

How Americans' Appetite for Leather in Luxury SUVs Worsens Amazon Deforestation

An examination of Brazil's immense tannery industry shows how hides from illegally deforested ranches can easily reach the global marketplace. In the United States, much of the demand for Brazilian leather comes from automakers.

By **Manuela Andreoni, Hiroko Tabuchi and Albert Sun** Photographs by **Victor Moriyama**

Nov. 17, 2021

This article was produced in partnership with the Pulitzer Center's Rainforest Investigations Network.

BURITIS, Brazil — One morning this summer, Odilon Caetano Felipe, a rancher who raises cattle on illegally deforested land in the Amazon, met with a trader and signed over 72 newly fattened animals. With that stroke of the pen, Mr. Felipe gave his cattle a clean record: By selling them, he obscured their role in the destruction of the world's largest rainforest.

Over lunch shortly after the July 14 sale, Mr. Felipe spoke openly about the business that has made him wealthy. He acknowledged cutting down the thick Amazon forest and that he had not paid for the land. He also said he structured his sales to hide the true origins of his cattle by selling to a middleman, creating a paper trail falsely showing his animals as coming from a legal ranch. Other ranchers in the area do the same, he said.

"It makes no difference," he said, whether his farm is legal or not.

A New York Times investigation into Brazil's rapidly expanding slaughterhouse industry — a business that sells not only beef to the world, but tons of leather annually to major companies in the United States and elsewhere — has identified loopholes in its monitoring systems that allow hides from cattle kept on illegally deforested Amazon land to flow undetected through Brazil's tanneries and on to buyers worldwide.

Climate Fwd A new administration, an ongoing climate emergency — and a ton of news. Our newsletter will help you stay on top of it. [Get it sent to your inbox.](#)

Mr. Felipe's ranch is one of more than 600 that operate in an area of the Amazon known as Jaci-Paraná, a specially protected environmental reserve where deforestation is restricted. And transactions like his are the linchpins of a complex global trade that links Amazon deforestation to a growing appetite in the United States for luxurious leather seats in pickup trucks, SUVs and other vehicles sold by some of the world's largest automakers, among them General Motors, Ford and Volkswagen.

A luxury vehicle can require a dozen or more hides, and suppliers in the United States increasingly buy their leather from Brazil. While the Amazon region is one of the world's major providers of beef, increasingly to Asian nations, the global appetite for affordable leather also means that the hides of these millions of cattle supply a lucrative international leather market valued in the hundreds of billions of dollars annually.



Odilon Caetano Felipe, a rancher, acknowledged that he had deforested land within the Jaci-Paraná protected area.



Cattle at Mr. Felipe's farm were rounded up for shipment to a slaughterhouse.



Burning pasture land near Porto Velho, the capital of Rondônia.

This leather trade shows how the wealthy world's shopping habits are tied to environmental degradation in developing nations, in this case by helping to fund destruction of the Amazon despite its valuable biodiversity and the scientific consensus that protecting it would help to slow climate change.

To track the global trade in leather from illegal ranches in the Brazilian rainforest to the seats in American vehicles, The Times interviewed ranchers, traders, prosecutors and regulators in Brazil, and visited tanneries, ranches and other facilities. The Times spoke to participants at all levels of the illicit trade in the Jaci-Paraná Extractive Reserve, an area in Rondônia State that has been granted special protections because it is home to communities of people who, for generations, have lived off the land by tapping rubber trees.

These communities are now being forced out by ranchers who want the land for cattle. Over the past decade, ranchers have significantly expanded their presence in the reserve, and today some 56 percent of it has been cleared, according to data compiled by the state environmental agency.

The reporting is also based on analysis of corporate and international trade data in several countries and thousands of cattle-transport certificates issued by the Brazilian government. The certificates were obtained by the Environmental Investigation Agency, an advocacy group in Washington. The Times independently verified the certificates and separately obtained thousands of additional ones.

This enabled the tracking of leather from illegal farms in the Amazon to slaughterhouses operated by Brazil's three biggest meatpackers, JBS, Marfrig and Minerva, and then to the tanneries they supply. JBS describes itself as the world's largest leather processor.

According to Aidee Maria Moser, a retired prosecutor in Rondônia State who spent almost two decades fighting illegal ranching in the Jaci-Paraná reserve, the practice of selling animals reared in the reserve to middleman traders suggests an intent to conceal their origin. "It's a way to give a veneer of legality to the cattle," she said, "so slaughterhouses can deny there was anything illegal."

The problem isn't limited to Rondônia. Last month, an audit led by prosecutors in the neighboring state of Pará, home to the second-largest cattle herd in the Amazon, found that JBS had bought 301,000 animals, amounting to 32 percent of its purchases in the state, between January 2018 and June 2019 from farms that violated commitments to prevent illegal deforestation.

JBS disagreed with the criteria used by the prosecutors and agreed to improve its monitoring system, block suppliers flagged by the research and donate \$900,000 to the state in response to the audit.

To get a sense of scale of the ranches operating in vulnerable areas across the Brazilian Amazon, The Times overlaid government maps of protected Amazon land, deforested areas and farm boundaries with the locations of ranches that JBS publicly listed as supplying its slaughterhouses in 2020. An analysis showed that, among the JBS suppliers, ranches covering an estimated 2,500 square miles significantly overlapped Indigenous land, a conservation zone or an area that was deforested after 2008, when laws regulating deforestation were put in place in Brazil.

The methodology and results were examined and verified by a team of independent researchers and academics who study land use in the Brazilian Amazon.

International trade data showed companies that own tanneries supplied with the hides had then shipped leather to factories in Mexico run by Lear, a major seat maker that supplies auto assembly plants across the United States. Lear said in 2018 that it was then sourcing about 70 percent of its raw hides from Brazil. Brazil's hides also go to other countries including Italy, Vietnam and China for use in the automotive, fashion and furniture industries, the trade data showed.

JBS acknowledged that almost three-quarters of the ranches identified in The Times's analysis did overlap with land that the government categorizes as illegally deforested, or as Indigenous land or a conservation zone. But it said all the ranches had been in compliance with rules to prevent deforestation when JBS bought from them.

JBS said that, in those instances where there were overlaps, the farms were allowed to operate in protected or deforested areas, or their boundaries had changed, or they had followed rules to fix their environmental violations. Ranching is allowed in some protected areas in Brazil if it follows sustainable practices.

In a statement, JBS said it has maintained a monitoring system for more than a decade that verifies supplier compliance with its environmental policy. "More than 14,000 suppliers have been blocked for failure to comply with this policy," it said. However, the company said, "the great challenge for JBS, and for the beef cattle supply chain in general, is to monitor the suppliers of its suppliers, since the company has no information about them."



A farm on the edge of a burned area near Cacoal, in Rondônia.



Cattle from Mr. Felipe's farm were herded onto trucks for transport to slaughter.



Cattle trucks arrived at a Marfrig slaughterhouse in Ji Paraná, a city in Rondônia.

Amazon deforestation has surged in recent years as ranchers race to supply growing demand for beef, particularly in China. Leather industry representatives make the point that as long as there is demand for beef, they are simply using hides that would otherwise be sent to landfills.

Raoni Rajão, who studies Amazon supply chains at the Federal University of Minas Gerais, said that because the leather industry makes ranching more profitable, it shares responsibility for any deforestation. "Leather can have high added value," he said.

Forest loss is destroying the Amazon's ability to absorb carbon dioxide, which trees pull out of the air. Carbon dioxide from the burning of fossil fuels is the main driver of climate change. Brazil was one of more than 100 nations to pledge to end deforestation by 2030 at the recent United Nations climate summit in Glasgow.

While most ranches in the Amazon region aren't linked to illegal deforestation, the findings show how illegal leather is entering the global supply chain, circumventing a system that slaughterhouses and leather companies themselves created in recent years to try to show that their cattle come only from legitimate ranches.

In response to detailed questions, JBS, Marfrig and Minerva said they weren't aware that cattle from the Jaci-Paraná reserve were entering their supply chains.

All three said they had systems to monitor farms that supply their slaughterhouses directly, and that they exclude farms that don't comply with environmental laws. But all three acknowledged that they can't trace indirect suppliers, such as Mr. Felipe, who sell cattle through middlemen, masking their origins.

Lear said it used "a robust sourcing process" that ensured it worked "with the most capable and advanced suppliers that are committed to purchasing hides from cattle reared on compliant farms." The company said that if suppliers violated its policies, it would take steps that could include canceling their contracts "and/or legal action against the supplier."

G.M. said it expected suppliers to "comply with laws, regulations, and act in a way consistent with the principles and values" of the automaker. Ford said it aspired "to source only raw materials that are responsibly produced." Volkswagen said its suppliers already adhered to a high level of sustainability.

In Jaci-Paraná, the global demand for leather is helping to sustain a growing herd of 120,000 cattle where forest once stood. "If all the cattle were sold," said Ms. Moser, the former prosecutor, the government would have enough money "to reforest the whole reserve."

'I came here to kill you'



Lourenço Durães at his home on the banks of the Jaci-Paraná River in July.

It was pouring rain last December when two men docked at Lourenço Durães' home by the Jaci-Paraná River. Mr. Durães, a 71-year-old rubber tapper, invited the men in and offered them coffee. Then, after discussing the weather for a few minutes, one of the visitors got right to the point.

"I won't fool you," he said, according to Mr. Durães and one of his friends, who together described the meeting recently. "I came here to kill you."

They wanted to get rid of Mr. Durães because his land is valuable to ranchers.

Jaci-Paraná was created in 1996 to grant a community of rubber-tree tappers the right to pursue their livelihood. Mr. Durães is among the last of the tappers. The community is being pushed out by deforestation.

"We are frightened, but I hope for justice," Mr. Durães said, adding that he believed he was spared that day because he is an old man.

According to Mr. Durães and a police report filed by his friend, the would-be hit man identified the person who had sent him, but only by a nickname. The police didn't investigate, according to the police report, because Mr. Durães and his friend couldn't provide a full name of a person to press charges against.

In an interview, Lucilene Pedrosa, who directs the regional police division, said her team was waiting for the men to provide more information so it could investigate.

Government data analyzed by The Times shows the appetite for land in the area. According to the numbers, between January 2018 and June 2021 ranches operating in Jaci-Paraná on illegally deforested land sold at least 17,700 cattle to intermediate ranches. The buyers were suppliers to the three big meatpackers, JBS, Marfrig and Minerva, according to both government and corporate data.



The forested area where Mr. Durães lives and taps rubber trees.



A logging truck in the Jaci-Paraná reserve.



Mr. Durães arrived at his home by the Jaci-Paraná River.

Almost half of those 17,700 cattle were bought by Armando Castanheira Filho, a local trader who has been one of the largest buyers in Jaci-Paraná and a direct supplier to all three major meatpackers. The sales to him created a paper trail that concealed that the cattle originated on illegal ranches.

A Times reporter witnessed such a transaction when Mr. Felipe, the rancher who acknowledged engaging in deforestation, sold his 72 cattle this year. The buyer that day was Mr. Castanheira.

The Times then tracked the animals. Eleven hours later, they ended up at a Marfrig slaughterhouse.

Marfrig runs a website listing where its cattle come from in an effort to show that it sources cattle responsibly. For the July 14 shipment tracked by The Times, Mr. Felipe's ranch isn't listed on the site. But the list of farms that supplied cattle for the next day's slaughter does include Mr. Castanheira's farm, which is located outside the reserve.

At the end of that day at the Marfrig slaughterhouse, a truck marked with the name of a tannery, Bluamerica, left the slaughterhouse carrying hides. Bluamerica is a tannery that supplies Lear, the automobile seat maker.

Mr. Castanheira confirmed that some of the cattle he buys from the reserve go directly to slaughter, spending no time at his ranch, although the paperwork shows they went through his own farm first. He denied doing it to hide the cattle's origin.

"I don't do this to 'launder' anything," he wrote in a text message. He said his intent was simply to profit from the difference between what he pays for each animal and what he can get at the slaughterhouse.

Marfrig, Minerva and JBS said they did not dispatch trucks to pick up cattle at the Jaci-Paraná reserve, or any location other than their direct suppliers. Lawyers for Marfrig have also filed a report with the police that lists the events described by The Times, calling them "potential offenses of criminal nature."

Mr. Castanheira now maintains that the Times reporter witnessed the only instance of this kind of transaction by him. All three meatpacking companies said they have now excluded Mr. Castanheira from their supplier pool.



A statue by the road into Ariquemes, a city in Rondônia.



Odilon Caetano Felipe, left, weighed his animals for Armando Castanheira Filho, the cattle middleman.



Armando Castanheira Filho's ranch, Santo Angelo, is outside the protected reserve.

Two of Bluamerica's owners, companies named Viposa and Vancouros, said their suppliers were subject to regular audits and acknowledged the challenges of tracing indirect suppliers. Both companies said they were working with the World Wide Fund for Nature, an environmental group based in Switzerland, to improve their systems.

Overall, an analysis of government data on cattle movement in Jaci-Paraná and nearby areas between 2018 and 2021 identified 124 transactions that show signs of cattle laundering, experts say. The transactions show at least 5,600 cattle were transferred from farms in the reserve to middlemen who, on the same day, sold cattle to the three major slaughterhouses.

Holly Gibbs, a University of Wisconsin-Madison geographer who has been researching agribusiness in the Amazon for a decade, said that though legitimate middlemen often buy and sell cattle on the same day, the fact that the transactions aren't closely tracked "is a huge loophole."

"They're bringing animals that were raised on a protected area into national and international supply chains," she said.

The supply chain, from the ranch to the auto showroom, is complex. Hides from Minerva and JBS slaughterhouses go to JBS-owned tanneries, while Marfrig's hides are mainly processed by Vancouros and Viposa, according to corporate data and interviews. Trade data compiled by Panjiva, the supply-chain research unit at S&P Global Market Intelligence, shows that the seat manufacturer Lear, which is based in Southfield, Mich., is the largest American buyer of hides from JBS, Vancouros and Viposa.

This past May, illegal ranchers in Jaci-Paraná won a major victory. Rondônia's governor signed into law a measure that shrank the size of the reserve by 90 percent.

The law, which prosecutors are fighting in court, opens a path for ranchers on illegally deforested land to legalize their businesses. Critics of the law said it could set a precedent for further deforestation in other protected reserves.

No matter the outcome of that legal fight, Mr. Durães, the rubber tapper, said he did not intend to leave his sliver of forest. The cattle pasture is now barely a mile away from his two-room wooden home.

Living among the mighty trees is the only existence he knows. And staying, he said, is "the only way to keep the forest standing."

'Transparency' with a loophole



Piles of partly processed hides in the Vancouros tannery in Londrina, Brazil.

Every few seconds at the Vancouros tannery in southern Brazil, the sound of leather hides tumbling in dozens of 11-foot wooden drums is interrupted by the clicks of a pneumatic marker as each individual hide is pierced with a seven-digit code that traces its origin.

Clébio Marques, the tannery's commercial director, plucked a damp blue hide from a pile, pulled out his phone and typed its code into a website that his company created for its clients, such as Lear. Up popped the details of the supplier of that specific hide.

"All of our leather is traceable," he said. "This is not required, no one asked for it, but we felt the market needed more transparency."

But then Mr. Marques was presented with the finding that one of his most important suppliers, Marfrig, was buying cattle from suppliers whose transactions showed signs of cattle laundering. "I'm surprised," he said. "We expect the main product to be legal."

He stressed, though, that his own company's monitoring wasn't at fault. "We have to trust the documents that are provided to us, because our audit is based on their system," Mr. Marques said.

All three major meatpackers have systems designed to track the last farm where the cattle they slaughter came from. However, all three have the same flaw: They don't account for the fact that cattle don't typically spend their whole lives on a single farm. Therefore, they don't consider that a direct supplier might be selling cattle that were actually raised by someone else, on illegally deforested land.

The tracking systems were created after a 2009 Greenpeace report that linked Brazilian beef and leather suppliers to illegal deforestation. Today, the three major firms state that they have zero-tolerance deforestation policies for all direct suppliers.



Hides, destined for a tannery, at a slaughterhouse in Porto Velho in July.



The Vancouros tannery is one of Lear's suppliers, trade data shows.



A slaughterhouse in Porto Velho. China is a major buyer of beef produced in Brazil.

All three major slaughterhouses publicly post their tracking data online. JBS's is the most detailed; the other companies omit ranches' precise locations. It was the Times analysis of this JBS data for 2020, the most recent year available, that indicated the company's suppliers included ranches that may have violated government rules designed to prevent deforestation and displacement of Indigenous people.

JBS said all of its suppliers were in compliance at the time of purchasing. Marfrig and Minerva said that they shared as much information about their direct suppliers as permissible under Brazil's data privacy law.

As part of this process, tanneries rely on an industry-funded organization, the Leather Working Group, to certify their compliance. The group has assigned its top rating, "gold," to all the Amazon-based tanneries that supply Lear with leather, signifying that they adhere to environmentally sustainable practices.

In a statement, the group said it was working to improve its traceability protocols but that "due the complexity of the farming systems in Brazil and lack of publicly available databases, there is still, unfortunately, no easy solution for this situation."

JBS, Marfrig and Minerva all have publicly pledged to improve the tracking of ranches that sell cattle to its direct suppliers. JBS has said it will trace one layer of indirect suppliers by 2025. Marfrig vowed to trace all its indirect suppliers in the Amazon by 2025 and Minerva said it would have fully traceable supply chains in South America by 2030.

"Only a birth-to-slaughter traceability for individual animals is going to be enough to ensure that there is no deforestation in these high-risk supply chains in the Amazon," said Rick Jacobsen of the Environmental Investigation Agency, the nonprofit group.

From Brazil to America's car lots



Stacks of leather at a Vancouros operation in Londrina.

The leather seats in Cadillac's Escalade SUV, described by a dealer in Washington State as "a luxury hotel on wheels," can push the price for General Motors' top-of-the-line model to more than \$100,000.

The Escalade is one of the many vehicles sold in the United States that uses leather seats and other trimmings from Lear, a company that commands about a fifth of the world's market in car seats.

Neither Lear nor G.M. labels where the leather for its car seats comes from. Lear's imports of Brazilian leather have surged over the past decade, driven by a jump in leather sourced from JBS, according to data from Panjiva, the supply-chain data company. Last year, Lear was the largest American importer of leather and hides from Brazil, importing about 6,000 tons, the bulk of that from JBS,

according to Panjiva data.

Full-size trucks and large SUVs are a growing force behind the demand for leather trimmings in the auto industry. To many buyers, leather “screams luxury and usually adds significant resale value,” said Drew Winter, a senior analyst at Wards Intelligence, an automotive research firm.

Raymond E. Scott, Lear’s chief executive, laid out the importance of luxury vehicles at an investor presentation in June. The company has 45 percent of the luxury market, he said. And what was propelling the growth in Lear’s seating business was “really the strength of G.M.’s full-size trucks and SUVs,” a lineup that also includes the Yukon, Chevrolet Tahoe and Suburban.

In Brazil, “100 percent of our suppliers use geo-fencing” (a technology that uses GPS to establish a virtual fence) “to ensure they don’t buy animals from farms involved with deforestation,” Lear said in a 2018 statement.

However, The Times’s findings in Brazil indicate that Lear’s suppliers didn’t have the ability to track all cattle in this way.

Lear said it required all suppliers to comply with a no-deforestation policy, which bans the use of any materials sourced from illegally deforested areas or from Indigenous or other protected lands. According to corporate filings, Lear’s other biggest customers are Ford, Daimler, Volkswagen and Stellantis, formed from the merger of Fiat Chrysler and the French maker of Peugeot and Citroën cars.



Pastureland near Buritis in Rondônia State.



The Vancouros tannery in Londrina.



A Cadillac Escalade at a movie premiere last year in Los Angeles. David Mcnew/EPA, via Shutterstock

General Motors said its supply chain was “built on strong, transparent and trusted relationships.” Ford said it held itself and its suppliers to ambitious standards and “did well in many areas and can improve in others.” Volkswagen said it was working on better tracking the supply chain back to the farm.

Daimler said that a small percentage of its leather came from Brazil. Stellantis said it shared concerns over traceability, and was actively working to confirm locations of tanneries and farms in its supply chain.

Last year, about one-third of the 15,000 tons of leather imported to the United States came from Brazil, which recently overtook Italy to become the biggest exporter of leather and hides to America. Much of that increase can be attributed to the auto industry.

The bulk of JBS's leather shipments to Lear in the United States travels from São Paulo to Houston, according to trade data from Panjiva. From there, much of it is trucked across the Mexican border to one of two dozen car-seat factories operated by Lear in Mexico, where workers cut the hides and stitch them into seat covers.

The leather is then trucked back over the border. From January 2019 through June 2021, Lear's plants in Mexico shipped at least 1,800 tons of leather to the United States, according to trucking data tallied by Material Research.

Its final destination: Lear facilities nationwide. They tend to be located closer to the final automobile-assembly plants, making it easier for the company to match color and other variations to the models coming down the vehicle assembly lines.

One such destination is General Motors' plant in Arlington, Texas, a sprawling campus on 250 acres where the automaker produces some of the company's largest and most luxurious trucks, including the Escalade. Autoworkers assemble about 1,300 SUVs a day for sale in the United States as well as for export.

A 10-minute drive away, Lear has a factory that makes leather seats.

Manuela Andreoni reported from the Jaci-Paraná reserve in Brazil. Hiroko Tabuchi and Albert Sun reported from New York.