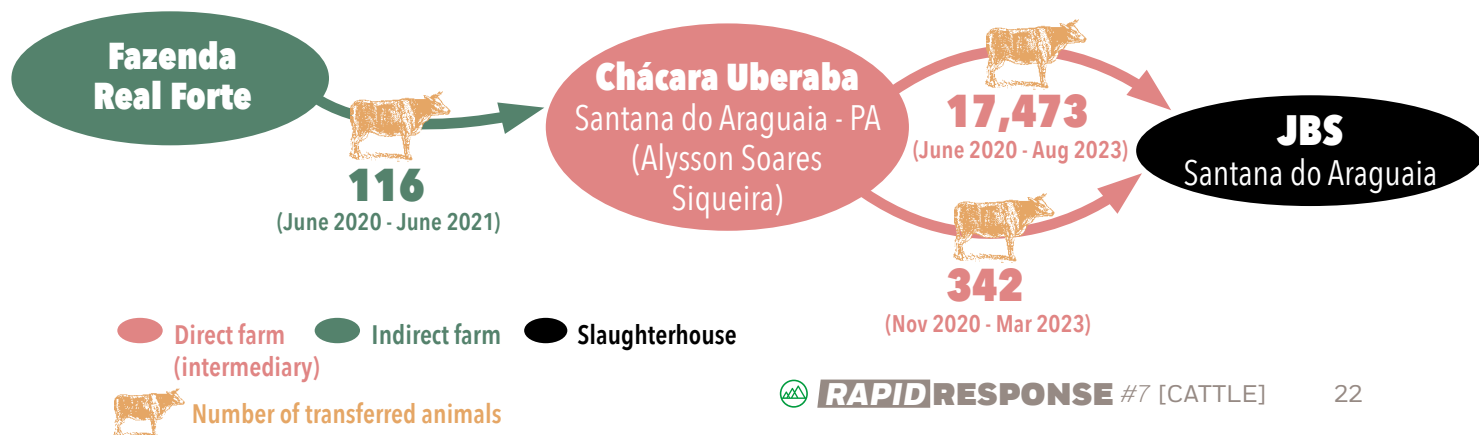
### Supply chain links

**Type of supply connection:** Indirect **Meatpacker & Location:** **JBS Redenção (PA), Santana do Araguaia (PA)**

**Heads of cattle sent to the slaughtering plant (period):** Indirect: 116 (June 2020 - June 2021) -> Chácara Uberaba, Santana do Araguaia, PA (Alysson Soares Siqueira) -> 17,473 (June 2020 - August 2023), 342 (November 2020 - March 2023)

**Supplying meat to:** **Grupo Pão de Açúcar, Carrefour, Sendas-Assai**

**Nearby tannery location (distance from meatpacker):** **Durlicouros, Xinguará, PA (100 km and 150 km)**





**Before: July 2024**

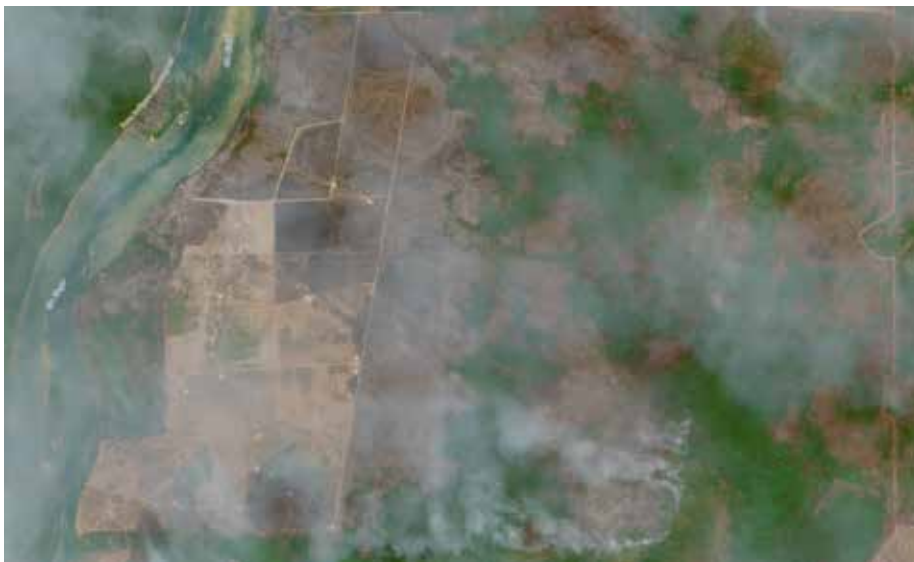
Source: Imagery © 2026 Planet Labs PBC



**After: October 2024**

Source: Imagery © 2026 Planet Labs PBC

— limits of the property  
— limits of the deforestation



**Fires: September 9, 2024, active fires**

Source: Contains modified Copernicus Sentinel data (2025) processed in Copernicus Browser

## Case 7.5. Fazenda Jaraguá

### Property: **Fazenda Jaraguá** Amazon biome

Porto dos Gaúchos (MT) **Property area (ha):** 993 • **Property coordinates:** -11.48536, -57.10692  
**CAR:** MT-5106802-E29DBF7CC6674794A18A7AE8CEDB751C (validated) • **SIGEF/SNCI (Código do Imóvel):** 9012101040276

### Ownership and other linked properties and companies

**Ownership:** Flavio Rogerio Ewald, Lenita Paula Ewald

**Other linked propertie** One linked property in Porto dos Gaúchos (MT): Fazenda Jaraguá I (737 ha)

**Linked companies:** Armazéns Gerais Jaraguá, Madeireira Jaraguá (Porto dos Gaúchos, MT)

**Comments:** The validated self-declared land registry CAR is bigger than the SIGEF registration. (1) There are two "active" Sustainable Forest Management (SFM) Plans in the area (logging). In a different area (outside the SFM), there is an authorization for clearing 433 ha of native vegetation for logging ("exploração florestal"), valid between August 2024 to Aug 2029.

Owner Flavio Rogerio Ewald has four active loans from the BNDES (Brazilian Development Bank) totaling R\$3.5 million (US\$658,712) to purchase agricultural machinery in Porto dos Gaúchos, the same municipality of Fazenda Jaraguá.(2)

(1) <https://geoportal.sema.mt.gov.br/#/>

(2) <https://www.bndes.gov.br/wps/portal/site/home/transparencia/consulta-operacoes-bndes/consulta-a-operacoes-bndes/>

### Cleared Area

**August 2024-January 2026 (DETER + visual confirmation): 421 hectares**

**Remaining native vegetation (ha):** 468 • **Vegetation type:** Contact between rainforest and seasonal forest • **Number of fire alerts:** – • **Fire events:** – **Inside Forest Code's protected areas:** – • **Priority for Biodiversity Conservation** No • **Nearest Indigenous Territory and Natural Conservation Areas (distance):** Apiaká-Kayabi Indigenous Territory (42 km)/Batelão Indigenous Territory (50 km)

### Environmental fines and embargoes

**Environmental fines & embargoes:** No

**SELO VERDE platform info:** –

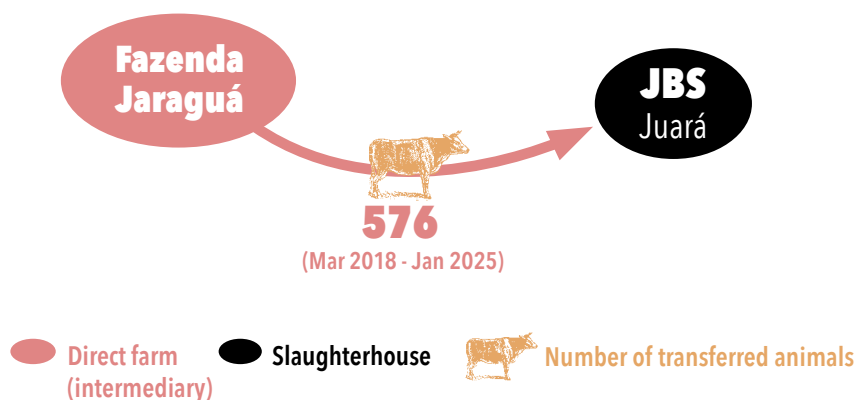
### Supply chain links

**Type of supply connection:** Direct **Meatpacker & Location:** JBS Juara (MT)

**Heads of cattle sent to the slaughtering plant (period):** 576 (March 2018-January 2025)

**Supplying meat to:** Carrefour, Sendas-Assaí

**Nearby tannery location (distance from meatpacker):** Curtume Blubras (Vancouros/Viposa/Viva), Sinop, MT (220 km) & JBS Colíder, Colíder, MT (235 km)





**Before: April 2025**

Source: Imagery © 2026 Planet Labs PBC



— limits of the property  
— limits of the deforestation

**After: June 2025**

Source: Imagery © 2026 Planet Labs PBC

## Case 7.6. Fazenda Vista Alegre

### Property: Fazenda Vista Alegre Cerrado biome

Água Clara (MS) **Property area (ha):** 5,795 • **Property coordinates:** -19.7579, -53.3818  
**CAR:** MS-5000203-DE8C8AB866084281AE888BFEB1E4D7C1 (pending) • **SIGEF/SNCI (Código do Imóvel):** 9120180004422

### Ownership and other linked properties and companies

**Ownership:** Estate of Orestes Prata Tibery Junior

**Other linked properties:** Ten linked properties totaling 2,091 hectares. In Ribas do Rio Pardo (MS): Fazenda Vista Alegre da Cachoeira (420 ha); in Três Lagoas (MS): Estância Lagoinha Parcela 01,02,03 (226 ha), Fazenda São João (576 ha), Fazenda Vô Orestes (453 ha), Fazenda Vô Ruthy parte 1,2,3,4 (416 ha).

**Linked companies:** NJOP Agropecuária (or Grupo Nelore JOP) in Santo Antônio do Aracanguá (SP), and Castilho (SP), cattle; Prata Leilões in Três Lagoas (MS).

**Comments:** The formal owner of the farm, Orestes Prata Tibery Junior, a well-known cattle rancher, died in 2012. (1) His five children have since taken on leadership roles in various family businesses. (2) José Carlos, Angelo, and Orestes Neto are partners in a livestock auction company. (3)

(1) <https://ancestors.familysearch.org/pt/G6Y5-YG6/orestes-prata-tibery-j%C3%BAnior-1938-2012>; <https://oglobo.globo.com/politica/tres-pessoas-morrem-em-queda-de-aviao-em-mato-grosso-do-sul-5897784>

(2) <https://www.perfilnews.com.br/2017/08/25/morte-de-orestinho-completa-cinco-anos-mas-seu-legado-permanece-vivo/>

(3) Prata Leilões (fiscal number 04.579.175/0001-56)

### Cleared Area

**August 2025-January 2026 (DETER + visual confirmation):** 496 hectares  
**Remaining native vegetation (ha):** 1,588 • **Vegetation type:** Seasonal parkland savanna  
**Number of fire alert:** – • **Fire events:** – • **Inside Forest Code's protected areas:** –  
**Priority for Biodiversity Conservation:** No • **Nearest Indigenous Territory and Natural Conservation Areas (distance):** –

### Environmental fines and embargoes

**Environmental fines & embargoes:** In a related property in 2007

**SELO VERDE platform info:** –

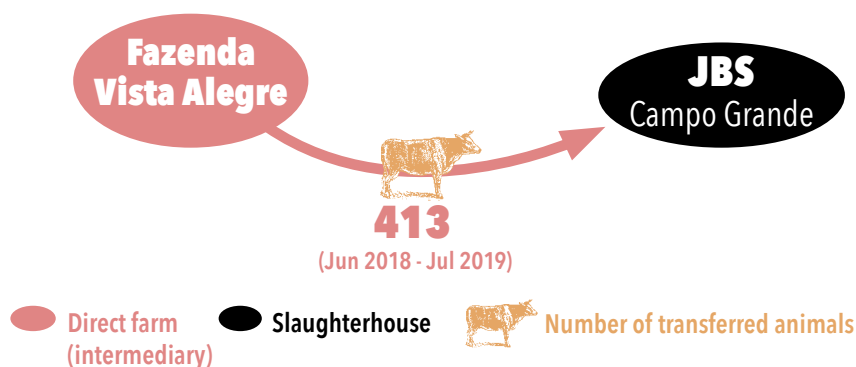
### Supply chain links

**Type of supply connection:** Direct **Meatpacker & Location:** JBS Campo Grande (MS)

**Heads of cattle sent to the slaughtering plant (period):** 413 (Jun 2018–Jul 2019)

**Supplying meat to:** Grupo Pão de Açúcar, Carrefour, Sendas-Assaí, Grupo Mateus

**Nearby tannery location (distance from meatpacker):** Curtume Blubras (Vancouros/Viposa/Viva), Bataguassu, MS (270 km)





**Before: February 2025**

Source: Imagery © 2026 Planet Labs PBC

**After: June 2025**  
Source: Imagery © 2026 Planet Labs PBC



limits of the  
property  
limits of the  
deforestation

## Case 7.8. Fazenda Santo André

### Property: Fazenda Santo André Amazon biome

Paranaíta (MT) **Property area (ha):** 2,033 • **Property coordinates:** -9.958834, -54.91798  
**CAR:** MT-5106299-FB65DA47DDBC44C48CB41562C8A06C13 (validated) • **SIGEF/SNCI (Código do Imóvel):** 9501499349418

### Ownership and other linked properties and companies

**Ownership:** Luiz Antonio Ferreira de Melo, Miriam Godinho Ferreira de Melo

**Other linked property:** One linked property in Rio Sono (TO): Fazenda Rancho Fundo (704 ha) and one linked property in Alta Floresta (MT): Estância Santa Bárbara (unknown size)

**Linked companies:** –

**Comments:** Luiz Antonio Ferreira de Melo, one of the farm's owners, served as deputy mayor of Alta Floresta (MT) from 2009 to 2012. (1) In February 2025, the property received an authorization for the deforestation of 386 hectares. (2)

(1) <https://www.altafloresta.mt.gov.br/Prefeitura/Gestoes-Anteriores/Luiz-antonio-ferreira-de-melo-19/>;  
<https://divulgacandcontas.tse.jus.br/divulga/#/candidato/CENTRO-OESTE/MT/14422/2467/2008/89877>  
 (2) <https://geoportal.sema.mt.gov.br/>

### Cleared Area

**August 2024-January 2026 (DETER + visual confirmation):** 535 hectares burned + 311 ha clear cut  
**Remaining native vegetation (ha):** 1,760 • **Vegetation type:** Submontane dense humid forest  
**Number of fire alerts:** 47 • **Fire events:** in September 2024 • **Inside Forest Code's protected areas:** 535 ha (burned area) • **Priority for Biodiversity Conservation:** Very high • **Nearest Indigenous Territory and Natural Conservation Areas (distance):** Kayabi Indigenous Territory (47 km)

### Environmental fines and embargoes

**Environmental fines & embargoes:** One environmental fine was issued in 2015 for submitting partially false information to the official online tracking system for timber credit trading in order to conceal their illegal origin. (1)  
 (1) <https://servicos.ibama.gov.br/ctf/publico/areasembargadas/ConsultaPublicaAreasEmbargadas.php>

**SELO VERDE platform info:** –

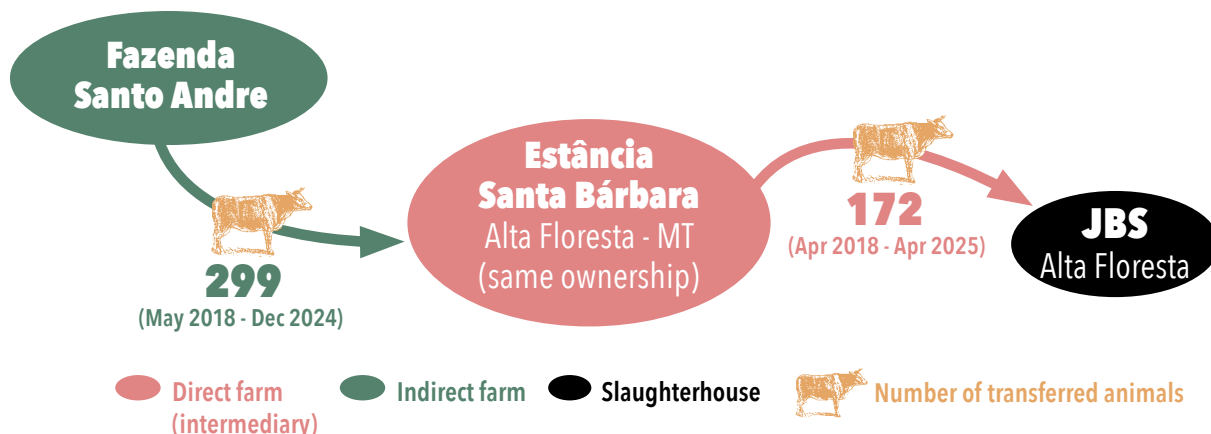
### Supply chain links

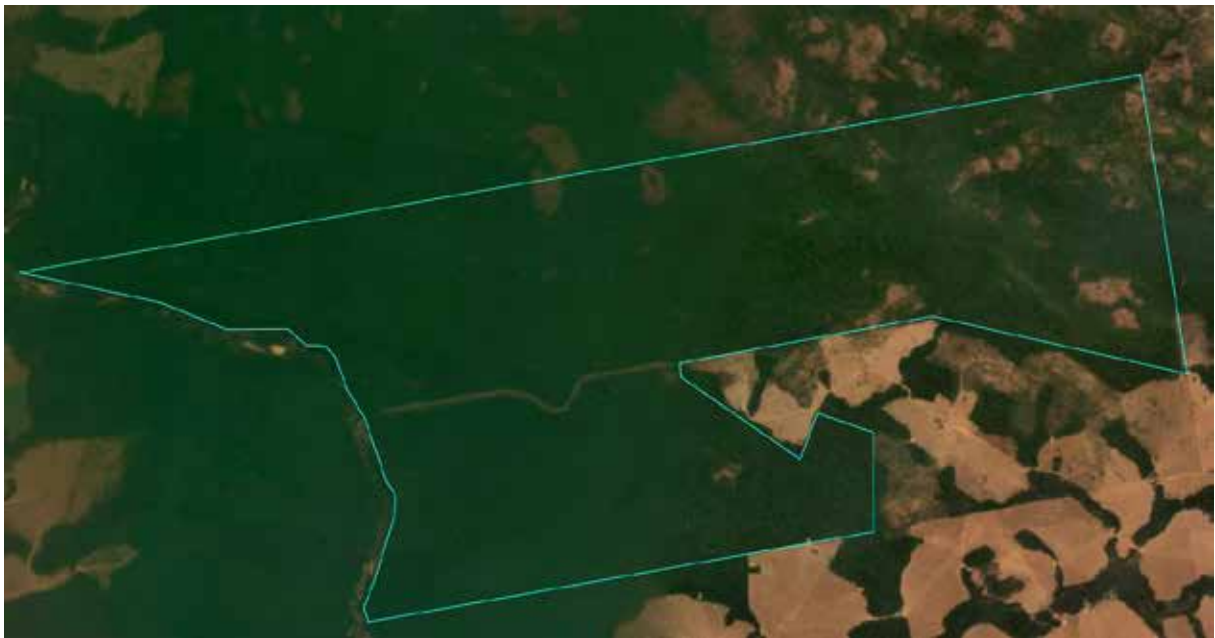
**Type of supply connection:** Indirect **Meatpacker & Location:** JBS Alta Floresta (MT)

**Heads of cattle sent to the slaughtering plant (period):** 299 (May 2018 - Dec 2024) --> Estância Santa Bárbara, Alta Floresta, MT (same ownership) --> 172 (April 2018 - April 2025)

**Supplying meat to:** Carrefour, Sendas-Assaí

**Nearby tannery location (distance from meatpacker):** JBS, Colíder, MT (135 km)





**Before: September 2024**

Source: Imagery © 2026 Planet Labs PBC



**After: October 2024 (burned area)**

Source: Imagery © 2026 Planet Labs PBC

— limits of the property  
— limits of the deforestation



**Fires: September 5, 2024, active fires**

Source: Contains modified Copernicus Sentinel data (2025) processed in Copernicus Browser

# RIGHT OF REPLY TO CASE STUDIES

Below are excerpts from the responses of the retailers and meatpackers contacted by Mighty Earth to our questions about their links and business relationship to the seven case studies described above. Their full company responses are available [here](#).

## Retailers

### Carrefour said on March 26, 2026:

"Among the 7 farms mentioned: 4 are not registered in our database; 3 are historical in our database and still under analysis. We come back to you in the coming days with the details."

### Grupo Pão de Açúcar said on March 25, 2026:

"Regarding the cases questioned by Mighty Earth, the Company immediately launched an investigation into all farms listed. Among the 3 farms listed:

- 2 are not part of GPA's purchase database and therefore are not part of the Group's supplies.
- 1 has a purchase dated before the deforestation identified, with no subsequent purchases.

Considering this alert, GPA has decided to block all CARs mentioned."

## Grupo Mateus didn't reply

### Sendas/Assaí said on March 31, 2026:

"With regard to the cases shared, we have adopted a preventive approach aligned with the continuous improvement of our controls, including the blocking of these farms with currently active suppliers. We note that part of these properties do not have and have not had any commercial relationship with Assaí. In cases where there was past supply, transactions were carried out in compliance with the policies, criteria, and procedures in place at the time."

## Meatpackers

## JBS didn't reply

### Marfrig said on March 25, 2026:

"In summary, the points raised by Mighty Earth refer to eight cases of alleged suppliers with a possible link to MBRF. Following our internal review, we found that only two of these cases, identified as 7.5 and 7.6, concern producers actually registered with MBRF. At the time of the slaughter operations, both suppliers were in compliance with the company's social and environmental commitments; these farms are currently blocked from supplying new cattle due to social and environmental non-compliances identified after the date of the last slaughter carried out for MBRF. This restriction will remain in place until the situation has been fully resolved and compliance restored, in line with the company's social and environmental criteria. We would also note that these slaughter operations took place in industrial units which ceased to form part of MBRF as from October 2024.

The other cases mentioned in the report (7.1, 7.2, 7.3, 7.4, 7.7 and 7.8) show no record in MBRF's database of direct or indirect suppliers, based on the information made available."

### **Minerva Foods said on March 24, 2026:**

"With respect to the specific cases listed by Mighty Earth:

Case 7.1 [...] "No record related to this property was found in the Minerva Foods registration system; therefore, it has no commercial relationship with the Company."

Case 7.2 [...] "No record related to this property was found in the Minerva Foods registration system; therefore, it has no commercial relationship with the Company."

Case 7.3 [...] "The producer Adalberto Rodrigues de Almeida is registered with Minerva Foods, and the properties are listed in the Company's database; however, there are no records of any commercial transactions with Minerva Foods."

Case 7.4 [...] No record related to this property was found in the Minerva Foods registration system; therefore, it has no commercial relationship with the Company. The producer Alysson Soares Siqueira is registered with Minerva Foods; however, the property Chácara Uberaba is not listed in our database and, therefore, has no commercial relationship with the Company".

Case 7.5 [...] "No record related to this property was found in the Minerva Foods registration system; therefore, it has no commercial relationship with the Company."

Case 7.6 [...] "The property is listed in the Minerva Foods registration system, linked to the producer Luisa de Souza Prata Tibery Lima, who is registered with the Company. The farm Vista Alegre underwent a detailed socio-environmental monitoring analysis and, after presenting an Environmental Authorization for Vegetation Suppression, obtained the necessary clearance regarding the PRODES 2025 polygon identified in the area, making it eligible for commercialization according to the sectoral protocol Beef on Track. Therefore, no applicable restrictions were identified during commercial transactions with the Company, the most recent of which occurred in March 2026."

Case 7.7<sup>20</sup> [...] No record related to this property was found in the Minerva Foods registration system; therefore, it has no commercial relationship with the Company."

Case 7.8 [...] "No records related to these properties were found in the Minerva Foods registration system; therefore, they have no commercial relationship with the Company."

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<sup>20</sup> Note: case 7.7 was excluded of this publication.

# METHODOLOGY: FROM BRAZILIAN RETAIL STORES TO DIRECT AND INDIRECT CATTLE SUPPLIERS

Cattle ranching is Brazil's main driver of deforestation, and about 76% of beef production is consumed domestically<sup>21</sup>.

This report analyzes Brazil's domestic cattle supply chain by linking deforestation, forest degradation, and fires in the Amazon and Cerrado biomes to beef products found in the stores of four major retailers operating in Brazil: Carrefour, Grupo Pão de Açúcar, Grupo Mateus, and Sendas-Assaí.<sup>22</sup>

The starting point of our analysis consists of data collected from a sample of beef products scanned in Brazilian supermarkets. This data is gathered using the Do Pasto ao Prato ("From Pasture to Plate", dPaP) mobile phone application,<sup>23</sup> developed by Trase, the Stockholm Environment Institute, UCLouvain and Repórter Brasil.

Using the dPaP app, consumers can scan meat product labels to register key information about meat products, including the product type, processing date, and meatpacker registration numbers – such as the Federal Inspection of Slaughterhouses (*Serviço de Inspeção Federal*, SIF), the State Inspection of Slaughterhouses (*Serviço de Inspeção Estadual*, SIE) or the Brazilian National Registry of Legal Entities (*Cadastro Nacional da Pessoa Jurídica*, CNPJ) numbers. These registration numbers enable identification of the meatpacker and the slaughterhouse where the product was processed.

We used dPaP data collected by consumers, a network of volunteers (so-called 'citizen scientists'), and commissioned data collectors (paid researchers) in stores operated by the market leading Brazilian retailers. According to the Brazilian supermarket association ABRAS, these are, in descending order: Carrefour, Sendas-Assaí, Grupo Mateus and Grupo Pão de Açúcar.<sup>24</sup>

First, the dPaP data enabled us to establish links between beef products scanned in Brazilian retailers' stores and their slaughterhouses. Links between these slaughterhouses and potential direct and indirect cattle suppliers were then established using a sample of records of Animal Transportation Guides (*Guia de Trânsito Animal*, GTA) records, a mandatory document for cattle transfers between farms, or from farms to slaughterhouses in Brazil.

This GTA data sample covers direct (Tier 1) and indirect (Tier 2) suppliers to slaughterhouses operated by JBS, Marfrig, and Minerva Foods. The GTA sample covers data from seven Brazilian states: Goiás, Minas Gerais, Mato Grosso, Mato Grosso do Sul, Pará, Rondônia and Tocantins. This data reflects commercial relationships at a specific

21 Spers E E, Carvalho Burnier P and Lucchese-Cheung T (2021) *Beef Consumption Pattern in Brazil*, in *Meat and Nutrition*, edited by Chhabi Lal Ranabhat, 2021

22 For this report, deforestation is defined as clearing native vegetation in the Amazon and Cerrado biomes, including forests, grasslands, and other types of native vegetation.

23 For Do pasto ao prato app, see: <https://www.dopastoaoprato.com.br/>

24 ABRAS (2023) *Ranking Abras 2023, SuperHiper*, nº 558, May 2023, ABRAS: São Paulo, Brazil

point in time between farms, and between farms and slaughterhouses. Mighty Earth urges full disclosure of these relationships between slaughterhouses and their direct and indirect cattle suppliers to enhance transparency and traceability and to strengthen the fight against deforestation and degradation.

Finally, we overlapped PRODES and DETER high resolution deforestation satellite monitoring data (August 2023–September 2025) from the Amazon, Pantanal, and Cerrado biomes onto properties identified as potential direct and indirect cattle suppliers to target slaughterhouses. This step enabled us to identify possible links between deforestation on cattle ranches, slaughterhouses, and beef products sold in Brazilian retailers' stores.

This report also features seven case studies of deforestation in Brazil's most threatened biomes. These illustrate cattle ranches that directly and/or indirectly supplied slaughterhouses sourcing beef products for the identified retailers' stores. Each includes before-and-after satellite imagery to illustrate real-time deforestation, compliance data with Brazilian environmental regulations, and details on retailer and supply chain links.

# APPENDIX 1 - METHODS

## Monitoring deforestation in Brazilian cattle supply chains



### **Step 1.** In-store beef product scanning using the Do Pasto Ao Prato app

Consumers, volunteers and paid data collectors used the DPaP app to scan and record information about beef products found in retail stores of the four leading retail groups in Brazil – Carrefour, Grupo Pão de Açúcar, Sendas-Assaí and Grupo Mateus – located in five Brazilian regions that were previously defined according to their population and presence of the retailers. In most cases, photos were taken. The data is transmitted to the DPaP database.

Using the DPaP app, data collectors registered the supermarket locations and the slaughterhouse registration numbers on beef products, such as the SIF, SIE, and CNPJ codes, among others. Whenever possible, pictures of the identified products were taken. The aim is to identify the full range of origins of the different fresh, frozen and processed beef products. This data is then added to the DPaP regular database and processed and analyzed using the same methods and criteria.

The DPaP app links the sanitary codes (SIF, SIE or other) or the tax code (CNPJ) associated with a slaughterhouse to the specific establishment where the user is located. Leveraging the user's location data, the app generates a list of nearby retail stores, allowing users to select the one they are currently in. Following this selection, the application securely stores information about the slaughterhouses that supply products to the selected store in its database.

### **Step 2.** Share Do Pasto ao Prato data

The DPaP database contains a sample of the identified beef products found in Brazilian retailers' stores with the following information:

DATETIME
PLATFORM
REF_NUMBER
REGISTERED
REQUEST_INCLUSION
STATE_TYPE_OF_REF
SUPERMARKET
TYPE_OF_MEET
TYPE_OF_REF
UNI_ID
Cnpj
SIF Code
APP_VERSION
LOCATION_OF_SUPERMARKET
PONTUACAO_SUSTENTABILIDADE
SUPERMARKET_NAME
TYPES_OF_PLACE
LAT
LON
BUSINESS_STATUS
FORMATTED_ADDRESS
STORE_LAT
STORE_LNG
NAME
RATING
TYPES
USER_RATINGS_TOTAL
MUNICIPALITY
STATE
WEBSITE
PRICE_LEVEL
REGIAO
SUPERMERCADO_GRUPO
CARNE_TIPO
PRODUTO
SOURCE
HOLDER

**SIF Code:** The entries without a SIF code are removed, since without this information, it is impossible to locate the slaughterhouses from where the product originates. In some entries, the SIF code is filled in as the reference number ("REF\_NUMBER"), so all entries with a reference number and/or a SIF code are retained.

**Type of meat (CARNE\_TIPO):** all the entries linked to poultry and pork products are removed ("CARNE\_TIPO"). All the products linked to beef products are retained.

**All the retained entries** have a linked "DATETIME", "REF\_NUMBER", "CNPJ", "SIF Code", "FORMATTED\_ADDRESS", "NAME", "MUNICIPALITY", "STATE", "CARNE\_TIPO" and "HOLDER".

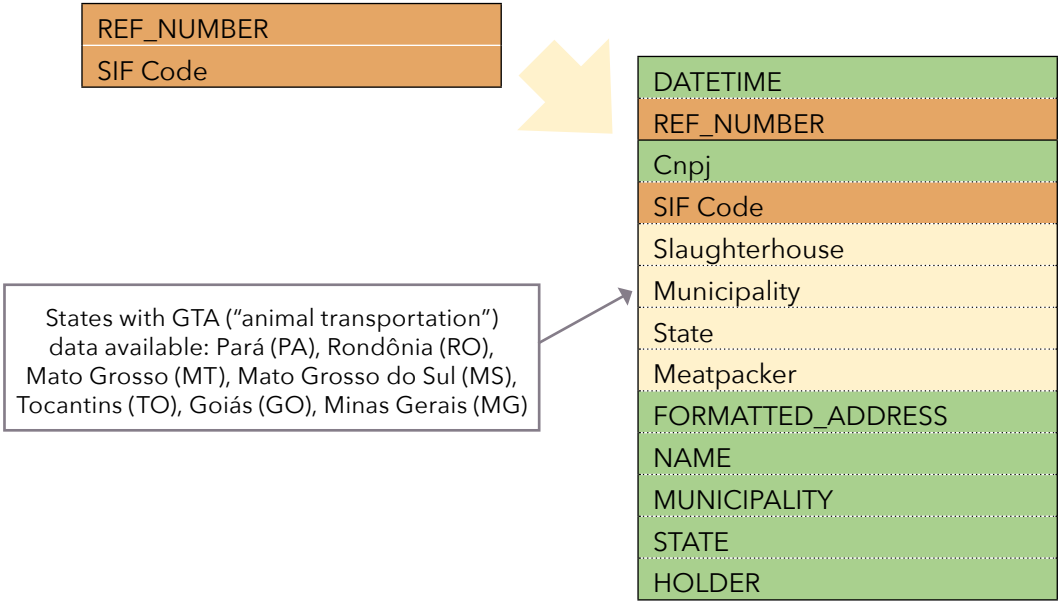


DATETIME
REF_NUMBER
Cnpj
SIF Code
FORMATTED_ADDRESS
NAME
MUNICIPALITY
STATE
CARNE TIPO
HOLDER

### Step 3. Identification of slaughterhouses using SIF Codes

Using the list of SIF codes, the slaughterhouses of origin are identified with reference to official Inspection Federal Services (SIF) registration data or other registrations, such as CNPJ and SIE, linked to the Brazilian Ministry of Agriculture, the Tax Office or open-access state databases. This enables the identification of slaughterhouse operators and their location, including their municipality and state.

Considering the list of the identified slaughterhouses, their location, and their operators, we selected only those operated by **JBS**, **Marfrig**, and **Minerva Foods** in seven states (Pará, Rondônia, Mato Grosso, Mato Grosso do Sul, Tocantins, Goiás, Minas Gerais). The selection of meatpackers and states is shaped by a sample of data on animal transportation guides retrieved through the GTAs. Only entries linked to slaughterhouses operated by one of these three target meatpackers in one of the seven states are retained at this step.



**Step 4.** Identification of properties that directly or indirectly supply cattle to the selected slaughterhouses. Identifying these suppliers is possible through overlapping a sample of GTA data covering suppliers in seven Brazilian states with the official land tenure registration system data, known as SIGEF and SNCI.

The available GTA data is only a sample, since the number of GTA records we have access to does not cover the entire Brazilian territory and does not include all GTA records. Our sample includes data for only seven states from 2017 to 2025, and it does not cover the whole meatpackers’ supply chain. It is not possible to estimate the exact proportion of the sample relative to the total suppliers of the targeted meatpackers. Because the data released by the meatpackers is not fully accurate (ie it may be outdated; some only covers direct suppliers, some only covers the Amazon biome, for example), it is difficult to calculate the proportional coverage of the direct and indirect suppliers we found compared to the total meatpackers’ suppliers. Furthermore, our sample only includes the 38 slaughterhouses linked to the beef products found in the visited stores. The sample of GTA data covers direct and indirect suppliers to the selected slaughterhouses of the three largest meatpackers in the states of Mato Grosso, Mato Grosso do Sul, Goiás, Minas Gerais, Rondônia, Pará and Tocantins. Only the direct (Tier 1) and indirect (Tier 2) suppliers to the targeted slaughterhouses were extracted from the GTA sample. Once a supply relationship has been established (regardless of the year it was identified), we consider that farm to be a potential direct or indirect supplier to the target slaughterhouses.

**Step 5.** Overlay official deforestation data from PRODES and DETER platforms with properties identified as potential direct and indirect suppliers to the targeted slaughterhouses.

Once the supply chain link between the farm and the slaughterhouse has been established, regardless of the year the animals were transferred, the database recognizes it as a potential direct or indirect supplier to the targeted slaughterhouses. Deforestation data over the years can be then overlaid with the supplier property polygons. The analysis considered two periods for calculating deforestation: between 2023 and 2025 and between August 2025 and September 2025, both periods including legal and illegal deforestation.

Timeline		Source	Details
August 2023	July 2024	PRODES 2024	Identified deforestation indicates deforestation (legal and illegal) that occurred in a sample of direct and indirect suppliers between August 2023 and July 2025. The Brazilian Forest Code does not allow illegal deforestation after July 2008.
August 2024	July 2025	PRODES 2025	
August 2025	September 2025	DETER 2025	DETER is an alert system used by the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) and other relevant agencies for monitoring and control of deforestation and forest degradation.

The identified properties may directly supply one slaughterhouse and indirectly supply another or even more than one slaughterhouse; therefore, the simple totals may include one supplier more than once. To avoid double counting, a “total without overlap” is calculated by removing repetitive deforestation data of properties that directly and indirectly supply more than one slaughterhouse.

**Step 6.** Quantitative and qualitative case study research

Case studies are then selected to illustrate the links between recent deforestation on properties that supply slaughterhouses, and the origin of beef products sampled in retail stores. Recent deforestation data from DETER satellite monitoring deforestation alerts from August 2024 to January 2026 is overlapped with properties that directly and indirectly supply the selected slaughterhouses. Once the case study is selected, satellite imagery visually confirms the deforestation alert, and the actual deforestation is calculated using high-resolution Planet GIS satellite imagery.

The criteria used to select case studies are based on key information, such as the amount of recent deforestation, remaining native vegetation, proximity to Indigenous territories, the illegality of the deforestation, and a variety of direct and indirect suppliers to the targeted slaughterhouses. Each case study includes quantitative and qualitative data on the farm and ownership, supply chain links to the targeted slaughterhouses, and before-and-after imagery to show evidence of the reported deforestation.

**Step 7:** Right of reply for companies cited in Mighty Earth’s Rapid Response report

Meatpackers that have had commercial relationships with the selected farms identified by GTAs since 2017 received a communication from Mighty Earth inviting them to provide a right of reply on the cases identified. Retailers who have sold beef products originating from the affected slaughterhouses also receive a right of reply before the report is released. Responses are published in the same report and as an attachment.

**Acknowledgements:**

The Rapid Response – Cattle Report is published by Mighty Earth, in partnership with Aid Environment, using data collected through the Do Pasto ao Prato Initiative, and with additional research from Repórter Brasil. Mighty Earth thanks the designer, the copy editor and the volunteer researchers who worked on collecting data on beef products in several Brazilian supermarkets through the Do Pasto ao Prato app.



Mighty Earth

April 2026

1701 Rhode Island Avenue NW

Suite 3-123

Washington, D.C. 20036

[mightyeearth.org](http://mightyeearth.org)