



## Brazil of Biofuels

### Impacts of Crops on Land, Environment and Society

#### *Volume 3 – Sugarcane*

**Biofuel Watch Center - NGO Repórter Brasil**  
**Support: Solidaridad, Doen Foundation, Cordaid**

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### Executive Summary

The launch of this report on the impacts of 2008`s sugarcane harvest marks the conclusion of the first cycle of activities of the Biofuel Watch Center (BWC) of NGO Repórter Brasil. This research on sugarcane, an expanding crop facing the ethanol global boom, brings an alert on the contrast between the wealth and poverty that characterizes the sector: on the one hand, high investments from national and international groups guarantee cuttingedge technology development; on the other, the advance of monoculture generates environmental problems and thousands of workers are still suffering laboural superexploitation.

Investments of billions of reais received by the sugar-alcohol industry from Brazilian and foreign businesses and institutions have encouraged the advancement of sugarcane plantations in areas already consolidated, such as São Paulo, and over new borders in Brazil`s Midwest region. The international financial crisis that emerged in the second half of 2008 should delay a series of new projects, but not to the point of reversing the expansion cycle. That is shown by the facts that the national sugarcane production increased 13.9% in 2008 over the last harvest and it should increase 7.6%1 more in the next year.

Despite that, the crisis was used by businesses to justify lowering wages paid in rural areas. Since the late 1990s, wages had been accumulating small increases when compared to the growth in food prices, but that trend was reversed in 2008. Wage readjustments obtained in negotiations rarely reach two figures while the price of a package of basic food items increased 16%2. In the state of São Paulo, which concentrates 59.5% of the country`s sugarcane production, workers` decreasing purchase power encouraged strikes, often repressed violently by the police, as well as layoffs by the companies. The climate in plantations became so explosive that union leaders remembered the historical demonstrations that happened in the area of Guariba, SP, in the 1980s.

As can be seen, dissatisfaction is not recent. It has its roots in a model based on overexploitation of labour, where part of the frequent increases in productivity is appropriated by farm or processing mill owners. Since 2000, workers` productivity has grown 11.9% in the state of São Paulo, but cutters` pay increased only 9.8%3. The 2008 harvest worsens labour conditions in several aspects. For instance, the amount of violations registered made by inspectors to employers in the state for not meeting requirements of weekly time off and lack of individual protection equipments has relatively increased. And 2,553 people were liberated from sugar-alcohol enterprises that used contemporary slavery - virtually half the slaves found along the year.

From the environmental viewpoint, sugarcane expansion reached areas such as the Cerrado, the Amazon, the North-eastern Atlantic Forest and even Caatinga. In 2008, 24 companies in Pernambuco were fined for several environmental crimes. Pantanal, one of the world`s main environmental assets, is under pressure from projects to install processing

plants in the state of Mato Grosso do Sul, near tributary rivers that are important for the biome. The promise of agro-ecological zoning, which could organise the expansion of the crop, remains unfulfilled by the government.

Without preserving the environment, there is a virtual consensus that agrofuels lose their comparative advantage regarding fossil fuels, when we considered burning and release of greenhouse effects gases. In that aspect, the state of São Paulo witnesses the advancement of mechanised harvest, which, on the one hand, brings considerable environmental advantages, but, on the other hand, is seen by workers as a risk to their jobs, since compensatory policies such as agrarian reform and professional training are shy. Until 2014, about 180 thousand people are estimated to have lost their jobs only in sugarcane plantations in the state.

More details, analyses and stories of impacts caused by the advancement of sugarcane in the country can be seen in the pages of this report, divided into three major parts according to their production and historic peculiarities: Mid-South, Northeast and The Amazon. In order to do this work, researchers from the Biofuel Watch Center travelled eight Brazilian states - Acre, Alagoas, Bahia, Pernambuco, Maranhão, Mato Grosso, Mato Grosso do Sul, and São Paulo - and interviewed hundreds of workers, union leaders, researchers, authorities and businessmen from the sugarcane industry.

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## ***Volume 2 – Palms, Cotton, Corn and Jatropha***

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## **Executive Summary**

Deforestation in Amazon and Cerrado – the Brazilian savanna –, contamination by pesticides, threats to food sovereignty of small farmers and income and land concentration are some of the impacts caused by the expansion of crops that can be used to the production of biodiesel in Brazil. In *“Brazil of Biofuels – Palms, Cotton, Corn and Jatropha – 2008”*, NGO Repórter Brasil reports on the expansion projects of crops, such as oil palm, in the Amazon, and cotton, in the Cerrado areas of Midwest and Northeast regions.

Regarding oil palm, one of the major concerns is with proposals of a change in Forest Code, which aim at allowing the recovering of legal reserves with exotic species such as oil palm. Such measures might boost monoculture in the Amazon, causing deforestation and bringing impacts upon the forest’s biodiversity. Foreign corporations are starting to implant projects in the region. That is the case of Felda, from Malaysia, in the municipality of Tefé, Amazonas State, and

Biopalma, which has Canadian capital, in Pará State.

Cotton advances over Cerrado areas, which don't count on specific satellite monitoring systems like the ones that cover the Amazon area. According to the Ministry of the Environment, at least six high conservation value areas are at risk in Cerrado due to the growth of cotton crops. When it comes to labour related impacts, five estates that produce cotton are in the "laundry list" of slave labour divulged by the government, and 431 slaves were freed from those areas.

Corn is not used as raw material for fuels in the country, but its use in the US in the production of ethanol explains the advance in the cultivated area of the crop over the past harvest. Such expansion, though, has been threatening the maintenance of traditional cultivating practices, suffocating ancient species of the grain. This impact will be intensified by the recent liberalization of genetically modified corn seeds.

The use of jatropha is still small and only this year the producers managed to register it in the Ministry of Agriculture. But even with the recent regularization, the crop already draws the attention of big investors. Spanish company CIE Automotive supports enterprises, for example, in Minas Gerais and Mato Grosso. Jatropha is coveted for the high oil concentration in its seed, but part of the specialists considers further research to be necessary.

This is the second report of a series produced by the Biofuel Watch Center of NGO Repórter Brasil. The first, launched in April of this year, in Buenos Aires, during the meeting of the Round Table for Responsible Soy, analyzed the impacts caused by soy and castor bean. The next one, exclusively on sugarcane, will be released next December. To produce this report, four researchers from NGO Repórter Brasil have covered 11 Brazilian States - Mato Grosso, Santa Catarina, Rio Grande do Sul, Paraná, São Paulo, Minas Gerais, Bahia, Pará, Amazonas, Maranhão e Tocantins – and 25 thousand kilometers.

### ***Volume 1 – Soy and castor bean***

**Biofuel Watch Center - NGO Repórter Brasil**  
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### **Executive Summary**

By publishing the first volume of the report "Brazil of the agrofuels" – Impacts of plantations on land, environment and society, the Agrofuel Monitoring Centre of the NGO Repórter Brasil starts a systematic support of the impacts caused by crops used in the production of agroenergy. The work, divided in three annual reports, is assessing the socioeconomic, environmental, agricultural effects and those on indigenous and traditional communities of soy and castor bean cultures (volume 1), corn, cotton *dendê* and *babaçu* (volume 2), and sugar cane and *pinhão manso* (*jatropha curcas*) (volume 3).

**Soy** – The increasing international demand for agrofuels becomes the most recent incentive factor for the advancement of soy production in Brazil. It is estimated that the country will even beat the USA in 2008 as the biggest exporter and, in six years at the most, it will consolidate the largest grain cultivated area in the world. If on the one hand that expansion generates wealth for some producers and foreign currencies for the country, on the other hand, it has intensified the impacts such as deforestation, pollution of rivers, and concentration of land and worker exploitation, mainly in the Cerrado and Amazon region.

Up to now, the main drive of soy expansion is indirect. The increase in the demand for corn-produced ethanol in the USA promoted the plantation of this grain and contributed to stop the soybean area around there. This is added to a scenario of intense worldwide demand for whole wheat for feed, making the international grain prices, which were dropping, start rising again. Facing that scenario, the Brazilian producer decided to plant more. Between the last harvests and that of 2007/08, soy plantation increased by a 20% in the North region (where the biggest part of the Amazon grove is situated) and by a 7,9 % in the Northeast region, mainly in the Cerrado areas of Maranhão, of Piauí and Bahia. In Brazil, soybean is the main raw material used to produce biofuel. Current consumption to supply for the compulsory mix of a 2% in oil fuel and to produce 850 million of litres of biofuel per year is estimated in 3,5 millions of tons of soy, an amount which being small, still does not influence soy prices in Brazil.

The future scenario intended for the soy cultivators is a hot market. The intense demand must sustain the process of grasslands substitution from the plantation of grain, which stabilizes deforested areas, many times illegally, and pushes stockbreeding more and more towards the Amazon, thus promoting deforestation of river basins which are fundamental for the Brazilian socio-biodiversity threatened by the indiscriminate plantation of soy in lands which, by law, should have their vegetation preserved, such as marginal plants. They also face the problems brought in by the pollution of their rivers, whose waterheads are located in agricultural areas, such as what happens in the Xingu Indigenous Park.

There are even cases where soy is being produced on lands officially acknowledged as traditionally indigenous by the Brazilian State. For example, there are plantations in the Xavante's Maraiwatsede Indigenous Land, in Mato Grosso and in various areas acknowledged as traditionally occupied by the Guarani-Kaiowá, in South Mato Grosso.

In spite of the strong mechanization of the sector, slave work has been found in soy farms during the soil cleaning stage for the implantation of plantations. Data coming from the "dirty list" of slave work, a public record of employers who used this type of labour, kept by the Work and Employment Ministry in 2007, show that 5,2 % of the cases took place in the grain sector. Companies and financial institutions have used devices to fight slave work, encouraged by the Brazilian Pact for the Eradication of Slave Work. But there are still failures and the soy harvested by producers in the "dirty list" is still going into the market.

In spite of that, labour impacts focus on the low employment generation by means of the mechanization of production (1 to 4 direct jobs every 200 hectares) and on work-related accidents associated with the handling of machines and the use of agro-toxics, highly used in conventional and transgenic production. There is an increasing number of workers and communities surrounding the plantations who feel the effects of defensive farmers. For example, in 2005, 6870 people were searching for health services due to contamination. The soy process, based on a model of large mechanized properties, encourages the concentration of land and the rural exodus. In what respects to the increase in the production of soy, the number of rural properties devoted to grains dropped by a 42% in a decade. The rate was a 16,3% for the other properties. The expansion process has not been a peaceful one: it may be behind at least 4 out of the 16 agricultural conflicts in the State of Mato Grosso in 2007, at least 18 out of the 38 conflicts recorded in Paraná, and at least 2 out of the 105 conflicts which aroused in Para.

If on the one hand, it is early to dimension the weight agro-fuels represent in the agricultural price of commodities, on the other; it is already possible to conclude that the increase in the demand given by them tends to press foods in a scenario where the quotation of products such as soy, corn and wheat reached record steps. The International Monetary Fund estimates the raising of food prices by a 30,4% between November 2004, beginning of rising and December 2007. The choice for the agro-fuels will not initiate hunger in the world, since it affects hundreds of millions of people on a daily basis. But it will certainly make the picture worse.

A study such as "Brazil of the agrofuels", in this delicate moment of the international commercial relationships, is highly

strategic in order to identify bad behaviours and it can be used by the interested sectors in the reversion of this negative impacts scenario. Among the recommendations to the public power, there are the cutting of financing and renegotiation of debts with the businessmen responsible for those impacts, and also the prohibition of agricultural expansion in the Cerrado and the Amazon region without research which proves the socio-environmental viability, without properly consulting the local populations and that food sovereignty is guaranteed. For the business sector, a deep care is proposed in their supply chain and the own behaviour of the companies.

**Castor bean** – With the launching of the National Program of Production and Use of Biofuel (PNPB), in 2004, the spotlights turned to the castor bean again, chosen by the federal government as one of the ‘old reliable’ of their policy of social inclusion of family agriculture in the agro-energy productive chain. By government decision, the purchase of castor bean grown by family agriculture, mainly in the Semiarid Northeast area of Brazil, turned out to be tax incentive worth for the biofuel industry.

The project, on the other hand, has not brought concrete results yet for the small farmers, especially in the States located in the Northeast of Brazil. In spite of the efforts to popularize the castor bean cultivation, its productive chain is still too tied to private projects of the biofuel industry and far away from the needs of family agriculture, which generated misunderstandings between the agricultural and processing sectors. But there are exceptions to this rule. When organized farmers take on a productive chain and impose their own management and trading criteria, castor bean has proved to be, indeed, an alternative with a profitability which is social, environmental and economically sustainable.