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## Brazil

### Cattle, “Soyanization,” and Climate Change

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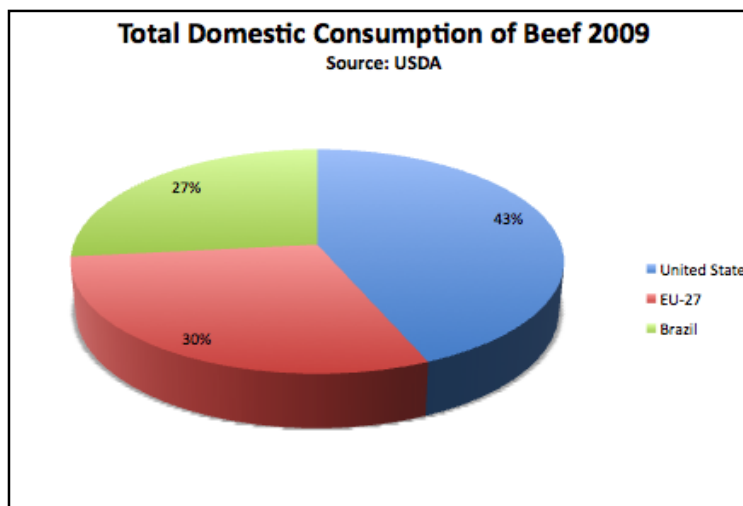
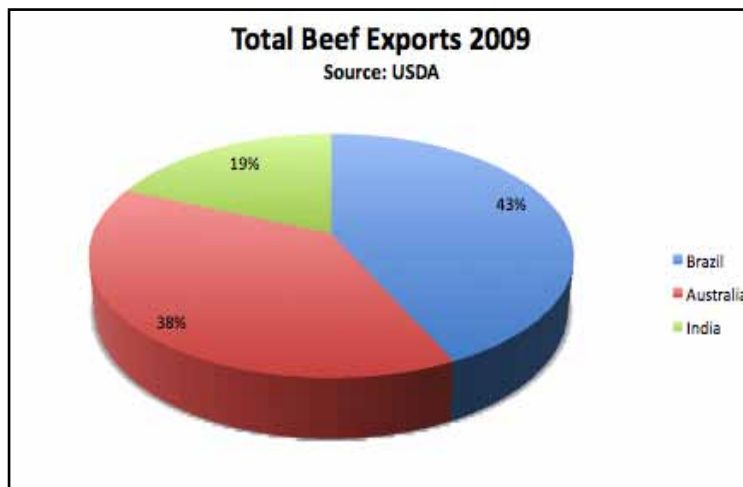
IN RECENT DECADES, BRAZIL, now the world’s tenth largest economy, has become an agricultural powerhouse, including in the area of livestock. It exports 35 percent of the world’s poultry—3.1 million metric tons annually—ousting the U.S in 2003 from its long-held position as the leading global poultry exporter. Brazil sells its poultry as far afield as Hong Kong, Yemen and the United Kingdom, and poultry production grew by 25 percent in the period between 2000 and 2007.

Brazilian *churrascaria*, or steakhouses, are famous for the variety and volume of barbecued meats they serve. Although Brazil’s national dish, the stew *feijoada*, is based on black turtle beans, it’s also cooked with beef and pork. With 190 million cattle, a figure that matches or even slightly exceeds the country’s human population, Brazil

has also become the global leader in beef exports, producing a quarter of the world’s beef. As a result of the expansion of the middle class and explicit anti-poverty government policies, meat consumption has grown in Brazil by an average of two percent each year since 1995. Brazilians on average consume 37 kilograms (81 pounds) of chicken a year, a level not far behind U.S. consumption of 45 kgs.

(99 lbs.) per person per year.

Also in recent decades, the Brazilian government has worked hard to develop its soy sector. Soy is valued as an integral part of animal feed and coveted as an important source of foreign currency. The country currently harvests 22.5 million hectares of soy each year, doubling the area harvested in the past decade and rivaling U.S. levels of production.



#### The (High) Costs of Soy Production

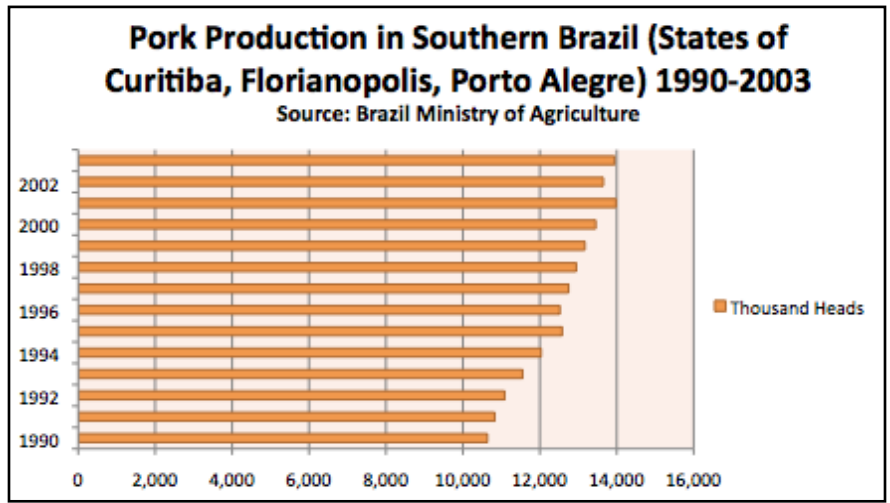
But Brazil’s domination of the beef industry and its central role in global soy production have come at a significant ecological cost in terms of water pollution, land degradation and destruction of biological diversity. In 2004, Brazil took the lead in global beef exports, largely as a result of cattle ranching in the Amazon. Although activists in the 1980s tried to turn consumers away from what they termed “rainforest beef,” the Brazilian Amazon has become an epicenter of cattle production. In 2007, for the first time, 10 million Amazonian cattle were slaughtered for meat, and the total cattle population in the rainforest has reached 73 million.

From 2004 to 2007,

Brazil's beef production increased by 46 percent with the number of cattle in the legal Amazon region exceeding 10 million. According to the Brazilian government, deforestation levels as of August 2008 showed a doubling from the previous year's levels, with cattle ranching the primary culprit, responsible for 65–70 percent of all land cleared.

Amid global pressure to curtail the destruction of the Amazon forests as a prime means of addressing climate change, Brazil's president, Luiz Inácio Lula da Silva has, pledged to cut deforestation rates by 72 percent by 2018, and Brazil's overall greenhouse gas (GHG) emissions 36 percent from projected levels by 2020. (Brazil is the world's fourth largest emitter of GHGs.) But Brazil's government also plans to double the nation's cattle herd by 2018; methane and other greenhouse gas (GHG) emissions from the cattle (as well as other livestock) sector are considerable. In 2003, the methane released from Brazil's cows' digestive processes (enteric fermentation) totaled 19Tg.

Soy, exported for animal feed to Europe and, increasingly, China, is also driving deforestation and the transformation of ecosystems in Brazil. Agricultural firms have planted soy in the Campos Sulinos natural grasslands in the southern state of Grande do Sul, and have contributed to the tearing down of vast swathes of the Atlantic Forest, where more than eight million hectares of soy now grow. It is, however, Brazil's Cerrado grasslands, home to over 200 species of mammal, ten thousand species of plants and the source of 80 percent of the Amazon's waterways, that bear the brunt of the country's foray into industrial soy production. The state of Mato Grosso (which literally means "Thick Forest", and

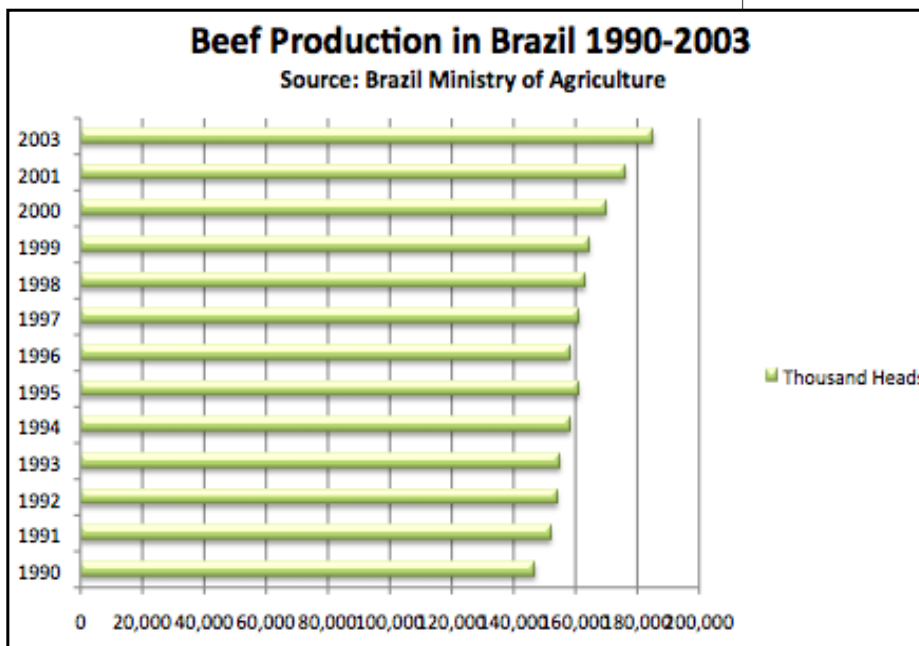


whose name is a testament to the vast stands of trees that once swept across the landscape), has become the epicenter of Brazilian soy production, producing 89 percent of the country's soy, according to a report by the World Wildlife Fund, "Managing the Soy Boom." Most of this production occurs on the Cerrado plains, where lax national forest code laws allow farmers to clear as much as 65–80 percent of their plots, as opposed to the 20 percent allowed in forested areas.

### The Livestock Sector

The development of Brazil's livestock sector plays an important role in the country's position as one of the world's top GHG emitting nations. As Brazil's forests and shrubs give way to soy and cattle, the carbon-absorbing capacity of the vegetation is lost. It is estimated that the Amazon forests capture and hold between 80 to 120 billion tons of carbon, helping to slow global warming. As trees are cut down, carbon-capturing capacities are diminished, and carbon dioxide is released into the air, accelerating climate change.

Deforestation in Brazil accounts for 75 percent of all carbon dioxide emissions, and in 2006 resulted in the pumping of close to 265 million tons of carbon dioxide into the atmosphere. Brazil's methane emissions, a greenhouse gas with 23 times the global warming potential of carbon dioxide, are also staggering. A recent study by EMBRAPA, the Brazilian agricultural research agency, found that each cow in Brazil emitted over 100 pounds of methane a year. Multiply this by the nearly 200 million cows living in Brazil today, and the total is vast.



### Deep Inroads

Brazil's expansion of the livestock sector and subsequent rate of deforestation is intimately linked with the global market

demand for agricultural commodities, be they soy derivatives, beef, poultry, pork or leather. Multinational companies have made deep inroads into Brazil, and have industrialized all aspects of Brazil's livestock sector, from corporate giant Bunge's industrial farms that grow 50,000 hectares of soy, to Arkansas-based Tyson's control over Macedo Agroindustrial, through which it plans to process 176,000 chickens daily. With the exception of Brazil's cattle, which still mainly roam freely on large tracts of land (much of it former forest), most of the industry leaders in egg, broiler chicken, veal and pork production have adopted factory farm style methods of production.

In 1957, the town of Bastos in the state of São Paulo opened itself to industrial livestock operations that continue to thrive there today. Its current levels of egg production—a thousand tons daily—exceed those of any other Brazilian city by a large margin. The city's website relates that its chickens consume over 400 tons of corn each day and produce 4,800 tons of manure monthly. In less than two months, according to the website, the city's egg output is greater than all of Brazil's population, 192 million people, a significant amount of eggs.

Brazil's supply of cheap labor and ample soy is also fueling an expansion of industrial hog facilities in the country, seeking to meet domestic and global demand for pork. In Mato Grosso, the town of Diamantino claims to be the "the capital of swine culture." It's home to the Diamantino Industrial Complex, a facility of almost epic proportions that coordinates the entire cycle of pork production, from

processing animal feed to hog breeding, to slaughter, processing and packaging. The complex houses one of the largest feed plants in the state, capable of producing 50 tons of grain an hour. Marfrig Alimentos S.A, the world's fourth biggest meat-packer, invested 128 million reais (\$72 million) in the complex in July 2009. By the time construction is completed in 2010, the facility will house up to 22,000 breeding sows and slaughter 3,000 hogs daily.

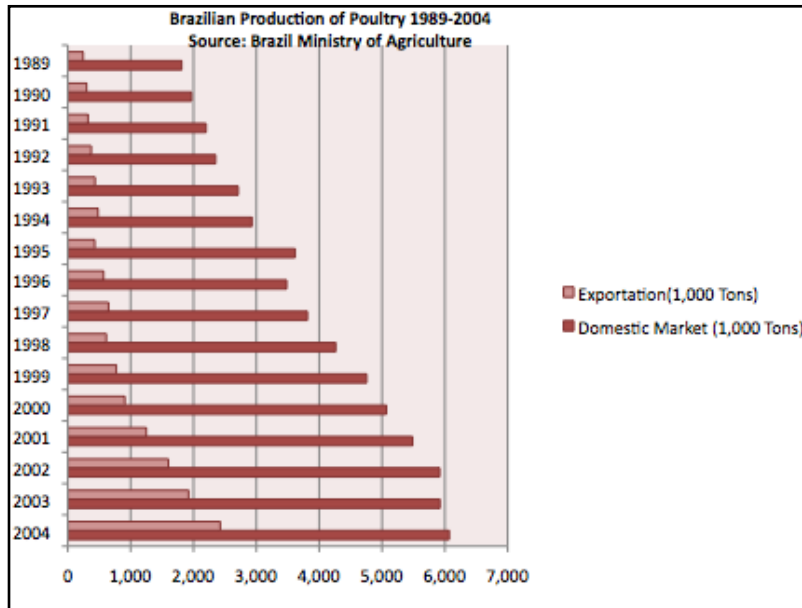
While the industrialization of Brazil's livestock sector has made domestic meat more affordable, including to

those in the country's lowest income brackets, by and large the benefits of Brazil's experiment with industrial animal agriculture have been limited to a minority of corporate stakeholders. According to Brazilian researcher and advocate Joao Meirelles Filho, monocultures, whether soy or cattle, have immense social costs. His research found that the cattle industry employs one person for every 700 cattle, and that centers of cattle production in Brazil have high rates of unemployment and poverty. For those who are able to find work on industrial farms, working conditions are abysmal, and rural workers are often forced into bonded labor. According to a 2007 report issued by Brazil's Labor Ministry, Amazon ranches accounted for 62 percent of enterprises dependent on slave labor.

### Fast-Food Brazil

Fast food consumption in Brazil is exploding, as more and more Brazilians choose

to eat in American-style fast-food outlets. The leader in the Brazilian market is McDonald's, which currently has 1,200 outlets in the country, in 138 cities in all five regions. Every day, 1.6 million people across Brazil eat at McDonald's. Marfrig and Sadia, two dominant Brazilian agribusinesses, supply Brazil's McDonald's with their meat. Bob's and Burger



King are also popular (Bob's offers a "homegrown" take on the American burger).

For Brazilians in urban centers, the spread of industrial animal agriculture and expansion of fast-food franchises has meant a growing rise in "diseases of affluence," such as obesity and diabetes.

As Brazil's Ministry of Environment works to document and prevent the destruction that has occurred at the hands of Brazilian ranchers and soy growers, it has met with increasing resistance from the agricultural lobby. Ahead of the Copenhagen climate talks, Brazil's State Department mediated sessions between the ministries of agriculture and environment, who are at odds over environmental legislation. In the past, the ministry of agriculture has succeeded in reducing the percentage of land allocated to "legal reserves," and continues to advocate a more lax interpretation and enforcement of environmental legislation.

A similar situation is playing out at the state-level, where agricultural interests are overturning environmental protection laws. In the major pork-producing state of Santa Catarina, for example, lobbyists succeeded in reducing the size of protected areas along rivers and other waterways from 30 meter to five meters.

### Smoke Clearing from the Clearing

As of September 2009, levels of deforestation were down 32 percent from last year's levels, and in October 2009, 400km<sup>2</sup> Amazon were deforested, the smallest deforestation level since 2004. While President da Silva claims he is making good on plans to cut deforestation by 80 percent through 2020, activists criticize these efforts as merely shifting the destruction and agricultural production to the Cerrado, which has had nearly 50 percent of its area destroyed in recent years.

In an attempt to give voice to these concerns, activists and environmentalists alike launched an action plan in September 2009, to control and prevent deforestation and fires in the Cerrado. The PPCerrado (*Plano de Ação para o controle e prevenção dos desmatamentos e queimadas no Cerrado*) seeks to challenge agricultural expansion into the Cerrado, where rates of destruction (21,000km<sup>2</sup> a year) are nearly double those in the Amazon, and contribute significantly to Brazil's GHGs.

In addition, there is growing awareness among Brazil's civil society of the negative environmental effects of the country's intensifying livestock production. In September 2009, the Vegetarian Society of Brazil (SVB) launched a Meatless Mondays campaign in the city of Sao Paulo. The initiative, supported by São Paulo's secretary of the environment, has generated substantial interest. With 28 percent of all Brazilians interested in reducing their meat intake, campaigns such as this may play an important role in

helping Brazilians cut back on their consumption of animal products.

Although the campaign has engendered a backlash—Brazil's Poultry Industry Organization sent an official letter to the São Paulo government defending the health, social, economic and environmental benefits of meat consumption—Brazil's Vegetarian Society plans to expand "Meatless Mondays" to Rio, Salvador, Brasilia, Florianopolis and Campinas. The SVB will attend the United Nations Copenhagen climate summit in December 2009 to discuss the climate impacts of meat production.

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