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## [Eucalyptus and silent poisons: The expansion of plantations in the southernmost part of Bahia, Brazil](#)

The process of territorial transformation in the southernmost part of Bahia is closely intertwined with agriculture in Brazil, and is based on an extremely unequal territorial structure that has been in place since colonial times. But this has recently been exacerbated by the imposition of a single model of extensive and intensive production, using land, water, agrochemicals, chemical inputs, large machinery and biotechnology. This is agribusiness in general, and in particular, the eucalyptus plantations that supply huge pulp mills.

### **Eucalyptus, agrochemicals and ideological manipulation**

Eucalyptus plantations designated for pulp production involve the covert use of agrochemicals. Agrochemicals are chemicals that—along with other substances and products—were re-purposed from their original military functions following the two world wars. Explosive materials turned into synthetic and nitrogenous fertilizers; lethal gases became agrochemicals; and war tanks were transformed into tractors (1). Thus, in the second half of the twentieth century, the Green Revolution was launched with the promise to increase agricultural production as a means to end hunger. What is not clear is how tree plantations, such as eucalyptus, can help end hunger—since trees cannot be eaten!

The Green Revolution in Brazil was linked to the government's Plan of Goals in the post-World War II era. With the 'help' of the United States, this program sought to modernize agriculture. For example, the manufacturing of tractors was included within the automobile industry's goals, and agrochemicals within basic industries, since "the goals were to be defined and implemented in close harmony with each other, so that investments in certain sectors could be positively reflected in others." (2)

While the Brazilian government was creating strategies to justify the use of these products—which increased after the military coup of 1964—Rachel Carson, a marine biologist and writer from the United States, warned that same year about the dire consequences of these products in her book, *Silent Spring*. According to Carson, this is the most alarming human attack on the environment, as it involves the contamination of air, soil, rivers and seas with hazardous and lethal materials. This is irreparable and irreversible, because nature cannot absorb these substances that humans have created, and they cause damages to occur in chain effect on all living tissues. Carson also said that the apparent need to develop more and more substances is a direct consequence of their use. For example, in order to survive, insects develop resistance to a certain substance. This promotes the production of new substances that are more potent and lethal than the previous ones (3).

With its so-called Plan of Goals, Brazil thus entered the era of conservative agricultural modernization, which sustained the violent and perverse implementation of capitalism in the countryside. Poisons came to Brazil wrapped in a package called "development." The countryside would no longer be backwards. This was the deal various sectors of the economy made with each other, united to promote what would later be called agribusiness; and they were cheered on by science, mass media and politicians. Herbicide and glyphosate consumption alone increased by 5,400 per cent between 1965 and 1979. While Agent Orange 2,4-D was being used as a chemical

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weapon to kill millions of people in the United States' War on Vietnam, Laos and Cambodia in the 1960s, it was already being heavily used in Brazil. The Amazonian Bank weekly bankrolled almost 50,000 litres of Agent Orange, mainly used by German and North American companies in the Brazilian Amazon and Savannah (Cerrado) (4).

In the 1970s, the Ministry of Agriculture allocated 20 per cent of agricultural funding to agrochemical companies, on the grounds that these products were necessary to produce food. The National Agricultural Development Plan (PNDA by its Portuguese acronym), in addition to financing agrochemicals, required that they be used. This led to an increase in agrochemical industries—from 14 factories in 1974 to 73 factories in 1985 (5). It is worth noting that close ties existed between the military dictatorship and large agrochemical companies. For example, the Minister of Agriculture at that time, Nestor Jost, took office while he was still Chairman of the Board of the German chemical company, BAYER; in fact, he used State financial resources to participate in company meetings (6).

### **Eucalyptus and the rain of poison**

A person passing through areas with eucalyptus plantations cannot imagine the danger hidden in their silence: synthetic chemicals with different functions, which help maintain and boost transnational corporations' profits.

The problems associated with the use of agrochemicals in eucalyptus plantations are found in several regions. In João Lisboa, Pará State, the President of the Rural Workers Union and other councillors denounced the agrochemical contamination in Celmar S/A's eucalyptus plantations, in Varejão dos Crentes district. This was in 1995. A team from Maranhão Federal University detected the absence of safety equipment. Some of Celmar's products include Bromex (trade name) which is methyl bromide, a chemical banned in Europe, and DMA 806, which is 2,4-D. Other highly toxic products were also found, including Garlon 480 (triclopyr) and Goal BR (oxyfluorfen). The report highlighted the lack of specific trials verifying whether there could be possible adverse effects. (7).

In 2003, Espírito Santo's newspaper, *Século Diário*, published a complaint by Health Sciences doctor, Luiz Henrique Borges, who was head of the Department of Collective Health at Emescam School. He denounced the annual use of 1,839 tons of agrochemicals, which Aracruz Celulose (currently FIBRIA) dropped as poisonous cocktails over two municipalities, Conceição da Barra and São Mateus (8).

Technical Opinion No. 138 from 1985, which authorized Veracel Celulose to use the poisons glyphosate and sulfuramid in Bahia State, considers these substances to be non-toxic—i.e., causing no effect on the environment or people. However, the Pataxó indigenous peoples, and rural workers and communities have denounced these poisons on multiple occasions. In 2011, in the public hearings on the extension of Veracel Celulose's license, the people present clearly said NO to the expansion of plantations. Their main argument was the uninterrupted use of poisons and its harmful consequences. Globally, there is extensive literature confirming that glyphosate and sulfuramid are hazardous substances.

The communities living near Suzano Papel e Celulose and FIBRIA's eucalyptus plantations in Bahia are also suffering the impacts of agrochemicals. In mid-2013, their plantations became infested with the brown caterpillar, or leaf-cutting caterpillar. These caterpillars became butterflies that infested cities and communities (9). Later, the caterpillars attacked Veracel Celulose's crops. The emergence of new pests is a natural consequence of the imbalance generated by monocultures. Faced with this problem, the companies got together and sprayed a rain of poison over the whole region. This

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practice had already been used on coffee plantations. It is a dangerous practice, because "less than 0.1% of the agrochemicals applied to crops actually attack the pests that are the target. Thus, large quantities of these products are spilled during their application, causing adverse effects on human health and beneficial biota, and polluting the soil, water and atmosphere of the ecosystem." (10)

Through billboards and brochures published throughout the region, the Agricultural Defence State Agency of Bahia (ADAB, by its Portuguese acronym) disseminated the information that pests were being controlled through the use of a biological insecticide. According to manufacturers and contracted scientists, the product would be "(...) specifically aimed at caterpillars, and not present any risk to human or animal health" (11). The trade name of this product (*Bacillus thuringiensis*) is DIPEL, and it is manufactured by Chemical-EUA. In affected areas, a spraying plane passed over communities and villages almost every day between 2014 and early 2016. The Quilombo I and II settlements, Zumbi dos Palmares in Mucuri Municipality, and the Quilombola communities in Alcobaca Municipality—such as Juerana, Aldea Mucugê I and II, Craveiro, Nova Esperança, and several others—began to feel the harmful effects of these products on people, crops, rivers and lakes of the region. Many people got sick, and domestic animals like cats, dogs and chickens died—as well as food crops.

Impacted populations later discovered that several products associated with DIPEL—"biological insecticides," as their proponents call them—were being used. Because they are "biological" does not mean that they do not cause impacts, but that is for another discussion. This apparently inoffensive insecticide did not achieve its objective, so reinforcement was necessary through the use of several other substances. At the environmental public hearing held in Mucuri in July 2016, landless workers, councillors and beekeepers reported that the planes sprayed not only DIPEL, but also other products. One participant pointed out that: "The company only says they use DIPEL in aerial spraying, but they are actually using Evidence, Thiamethoxam and Actara, an expensive and strong product." In light of this situation, the Centre for Studies and Research for the Development of the Southern Tip of Bahia (CEPEDES by its Portuguese acronym) sought information about these products from Bahia's Agricultural Defence Agency (ADAB) and Regional Engineering and Architecture Council (CREA, by its Portuguese acronym).

In CREA's list from 2013, 2014 and 2015, one sees products from the neonicotinoid chemical group, which are nicotine derivatives. The 2014 list shows that 52,857,000 litres of DIPEL were used. Along with DIPEL, there was an astonishing increase in insecticides from the neonicotinoid chemical group, amounting to over 43 million litres. In particular, field workers and communities identified that Actara, Evidence and Thiamethoxam were used, the latter containing both neonicotinoid and pyrethroid. The total amount of these chemicals, plus DIPEL, reached 96,022,100 litres in 2014. In 2015, the use of DIPEL dropped to 7,946,000 litres, but the use of neonicotinoid chemical products increased, altogether totalling 153,194,750 litres.

In addition to the herbicide Glyphosate, the companies FIBRIA, Suzano Papel e Celulose and Veracel Celulose use other chemicals to control forests. These include the oxyfluorfen-based herbicides, Isoxazole, Triazolone Cyclohexene and Dicarboximide; and insecticides, germicides and fungicides like *Bacillus Thuringiensis* (DIPEL), Benzalkonium chloride – Quaternary ammonium, Neonicotinoids (Actara, Evidence 700, Thiamethoxam); Organophosphates (Orthene 750 BR); Inorganic dicopper chloride trihydroxide; Pyrazole; Sulfluramid (Mirex) and Trifloxystrobin. The main manufacturers of these chemicals are the German companies, BAYER and BASF, the U.S. companies, DOW, GRIFFIN Corporation and MONSANTO, the Swiss company, SYNGENTA, and the Japanese company, SUMITOMO CHEMICAL.

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## **Violations and injustices of silent poisons**

At least two or more active ingredients are needed for eucalyptus plantations: one to kill ants and another to smother the emergence of invasive plants, which is how technicians define the few plant species that manage to break through eucalyptus's solitariness. In addition, more than one component can be used for these cases, because, according to manufacturers, products become ineffective as plants and insects develop resistance to them. This requires higher doses of the same product, or new formulas and mixtures that are applied relentlessly—given that some areas have trees of all ages, permanently supplying pulp mills that operate 24 hours a day.

Thus, the discourse about proper dosages and safe use is not real, but rather exists to build a positive image in order to hide the harmful effects on health and the environment. This demonstrates the aggressiveness of the strategy, reinforced and endorsed by hegemonic science, which supposedly ensures proper amounts and low toxicity of lethal products. Yet people and the environment are being poisoned daily, and water sources are being contaminated at unknown levels. On top of this, fast-growing eucalyptus plantations require enormous quantities of water, leading to water scarcity. The brown caterpillar's recent emergence further reinforces the situation of imbalance in the ecosystem, and it has led to the afore-mentioned aerial application of a greater number and variety of chemical products.

One observes that all this perverse exploitation—including the poisoning of people, and in particular the rural population—occurs in order to produce pulp to supply the Global North with disposable paper. Furthermore, this exploitation occurs with the participation of the State and of Science, who together are building a world of poisoned paper that absorbs the life, sweat and blood of the earth. This world is only possible because of deep inequalities, which enable violent expropriation through usurpation, the exploitation of human labour, and most of all, impunity for violators.

### **Final Considerations**

The intense lobby of agribusiness continues to this day, leading to tax exemptions and generous subsidies for agrochemical and pulp companies, which expanded dramatically in the 1970s. Transgenic eucalyptus was born at the nexus of the pulp and agrochemical industries. Suzano Papel e Celulose, through the biotechnology company, Futuragene, obtained permission in 2015 to release these transgenic crops. Field tests for their large-scale commercial use have already begun. This implies an even greater use of water and agrochemicals.

It is also important to note how history repeats itself. Ever since the political-legal-media coup that deposed President-elect Dilma Rousseff, setbacks in workers' rights have deepened, while agribusiness encroaches upon the traditional lands of peasants, indigenous peoples and quilombolas. In Bahia, around 300 families were displaced from areas where there was conflict with the company, Veracel Celulose. One also observes the attack on regulatory and oversight bodies, such as the National Agency for Sanitary Vigilance (ANVISA, by its Portuguese acronym), which is responsible for assessing and revaluating agrochemicals. Just as agrochemical and eucalyptus-pulp industries benefited under the civil-military coup of 1964, current agribusiness representatives—who are intimately tied to the agrochemical industry—named Blairo Maggi as Minister of Agriculture under the current government. Maggi is known nationally as the "King of Soy," and he authored Bill 6299 of 2002, known as the "Poison Bill," which aims to facilitate the marketing, use, storage and transport of agrochemicals. There are strong indications that the current coup, like the one in 1964, is based on strengthening companies in this sector. Thus, history repeats itself; and in this case, as a shameless farce devoid of ethics.

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In light of this situation and current conditions, there is a clear need to eradicate this production model centred on eucalyptus and pulp mills. Likewise, there is a need to transition from a food production system based on monocultures and the intensive use of fertilizers and agrochemicals, to agroecological production that guarantees territories free of agrochemicals—as an alternative and a way to generate life and health for people and the environment.

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This article is based on another, originally in Portuguese, which can be found at:

<http://racismoambiental.net.br/2017/09/04/desertos-verdes-eucalipto-e-o-veneno-silencioso/>

(1) Dictionary of Rural Education, 2012, p. 86

(2) <http://cpdoc.fgv.br/producao/dossies/JK/artigos/Economia/PlanodeMetas>

(3) Carson, Rachel. Silent Spring, 1962. 1st Edition, São Paulo: Gaia Publishing House, 2010.

(4) Pinheiro, Sebastião, 1989, “A Máfia dos Agrotóxicos no Brasil”.

<http://cpdoc.fgv.br/producao/dossies/JK/artigos/Economia/PlanodeMetas>

(5) Rigotto, Raquel Maria. ROSA, Islene Ferreira. In: Caldart RS, Pereira IB, Alentejano P, Frigotto G, organizers. In Dictionary of Rural Education, Editora Expressão Popular, São Paulo, 2012

(6) Ibid (4)

(7) FANZERES, Anna. (Coord). “Temas conflituosos relacionados à expansão da base florestal plantada e definição de estratégias para minimização dos conflitos identificados”, “Relatório Final de Consultoria”, “Programa Nacional de Florestas”, “Secretaria de Biodiversidade e Florestas”, Ministerio del Medio Ambiente, Brasília, March 2005.

(8) Século Diário: “Agrotóxicos da Aracruz Celulose: grave problema de saúde pública por Ubervalter Coimbra”

(9)

<http://g1.globo.com/bahia/jornal-da-manha/videos/v/mariposas-invadem-a-cidade-de-prado-no-sul-do-estado/4306242/> and

<http://g1.globo.com/bahia/noticia/2015/09/infestacao-de-mariposas-intriga-autoridades-de-cidade-do-sul-da-ba.html>

(10) Environmental Health Vigilance Department, and DSAST (Workers Health) – Ministry of Health

<http://www.epsjv.fiocruz.br/sites/default/files/files/DSAST.pdf>

(11) [www.abaf.org.br/download/lagarta-parda.pdf](http://www.abaf.org.br/download/lagarta-parda.pdf)