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PEASANTRY AND NEOEXTRACTIVISM IN SÃO PAULO: DYNAMICS AND CONFLICTS OF THE SUGAR-ENERGY INDUSTRY IN THE REGION OF RIBEIRÃO PRETO

Victor Marchesin Corrêa* Joelson Gonçalves de Carvalho*

Abstract

This research has investigated the productive dynamics of the sugarcane agribusiness and its effects on the social reproduction of peasant groups in the administrative region of Ribeirão Preto, in the interior of São Paulo, an important territory hegemonized by sugarcane, which has been the stage of several agrarian conflicts in the state. To pursue this, semi-structured interviews were conducted with representative agents for the topic at hand, as well as field visits and analysis of secondary data. Using a historical-dialectical paradigm, the aim of this article is to demonstrate that in the region in question, an intensive, predatory neoextractivist activity is located, led by the sugarcane sector which, in its production logic, disrupts and hinders peasant production and social reproduction. The conclusions indicate that, even outside frontier zones, there have been severe impacts on local peasant groups, resulting in dispossession, land concentration, and conflicts of various kinds.

Keywords

Agribusiness; Sugarcane Sector; Socio-Environmental Impacts; Agrarian Issues; Rural Settlements.

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ARTIGOS DOSSIÊ NEOEXTRATIVISMO E AUTORITARISMO

CAMPESINATO E NEOEXTRATIVISMO EM SÃO PAULO: DINÂMICAS E CONFLITOS DA ATIVIDADE SUCROENERGÉTICA NA REGIÃO DE RIBEIRÃO PRETO

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Resumo

Esta pesquisa investigou a dinâmica produtiva do agronegócio canavieiro e seus efeitos na reprodução social de grupos camponeses na Região Administrativa de Ribeirão Preto, interior do estado de São Paulo, importante território hegemonizado pela cana-de-açúcar e palco de diversos conflitos agrários do estado. Para tanto, foram realizadas entrevistas semiestruturadas com agentes representativos para o tema em questão, além de visitas de campo e análise de dados secundários. A partir de um paradigma histórico-dialético, o objetivo deste artigo é demonstrar que, na região em questão, se localiza uma intensiva e predatória atividade neoextrativista protagonizada pelo setor sucroenergético que, em sua lógica de produção, desorganiza e dificulta a produção e reprodução social camponesa. As conclusões indicam que, ainda que fora de zonas de fronteira, há severos impactos sobre grupos camponeses locais, resultando em despossessões, concentração fundiária e conflitos de diversas ordens.

Palavras-chave

Agronegócio; Setor Sucroenergético; Impactos socioambientais; Questão Agrária; Assentamentos rurais.

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1. Introduction

In the academic sphere, neoextractivism as a research agenda is often associated with frontier territories due to the unsustainable nature of exploiting natural resources, as identified by Ye et al. (2019). That is to say, as these resources become exhausted, it is then necessary to mobilize new land in order to guarantee the reproduction of the economic model. While this is particularly clear in relation to mining (Santos; Milanez, 2013; Contente, 2018), for agriculture, however, this element is less evident, especially when considering territories that are already fully anthropized. That said, this study has emerged after identifying a major difficulty in studies on neoextractivist dynamics, namely: their occurrence in areas with a stabilized land structure.

We set out to analyze the context of the Administrative Region (AR) of Ribeirão Preto, a territory that includes 25 municipalities and more than 9,300 hectares (ha) of land in the northern part of the state of São Paulo, which is one of the main sugarcane production centers in Brazil. Having been established outside agricultural frontier areas, with a highly concentrated, although largely stabilized land distribution, and with a high population density, it is only to be expected that the recent boost to the sugar-energy sector would take on particular contours across this region, given the obstacles for incorporating new lands (Costa, 2011). It should be noted that such stability does not signify the absence of conflicts or transformations in the local land structure, but that the legal-land status of agricultural establishments in the region is mostly defined, which therefore reduces the possibility of dynamics involved in contesting inheritance, land grabbing, and the eviction of squatters.

We start from the assumption that, in the region studied, a series of technical factors limit, but do not prevent, the territorial expansion of sugarcane cultivation. Essentially, this activity presents a high degree of capital immobility, due to the construction of processing factory units, in addition to the high costs of cutting, loading and transporting (CLT) sugarcane, which restrict the radius within which the raw material may be produced in relation to the processing plant (Pinheiro, 2015), thereby making this crop particularly unsuitable for advancing the agricultural frontier. However, despite the fact that sugarcane cultivation does not immediately produce new deforestation, "the expansion fronts of monoculture agribusiness are intertwined and displaced mutually, exerting pressure onto the expansion of territorial exploitation and the deforestation of areas located on the agricultural frontier" (Assis, 2014, p. 410).

Thus, this article aims to analyze the impacts of sugarcane production on the reproduction of peasant groups settled in the AR of Ribeirão Preto. We seek to demonstrate that in the interior of São Paulo, the most industrialized and urbanized state in Brazil, there exists an intensive, predatory neoextractive activity, led by the sugar-energy sector, which, due to its dynamics, has disorganized and hindered peasant social reproduction, and played a leading role in conflicts with social movements fighting to secure land rights.

It is precisely in the relationship with the land that the peasant condition fundamentally resides, marked by an enormous diversity in their way of life and social organization. In the region studied herein, this condition has also been anchored in the presence of settled families who have benefited from public policies on land redistribution. This article analyzes the reproduction conditions of these families, understanding their practices as a vector of resistance to the advancement of sugarcane agribusiness.

It should be emphasized that, in addition to its specific contours, the sugarcane agroindustry, as well as other activities that make up the intensive production of agricultural commodities, converge with the logic of so-called neoextractive activities which, in the context of the expanded reproduction of capital, bring significant socio-environmental impacts, such as the loss of biodiversity, contamination of rivers and soil, territorial conflicts, the displacement of traditional communities and, among others, coercion and violence toward the most vulnerable populations. We begin from the hypothesis that this is the case in the region of Ribeirão Preto, in

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^{1. &}quot;In order to respond with high productivity, sugar cane requires corrected, balanced soils, which is why it has not adapted to the condition of a pioneer crop" (Silva; França; Oyamada, 2014, p. 75).

^{2.} This and all other non-English citations hereafter have been translated by the authors.

the interior of the State of São Paulo, where the territorial hegemony of sugarcane directly effects access to jobs and the production of family and peasant farming.

In addition to this introduction and final considerations, this article is divided into four sections. Section two presents theoretical mediations that help to support the argument that the sugar-energy agribusiness illustrates a specific type of neoextractivism and, therefore, has very distinct impacts. Section three is dedicated to a more general presentation of the methodological procedures. Sections four and five are dedicated, respectively, to presenting the socio-territorial dynamics of the sugar-energy sector and its impacts on peasants in the Ribeirão Preto region.

2. Agribusiness and neoextractivism: theoretical mediations

It is acknowledged that capitalism does not advance uniformly across territories. Marx (2011) stated that primitive accumulation signified the process characterized by the violent expropriation of peasants and the creation of a vulnerable, dispossessed working class. This conception gained an important contribution from the work of Rosa Luxemburg (1984) who helped to demonstrate that the continuous expansion of capitalism also tends to make expropriation and violence continuous. With his concept of accumulation by dispossession, David Harvey (2004) expanded the understanding of primitive accumulation, arguing that, even in the later phases of capitalism, dispossession and expropriation have continued to play a fundamental role in maintaining and expanding the system. Herein lies a central analytical key when considering neoextractivist activities.

The perspectives of Luxemburg and Harvey reveal how the incessant search for capital accumulation may today fuel practices called neoextractivist, where the activities involved in the exploitation of natural resources are accompanied by processes of spoliation, displacement of traditional communities and significant environmental impacts.

Understanding these historical and conceptual connections is fundamental in order to analyze the complex dynamics that involve contemporary capitalist development, most notably in countries such as Brazil.

Neoextractivism, according to Acselrad et al. (2021, p. 168), is characterized as a "capitalist development model based on the exploitation of natural resources through poorly diversified production networks focused on the export of commodities". Its main characteristic, according to Ye et al. (2019), is the non-reproduction of exploited natural resources, which, among other impacts, often results in soil depletion, the destruction of landscapes and biodiversity, increased pollution and the displacement of local populations.

In Brazil, the exploitation of land and nature has been shaped by a process of reaffirming the plantation. If formerly, the dynamic focus of the country's economy was the production of monocultures on vast expanses of land with slave labor and production destined almost exclusively for the international market, currently we are witnessing commodity production with the prominent exploitation of land, natural resources and workers, characteristics that are inseparable from agribusiness in Brazil (Carvalho; Molina; Cunha, 2021).

Based on the assumption that agribusiness is the result of an association between large agro-industrial capital, financial capital and large property, today it has become the most relevant political and economic actor in order to understand the neocolonial or neoextractivist reversion in Brazil. The historicity of this contemporary conformation becomes more evident with the technical modernization of agriculture and its integration with industry, especially in relation to inputs and machinery. These blocks of capital were to structure what would be called, decades later, agribusiness. Delgado and Leite (2022) have argued that it is impossible to analyze the current Brazilian rural context without considering the influence of financial capital and the financialization process of agriculture. Similarly, studies by Delgado (2005; 2012) have demonstrated that the association between financial capital and large estates in the arrangement of contemporary political economy has engendered a dynamic that overexploits the workforce and natural resources, bringing about economic, environmental and social impacts. With regard to sugar-energy agribusiness, particularly in the case of São Paulo, the entry of large transnational corporations may also be observed, most notably from the oil and food sectors. Furthermore, as analyzed by Corrêa (2020; 2023), it is also necessary to consider the presence of pension funds that entered the sector following the opening of capital of national companies.

Thus, it is through criticism of the negative impacts of agribusiness, defense of agricultural productive practices associated with preserving the environment, the valorization of local economies and peasant culture that the most recent resistance experiences of social movements have resulted, in their fight for land and land reform. These struggles have paradoxically taken place within a context whereby the same actor who has taken a leading role in primitive accumulation also appropriates the critical discourse in the form of "environmental responsibility" (Lopes, 2006). In other words, the environmental issue, when incorporated by workers and affected populations, has also been incorporated by agribusiness sectors into the repertoire of their interests and demands (Lopes, 2006).

Faced with this scenario, social movements have sought to defend their territories, from the traditional perspective of a "fight for land", expanding it to a

"fight on land", upholding environmental justice. In other words, movements that have traditionally acted and mobilized around the issue of land began to act on environmental fronts to protect nature and resume their life projects across these territories (Escobar, 2005).

In this onslaught, these movements have constituted themselves as actors that define new territorialities, new practices and social relations, disputing narratives and rethinking the appropriation of biological diversity. The debate on biodiversity, as indicated by Escobar (1998), is relatively recent within the strategies of social movements which, he stated, construct nature differently from hegemonic forms. Therefore, they create different uses and attribute different meanings to the term. Understanding this is fundamental in order to obtain a broader understanding of the current dynamics of social movements that have redefined themselves and that fight for the countryside, identity and culture to persist.

The foundations of the long Marxist tradition in rural studies have focused on the penetration and advancement of capitalist relations in the countryside and their resulting consequences for traditional populations in the rural world and their forms of life and social reproduction. In general terms, it is within this analytical framework that the present study is inserted. However, the twenty-first century has brought particularities to the development of capitalist relations in the countryside, caused by transformations in the dynamics of the expanded reproduction of capital, especially in Latin American countries. This has leveraged a primary-export model of international insertion based on the expansion of agricultural and mining megaprojects (Delgado, 2012).

This new economic order has been driven economically by the boom in international prices for agricultural and mineral commodities. However, it is due to the conception of political and economic agents, with regard to the role of suppliers of primary goods in Latin American economies in the international division of labor, which Maristella Svampa (2013) calls the "commodities consensus", in reference to the tacit – although increasingly explicit – acceptance of the inevitable nature of this type of insertion, given the growing global demand for primary products (Svampa, 2013).

The search to explore comparative advantages in Latin America has ratified a neoextractive development model whose impact on territories, natural resources and rural populations has been significant.

Neoextractivism establishes a vertical dynamic that invades the territories and de-structures regional economies, destroys biodiversity, deepens the process of land concentration evicting or displacing rural, indigenous or peasant communities, and violates processes of citizen decision-making. (Svampa, 2013, p. 34)³

These new configurations take on political contours, since the public machinery has been mobilized to suppress the citizen participation of the populations affected by extractive enterprises, making the designs of such a project converge with authoritarian practices, in an aggressive attack on peasant, indigenous and quilombola territories in accelerated processes of dispossession (Acselrad et al., 2021). As an illustration, it is important to mention the pressures, operated within the State, to change regulations and legislation (land, labor and environmental) with their consequent risks to rural populations, since "deregulating environmental standards and releasing predatory activities implies favoring expropriation of social groups whose material and immaterial reproduction depends on access to land, water and other natural resources" (Acselrad et al., 2021, p. 170-171).

In addition to extractive enterprises in the conventional sense, such as mining, neoextractivism also includes those linked to the corporate agri-food system, such as the production of agricultural commodities and agrofuels (Svampa, 2013). The tangible effects of the sugar-energy sector are typical of the expanded dynamics thus considered, and result in the disruption of the family economies of rural populations, an increase in land concentration and a low diversification of the regional agricultural economy, with the consequent dependence on sugarcane production.

Rural populations, in turn, refer to a wide diversity of contexts, cultural practices and social relationships, which vary over time and space. This diversity has here been incorporated into the concept of peasantry as an operationalizable analytical category, as expressed in the literature which, in its diversity, associates the peasant with the existence of a family economy (Chayanov, 1974; Shanin, 2008), closely related to land as a living and working environment (Girardi, 2008; Welch et al., 2009), characteristics present among the beneficiaries of land redistribution programs, which, herein, will be the object of our observations.

3. Method and methodological procedures

The analysis undertaken here seeks to understand social phenomena as processes in transformation, in which contradictions and conflicts between different forces are fundamental to the change and reproduction of social structures.

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^{3.} NB – For direct citations, the English version was used of SVAMPA, M. The 'Commodities Consensus' and Valuation Languages in Latin America, *Alternautas*, 2(1), 45-59, 2015. Available at: https://journals.warwick.ac.uk/index.php/alternautas/article/view/1003/683

To this end, secondary data were gathered, most notably from the Agricultural Census and the Municipal Agricultural Production Survey, both from the Brazilian Institute of Geography and Statistics (IBGE), as well as data from the State Data Analysis System Foundation (SEADE) regarding the occupation of labor in rural areas. We also sought to understand the transformations observed in the regional rural context, with an advancement in sugarcane cultivation and a redefinition of the land and productive structure of the AR of Ribeirão Preto.

The study also used in-depth interviews, with the application of semistructured scripts to collect primary data, so as to identify the peasant perception of their own lives and work experiences within a territory hegemonized by the sugarcane agroindustry, as well as, the conflicts present in the territory.

From within the diversity of peasantry, as an analytical category, rural settlers were selected for the purposes of field research, identified as the main social subjects standing in resistance to agribusiness in the context of the regional agrarian issue. Five settlements were identified in the AR of Ribeirão Preto, two of which were state and three federal – a relevant factor for the development of the research, as will be established below. Eleven interviews were conducted with the aim of investigating the perceived impacts of sugarcane production on the life of the settlement, as well as on the trajectory of the settled families and their strategies of social reproduction. Three interviews were also held with representatives from the sugar mills in the region, aiming to identify the specificities of sectoral development across the studied territory during the past ten years, as well as their relationship with workers.

All the other agro-industrial units in the study area were also contacted for the research, who either refused to participate or failed to respond. The field research was conducted throughout 2022, while the collection and analysis of secondary data began during the second half of 2021. Through the work undertaken, it was possible to characterize and analyze the socio-territorial dynamics of the sugar-energy sector in the Riberão Preto region, to understand the determining elements of the local peasant condition, together with some of the significant impacts of sugarcane production on the organization of production and the lives of the social subjects studied.

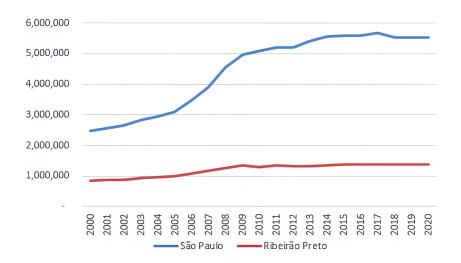
4. Socio-territorial dynamics of the sugar-energy sector in the AR of Ribeirão Preto

The expansion of sugarcane to the Ribeirão Preto region was supported by the National Alcohol Program (Proálcool), during the 1970s, within the policies of the II National Development Plan (II PND), which favored the consolidation of agricultural modernization in the region upstream and downstream of the sugar-energy sector. From the 1980s onwards, this expansion was stimulated by the Sugarcane Expansion Program for Fuel Production in the State of São Paulo (Procana) (Carvalho, 2011).

During the 1990s, marked by an intensification of the processes of globalization and neoliberal structural adjustments, a trade opening was imposed, which weakened the internal production of items linked to family and peasant-based agriculture. On the other hand, the commodity-producing agribusiness was favored, supported by the monoculture-latifundium-export tripartite. Within this dynamic, sugarcane became one of the main agricultural products in the state of São Paulo and in the AR of Ribeirão Preto, a fact that was reiterated over the following decades. In the 2000s, the internationalization and financialization of the sugar-energy sector, analyzed in Benetti (2008) and Corrêa (2020), also changed the regional dynamics, with the entry of international groups – such as the French Tereos Group – and the opening of capital of the main groups active in the region, such as Cosan and São Martinho, which injected a significant amount of resources into the local sugarcane complex and boosted the growth of its activity.

The relative stability of the area planted with sugarcane during the period 2000-2020 indicates a consolidation process of the sugarcane culture. At the beginning of the 2000s, sugarcane already occupied most of the region's arable area, remaining stable at around 1,300,000 ha since 2009, as may be observed in data from the Municipal Agricultural Production Survey (PAM), presented in the graph below. However, according to data from the SEADE Foundation, with this planted area, for the year 2020, sugarcane represented 68.2% of the entire arable area and 68.5% of the entire Agricultural Production Value (VPA) of the region. Subtracting the area destined for pastures, the area planted with sugarcane extended to more than 90% of agricultural occupation across the region (Seade, 2023).

According to Graph 1, the relatively low growth in sugarcane production in the Ribeirão Preto region, when compared to the state of São Paulo as a whole, represents around 400 thousand ha of land incorporated by this crop between the years 2003 and 2013. Considering the lack of unoccupied land in the region to accommodate this growth, the advance of sugarcane ultimately occurred through the suppression of other agricultural activities.



Graph 1. Area planted with sugarcane (in ha) in the Administrative Region of Ribeirão Preto and in the state of São Paulo, 2000-2020

Source: PAM-IBGE, 2022.

In part, the analysis of this expansion must consider the areas occupied by livestock and the advance of sugarcane over the region's pastures. Data from the Municipal Livestock Survey (PPM), carried out by the IBGE annually, does not identify the size of pasture areas, however, it is possible to verify a significant reduction by around 60% in the total cattle stock in the Ribeirão Preto region between the years 1990 and 2022. According to data from the Agricultural Census, between 2006 and 2017, the AR of Ribeirão Preto lost approximately 23% of areas destined for pastures, which is around 20 thousand hectares.⁴ This indicates a restructuring of local rural patronage and its economic activity, the result of which was less diversification in the region's agrarian economy, intensifying economic dependence on sugarcane production. This process is a typical characteristic of areas dominated by neoextractive enterprises, due to pressure for the monopolization of natural resources and the disruption of other economic activities.

According to Graph 1, the relatively low growth in sugarcane production in the Ribeirão Preto region represents a movement inversely proportional to that of rice and beans production in the same region, for which, during the same period, the planting area suffered a reduction of 98% and 58%, respectively. Although these agricultural crops are historically linked to family and peasant farming, when analyzing data on the strata size of agricultural establishments at the

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^{4.} The data presented were obtained from the sum of individual data from all municipalities in the region, as some aggregated data are not available in the Agricultural Census due to statistical confidentiality in case there are three or less agricultural establishments for the information sought.

municipal level, the advance of sugarcane over other crops, once again, suggests a reconfiguration movement of the rural elites According to the most recent census, establishments with up to 100 hectares represent approximately 85% of the total number of agricultural establishments. However, these only cover 21% of the total area. Establishments of between 100 and 1,000 hectares comprise 13% of the number of establishments, but cover 43.4% of the area. It is impressive that establishments with 1,000 hectares or more represent less than 2% of the total, although they cover a significant portion of the area, corresponding to 35% (IBGE, 2019). These data, which are also affected by IBGE statistical secrecy criteria, indicate that, in addition to land concentration, there is also a concentration of productive control in agriculture by large establishments with clear business management, whether for typical agribusiness products, such as sugarcane, or whether for others, such as beans, for example.

Competition between crops may explain the decrease in the production of typically peasant food goods in cases where these lands are suitable for capture through the land market, via purchase or lease. One of the representatives of the sugar-energy business groups interviewed highlighted the scenario of saturation and intense competition for land and raw materials from companies in the complex. This does not apply, however, to the part of the population settled in agrarian reform programs, most notably the federal programs.

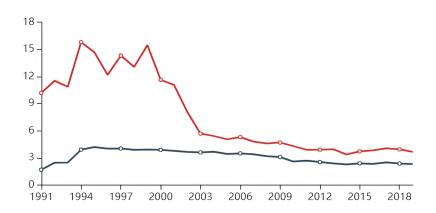
This movement propels a process of technological introjection with a view to increasing the agricultural and industrial productivity of the regional sugarcane complex and coping with high leasing costs. The high degree of mechanization and automation of production processes is a fundamental characteristic of sugarcane production in the region, with direct impacts on the absorption of rural and urban labor. However, this same representative indicated that the sugar mills in the region operate with a high idle capacity, indicating that this strategy encounters limits in the crushing capacity of the mills, thereby exerting pressure to incorporate new agricultural land.

This dominance of the sugar-energy sector is reflected in the fierce territorial disputes in the region, which include conflicts associated with the advance of sugarcane onto urban fringes and protected public areas. This was confirmed in field research conducted in the municipality of Jardinópolis, where the sugarcane fields belonging to the Balbo Group have advanced onto public areas along the railway embankments, where the implementation of agricultural projects is prohibited. This same area has been claimed by the Landless Rural Workers Movement (known as MST) and the Union of Housing Movements (UMM) which, together, have installed the Campo and Cidade Paulo Botelho encampments there,

indicating how the peasant condition has been squeezed in between the asphalt of the SP- 351 highway and the illegal advancement of sugarcane fields up to the railroad tracks.

Data from the 2017 agricultural census reveal a highly concentrated agrarian structure in the analyzed territory, containing rural establishments of more than 1000 ha occupying 68% of the agricultural area, even though they represent only 3.52% of the total establishments. On the other hand, agricultural establishments with up to 50 ha account for 79.9% of the region's total establishments, although they only cover 6.44% of the territory (IBGE, 2019).

With regard to the occupation of labor, there is an unequivocal existence of bottlenecks for incorporating it into agricultural activities, considering the context of land concentration and highly capital-intensive crops in the region. Scientific and technological progress has changed the amount of available jobs in proportion to the capital investments. Data from the SEADE foundation (2023) reveal a precipitous drop in the number of workers employed in agriculture in the region, and has remained below 6% throughout the twenty-first century, as may be observed in Graph 2.



-O- Administrative Region of Ribeirão Preto -O- Total in the State of São Paulo

Graph 2. Relative participation of formal employment in agriculture, livestock, forestry, fishing and aquaculture in the total formal employment in the AR of Ribeirão Preto, 1991-2019

Source: SEADE Foundation, 2023.

The stimulus to mechanize sugarcane cutting occurred during the time when ethanol was being put forward as an energy alternative to fossil fuels, with the possibility of eliminating sugar field burning.⁵ Inserted into the international debate on climate change, the 2007 Agro-Environmental Protocol of the Secretariat of Infrastructure and Environment for the State of São Paulo (Sima, 2017), which provided for replacing manual sugarcane cutting with mechanized cutting, signed by the vast majority of companies in the sugar-energy sector in the state of São Paulo, drastically reduced the human employment during the harvest. However, no alternatives were provided for those who lost their jobs (Baccarin, 2016).

Two of the three business interviewees highlighted the proactiveness of the sugar mills in accelerating the mechanization process, introducing it before the deadlines established by the protocol, in an attempt to improve the sector's image as being an environmentally responsible activity. The interviewees reiterated their companies' commitment to the provisions of the Forest Code and other environmental laws and regulations, even though, as will be described below, their activities have generated significant negative environmental impacts. The construction of the sector's narrative on environmental responsibility reveals a process that has environmentalized conflicts, analyzed by Lopes (2006) as a phenomenon that informed the transformations in corporate strategies and the search for building legitimacy in certain markets in the face of concerns regarding the public environmental issue and its agenda.

The mechanization of sugarcane cutting culminated in the near elimination of burning sugarcane fields, causing, on the other hand, a process involving the mass dismissal of rural workers, which was far more intense among low-qualified workers, the sugarcane cutters themselves (Baccarin; Gebara; Borges, 2011). There was a clear increase in the use of mechanical harvesters: from 753 units to more than 3000 in the state of São Paulo, according to data from the Etanol Verde report (2017). The result was an intensified exploitation of agricultural labor in sugarcane production. This led to a reorganization of labor relations with a potential increase in the concentration of regional income and the draining of local resources, in the face of an increasingly more internationalized appropriation regime resulting from the financialization of these activities. This confirms the negative social impacts of the neoextractivist dynamics identified by Burchardt and Dietz (2014), who warned of the disruption of national labor and consumer markets in favor of a development model based on the commodification of nature.

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^{5.} Sugarcane crops are set on fire before the harvest in order to remove the leaves and tops of the sugarcane plant leaving only the sugar-bearing stalk to be harvested.

Comparing the number of workers employed in agricultural activities in the AR of Ribeirão Preto between the 2006 and 2017 agricultural censuses reveals a reduction of 14,870 rural workers, representing a drop of 33.2%, in just 11 years. Even among those employed with a degree of kinship with the landowner (a characteristic element of family farming) there was also a drastic reduction, from 10,166 workers in 2006 to just 5,944 in 2017, a reduction of around 42% (IBGE, 2019).

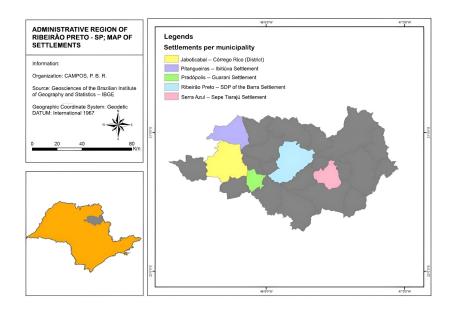
The joint analysis of the information indicates that, alongside land concentration, sugarcane cultivation has advanced into areas previously occupied by family and peasant farming. Faced with the hegemonization of the sugar-energy sector in the occupation of agricultural areas, including family and peasant farming areas, the possibilities of employing labor in agricultural activities in the region are residual and the strengthening of typical agribusiness in the region occurs pari passu to the increasing difficulties of peasant social reproduction.

5. Peasantry in the face of agribusiness hegemony: reflections from the AR of Ribeirão Preto

Despite the strong agro-industrial dynamics linked to the sugar-energy sector in the Ribeirão Preto region, there is a significant population living and working in rural areas. Considering only the families that have benefited from land redistribution programs, there are approximately 900 families sheltering in five rural settlements (Map 1). Of these five projects, three are the result of a state policy on land redistribution and were established under the responsibility of the Land Institute for the State of São Paulo (ITESP) foundation, while the other two are on a federal level, under the responsibility of the National Institute of Colonization and Agrarian Reform (INCRA).⁶

reasons of focus in this article, will not be addressed herein.

^{6.} INCRA is a federal autarchy with the objective of carrying out agrarian reform in Brazil in addition to managing the country's public lands, and within its prerogatives, is responsible for recovering settlement infrastructures and monitoring and correcting Brazilian environmental liabilities. The ITESP Foundation is the entity responsible for planning and executing agrarian and land policies in the State of São Paulo and for recognizing Quilombola Communities. It should be noted that there are institutional conflicts between ITESP and INCRA regarding the current responsibility of state settlements which, for



Map 1. The AR of Ribeirão Preto and the locations of the municipalities with settlements Source: Carvalho, 2011.

What the state settlements⁷ have in common is the fact that they were installed in former areas of *hortos florestais* (forest gardens),⁸ and that, when they were intended for land redistribution, they were under the administration of the State Government of São Paulo. The federal projects also have an important common characteristic: both are Sustainable Development Projects (SDPs) and, as a result, must be guided by principles such as associations, agroecology and stricter rules regarding environmental standards.

The SDP Da Barra and Sepé Tiaraju settlements were established in territories previously used for sugarcane production, which implies a very particular context for constituting rural communities in areas degraded by sugarcane production. This leads us to reflect not only on the advancement of agribusiness onto peasant lands, but also on the conditions that enabled the advancement of agrarian reform into territories hegemonized by sugar cane cultivation.

The creation of the da Barra SDP, in 2004, was a milestone for Brazilian agrarian reform, since its expropriation was the first in the entire country due to non-compliance with the social function of rural property in relation to the appropriate use of available natural resources and preserving the environment. The farm is located in a recharge area of the Guarani aquifer, previously destined

⁷. For a characterization and details of the settlements mentioned herein, please see Carvalho (2011).

^{8.} Generally a protected area of native forest close to urban centers.

for the production of sugarcane, with no control or mechanism to mitigate the damage caused to the environment (Carvalho, 2011). The regularization of the settlement was established with the institutional commitment to develop an ecologically sustainable production of healthy food items, based on agroecological principles, on land that was suffering from the gradual loss of its biodiversity and ecological dynamism.

Likewise, the Sepé Tiaraju SDP was established in the area of an old sugarcane farm, owned by the Nova União Processing Plant (now deactivated), which had been expropriated by the government of São Paulo due to labor debts and other tax liabilities (Carvalho, 2011). This resulted in the materialization of a different model of land occupation and rural development, which assumed the role of mitigating the climatic and environmental effects of sugarcane production, forcefully inserting the environmental issue into the panorama of agrarian conflicts.

Structuring the settlements in question presented obstacles arising from the previous sugarcane cultivation. During the field research, residents from the da Barra SDP reported how the process of extracting sugarcane stumps (a procedure generally carried out with the help of machinery) had to be carried out manually by the settlers themselves, only with the use of hoes, since, without this, it would have been impossible to start food production on the plots of land.

This food production was also hampered by the scarcity of water in the settlement, given that, according to the settlers, at least two water sources had been silted up due to sugarcane cultivation. Reports indicated that, initially, the soil quality was low, due to nutrient depletion, which put the construction of an organic production system at risk. According to one settler: "undertaking agroecological production without using agrochemicals is a big challenge. So, in the first year production was reasonable. In the second it was much lower, and in the third year, nothing. There was little compensation, the land was very weak." (Settler 1 from the da Barra SDP, aged 58).

Correcting and balancing soils, as well as recovering biodiversity, is more costly and time-consuming when the state of degradation of the area is more advanced, especially considering the impossibility of using chemical fertilizers. Being an SDP, the requirement of using environmentally sustainable and differentiated practices and inputs implies a complex, often expensive process, which is aggravated even more due to the evident difficulties for settler families to access financing policies. These difficulties also characterized the trajectory of the Sepé Tiaraju SDP, where difficulties were encountered in accessing credit lines intended for structuring settlements, which directly affected the problems involved in recovering the area from the degradation imposed by sugarcane liabilities.

Despite the condition of the soil, all the interviewed settlers mentioned difficulties related to extreme climatic events, such as frosts and excessively long periods of drought, events that the peasants themselves attribute to the loss of biodiversity and regional forest cover due to the expansion of sugarcane fields.

Replacing the old sugarcane production by agroecological practices ultimately demonstrates the adoption of different logics for the use and occupation of the territory. Since the process of establishing the SDPs was marked by a strong environmental component, after the land regularization of the territory, the fight to remain and resist, led by the peasant population, also took on a strong environmental component. This element refers to the eco-territorial turn of local social movements, identified by Svampa (2013) as the movement to valorize counterhegemonic subjects, and their ways of life and production as legitimate vectors of an alternative, sustainable development model. Thus, the environmentally sustainable aspects of the peasant way of life are exalted in explicit opposition to the insertion of these territories in the circuits of capitalist accumulation, in a process similar to that analyzed by Assis (2015) for the case of peasant and riverside populations in the western part of the state of Pará, where the environmental issue is at the center of land conflicts.

However, sugarcane is an uncomfortable reality in the settlements, since they are surrounded by sugarcane fields in their bordering regions, which perpetuates conflicts, tensions and intimidation. According to one settler:

Sometimes our fire here sets fire to their sugarcane too. They get angry, this year they were angry, but it wasn't our fault. We don't know who started the fire. The fire spread, we couldn't put it out, it jumped over to there. Then they came with their trucks [...]. "Since you're setting fire, we're going to set fire to you too!", they shouted (Settler 2 from the da Barra SDP, aged 58)

The most conflicting events are concentrated in the bordering territories between the settlements and the sugarcane growing areas. As Martins (1996) identified, frontier spaces, where one space meets another, are stages for the emergence of conflicts. Even though these are not frontiers in the classic sense, we identified the existence of frontiers between different logics of territorial occupation, forming a peasant reality isolated by sugarcane fields and modern circuits of capitalist organization of space. In addition to the fire (which appears on both sides and impacts the neighborhood), according to several interviews, there

are also the impacts of the drift process,⁹ due to the aerial spraying of pesticides on sugarcane fields, which causes damage such as death of chickens and other animals, putting agroecological-based production at risk.

With regard to the state experiences of land redistribution, despite the more recent increase in the number of peasant families interested in implementing more sustainable production systems, including some with agroecological production and management, conventional agriculture is widespread. According to Carvalho (2011), the agricultural model inherited from the green revolution dominates the forms of production in state settlements, with little (although growing) space for agroecological alternatives.

However, the existence of sugarcane cultivation has been recorded for almost two decades in part of the lots in these settlements. This is due to the fact that there is a regulation that formalizes a "partnership" between settled families and agro-industries (ITESP, 2004), authorizing the beneficiaries of state agrarian reform projects to sign agricultural production contracts with agro-industrial companies. In the AR of Ribeirão Preto, this partnership has materialized, in a preferential manner, in the leasing of land so as to form sugarcane fields.

With the legalization of leasing areas destined for agrarian reform in order to plant sugarcane, space has been opened for harassment and obtaining rural settlements, which were previously outside the land market. With regard to this, as Amim and Vergopoulos (1977) stated, while it is a fact that peasants maintain possession of the land, they nonetheless lose autonomy over it and frequently sell labor power, taken to the condition of a home worker. It is a fact that these partnerships help to increase the family annual income; however, it is necessary to consider the absence of public policies that favor the production and commercialization processes of settlement production. The fact is that the presence of sugarcane in these settlements generates internal and institutional conflicts on both a state and federal level (Carvalho, 2011).

6. Final considerations

The most recent dynamics of the sugar-energy sector in the AR of Ribeirão Preto, to the extent that it leads to land concentration and territorial hegemony, have created obstacles to the agricultural production and social reproduction of the peasantry. The logic of monoculture supported by an intense exploitation of natural

^{9.} Drift is the movement of chemical substances sprayed or applied in an agricultural area, which reach other areas that were not intended for application. This may occur because of several reasons, such as wind, lack of maintenance or adequate adjustment of equipment, among others.

resources, such as land and water, justifies using the concept of neoextractivism to consider the pattern of the region's territorial development. Even outside the most recent areas in which agribusiness has incorporated new lands, if we contemplate the similarities with the processes of accumulation through spoliation and destruction of resources, it is possible to establish a great similarity between the sugar-energy agribusiness and the extractive forms of production, placing it as a manifestation of neoextractivism in the interior of the state of São Paulo.

Even with the stability of sugarcane production in the AR of Ribeirão Preto, in general terms, the territorial advance of the sugar-energy sector appears to suppress crops traditionally linked to peasant agriculture, therefore impacting the possibilities of work and income for rural populations. Not even its expansion is accompanied by an increase in jobs, since, as with the large neoextractive projects, changes in the organic and technical composition of capital occur to the detriment of labor. It should be noted that, for the region in question, the obstacles to the horizontal expansion of production are compensated by an increase in productivity per worker, thereby intensifying the exploitation of labor. Furthermore, as Assis (2014) observed, the agribusiness expansion fronts are intertwined and should not thought of as isolated items. Thus, the production and accumulation strategies of the sugar-energy sector in the region are reflected, dialectically, in the denial of land as a living and working space for the rural population of the Ribeirão Preto region.

The model for the overexploitation of natural resources applied in sugarcane production has brought about major environmental risks and damage to both land and water, which, in turn, has legitimized the expropriation of two large areas destined for agrarian reform (the da Barra and Sepé Tiarajú SDPs). These settlements, in their socio-productive organizations based on agroecology, are in clear conflict with the neoextractivist logic of agribusiness for territorial occupation. Isolated by sugarcane fields, the SDPs in the region are places of resistance beaconed by a distinct worldview, from which other ways of relating to the land are derived. It is no coincidence that the areas bordering rural settlements materialize as conflict zones.

With their peasant social reproduction strategies, the settlement populations have strengthened the implementation of agroecological production systems, permanently incorporating a strong environmental concern that advocates the incorporation of other forms of occupation, use and conservation of territories. Thus, they have distanced themselves from the forms promoted by a neoextractivist logic, resulting in an essentially political antagonism between the peasantry and agribusiness that shapes the regional agrarian issue. It is interesting to note that,

from this point on, peasants begin to dispute concepts of "development" and "sustainability", as well as ways of interpreting agriculture and territory, which is evident in the statements of many settlers during the field activities: "sugarcane is not bad, the problem is the way it is produced" (Settler 1 from the da Barra SDP, aged 58).

Lastly, it should be noted that the creation of rural settlements provides the basic conditions for peasant groups to exist, i.e., it guarantees access to land as a living and work space, although it is insufficient to protect such groups from the numerous threats and harassment to which they are subjected by the economic, political and coercive power of the sugarcane agroindustry. It is important that public agrarian reform policies consider productive diversification as a way of guaranteeing the economic sustainability of rural settlements. However, they should also guarantee the participation of peasants in consultative (and perhaps deliberative) spaces, so that decisions related to the use of land and natural resources may incorporate their opinions and demands regarding projects that affect the lives and means of subsistence of these same peasants.

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