

Brazil's Ethanol Plan Breeds Rural Poverty, Environmental Degradation

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On Jan. 22 the Lula administration announced it will increase federal funding for Brazil's sugar-based ethanol industry by almost US\$6 billion over the next four years. One day later, U.S. President George W. Bush declared in the State of the Union address his goal to reduce U.S. use of gasoline 20% by the year 2017.

The general response in Brazil to Bush's announcement was overwhelmingly positive. Luis Fernando Furlan, Minister of Industry, Development, and Commerce, was quoted in the *Gazeta Mercantil* as saying he received Bush's announcement "with applause."

"It is a fantastic business opportunity," Luis Carlos Correa Carvalho, an industry consultant, told Reuters. "We have never had such a great opportunity for the substitution of petroleum."

The United States is currently the largest importer of Brazilian ethanol. Last year it imported 1.74 billion liters, or 58% of the total three billion liters that Brazil exported. For the United States to reach Bush's target reduction of gasoline use, the country will need an additional 135 billion liters of ethanol annually. Because it will not be able to produce the entire amount, no doubt a large portion will come from Brazil.

Brazil is the global leader in ethanol exports. In 2006, the country exported about 19% of the total 16 billion liters it produced, providing 70% of the world's supply.

This amount will soon increase. A partnership between the Ministry of Science and Technology and the University of Campinas in São Paulo is currently conducting a study to plan Brazil's ethanol exports as a substitute for 10% of the global use of gasoline in 20 years.

If this plan is successful, the country's ethanol exports will total 200 billion liters by 2025—an increase of almost 67%. The geographic area planted with sugarcane will increase from 6 million to 30 million hectares.

Is Ethanol the Solution or the Problem?

Many citizen organizations in Brazil are concerned that what appears to be an economic panacea may be a social and ecological disaster. They claim that as the industry expands and more hectares are planted mono-cropping sugarcane, existing problems in rural areas of landlessness, hunger, unemployment, environmental degradation, and agrarian conflicts will be exacerbated.

A recent declaration from the Forum of Resistance to Agribusinesses, a consortium of non-governmental organizations (NGOs) throughout South America states, "The implementation of the model of production and export of biofuels represents a grave threat to our region, our natural resources, and the sovereignty of our people."

There is concern that while expansion of the ethanol industry may boost Brazil's GDP and some Brazilians will become very wealthy in the process, the majority of the population will not benefit from the ethanol export boom. Given U.S. plans to increase imports of Brazilian ethanol and the alliance slated to be forged during Bush's South America visit in March, it is likely the livelihoods of many Brazilians, especially the rural poor, will be subordinated to maintain U.S. consumption.

"The era of biofuels will reproduce and legitimize the logic of the occupation of rural areas by multinational agribusiness, and perpetuate the colonial project to subvert ecosystems and people to the service of the production and maintenance of a lifestyle in other societies," states the Forum. The group alleges that Brazil's effort to supply the Global North with ethanol is simply a repeat of the same model of economic growth via agro-export that has been practiced since Portuguese colonization.

Agricultural production for export in Brazil has traditionally been a model imposed on the country by more powerful nations in the North, alongside a small group of Brazilian landowners. Agro-export generates vast amounts of wealth for a few Brazilians, and exploitation and poverty for many others. Brazil's high rate of income inequality is inseparable from the fact that it also has one of the most unequal rates of land distribution. The sugar industry is a classic example of Brazil's land and income inequality.

A Bittersweet Future

Brazilian ethanol is produced from sugarcane, which has always been a primary agricultural commodity for the country. Because ethanol relies on sugarcane as its primary material, the industry is linked to the social and economic dynamics in rural areas that have developed from sugarcane production since the colonial era, most importantly labor exploitation and land concentration.

According to Marluce Melo of the Pastoral Land Commission (CPT) in the northern Brazilian city of Recife, Pernambuco, "Rural poverty has always been intrinsically related to the economy of sugarcane. Even in the 1970s, when Pernambuco was the largest national producer of sugarcane, the levels of poverty were amongst the highest in the world."

In many ways, things have changed little on the sugarcane plantations since colonial times.

"The problems with [sugarcane's] production today are very similar to the problems it generated hundreds of years ago," says Maisa Mendonça, Director of the São Paulo-based NGO Rede Social. Sugarcane fieldworkers endure some of the hardest labor in the world. According to Mendonça, Brazil has the lowest cost of production in the world because of the industry's dependence on labor exploitation, including massive slave labor, and its refusal to implement environmental regulations. In São Paulo the cost of production is US\$165 per ton; in Europe it is US\$700 per ton. In São Paulo the median monthly salary for a field laborer on a sugar cane plantation is US\$195; in Pernambuco it is US\$167.

It is estimated that 40,000 seasonal migrant laborers from the Northeast and Minas Gerais

state work in the annual harvest in São Paulo. They work long hours in extremely hot temperatures, cutting as fast as they can because their pay is based on the weight of their cuttings.

Maria Aparecida de Morães Silva, at the State University of São Paulo, reports that the required rate of productivity for cane cutters is increasing. In the 1980s, the average rate of productivity demanded of an individual cutter was between five and eight tons of sugarcane cut per day; today it is between 12 and 15 tons. From 2004 to 2006, the Pastoral of Migrants registered 17 deaths from excessive labor in São Paulo, and in 2005 the state's Regional Delegation of Labor registered 416 deaths of workers in sugar-based ethanol production.

Concentration in the Industry

As it grows, the sugar-ethanol industry has undergone a process of increasing concentration and vertical integration, as large corporations invest in land and production. According to a banker who finances loans to the ethanol industry in São Paulo and asked to remain anonymous, in the past control of the industry was dispersed among smaller businesses. Sugar mills were owned by individual owners who controlled both cultivation and milling.

Today Brazil has 72,000 sugar producers, and the ten largest producers still control less than 30% of production. However, the banker says, "The current trend is toward concentration, with a large number of mergers and acquisitions."

Many of the larger companies that are buying out the smaller companies are multinational agribusiness corporations. "The participation by foreign capital in the production of sugar and ethanol is currently 4.5%, and this number is going to grow. Recently many foreign groups are looking to invest in this industry in Brazil, due to one of the lowest costs of production in the world," says the banker.

Sugarcane seems to be following the same pattern of foreign investment and concentration as that of soybeans. Today almost all soybean production in Brazil is controlled by a handful of multinational agribusinesses.

Many of the corporations that control soybeans are now investing in the ethanol industry. Among the multinational agribusinesses investing in the industry are, according to the banker, Louis Dreyfus Commodities and Tereos, both based in France, as well as U.S.-based Cargill. The Louis Dreyfus [site](#) states the company is one of the three largest sugar traders in the world, and owns three Brazilian sugar mills with a fourth mill currently under construction in Mato Grosso do Sul . The company produces 450,000 tons of sugar and 150,000 cubic meters of ethanol annually.

According to the Cargill [website](#), in addition to being Brazil's largest soybean exporter and second-largest processor, Cargill is the largest operator of sugar, both in terms of Brazilian sugar production and export sales, as well as global sugar trading.

As more land is planted as a monoculture of sugarcane, and control of the industry becomes more concentrated, rural poverty increases. According to Melo of the CPT, "Monoculture has created a huge dependency on the sugarcane economy in the [Pernambuco] region, and impedes the creation of other forms of work and income. The monoculture of sugarcane also leads to an increasing concentration of lands in the hands of the sugar mills.

"For about 15 years, there were 43 sugar mills and alcohol distilleries in Pernambuco.

Currently only 25 of these companies control practically all of the land in the 43 municipalities of the sugarcane growing region of the state ... In the last two decades, practically all of the small properties in the region have disappeared, with the forced destruction of the sites, and the expulsion of the workers to the periphery of the 43 municipalities of the sugarcane region and to the larger cities of the neighboring metropolitan region. In this same period, about 150,000 jobs were lost when 18 companies closed and the lands and sugarcane processing was concentrated in the 25 sugar mills and distilleries that remain ... This has provoked a generalized 'slumming' of the workers, which has aggravated hunger."

Economic Boom or Environmental Bust?

Industry, government, and mainstream media in Brazil generally argue that increasing ethanol exports will boost economic growth and sustainable rural development, while simultaneously helping to curb global warming by helping the world reduce its dependency on fossil fuels.

But contrary to the "green" image evoked by industry advocates, the monoculture of sugarcane leads to massive environmental destruction. According to Melo, in Pernambuco only 2.5% of the original forest of the sugarcane region remains. In order to satisfy future global demand, Brazil will need to clear an additional 148 million acres of forest, says Eric Holt-Gimenez of the NGO FoodFirst, based in Oakland, CA.

The damaging environmental effects of monocropping sugarcane are, in the São Paulo banker's mind, the most troubling aspect of the sugar-ethanol industry. He claims that the sugar takeover is "pushing other crops to the agricultural frontier."

He explains that, "because sugarcane generates a high price per hectare, the regions with better climactic conditions are dominated by this crop, which results in sugarcane occupying lands that before were planted to grains and used for grazing livestock. Grain producers move to more remote regions, such as the center-west, which before were used for cattle. The result of this flux is that cattle ranchers seek new areas such as the Amazon region."

Resisting Changes in Land Use

As the expanding ethanol industry spreads rural poverty and loss of rural livelihoods due to increased land concentration and environmental destruction, the number and intensity of agrarian conflicts has risen. Brazil has one of the highest rates of income and land inequality in the world, and a well-articulated and organized agrarian reform movement of the rural poor. This has created a smoldering socio-economic fire that could very well be ignited with ethanol.

On Feb. 19 the Movement of Landless Rural Workers (MST) and the Central Union of Workers (CUT) organized about 2,000 MST members and rural workers to non-violently occupy 12 plantations totaling 15,600 hectares in nine municipalities of São Paulo state. According to the newspaper O Estado de São Paulo, "MST leader José Rainha Júnior said the objectives of the occupations are to force the government to acknowledge the emergency need for agrarian reform, and to call attention to the social problems resulting from the expansion of sugarcane in the state."

Melo reports that in 2005, Pernambuco registered 194 conflicts over land—a rate higher than the previous five years. She also reports that in the same year a general strike by

sugarcane workers was violently repressed.

“The employed and unemployed workers who struggle for agrarian reform are constantly threatened and coerced by the landowning companies and by the police at their service,” she says. CPT data shows 60 labor conflicts for 2005 alone, while between 2000 and 2004 the highest number of labor conflicts was nine.

As the Lula administration proceeds full-speed ahead with ethanol export as a model for economic development, it is turning its back on the millions of Brazilians who voted for the Workers’ Party based on its promises to implement real social and economic changes, especially agrarian reform. According to Melo, “The Lula government has strengthened the historical cane-production model imposed on the country based on monoculture, and concentrated landholdings and large companies. He has not shown any interest in creating alternatives to this perverse model.”

Can there be viable economic alternatives to sugarcane monocropping? “ Our evaluation is that the government needs to combat hunger,” says Mendonça. “The government wants to become a factory to supply rich countries with cheap energy. This is compromising agrarian reform and food production.”

What the social movements, many NGOs, and other organizations agree on is that Brazil needs to incorporate the concepts of food sovereignty into its development policy, prioritizing the land to produce food for Brazilians. Food sovereignty includes both the obligation of governments to ensure that their populations have access to nutritious foods in adequate quantities, and the right of people and countries to define their own agrarian policies, and produce foods destined to feed their populations before producing for export.

But food sovereignty will be unattainable without a comprehensive agrarian reform to keep family farmers on the land, producing and distributing healthy food to local populations. As it is currently developing, the Brazilian ethanol industry represents a direct challenge to food sovereignty and agrarian reform. Ethanol production to sustain the enormous consumption levels of the Global North will not lead the Brazilian countryside out of poverty or help attain food sovereignty for its citizens.

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