

Local/Global Encounters

Monocropping for Agrofuels: The case of Brazil

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ABSTRACT *Maria Luisa Mendonça discusses the current expansion of monocropping such as soybeans and sugarcane for the production of agrofuels in Brazil. She argues that in addition to environmental degradation from the indiscriminate use of natural resources, has led to both an increase in food prices and to an agricultural model based on high exploitation of workers and dependence on Trans National Companies. As a consequence, agrofuels take up some of the best agricultural lands in Brazil, displacing food production and destroying protected areas of the beauty and biodiversity of the Amazon and Cerrado.*

KEYWORDS *sugarcane; soya; farmers; agrarian reform; WTO; World Bank; water; biodiversity*

A history of violations

Monocropping of sugarcane began in Brazil during the period of Portuguese colonization. Historically, this sector has been based on exploitation of large areas of land, natural resources, and slave labour. The activity grew even greater with the international financial crisis of the 1970s, which caused a sharp rise in the price of oil, and pushed forward the ethanol sector, starting with the creation of a governmental programme called Proálcool. From 1972 to 1995, the Brazilian government provided support for increasing the area of sugarcane plantations, and structuring the sugar-alcohol (ethanol) complex, with large subsidies and different forms of incentives. The Sugar and Alcohol Institute, for example, was responsible for all commercialization and export of the product, subsidizing undertakings, providing incentives for industrial, and land centralization based on the argument of 'modernization' of the sector, supplying fertile land, means of transport, energy, and infrastructure.

'The sugarcane complex is presented as a totally integrated production due to its historic expansion and constitution, under the aegis of the State. Land ownership had a central role in this process and linked to that were the official policies on access to credit and the benefits of State subsidies. Its business is not sugar or ethanol, but rather the appropriation of resources by means of programs, incentives, and opportunities offered by the government', explains Attorney Bruno Ribeiro, of the Pastoral Land Commission.

The current debate in Brazil

The economic policy of Brazil today is based on monocropping for export. The government continues to promote the sugar-ethanol sector by opening new lines of credit, principally from National Economic and Social Development Bank. Recently, there was an increase in the participation of foreign corporations in this sector, which benefit from public resources. The Brazilian government has prioritized an agricultural policy that favours subsidized lines of credit and rollover debt that favour large corporations and landholdings. The Brazilian agro-industrial complex also uses other types of 'privileges', by means of 'grilagem' (land grabbing), slave labour, and violation of environmental and labour laws.

The debate on the production of agroenergy is centered on the agricultural and economic model now being adopted by countries on the margins as they recycle the dominant geopolitics. The Brazilian government takes a major role in promoting the expansion of monocropping for the production of agroenergy. The priority of Brazilian foreign policy is to guarantee access of the European Union, Japan, and the United States markets to agrofuels as well as to encourage other countries in the Global South to adopt this production model, through technology transfer.

The expansion of monocropping such as soybeans and sugarcane for the production of agrofuels, in addition to environmental degradation from the indiscriminate use of natural resources, has led to both an increase in food prices and to an agricultural model based on high exploitation of workers and dependence on Trans National Companies. As a consequence, agrofuels take up some of the best agricultural lands in Brazil, displacing food production and destroying protected areas of the Amazon and Cerrado (Mendonça *et al.*, 2008).

The Cerrado area

The Brazilian government has targeted the Cerrado as a priority area for advancing the agricultural borders, as this region is characterized by a favourable topography. It is known as the 'father

of water', for it is the source for the principal water basins of Brazil. With nearly 2 million km², this biome is located between the Amazon, the Atlantic Rainforest, the Pantanal, and the Caatinga. The region, as important for its biodiversity as the Amazon, holds nearly 160,000 species of plants and animals, many of which are endangered species. However, its destruction has not been visible, in spite of the intensity and the consequences it has caused. Antônio Thomaz Júnior, professor of the Department of Geography of the State University of São Paulo (Unesp), states in an interview that 'the expansion of sugarcane in Brazil for the production of ethanol may certainly advance over areas currently cultivating food crops, besides placing at risk the integrity of important biomes, like the Amazon and Pantanal'.¹

In the 2007 harvest, sugarcane production occupied 5.8 million hectares of the Cerrado, according to the Brazilian Institute of Geography and Statistics (IBGE). To begin planting sugarcane, it is necessary to clear the native vegetation, and thus all of the trees are uprooted. Studies indicate that each year nearly 22,000 km² of savannah are cleared. A report from the Society, Population and Nature Institute affirms:

Deforestation done for sugarcane production directly harms rural populations who survive off the biodiversity of the Cerrado. The other terminal consequence is that small food farmers leave their lands, having been lured into temporary employment in the sugarcane fields. This will diminish the food production in the area, which only serves to aggravate the migration to urban slums.²

In August 2008, an agreement between the Ministry of the Environment and the Ministry of Agriculture resulted in a series of modifications in the 'Law of Environmental Crimes', including one that allows the construction of sugarcane factories in the Pantanal.

Another direct link to food prices is the demand for water in agrofuels production. The director of the Scientific Committee of the Stockholm International Institute for Water, Jan Lundqvist, warns that:

Currently the quantity of water used throughout the world in food production is approximately

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7,000 km³. In 2050, the prediction is that this quantity will increase to 11,000 km³, almost double of what it is today. And the projections indicate that the demand of water necessary to produce biofuels will increase in the same proportions as the demand of water for food production, which would represent 20–30 km³ of water in 2050. (BBC Brasil, 2007)

Even in areas where there was already agricultural activity, sugarcane monoculture produces a much larger degree of devastation, because it substitutes diversified agriculture for homogeneous and continuous cultivation that leads to the total destruction of forest reserves. The demand of ethanol corporations for large quantity of good quality lands, with access to water and infrastructure, results in the devastation of natural resources and local agriculture. Sugarcane plantations are not expanding in degraded areas and marginal lands, as the Brazilian government claims.

Listening to the farmers' experiences

If you listen to the people of Lagoa da Prata, state of Minas Gerais, where a sugarcane mill already existed since the 1970s you see the level of destruction being wrought.³ When the French company Louis Dreyfus acquired the Lagoa da Prata mill, and expanded its plantations to produce ethanol it replaced land used for food production, and in addition destroyed forest reserves.

According to farmer Gaudino Correia, it does not pay to lease out the land to the ethanol factory.

The contracts are for 12 years, and after that the sugarcane has destroyed everything. The mill uses heavy machines to prepare the land, and it causes soil erosion. They burn sugarcane, and the ashes spread throughout the region. I did not want to lease out my land, and now I'm surrounded by sugarcane. Here there is no more land for farming, and therefore food prices have raised a lot. My neighbours have stopped producing corn, beans, coffee, and milk, and leased out their lands. I still plant corn, beans, and produce milk, but for small producers the price did not increase, only for the middleman and for consumers.

Farmer Sebastião Ribeiro has the same opinion. 'The company insisted, but I didn't want to lease out my land. My neighbours who did it ended up becoming depressed, because it is the same as

if you lose your land. What will happen if all farmers stop planting food crops?' He also explains that the companies use the water of the São qFrancisco River to irrigate sugarcane.

Local organizations are concerned with the environmental and social impacts of agrofuels production. 'The government should give priority to the preservation of the rivers springs. It is like wearing the veins that lead the blood to the heart. This expansion is happening very fast, and the production of sugarcane is supposed to double in the region. Family farming is going to disappear, and foods can become scarce', says Lessandro da Costa, director of the Environmentalist Association of Alto São Francisco. The president of the Rural Workers Union of Lagoa da Prata, Nelson Rufino, explains that most of the workers in the agroindustry are migrants, so they are vulnerable to exploitation and prejudice.

The mills spread poison by airplane, and the number of cases of cancer in the population is enormous ... there are more than 140 workers removed from their jobs because of health problems ... We have registration of five death cases from accidents at work ... For the workers the situation has worsened because we have lost income.

The Minister of Agriculture Reinhold Stephanes affirms that the expansion of sugarcane plantations happens on land that is 'degraded', and there are no impacts on the environment or on food production. The data given to justify this assertion is based on the idea that in Brazil, there are millions of hectares of land 'abandoned' or 'marginal'. But the government has yet to explain what exactly it means by 'degraded land'. It would not make sense for companies and public banks to invest heavily in agrofuels unless the land was level, of good quality, with access to water and infrastructure. Even when sugarcane production replaces other agricultural activities, or even cattle-raising, there is a much greater degree of devastation because large-scale sugarcane plantations do not thrive alongside other vegetation. If there really were so much land available in Brazil, then it would not be necessary to expand ethanol production into preserved areas.

The cultivation of sugarcane skirts in the restricted conservation zones of the Serra da Canastra National Park, considered of extreme biological importance by the Atlas of Biodiversity in Minas Gerais. Referring to the mill's activities, Joaquim Maia Neto, chief of Brazilian Environmental Institute at the Park, affirms:

They plant sugarcane practically inside the water. The company deforested and burned the area, and it was a major threat for the whole region. The Public Prosecutor's Office filed a lawsuit against the company. We hope that the area will be restored soon, and that the company be punished because of environmental crimes. This activity brings serious environmental problems. Brazil should prioritize a diversified model of agriculture.

The National Supply Company (CONAB), an organ linked to the Ministry of Agriculture, registered an increase in the production of sugarcane in the Amazon from 17.6 million tons to 19.3 million tons between 2007 and 2008 (Betto, 2008). In 2006, CONAB demonstrated that the Northern region had the highest indices of increase in sugarcane production in the country. The expansion was 68.9 percent in Tocantins, 55.1 percent in Amazonas, and 34.3 percent in Pará. The production from these three states was 1.6 million tons, representing an increase of 46.8 percent in relation to the previous harvest (Jornal Valor Econômico, 2006). Official data from IBGE indicates that cattle-raising in the Amazon has practically doubled in the last ten years, pushing for the expansion of the agricultural borders. The 2006 Farming Census showed that since 1996 the increase in agricultural expansion in the Northern Region was 275.5 percent. Between 2006 and 2007, the soy harvest in the Northern Region had a 20 percent increase.⁴

Expropriation of small farm holdings

In Brazil, the increase in ethanol production has caused the expulsion of small farmers from their lands, and has generated a dependency on the so-called 'sugarcane economy', where only precarious jobs exist in the sugar fields. Large landowners' monopoly on land blocks other

economic sectors from developing, and generates unemployment, stimulates migration, and submits workers to degrading conditions. Despite propaganda about 'efficiency', the ethanol industry is based on the exploitation of cheap labour and even slave labour. This pattern of exploitation has caused serious health problems and even death of workers. The causes of these deaths include assassinations, accidents, and illnesses. According to International Labour Organization, in 2007, public attorneys rescued 288 workers in slave conditions at six plantations in São Paulo; 409 workers in the sugarcane fields at the ethanol plantation Centro Oeste Iguatemi, state of Mato Grosso do Sul state; and 1,108 workers in the sugarcane plantation Pagrisa (Pará Pastoril e Agrícola S.A.), municipality of Ulianópolis (state of Pará), in the Amazon region.

The adoption of a monocropping for export is premised on the assumption that there is little impact on Brazilian rural development. As Manuel Correia de Andrade (2005) observed, that such a model is based on the idea of urban centres as the main generators of income and economic opportunities.⁵ However, the major regions in which natural resources are concentrated – such as water, land, minerals, and biodiversity – are mostly rural and they are now at the center of the political and economic disputes, nationally and worldwide. Multilateral financial agencies, large national and transnational firms, and governments dispute on geopolitical control of these regions rich in strategic resources, both agricultural and mineral energy-related.

In order to promote monocrop agrarian reform and family farm policy is 'extinguished'. During the Fernando Henrique Cardoso administration, agrarian reform policy was replaced by a project called 'The New Rural World', basically centered on three principal assumptions: settling of landless families under a compensatory social policy; 'decentralizing' agrarian reform projects, passing responsibilities inherent to the federal government to states and municipalities; and replacing the constitutional rulings on expropriation with a 'land market' policy that defines the terms for the negotiated purchase and sale of land. This concept of 'development' was encouraged by the

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World Bank, through the creation of three programmes: the Land Title, the Land Fund, and the Land-Based Poverty Alleviation Project. Even though it was premised on minimizing the State, the World Bank insisted that public funds also contributed to land ownership policy based on privatization of land. In accordance with this policy, small farmers must seek 'efficiency' by means of integration with the agro-industrial complex (Martins, 2004).

Global land grabs

Currently, the Brazilian agro-industrial complex is joining the ranks of 'globalized' capitalism, characterized by large agricultural and industrial monopolies, influenced strongly by financial capital (Oliveira, 1998), as well as the rules of international financial institutions, such as the World Trade Organization (WTO). Since its creation in 1995, the principal role of the WTO has been to expand its regulatory power in 147 countries, which means exercising a great influence on the daily lives of millions of people. In spite of spreading the ideology of 'free trade', the WTO has a complex structure of rules used in defense of the interests of multinational corporations and their headquarter countries. The scope of the agreements contained in the WTO greatly exceeds the subject matter of international trade. In Brazil, agricultural policies follow this logic, with a view to expanding access to markets and consolidating commercial advantages for the agricultural sector based on monocropping for export. In this vision, the big 'villain' is public subsidy for food production, but in reality the problems are caused by agricultural monopolies,

and by a production model looking toward the external market.

In contrast to the propaganda of the agro-industrial complex as a symbol of 'development' and 'efficiency', the land ownership and monocrop agricultural model creates serious social and economic inequalities, besides being highly dependent on public resources. The chief consequences of this policy are environmental degradation, inequitable concentration of income, and unemployment in rural areas. Alberto Passos Guimarães (1978: 22) labels this the 'conservative modernization of Brazilian agriculture'. According to Ariovaldo Umbelino Oliveira (2007: 7028), the total jobs created in the Brazilian countryside, 87.3 percent are in the small production units, 10.2 percent in mid-sized units, and only 2.5 percent on the large ones.⁶ His study demonstrates that the small and mid-size rural properties are responsible for the greater portion of food production for local markets. The 2006 Agrarian Census by IBGE reveals that properties of less than 10 hectares occupy less than 2.7 percent of the rural area, while properties larger than 1,000 hectares represent 43 percent of the total.

A call for democracy

In response to these difficult conditions, the platform of grassroots movements call for the urgent democratization of access to land and water in order to promote the implementation of a broad agrarian reform and strengthen family farming, as a way to guarantee the right to work to the historically excluded rural population, as well as food production for the domestic market, building a road to food sovereignty in our country (Stedile, 2005: 233).

Notes

- 1 *Cana pode prejudicar meio ambiente e produção de alimentos* [Cane may harm the environment and food production], *Repórter Brasil*, 4 April 2007, <http://www.reporterbrasil.com.br/exibe.php?id=984>.
- 2 *Cana coloca em risco o cerrado brasileiro*, *O Estado de São Paulo*, 3 December 2007.
- 3 The field research and interviews in Minas Gerais were done by Maria Luisa Mendonça, between March and April 2008.
- 4 Radioagencia Notícias do Planalto, 5 May 2008.
- 5 In *A Terra e o Homem no Nordeste*, Manuel Correia de Andrade (2005: 62) uses the expression '*cidade inchada*' (swollen city) coined by Gilberto Freyre to describe this process, and to point out that 'considerable increase in population,

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without a corresponding increase in employment possibilities, is more of a swelling than it is a growth'. He explains: 'We believe that one of the causes which most contributes to aggravating this problem is the dominant land ownership structure which has been in place since colonization'.

- 6 Conference offered on 29 May 2006 at the State University of Paraná. Text available at: <http://e-revista.unioeste.br/index.php/pgeografica/article/download/1284/1038>.

References

- Andrade, Manuel Correia de (2005) *A Terra e o Homem no Nordeste*, seventh edition, São Paulo: Cortez Editora.
- BBC Brasil (2007) 'Biocombustível causaria falta de água [Biofuel Could Cause Water Shortage]', 13 August.
- Betto, Frei (2008) 'Amazônia, ecocídio anunciado [Amazonia, Ecocide Announced]', Adital, 11 February.
- Guimarães, Alberto Passos (1978) *A Crise Agrária*, third edition, Rio de Janeiro: Paz e Terra.
- Jornal Valor Econômico (2006) 1 June.
- Martins, Mônica Dias (2004) *O Banco Mundial e a Terra*, São Paulo: Editora Viramundo.
- Mendonça, Maria Luisa, Isidoro Revers, Marluce Melo and Plácido Júnior (2008) '*Impactos da produção de cana no Cerrado e Amazônia* [Impacts of the Production of Sugarcane in the Cerrado and the Amazon]', published by the Pastoral Land Commission and the Network for Social Justice and Human Rights, December.
- Oliveira, Arioaldo Umbelino (1998) 'A Inserção do Brasil no Capitalismo Monopolista Mundial', in Jurandyr Ross (ed.) *Geografia do Brasil*, SP: EDUSP.
- Oliveira, Arioaldo Umbelino (2007) 'Geografia e os Movimentos Sociais', Conferência Perspectiva Agrária, Unioeste Colegiados de Geografia, n. 3.
- Stédile, J.P. (2005) *A Questão Agrária no Brasil* Vol. 3, São Paulo: Expressão Popular.