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# Revealing Brazil's rotten agribusinesses

by Universidade Federal de Minas Gerais

Following reports that Brazil's current deforestation rate—1 million hectares—is the highest in a decade, a peer-reviewed study published in *Science* today finds that 18-22%, and possibly more, of Brazil's annual exports to the European Union are potentially contaminated with illegal deforestation, while identifying for the first time the specific producers of soy in Brazil responsible for "poisoning the barrel." Unveiling these "bad apples" among soy and beef producers, but also revealing that a vast majority—some 80% of the country's farmers—abide by the Forest Code law, the study suggests deforestation-free Brazilian agricultural production is within reach, if leaders act.

"Until now, agribusiness and the Brazilian government have claimed that they cannot monitor the entire supply chain, nor distinguish the legal from the illegal deforestation," said Raoni Rajão, a professor at the Universidade Federal de Minas Gerais (UFMG) in Belo Horizonte, Brazil, and the lead author of *The Rotten Apples of Brazil's Agribusiness*. "Not anymore. We used freely available maps and data to reveal the specific farmers and ranchers clearing forests to produce soy and beef ultimately destined for Europe. Now, Brazil has the information it needs to take swift and decisive action against these rule-breakers to ensure that its exports are deforestation-free. Calling the situation hopeless is no longer an excuse."

The 12 researchers from Brazil, Germany and the U.S. who wrote the study developed high-powered software to analyze 815,000 individual rural properties in order to assess where illegal deforestation associated with soy and beef production are taking place and how much of these products is reaching the EU. The article also estimates the greenhouse gas emissions from deforestation that is linked with soy and beef exports, pointing out the shared responsibilities of international buyers.

## The Trouble with Trade

The article's findings come at a transformational moment in the history of the Amazon Basin, most of which falls on the national territory of Brazil. Led by President Jair Bolsonaro, who came into power in January 2019, the new administration has encouraged the clear-cutting of forests on private properties and public lands—in defiance of Brazil's Forest Code law and the soy moratorium agreement, which bans the clearing of forests for soy production. The government has also dismantled a series of environmental protections meant to stop illegal deforestation in conservation units and Indigenous Peoples' lands, staunch protectors of the country's forests.

International buyers of Brazil's agricultural commodities have long expressed concern that products contaminated with deforestation could be reaching their countries. EU leaders also have [openly](#)

criticized the Brazilian government, bolstering demands for the boycott of Brazilian products in response to the forest fires that ripped through the country in August 2019.

"Pummeled by the impacts of political signals encouraging the clearing of forests, mostly for land grabbing, Brazil's forests are at a breaking point," said Professor Britaldo Soares-Filho, a co-author also from UFMG. "It's critical for Europe to use its trade might and purchasing power to help roll back this tragic dismantling of Brazil's environmental protection, which has implications for the global climate, local people and the country's valued ecosystem services. With this research, policymakers in Brussels finally have the information they need to assess the extent of the problem in the Brazilian soy and beef sectors. It's time for them to act."

The European Union has laid out a plan for putting policies in place banning the import of products stemming from illegal deforestation, and they are also negotiating a lucrative trade deal with Mercosur, a bloc of South American countries that includes Brazil. Though this deal is facing increasing scrutiny in Europe, with calls for additional negotiations to add protections for forests and rights, the EU's relationship with Brazil puts it in a position to help the country end illegal deforestation. The evidence laid out in the report crystalizes where efforts should be directed.

"Right now, Brazil's enforcement of its own forest protection laws isn't strong enough to guarantee compliance with the European Union's strict environmental standards for trading partners," said Dr. Felipe Nunes from UFMG. "But if Brazil is serious about its trading ambitions, it can join forces with the EU to use its own available tools, such as the CAR (the country's online environmental registry) to end illegal deforestation linked to soy and beef supply chains. Brazil already has the means. All that's needed is the political will."

### **Contaminated Soy and Tainted Beef**

The article finds that producers on 45% of rural Amazon properties and 48% of rural Cerrado properties that supply soy and beef for exports are failing to comply with limits on deforestation laid out in Brazil's Forest Code. Of 53,000 properties producing soy in both regions, 20% have grown soy on land deforested after 2008; the authors estimate that half of this soy was produced on recently illegally deforested land.

Roughly 41%, or 13.6 million metric tons, of the EU's soy imports come from Brazil each year. Some 69% come from the Amazon and Cerrado regions. According to the study, about two million tons of soy grown on properties with illegal deforestation may have reached EU markets annually during the period of analysis, 500 thousand of which came from the Amazon. In most cases, the recently cleared areas are not used to grow soy in order to comply with the rules of the moratoria. But this has not prevented soy farms from clearing their lands illegally for pasturelands and other crops.

With respect to beef, the EU imports about 189,000 metric tons annually. The authors found that of a total 4.1 million head traded to slaughterhouses, at least 500 thousand head come directly from properties that may have deforested illegally. This represents 2% of beef produced in the Amazon and 13% in the Cerrado. But the largest problem lies in the indirect cattle suppliers that provide steers to fattening operations and are not being monitored by large slaughterhouses nor the government. By analyzing the flows of cattle between ranches, the study estimates that some 60%

of all slaughtered head could have been potentially contaminated with illegal deforestation (44% in the Amazon and 66% in the Cerrado) at some point in the supply chain.

## Soy Surge

Brazil is the world's largest producer of soy, followed by the United States and Argentina. The study reveals the production of soy, primarily used to feed meat and dairy livestock, is on the upswing across the country. Production has more than quadrupled over the past two decades and is projected to increase by another third over the next 10 years, with exports growing by 42%.

Pig farmers in the EU, the [world's largest pork exporter](#), rely on Brazilian soy, which is also a key ingredient in feed for chickens and other animals. The [increasing global demand for pork](#) from Asia and other regions has driven up production, which translates into increased demand for soy. This boom in soybean demand has hit the Cerrado region particularly hard. Known for its rich biodiversity, the world's largest tropical savanna has already lost half of its native vegetation.

## Europe's Deforestation-free Ambitions

The European Union has emerged as a global leader in developing public and private efforts to ensure deforestation-free imports of beef, soy, palm, timber and other products known to put tropical forests at risk. These efforts, as well as a food policy initiative aimed at cutting down on the long-distance transport of feed or agricultural products, are tied into the European Green Deal.

There are calls within the EU to reduce soy imports from Brazil; proposals have suggested importing the crop from geographically closer producers, such as the United States, or even building up production in the European Union's borders. This approach flows from the [Farm to Fork strategy for Sustainable food](#), a key component of the European Green Deal, which aims to significantly reduce carbon emissions from food production.

## Brazil's Opportunity to Lead

The researchers argue that Brazil could develop a transparent, web-based system using public information and methods laid out in their study to track which producers are illegally clearing forests from their properties. The authors suggest this approach would be preferable to current private systems under consideration by the EU, which would require companies to monitor themselves, or to hire third parties to do so—an approach that is costly, often lacks transparency, only encompasses few farms, and is prone to conflicts of interest.

"Brazil can no longer look the other way. It's now up to its political and economic leaders to root out the bad apples in the soy and beef sectors," said Professor Rajão. "If we were to do so, Brazil could become in practice and not only in discourse a global environmental powerhouse that protects its ecosystems, while feeding the world. In collaboration with a responsible agricultural sector, state and national governments can tackle climate change and protect some of the world's most biodiverse regions."

**More information:** R. Rajão et al., "The rotten apples of Brazil's agribusiness," *Science* (2020).  
[science.sciencemag.org/cgi/doi ... 1126/science.aba6646](https://science.sciencemag.org/cgi/doi/10.1126/science.aba6646)

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