

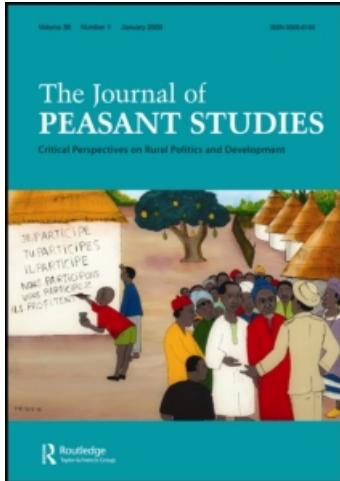
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## Journal of Peasant Studies

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713673200>

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Online publication date: 23 September 2010

**To cite this Article** Fernandes, Bernardo Mançano , Welch, Clifford Andrew and Gonçalves, Elienaí Constantino(2010) 'Agrofuel policies in Brazil: paradigmatic and territorial disputes', *Journal of Peasant Studies*, 37: 4, 793 — 819

**To link to this Article:** DOI: 10.1080/03066150.2010.512459

URL: <http://dx.doi.org/10.1080/03066150.2010.512459>

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## Agrofuel policies in Brazil: paradigmatic and territorial disputes

Bernardo Mançano Fernandes, Clifford Andrew Welch and  
Elienaí Constantino Gonçalves

The expansion of agrofuel crops challenges us to rethink policies, territories, human agency, and the paradigms used to explain them. In Brazil, policies supporting the expansion of agrofuel crops and the intensification of agrofuel production are reorganising rural land use and undermining some forms of participation in the capitalist and family modes of production. To reflect on this new reality, we study peasant movement reactions, proposals, and territorial disputes with agribusiness. Using the Pontal do Paranapanema region of São Paulo state as a case in point, the paper analyses territorial disputes between expanding sugarcane plantations and agrarian reform settlements as well as biodiesel production projects developed by the Landless Workers Movement (MST) and the Western São Paulo Federation of Settlement and Family Farmer Associations (FAAFOP). It also analyses the agrofuel policies of other peasant organisations, including Via Campesina. The production of agrofuels has changed the processes of land acquisition and use by both agribusiness and the peasantry, provoking new insights into the nature of territorial conflicts and thereby stimulating the need to revise perspectives on the agrarian question in Brazil.

**Keywords:** agrarian question; agrofuels; territory; MST; Via Campesina; CONTAG

### Introduction

This paper analyses the effects of agrofuel policies in Brazil and seeks to understand what these effects tell us about the agrarian question. In recent decades, the agrarian question has undergone a revival as a framework for understanding globalisation processes (Bernstein 1996/1997, 2004, McMichael 1997, Akram-Lodhi and Kay 2010a, 2010b). Instead of being seen as a foundational question for understanding nation-state formation and a supposedly preordained transition to capitalism, the agrarian question has come to undergird explorations of the rise of peasant movements worldwide, a resurgence that has come to play a central role in challenging the commodification of land, the politics of Ricardian economics, the predominance of unhealthy industrial food, the decoupling of agriculture from environmental concerns, depeasantisation, urban privilege, and authoritarianism in all its forms. In Third World settings like Brazil, despite strong ‘emerging market’ economic indicators, the idealised expectations of a capitalist agrarian transition never come and the agrarian question remains relevant.

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The authors would like to thank the three anonymous reviewers for their helpful comments.

The analysis of agrofuel policy is a case in point that helps defend a bottom-up, view-from-the-south argument elevating the agrarian question to the status of a 'pre-paradigm' struggling to challenge the hegemony of the agrarian capitalist paradigm. The present is something like the 'early moment' described by Thomas Kuhn (1996, xi) when writing about the competition between schools of thought in the process of scientific revolutions. 'When paradigms', writes Kuhn, 'enter into a debate about paradigm choice, their role is necessarily circular. Each group uses its own paradigm to argue in that paradigm's defence' (p. 94). According to the agrarian capitalist paradigm, so forcefully examined by such scholars as Robert Brenner (1976) and Terence Byres (2009), the experience of western European societies suggests that most nations will follow one developmental road or another in a nearly inevitable process of capitalist state formation that necessarily demands the domestication of the countryside by the city and the peasantry's metamorphosis into urban workers or capitalist family farmers.

Brazilian scholars, particularly economists such as Ricardo Abramovay, have been proponents of this view since the early 1990s. Abramovay's award-winning thesis was published then as *Agrarian capitalist paradigms in question (Paradigmas do capitalismo agrário em questão)*, 1992 and is now in its third edition. Its success is no doubt due to its extraordinary anticipation of future events. Following initial publication of the book, the agrarian capitalist paradigm it identified gained hegemonic status in many fields just as the agribusiness model it characterised grew to prominence as the salvation of Brazilian agriculture. Of course, Abramovay played a role in this system as architect of the National Family Farm Strengthening Program (Programa Nacional de Fortalecimento da Agricultura Familiar, PRO-NAF). Important to the economist's reasoning was his attempt to dismantle the Marxist agrarian question. Those who continued to question agrarian capitalism, however, regrouped around the classic works on the agrarian question (Kautsky, Lenin, Chayanov) and gradually fought back, instigated to academic militancy by the continued resistance of the peasantry. From the perspective of defenders of the agrarian question, there is very little to be gained from continuing to speculate about when and how 'the' agrarian transition to capitalism will take place. After centuries of idealising the end point, they argue, one can only affirm that the future is an enigma and the process of questioning its nature is the only sensible basis for scientific inquiry; indeed for most, the problem is the exploitative nature of capitalist agriculture that has produced the horrid irony of making the peasantry one of the most malnourished of social sectors (Macedo 2010). Thus, the essence of the agrarian question pre-paradigm is the urgent need to continue searching for solutions which anticipate neither the predominance of the peasantry nor the conquest of agrarian capitalism.

Our discussion is based largely on an examination of the implementation of Brazilian agricultural policies and the experiences of agribusiness interests and peasant organisations. Contributing to our analysis are observations of the territorial disputes that have occurred between agribusiness and the peasantry and an investigation of the significance of conflicting peasant movement approaches to agrofuels. We examine the agrofuel production projects of the Landless Workers Movement (Movimento dos Trabalhadores Rurais Sem Terra, MST), the Movement of Small Farmers (Movimento dos Pequenos Agricultores, MPA), the National Confederation of Agricultural Workers (Confederação Nacional de Trabalhadores na Agricultura, CONTAG) and the Associations of Settled Family Farmers

Federation in Western São Paulo State (Federação das Associações de Assentados e Agricultores Familiares do Oeste Paulista, FAAFOP). Our analysis is primarily focused on the context of the expansion of sugarcane production in the Pontal do Paranapanema region of Brazil's agriculturally prosperous state of São Paulo. There and in other locations around Brazil, CONTAG encourages peasant participation in all forms of agrofuel production while the MST encourages resistance. Meanwhile, the MPA suffered a split, with the majority supporting investment in the construction of an agrofuels cooperative that received start-up financing from Petrobras, one of the largest state energy conglomerates in the world, while a minority group left the MPA in protest, concerned that contact with agrofuels threatened food production and peasant longevity. Given the diverse responses of these peasant movements, we argue that the expanding market for agrofuel has changed the processes of territorial acquisition and loss for both agribusiness and the peasantry.

Throughout the discussion we emphasise geography's use of the concept of territory. Many disciplines utilise the concept of territory in the sense of area and extension, generally disregarding territory's multidimensional nature and, in all but the case of nation-states, the power relations that characterise it. National territories are understood by most scholars as historical formations, often built through occupation, war and negotiation. Our study is oriented by the geographic theory of territorialisation, deterritorialisation and reterritorialisation, or TDR, which holds that similar forms of conflict operate to define smaller units of space – sugarcane plantations and land reform settlements, for example – as territories (Fernandes 1999, 2009). In the Pontal, the rise in prices paid for agrofuels rapidly turned land designated for expropriation as land settlements into productive sugarcane farms. It also 'reterritorialised' established settlement lands – formerly dedicated to sugarcane – and 'deterritorialised' peasants of their control over the land. Some peasants organised FAAFOP to protect their territories by embracing new agrofuel markets, while others held fast in the MST, accusing these groups of selling-out to capitalism. The holdouts redoubled their efforts to defend the relative autonomy of the family mode of production.

The same TDR theory that applies to these examples of material forms of territory can also be applied to immaterial territories like ideology and academic schools of thought. In the case at hand, agrarian capitalism has territorialised the paradigmatic space among communities of scholars in different fields of study, most especially economics and political science. Among policymakers, too, the agrarian capitalism paradigm is preeminent. Those who are oriented by the certainty of agrarian capitalism argue that agrarian reform is dead, serving as nothing more than rural welfare policy. Those oriented by the agrarian question, however, vigorously support expanding and intensifying agrarian reform policies. In academic meetings and cabinet ministries, the territorial struggle on the land is accompanied by a fight to reorient policy, to 'territorialise' the hearts and minds of legislators and officials with one perspective or the other, which is not to deny the existence of a variety of competing approaches to agrofuel policy.

Keeping the multidimensional nature of territory in mind, we discuss the different forms of territorial dispute that take shape both in the countryside and in paradigm debates. We affirm that both must be considered territories and that one cannot be divorced from the other. In other words, material and immaterial territory are inextricably linked. James C. Scott (1985) also emphasises the material and

immaterial worlds in his classic examination of the ‘everyday forms of peasant resistance’, although he does not embrace the geographical concept of territory, herein presented through the examination of two concrete forms of territorial disputes. One is based in physical space – that is to say, in agricultural land that is routinely claimed, lost and reclaimed by peasants and agribusinesses. Another form of territory to be examined is called ‘territoriality’. This word expresses the concept of immaterial territory, the way claimed space is defined and articulated by claimants, in our case agribusiness and peasant interests. By applying the two competing paradigms to current agrofuel policies in Brazil, we illustrate how new territories and territorialities are constructed.

### **The agrarian question and the agrarian capitalist paradigm**

The capitalist development process in Brazilian agriculture is essentially unequal and contradictory, a process that simultaneously eliminates and creates parts of the peasantry. Brazilian geographer Arioaldo Umbelino de Oliveira has argued dramatically that capital contradicts itself by creating, destroying and recreating the peasantry (Oliveira 1991). From the perspective of geography, the elimination of peasants is seen as the result of capitalism’s territorialisation of the countryside. This process of expanding land acquisition and intensified use of wage labour forced peasants in some regions off the land and into towns, where they became dependent on seasonal agricultural work and government assistance. This depeasantisation process has also been stimulated by large-scale construction projects, such as hydroelectric plants – which inundate large areas of farm land – and road and rail corridors, which also cause mass displacement. The period of Brazil’s military dictatorship (1964–1985) was one that saw a sharp rise in these projects and the implementation of agrarian capitalist enterprises (Gonçalves Neto 1997). While some producers were expelled, however, capitalist expansion also brought new relations of domination that reproduced the peasantry as tenant farmers, share-croppers, and especially contract farmers. In the First World, contract farming relations are seen as contributing to the proletarianisation of farmers but in the Third World such contracts can be understood as at least temporary means of preserving peasant territories (Lewontin 2000, Oliveira 2004).<sup>1</sup>

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<sup>1</sup>For years, the disappearance of the family farm has been addressed by the literature and by policy adaptations in First World countries like the United States (Vogeler 1981, NIFA 2010). The expectation in these settings is the Jeffersonian ideal of self-governance arising from land ownership. As the contract system developed, however, the literature emphasised the farmer’s loss of autonomy and discounted the significance of land ownership. In the Third World, small farmer land ownership has been historically precarious and any force that helps preserve or expand it can be said to contribute to peasant autonomy. The definition of a proletarian is a worker who does not own the means of production. A farmer or peasant who owns his land cannot therefore be a proletarian even though his loss of control over the exact way in which the means are employed certainly constitutes a loss of autonomy. But from the basis of his or her territorial control – his or her ownership of the land and thus the means of production – other possibilities can be constructed. Finally, because of the mechanical and chemical inputs typically employed in conventional farming in the First World, many small farmers find their debt load so great that financial institutions actually secure their land titles. In the Third World, these models of agricultural and financial practices are less common and thus contract farming can help prolong tenure.

Yet, it is important to add here that the reproduction of the peasantry does not only happen as a result of the expansion of capitalism. In Brazil, the struggle for land takes the form of land occupations. Land occupations are discouraged by the capitalist order through the criminalisation of such strategies as well as direct forms of property protection, such as violent attacks by the authorities or hired guns (Welch 2006b). Yet despite the development of various public policies meant to end occupations, they continue to be the principal means used by popular sectors to recreate the peasantry (Fernandes 2000, Fernandes *et al.* 2009). Other important practices include the struggle of existing peasant, indigenous and Afro-Brazilian communities to strengthen their settlements and resist expropriation. Peasant organisations have also mobilised spectacular public events, such as cross-country marches on Brasilia, the national capital, in 1998 and 2005, in order to attract attention to the cause of agrarian reform and influence government policy.

In order to combat these constant struggles for land in various countries in the southern hemisphere, the World Bank proposed diverse financial programs for purchasing land beginning with the Land Bank in 1998 and continuing to the present as the Projeto Cedula da Terra (Borras 2003, 2006, Martins 2004, Ramos Filho 2008). These programs are a way of redirecting the struggle for land from the political sphere to the economic sphere. In other words, the World Bank and its national partners have sought to turn land reform questions into market questions, intending to thereby contain mobilisation and strengthen capitalism. Other measures adopted in Brazil include a contradictory mix of initiatives, from establishing agrarian reform settlements, where basic infrastructure and agricultural assistance are only grudgingly provided, to persecuting and imprisoning leaders, setting up competing organisations, encouraging police intimidation, and orchestrating attacks by private gunmen (CPT 2009).

Analysing agrarian conflicts and territorial struggles as conjunctural parts of capitalism, scholars working within the agrarian capitalist paradigm contribute to disguising capital's purposeful subordination of the peasantry. Those who adopt this analytical view believe the power relations that destroy and recreate the peasantry are not inherent structural qualities of capitalism. The concentration of land, wealth and power, along with the destruction and recreation of the peasantry are, they argue, conjunctural problems characteristic of agrarian capitalist development that can only be solved by capitalism (Abramovay 1992, Goldberg 1996). The World Bank's market-based agrarian reform measures fit within this logic.

Social inequalities in agrarian society are therefore produced by conjunctural problems, challenges that can be resolved by means of policies that enable the 'integration' of the peasantry (small family farmers for most of the paradigm's proponents) within capitalist markets (Abramovay and Magalhães 2007, Berdegué *et al.* 2008). Integration is necessary because the peasantry itself is incomplete; it cannot subsist on its own and thus depends on capitalist markets in order to develop. The integration of the peasant within capitalism serves the interests of both by transitioning the former to a better situation and enriching the latter with a new producer. According to the logic of the agrarian capitalist paradigm, the peasantry and capital 'interact'. An example of this in Brazil is PRONAF, which seeks to support farmers through guaranteed market share in such publicly funded initiatives as school lunch programs. This 'interactive' relationship quite properly leads to the

peasantry's subordination, loss of land, and inevitable metamorphosis either into a capitalist farmers or wage-earning workers. From the perspective of the agrarian capitalism paradigm, however, conflict is not a reference point, as integration is a harmonious not an unequal and contradictory process. In the politics of composing agrarian policies, agrarian reform is interpreted by advocates of the agrarian capitalism paradigm as a means of enabling small family farms to coexist in harmony with capitalist markets while the transition takes place (Abramovay 1992, Fernandes 2008b).

The relationship between the peasantry and capitalism is at the centre of the agrarian question's challenge to the agrarian capitalism paradigm. Agrarian question scholars interpret the relationship as one that always involves the subordination of the peasantry to capital, leading a fraction of the peasantry to insubordination (Bernstein 2009, Akram-Lodhi and Kay 2010a). For Fernandes (1999, 2000), the relationship generates permanent territorial disputes that can be analysed best through the TDR theory of land acquisition, loss and restoration. The geographer emphasises how the recreation of the peasantry in Brazil has more recently taken place as the result of land occupations conducted by social movements like the MST. Ploeg (2008) studies the resilient character of the peasantry evident in resistance to agribusiness efforts to incorporate them and reshape their identities and way of life. And Carvalho (2009) examines the so-called integration of the peasantry within capitalist markets by emphasising forms of peasant resistance as a kind of catharsis through which peasants recuperate historic rebelliousness.

Both perspectives discuss the role of agribusiness in agricultural development, yet in opposing ways. Agribusiness is the developmental model of capitalist agriculture that began to take shape in the aftermath of World War II and became consolidated, largely through the influence of transnational corporations (TNCs), in the 1980–1990s (Davis and Goldberg 1957, Burbach and Flynn 1980, Welch and Fernandes 2008). Agribusiness TNCs are organised in aggregates of systems that control agricultural products. Some TNCs are integrated horizontally, others vertically, and some seek to control all the systems involved in producing, processing, distributing and marketing commodities. To stress their control and spread, Ploeg (2008) calls agribusiness TNCs 'food empires'. At the starting point on the land, the large-scale monocultural production of a given commodity is predominantly directed by agribusiness firms, often with partial participation of the peasantry in the form of the contract system. Together with financial and technological inputs these once distinct systems form the contemporary agribusiness composite, one that is reinforced socially and politically by an ample ideological system that strives incessantly to convince society of its benefits. The complexity and seeming integrity of the composite help advocates of the agrarian capitalism paradigm make claims of the 'panacea-like' qualities of agribusiness.

In the context of Brazil, the agrarian question returned to the fore as the need arose to explain the massive resistance of the peasantry and peasant descendants among the marginalised urban poor to these processes of integration. The movement began to resist the agro-industrial juggernaut in the 1970s and refused to be quelled by the ideological assurances of agrarian capitalism propagandists. Despite significant gains, agribusiness could never claim a monopoly over interpretations of agrarian reality. Indeed, agribusiness does not have the monopoly over agricultural production and does not represent the totality of agricultural

production. As much as 70 percent of the fruits and vegetables Brazilians consume are produced by small farmers. Large-scale monoculture production based on labour expropriation and the concentration of territory, wealth and power is only one possible model for agricultural development. For advocates of the agrarian question perspective, peasant struggles against subordination to capitalism are a means for the elaboration of other models of development. They do so through developing social relations with bases in small-scale diversified family production, through grower associations and cooperatives that are conceived to be sustainable and inclusive (Welch 2006a).

The agrarian question perspective remains a pre-paradigm partly because, while it serves to unite critics of agrarian capitalism, it fails to unify them behind a vision of the future as well-articulated as that offered by agribusiness. For some geographers, the continued questioning of agrarian capitalism – in terms of scholarship and land occupations – suggests a new social formation will arise from a territorial treaty of sorts (Fernandes 2008a). Should the territory occupied by agrarian reform settlements continue to grow along with adequate public investment in their maintenance – always much less than the subsidies given agribusiness – and should agribusiness interests agree to accept agrarian reform as the status quo, a peace pact could result that guarantees the combined existence of family and capitalist modes of production. Given capital's insatiable appetite for resources, however, such a scenario is difficult for many to envision. Territorial acquisition does not automatically mean autonomy, but it is a necessary condition in order to construct it. The search for autonomy is a permanent struggle for 'territorial sovereignty', we argue. To ground the theoretical discussion in actual experience, the remainder of the paper examines specific case studies of the relationship between peasant movements and agrofuel development policies.

### **Ethanol disputes: peasantry and agribusiness**

Given the rise in the use of agrofuel, some corporations have invested in the purchase of processing mills or the construction of new facilities destined for ethanol production. In 2007, a transnational Brazilian construction company called the Grupo Odebrecht bought the Alcídia Mill located in the municipality of Teodoro Sampaio, in the Pontal do Paranapanema region. At least two additional mills are planned for construction by the Odebrecht group's ETH-Bioenergy, SA subsidiary. Within the administrative district of Presidente Prudente – commercial *entrepot* of the Pontal – the land devoted to sugarcane during the harvest year 2003–04 totalled 116,681 hectares and increased to 327,087 hectares for the harvest year 2008–09, up 210,406 hectares or 180 percent. This made it one of the state's most dynamic sugar regions (Table 1).

As Brazil's biggest sugar-producing state, São Paulo investors look to the Pontal as a region that possesses great potential for the expansion of cane cultivation. The region is characterised by illegally documented lands (*terrás griladas*) and land conflicts that have been dragging on for more than a century. The 1988 Brazilian Constitution targets 'unproductive lands' for agrarian reform redistribution. The shady legal status of land titles prevented capitalists from investing heavily in the area and for this reason cattle grazing predominated as a form of land exploitation. With growth in the sugar and ethanol industry, however, the cattlemen sought to protect their large holdings by converting their

Table 1. São Paulo state areas planted in hectares, by administrative district and harvest year, 2003–04 to 2008–09.

Administrative region	2003–2004	2004–2005	2005–2006	2006–2007	2007–2008	2008–2009	% increase in area planted
Araçatuba	224.5	246.9	262.3	294.8	397.9	512.6	128.4
Barretos	219.8	236.3	261.7	295.8	333.0	385.6	75.4
Bauru	299.8	314.5	329.9	353.2	422.1	474.2	58.2
Campinas	393.9	408.4	436.4	453.1	489.6	511.0	29.7
Central	320.4	329.3	341.6	366.4	394.3	432.3	34.9
Franca	355.0	376.3	390.5	417.1	449.4	489.1	37.7
Marília	241.3	253.3	266.2	289.1	360.0	405.9	68.2
Presidente Prudente	116.7	133.3	151.4	179.8	235.2	327.1	180.3
Ribeirão Preto	416.9	422.1	433.4	447.4	457.3	471.4	13.1
São José do Rio Preto	280.7	303.7	331.9	396.9	502.6	632.0	125.2
Sorocaba	133.7	141.3	159.4	167.5	208.5	232.8	74.1
<b>TOTAL</b>	<b>3,002.7</b>	<b>3,165.4</b>	<b>3,364.7</b>	<b>3,661.2</b>	<b>4,249.9</b>	<b>4,873.9</b>	<b>62.3</b>

Source: União da Indústria de Cana-de-açúcar (UNICA).

unproductive pasture into legally productive sugarcane plantations. Thus, lands recently characterised by dramatic conflicts between occupying landless workers and those holding falsified deeds are now being taken over by agribusiness interests intent on keeping them away from peasant movements. Naturally, the change in land usage has also affected dairy and beef production (Novo *et al.* 2010). The new reality challenges years of planning for the region's territorial development through policies centred on a combination of livestock and milk production.

In the Pontal region, the territorialisation of sugarcane and settlements actually began with struggles in the 1970s, following the implementation of a national ethanol development project called Proálcool – Programa Nacional de Álcool. But by the start of the twenty-first century, sugarcane had disappeared from the region. Due to some quirks in Brazilian data collection methodology, the following information may seem to conflict with the data in Table 1. In fact, the Presidente Prudente administrative district documented in Table 1 is slightly different in size and shape from the Pontal do Paranapanema region, whose data we now use to illustrate comparative change in the fortunes of sugarcane and agrarian reform. By 2003, sugarcane had come from being planted in a negligible area to occupying 71,095 hectares of the region, whereas the area occupied by agrarian reform settlements was actually larger, with 127,438 hectares. In 2008, however, the sugarcane invasion had exploded with the occupation of 152,027 hectares of the Pontal, while the region's 6,111 peasant families lived in 109 settlements that had territorialised 140,272 hectares (Unica 2009, Fernandes *et al.* 2009). In this five-year period, the settlement area had increased by just over 10 percent while the expansion of the area destined for sugarcane production rose dramatically by 114 percent. (See Table 2.) In the Pontal region, then, the conflict between peasants and agrofuel interests has visibly marked the landscape, something demonstrated by comparing each of their processes of territorialisation.

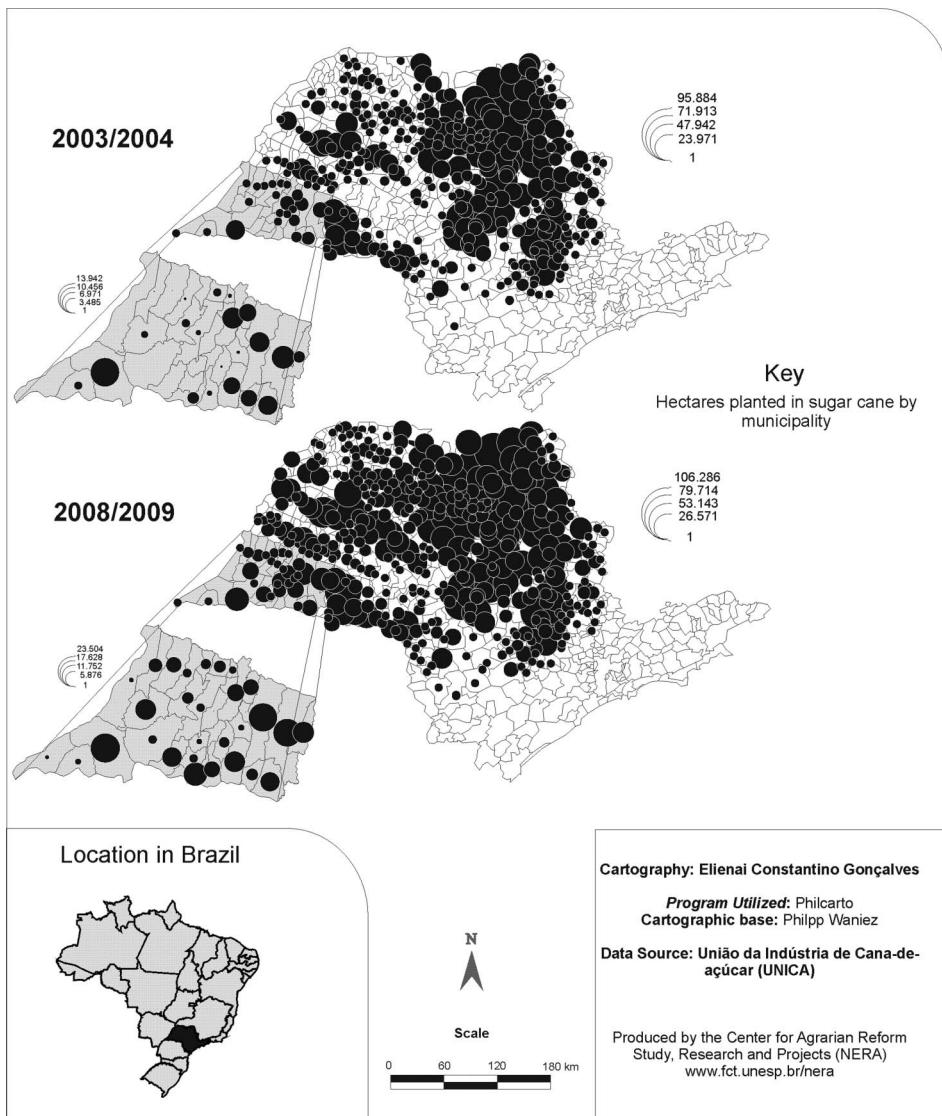


Figure 1. Sugarcane planted in São Paulo state during the 2003/2004 and 2008/2009 harvest years, with the Pontal do Paranapanema region highlighted.

These statistics reveal how agrarian reform policy has been grounded as policies favouring agrofuels have taken off. The challenge for peasant movements is to develop and maintain their autonomy over the territories that they gained in the struggle for land reform. While the advance of sugarcane occurs on larger properties, some families on some settlements have also sought salvation in the bittersweet promises of the sugar industry. Contractors for the firms have enticed settlers with thousands of dollars of up-front investment if the peasants were to allow the planting of sugarcane on their lots. Many who have accepted such deals have come to regret their decisions. In the Pontal municipality of Mirante do Paranapanema, we spoke to XV de Novembro Settlement families who described themselves as greedy and

foolish for contracting their lots. The yearly payments were quickly spent and family members found themselves forced to work as seasonal sugarcane cutters, one of the most difficult and lowest-paid jobs imaginable. The chemicals used to cultivate the cane diminished the quality of their land and water, making a change of crops costly and their houses less inhabitable (Ferrante 2008, Welch 2008).

The contract scheme expresses the territoriality of agribusiness on peasant land. Indeed, agrofuel policies have made apparent new features of the struggle for land in the Pontal region. With not only unproductive, illegally titled land converted into agribusiness territory but settlement land as well, the challenges for peasant territorialisation have grown significantly. Moreover, peasant territoriality has been threatened. Settlements were already fragile in their attempt to transform the lives of former peasants and the urban underemployed with the promise of farm lots they could control and call their own. By enticing families to sign contracts to lease their land to sugarcane producers, agribusiness began to undermine the process from within. Territorial disputes between the expansion of sugar-ethanol production and the agricultural project of once-landless workers represent two forces and two distinct models of development. Agrarian reform gains essential vitality from the expansion of settlement territories geared for peasant production. The introduction of the agrofuel contract system brought many inconsistencies and fragmented the unity of the reborn peasantry (see Fig. 2).

Table 2. Sugarcane versus land reform settlement expansion in the Pontal do Paranapanema, 2003–08 (area in hectares).

	2003–2004	2005–2006	2007–2008	% increase
Sugarcane	71,095	92,391	152,027	114%
Settlements	127,438	137,991	140,272	10%

Source: União da Indústria de Cana-de-açúcar (2009), Fernandes *et al.* (2009).

Notes: By 2009–10, the sugarcane area had expanded yet again to 208,953 hectares but the comparative growth of the settlement area is not yet known. On the basis of observation, it is expected to be negligible.



Figure 2. The territorial dispute between peasants and agribusiness is illustrated in this photo of the Mário Lago agrarian reform settlement in Ribeirão Preto, São Paulo, with food production lots to the left and sugarcane to the right. Photo: Douglas Mansur, 2005.

A case in point is that of a joint-venture initiative pursued on Pontal settlements by the Alcídia Mill. The first attempt to produce sugar ethanol on rural Pontal region settlements began in 1993 when mill owners presented a project to the state agency responsible for settlements, the Land Institute of the State of São Paulo (Institute de Terras do Estado de São Paulo, ITESP). They wanted to get families on 11 of the 121 lots of the Agua Sumida settlement in the municipality of Teodoro Sampaio to sign joint-venture contracts with Alcídia to plant sugarcane. The project stipulated that the São Paulo State Bank would finance the venture, loaning the families the necessary resources for production. Yet the families were never actually to see the money as the mill retained the power to administer the resources. The project simply required the families to sign over to the mill the loans they applied for without ever touching the money loaned (Destilária Alcídia 1995).

In an evaluation of the experience released in September 1995, mill spokesmen outlined the objectives that oriented the joint venture project:

to show that it is possible to plant sugar cane on small properties in a economically productive fashion, provide monthly income for the entire span of the productive period (48 months) and effectively fix the settled farmer on their land, in such a way that would not oblige them to seek out employment in other activities off of their land. (Destilária Alcídia 1995)

While the discourse is hopeful, the mill's actions belie positive appearances. If the objective was to secure the autonomy of the mill's peasant partners, why did Alcídia insist on taking complete control of loaned funds? On the contrary, later investigation was to interpret Alcídia's motives as ones that sought to use the peasants and agrarian reform lands to reduce risks and enhance returns through the use of subsidised loans and borrowed land.

In December 1995, ITESP's Department of Land Settlements approached the Geography Department of UNESP's Presidente Prudente campus and invited researchers to analyse the viability of the introduction of sugarcane on the settlements. According to ITESP, the joint venture had 'provoked lots of polemics surrounding the socioeconomic development on these settlements' as 'the region's mill owners and politicians began to push for the expansion of sugarcane plantations on Agua Sumida and other settlements, principally Gleba XV de Novembro' (Antonio *et al.* 1995). A team was formed to examine the pilot project.

The geographers conducted field research in order to develop a technical-scientific analysis of the viability of sugarcane cultivation on Pontal settlements. They stressed the contradictions raised by imposing sugarcane-plantation models of development on agrarian reform settlements. Sugarcane cultivation demands large chemical and mechanical investments and specialised production knowledge, none of which the settlements possessed. Researchers found that gradually the number of settlement sugarcane suppliers – *partners* – diminished to an unprofitable level, even for the mill.

The analysis evaluated the pros and cons of the joint venture from the perspective Alcídia mill investors. With respect to the mill, numerous advantages were identified. The integration of settlement farmers was a way to overcome the low profitability of sugarcane production in the region due, in large part, to the history of land conflict that discouraged investors. Alcídia's directors could publicise their 'social responsibility' contributions to the viability of small farmers, while utilising land devoted for agrarian reform without paying any rent. The location of the expanded

production on contiguous areas of the Água Sumida settlement made the investment more economical for the firm as the added area integrated seamlessly into the production process. Bank financing of settlement planting enhanced the business conditions for the project as the peasants carried all the risk of borrowing the money, while the mill enjoyed all the benefits of spending it.

The study captured the peasant perspective, as well. Those who entered into the partnership reported that they found the joint venture appealing at first. They liked how the joint venture gave them a sense of economic tranquillity when they began to receive monthly advance payments from the mill. They felt valued by the technical assistance provided by Alcídia. The sale of their product was guaranteed from the start and thus the partnership was understood by them as a viable alternative in the absence of broader public policies in support of the development of more diverse crops. But, the study concluded on a cautionary note:

At the same time that sugarcane seemed to be the only economically viable alternative for the small producer on the settlement, it also condemned them to dependency, to a lack of participation, and a loss of autonomy as the mill alienated them from their land and subjected them to conditions imposed exclusively by the company. (Antonio *et al.* 1995, 6).

This pilot project once again exposed the perversity of the modernisation of Brazilian agriculture, a perversity which may be extended through the negotiation of similar sugarcane production partnerships on other agrarian reform settlements. However, these negative considerations, stagnant sugar prices and a moribund market for ethanol combined to forestall the implementation of similar projects for the remainder of the twentieth century.

In 2002, ITESP presented Regulation 75, a new proposal 'to integrate' peasants and agribusiness to guarantee the participation of the settled farmers in the economy of the municipalities through 'supplying industries with raw materials, and increasing the planted area with essential crops for sustenance' (ITESP 2002). At the time, world oil prices were skyrocketing and Brazil moved to once again implement policies favouring cars with 'flex' motors that could run on pure ethanol or pure gasoline or any mixture of the two. The regulation reflected neoliberal ideology in attempting to use market mechanisms to enhance the viability of the settlements under its charge. It specified that ITESP would allow up to 30 percent of each settlement's lots to be utilised for planting sugarcane. The accompanying new partnership proposal encouraged the peasants to seek waged work on off-settlement agricultural establishments, arguing that such a relationship would enhance their liberty. This was quite different from the justification used in 1993–95, which stressed how the agrofuel joint venture would help 'fix' farmers on the land and avoid waged work. The new model was clearly influenced by the 'New Rurality' school of thought, which is consistent with the agrarian capitalist paradigm. Rather than serve as a support for peasant sustainability, ITESP's new agrofuel policy used this framework to disguise what amounted to a peasant deterritorialisation and proletarianisation project. The Alcídia mill, which had failed to sign the joint venture agreements of the 1993 pilot project, quickly signed five-year agreements in 2002 with some 119 settled families.

After yet another abrupt rise in the price of oil and a series of measures adopted by the government in order to stimulate ethanol production between 2002 and 2003, ITESP issued Regulation 77, which reiterated many of the conditions previously established. The institute believed, among other things, that it was 'necessary to

create public policies geared towards producing incentives for agribusiness and agricultural production'. It encouraged the development of projects on settlements for the cultivation of crops grown to satisfy agribusiness interests. Furthermore, settlers and their business partners could request permission from ITESP to dedicate as much as 50 percent of lots up to 15 hectares in size, while lots with more than 15 hectares were limited to devoting 30 percent of agricultural land to such ends (ITESP 2004).

According to ITESP, 500 settlement families used the 2004 regulation to form joint ventures with firms. Of these, as Table 3 shows, eight families cultivated soy and 492 sugarcane.

In São Paulo state, these 500 lots accounted for roughly three percent of a total number of 15,757 lots. In the Pontal region, 127 families entered into joint ventures, which is the equivalent of about two percent of the region's total number of 6,111 lots (Fernandes *et al.* 2009). The municipalities within the Pontal where there are settlements with joint venture contracts include Euclides de Cunha/Rosana and Teodoro Sampaio. Table 4 gives the statistics on each participating settlement. The settlements that possess the most lots in partnership are Alcídia da Gata and Santa Terezinha da Alcídia, with, respectively, 78 percent and 92 percent of their lots partnered with the Alcídia Mill to produce sugarcane.

The joint venture contracts between the settled families and the Alcídia distillery were to terminate in 2008. During fieldwork in 2009, we interviewed peasants who accepted the terms of the Alcídia partnership contract for two harvests – those of 2002 and 2009. They expressed disappointment with the experience and explained that it was a lack of alternatives and resources that initially attracted them to the

Table 3. Settlements with Portaria 77 contracts for the production of agrofuel in São Paulo as of April 2007.

Municipality	Settlement Project	No. of lots	Crop
Araraquara	Bueno de Andrada	16	Sugarcane
Araraquara	Monte Alegre III	26	Sugarcane
Araraquara	Monte Alegre VI	35	Sugarcane
Bebedouro	Reage Brasil	46	Sugarcane
Birigui	São José I	4	Soybeans
Brejo Alegre	Salvador	4	Soybeans
Matão	Silvânia	77	Sugarcane
Motuca	Monte Alegre I	43	Sugarcane
Motuca	Monte Alegre II	36	Sugarcane
Motuca	Monte Alegre IV	27	Sugarcane
Motuca	Monte Alegre V	21	Sugarcane
Pitangueiras	Ibitiúva	37	Sugarcane
Pradópolis	Guarani	1	Sugarcane
Rosana/Euclides da Cunha	Gleba XV de Novembro	39	Sugarcane
Teodoro Sampaio	Alcídia da Gata	14	Sugarcane
Teodoro Sampaio	Laudenor de Souza	7	Sugarcane
Teodoro Sampaio	Santa Cruz da Alcídia	7	Sugarcane
Teodoro Sampaio	Santa Terezinha da Alcídia	24	Sugarcane
Teodoro Sampaio	Santa Zélia	34	Sugarcane
Teodoro Sampaio	Vô Tonico	2	Sugarcane
Total		500	

Source: ITESP (2009).

Table 4. The percentage of peasant families with sugarcane production contracts on agrarian reform settlements in Pontal do Paranapanema as of April 2009.

Settlement	Total Families	Lots contracted	%
Gleba VX de Novembro	570	39	6.84
Alcídia da Gata	18	14	77.78
Laudenor de Souza	60	7	11.67
Santa Cruz da Alcídia	26	7	26.92
Santa Terezinha da Alcídia	26	24	92.31
Santa Zélia	103	34	33.01
Vô Tonico	19	2	10.53
Total	822	127	15.45

Source: ITESP (2009).

joint venture proposal (Gonçalves 2009). Each of them allowed 30 percent of their lots – some six hectares – to be rented. According to the contract, the peasants had to sign for PRONAF loans they never saw because they were immediately handed over to the mill, just as in the 1993 pilot project. Each family acquired about US\$9,000 in loans. The mill determined how the money would be spent without transparency or input from their peasant partners. Not notwithstanding these issues, the loans were attributed to the settled farmers and approved by the Banco do Brasil. The last harvest was planned for 2009. In 2008, however, the mill stopped the harvest, abandoning the planted sugarcane. The justification was that the quality of the sugarcane from the lots was not satisfactory and that the mill would not pay for them.

The joint venture contract specifies that the mill was to be in charge of soil treatment before planting in order to ensure a high yield. It also states that, before contract termination, the mill had to leave the lot in optimal condition. In our visit to affected settlements, however, it was easy to document how the company had failed to fulfil its obligation to its supposed partners. Peasants complained that the land had been ruined by poisons and that it would take an extended period of time to regain productive capacity. They suspected Alcídia of lowering the quality rating of the cane to ensure a low profit margin, thereby justifying limited to no payouts for the 2008–09 harvest year. According to the families, when the mill received the loans and the peasants supplied the sugarcane, the payments ceased. At the end of the partnership the mill owners claimed that the crop was of low quality, and nothing more would be paid them (Gonçalves 2009). All of this is suspicious given that the settled families never had access to information concerning the quantity and quality of the crops and the true cost of cultivation.

Despite the encouraging talk of 2004, projected goals of peasant integration and raised incomes were not fulfilled. The evidence makes it is easy to be cynical and dismiss the expressed intentions of the project as tactical discourse designed to get settlers to sign contracts and deliver their land usage rights and borrowing privileges to the mill. The timing of the Alcídia mill initiative certainly seems to have anticipated a moment of high prices to utilise settlement territory to expand production. The experience of the peasants underscores the perversity of the agrarian capitalist system in Brazil and reinforces the importance of the agrarian question. Peasant conditions were not improved. Promises made were not kept. Their lots were not recuperated, but remained polluted with the powerful chemicals used to

stimulate the growth of sugarcane. With a decline in oil prices forcing down fuel prices overall, in fact, the Alcídia mill simply quit processing sugar and left the cane standing in the fields, much to the dismay of the peasants who had pinned their hopes on the agrofuel boom (Gonçalves 2009).

### Competing paradigms, conflicting agrarian movement views

As these examples demonstrate, the process of substituting agrofuels for fossil fuels has affected territories through the expansion of fuel crops into food crop lands. Just as this has happened on the ground, as it were, the paradigmatic debate has heated up the air in defence of peasant interests in the face of such territorial disputes. For example, La Via Campesina-Brazil and the federal government's Agrarian Development Ministry (Ministério do Desenvolvimento Agrário, MDA) teamed up to publish an 11-volume collection of studies on the Brazilian peasantry, documenting the sector's presence throughout Brazilian history (Oliveira *et al.* 2008–2009). Scholars of the agrarian question paradigm have deepened their criticisms of the territorialisation of agrofuel crops by studying their political, social, economic, and environmental consequences. They warn of the structural implications of concentrating more land and power in the hands of the sugar-ethanol millowners (*usineiros*) and large scale soybean planters (*sojeiros*) called upon to produce biodiesel in compliance with the National Program for the Production and Use of Biodiesel (Programa Nacional de Produção e Uso do Biodiesel, PNDB), which was legislated in 2004 (Brasil 2004). Proponents of the agrarian capitalist paradigm discuss these themes as part and parcel of conjunctural adjustments necessary for emerging market maturation. Advocates of the paradigms express some similar concerns when they refer to environmental impacts, yet the distinctions between the two schools of thought sharpen when examining political and social implications. Understanding the debate between them is an important part of understanding agrofuel policies in Brazil today.

The growth in agrofuel dependency challenges scholars seeking to interpret their impact on the state and the two groups best organised to influence government policy – agribusiness and peasant movements. On the one hand, scholars from the agrarian capitalist paradigm have treated agrofuels as the answer to many economic, environmental, and social problems, including the liberation of peasants from oppressive labour in the cane fields (Abramovay and Magalhães 2007, Vermeulen *et al.* 2008, Berdegué *et al.* 2008). From the agrarian question perspective, however, the territorialisation of sugarcane has been shown to have caused an increase in the number of enslaved workers, water and air pollution and a decrease in the land available for agrarian reform (Moraes Silva 2006, Girardi 2008, CPT 2009). The two schools dispute the significance of land use for fuel or food, with the former emphasising food security (imports should be counted on to fulfil consumer needs) and the latter food sovereignty (national agriculture should be employed to fulfil all basic food needs) (Oliveira 2008, Hurtado 2009).

The debate between researchers helps us reflect on how the paradigms are two ways of seeing, interpreting and constructing development policies oriented toward improving or transforming Brazilian society. This is particularly true of the 'outsider' paradigm of the agrarian question. Its proponents hope to influence Brazilian government agrarian development policies and projects through supplying possibilities for change. Yet the relationship between governmental policy, paradigm

recommendations and peasant struggle is complex and dialectical; paradigm debates and governmental policies influence peasant movement policy initiatives which in turn cause changes in paradigm debates and the orientations of governmental policy. Keeping in mind this dialectical relationship, the paradigms must be seen as substantive forces in the composition of contemporary agrofuel policy and consequent territorial formations. The peasant – not to mention agribusiness – is also central to this process, as we show in analysing recent experiences.

The PNDB is one example of the influence these paradigms have had on agrarian development policies. Through the creation of the Social Fuel Stamp (Selo Cumbustível Social), the government explicitly included peasant agriculture within national energy policy (Brasil 2004). Biodiesel processing plants that buy raw materials from family farmers accumulate a certain percentage of stamps that bring rewards in the form of tax exemptions. Through such measures, the MDA seeks to use the PNDB to enhance ‘competition and social inclusion’, intending to thereby integrate peasant agriculture more systematically into national development projects. The logic of ‘integration’ is one of the principle characteristics of the agrarian capitalist paradigm. From the perspective of the agrarian question pre-paradigm, however, the Social Fuel Stamp is criticised as a subsidy to the agrofuel industry that contributes to the subordination of peasant producers. Agribusiness interests receive larger incentives still from the federal government’s agriculture and energy ministries in the form of subsidies for research and development of new agrofuel crop varieties, production process technologies and guaranteed market share.

An example of the influence these paradigms have on peasant movement policies arises from the dilemma that they confront in producing agrofuel. This dilemma is represented by the academic question of whether or not their policies and activities seek structural or conjunctural solutions to the problems they face. That is to say, whether they reflect the construction of systems of resistance promising greater autonomy for peasants or systems of integration, suggesting further subordination. Clearly, the relationship between peasant movements and the principles elaborated by the paradigms is neither simple nor clear cut. Many factors create conditions and even paradoxes in the relationship between paradigms, policy and capitalism.

Via Campesina-Brazil takes a critical position on agrofuel as an alternative energy source given the resulting problems that it causes with food production. The MST has generally encouraged this criticism, daring only to flirt with agrofuel production. One of the very few experiments can be found on the Fazenda Pirituba agrarian reform settlement in the municipality of Itapeva in the state of São Paulo, where six MST member families have developed skills in biodiesel production using sunflower seeds and an oil extractor that has the processing capacity of 150 kilos per hour. Unlike the focal crops of industrial biodiesel production – among them castor and soy – sunflower has been targeted by MST leaders such as Cledson Mendes da Silva as a ‘peasant crop’ in that it has multiple uses, from serving to forestall erosion and provide shade to producing oil useful not only as fuel but also for cooking (Welch and Pafunda 2009). Sunflower cultivation supports an apiary on the settlement and the husks are saved to make animal feed pellets. Some 150 peasant families have gained skills in beekeeping with the construction of a honey depository with the productive capacity of a ton per day. To facilitate their work, settlement farmers used profits from the sale of sunflower products to obtain a tractor. To keep it going, they process sunflower oil to make biodiesel fuel. One of the peasant

movement's principles with respect to the use of their territories is the association between the production of food and crops destined for energy (MST 2008). Not being tied to larger business networks may limit productivity from the perspective of agrarian capitalism, but the settlers' relative autonomy has enabled them to experiment with pluriculture and thus find a way to balance food and energy production. Indeed, peasants also produce beans, rice, coffee and garlic on the Fazenda Pirituba settlement.

However, some movements allied with *Via Campesina* have argued against the umbrella group's directives and pursued policies geared toward participation in the agrofuel industry. Although *Via Campesina* does not impose strict discipline on member organisations, such differences of opinion have stimulated considerable internal dissent. In 2007, partly as a consequence of the agrofuel debate, the MST formally detached itself from a historic leader in the Pontal – José Rainha Júnior – who had already founded *FAAFOP* to take advantage of the PNDB. In 2008, the MPA also underwent a split as a result of this issue. While the main body voted to establish a cooperative to develop an agrofuels business, from farm to mill, a smaller group of members left the organisation in protest. They formed a dissident movement called the Popular Peasant Movement (*Movimento Camponês Popular*, MCP), strictly committed to *Via Campesina*'s anti-agrofuel position, despite not being a member of the international group. The MPA, ironically, maintained its leadership role in *Via Campesina*.

### **The experiences of *FAAFOP* and the MPA**

Although *FAAFOP* is not affiliated with *CONTAG*, the federation is following a line traced by the confederation, which is Brazil's oldest and largest small family farm organisation. Since its founding as a corporatist entity in 1963, *CONTAG* has been organised at the national, state and municipal levels to articulate negotiations for improving the work and lives of agricultural wage-workers and small farmers. As a corporatist entity, *CONTAG* has typically worked within channels to influence the composition of government policy and then participated in its implementation. In the case of agrofuels, *CONTAG* claims the organisation's support for agrofuels began when the *Proálcool* project first started in the 1970s with an investment in agro-industrial complexes combining sugarcane plantations and ethanol mills. At the time, *CONTAG*'s Rural Worker Union Movement (*Movimento Sindical dos Trabalhadores e Trabalhadoras Rurais*, MSTTR) launched an aggressive growth campaign partly to encourage the creation of jobs through the expansion of sugarcane production (Houtzager 1998, Welch 2006c). 'Since its inception, the MSTTR supported the program, seeing in it an opportunity for family farmers', says one of the union's 'basic documents' from 2009. 'Two courses of action were prioritised: negotiation and close inspection. We planned to negotiate with all the businesses working in the sector. These negotiations needed to be tripartite, where the government, employers and workers had defined roles. From there the ethanol expansion policies and actions needed to be strictly monitored and evaluated' (*CONTAG* 2009a, 14, 62).

Later, with the creation of the PNDB, *CONTAG* also wholeheartedly supported participation in biodiesel policy, insisting simply on the need for good contracts. 'Our negotiations sought to establish contractual norms that could secure good production conditions and aggregate income, with technical assistance to make

viable the biodiesel production process' (CONTAG 2009a, 14). To support agrofuel research, CONTAG proposed the creation of a fund for financing national biodiesel development. CONTAG documents do not express a critical position on agrofuels; rather, they present proposals for developing the sector in ways that seem to benefit the environment and family farmers. 'Agrofuels (ethanol, biodiesel, etc.) stand out for their ability to substitute for petroleum with significantly lower emissions of polluting gases', their 'basic document' says (CONTAG 2009b, 8). For CONTAG, then, agrofuels are seen as one more economic opportunity for farmers and workers and one more space where care must be taken to avoid exploitation of the class. The expansion of sugarcane, for example, should not be resisted but welcomed so long as wage rates and safe working conditions are respected. The confederation represents a way of working comfortably within the mainstream paradigm of agrarian capitalism.

FAAFOP was created by José Rainha Júnior, an internationally recognised MST leader in the 1990s who became a dissident of the movement around 2004, the same year the PNDB was launched. While the motives for Rainha's split with the MST are complex, an important reason for the MST's decision to formally disown Rainha was rooted in the agrofuel debate. In 2007, the MST National Directorate wrote: 'The defence Rainha makes of agrofuel production projects integrated with transnational firms is completely contrary to the deliberate decisions taken by the MST' (Machado 2007). Rainha saw in Brazil's biodiesel program both short-term and long-term advantages for settlement farmers in the Pontal. Subsidies offered by the government for dedicating a small portion of their lots to cultivating the castor oil plant (*mamona*) had the potential of providing immediate income to farmers; the possibility of constructing a biodiesel mill nearby coupled with the biodiesel program's incentives for buying raw materials from family farmers through the Social Fuel Stamp promised to create long-term benefits for peasants (Welch and Pafunda 2009).

While Rainha continued to organise land occupations using the MST flag, in 2008 FAAFOP enlisted nearly 1,000 farm families from about a quarter the region's 109 agrarian reform settlements to plant *mamona*. To market the product and maintain pressure in favour of the short and long-term objectives, the federation created the Western São Paulo Biodiesel Production Cooperative (Cooperativa de Produção de Biodiesel do Oeste Paulista/Cooperbioeste). By harvest time in 2009, there were 760 families left who had each devoted a hectare of land to castor seed production. They sold 800 tons of the seed to Brasbiodiesel, a new subsidiary of the Grupo Bertin, with a mill processing mostly animal fat into diesel located some 150km away in Lins, São Paulo (Santana 2006, Rainha 2009). According to Rainha, an agreement was reached with Bertin to sell 50 percent of FAAFOP's 2010 yield, which is forecast to double the 2009 figure. Negotiations with Brasbiodiesel were facilitated by the PNDB's Social Fuel Stamp. To sweeten the deal, Brasbiodiesel offered peasant producers machinery, compost and lime.

In 2010, the federation expected to represent some 1,200 castor seed- and peanut-producing families, each dedicating no more than three hectares of their 20-plus hectare lots to agrofuel crops. The federation production policy is not only to supply raw materials, but also to process the castor seeds. FAAFOP's project was to create an industrial entity for processing the remaining 50 percent of the production for 2010, in addition to recycling compost. According to Rainha, however, the construction project for the mill confronted an impasse within the government when the national energy company, Petrobras, proclaimed its preference for

concentrating production in fewer plants. This preference helped Brasbiodiesel obtain help for expanding the Lins mill, demonstrating how peasant organising on the local scale is subject to policies favouring agrarian capitalism at the national and international levels (Rainha 2009).

Brasbiodiesel is a case in point when it comes to unwinding the complex threads of the transnational agrofuel industry as well as for Ploeg's argument about 'food empires'. As a subsidiary of the Grupo Bertin, Brasbiodiesel is really a subsidiary of JBS, S.A., which bought Bertin in 2009. JBS takes its name from the initials of a Brazilian meat packer named José Batista Sobrinho, who started the business in 1953. JBS now touts itself as the 'largest meat company in the world' and US capital has come to play a significant role in the company, despite its Brazilian base, since it bought Swift & Company in 2007 and even more so after acquiring Pilgrim's Pride Corporation for \$800 million in 2009. As a result, the chairman of General Mills Brazil recently became the Bertin's chief executive officer. Through Brasbiodiesel, the company looks forward to capturing 14 percent of the Brazilian market in biodiesel, which, under the influence of a 2005 law, should grow significantly until 2013 when all diesel sold at the pump must contain at least five percent biodiesel. It also exports biodiesel through Santos harbor (JBS, S.A. 2009, O'Callaghan 2009, Welch and Pafunda 2009).

Although the reality of his situation exemplifies CONTAG's policy of negotiated integration of peasants as agricultural producers only, Rainha's dream is one of peasant autonomy. As demonstrated by the story of Rainha's efforts to partner with transnational capital and the government, Cooperbioeste seeks to participate in a venture that will enhance the vertical integration and control of FAAFOP's peasant members. They see the biodiesel complex as creating favourable conditions for enhanced peasant resistance to capitalism. On the basis of the dedication of a small portion of a family's settlement lot, a significant cash income can be guaranteed. Should Cooperbioeste succeed in gaining the capital required to establish a biodiesel processing plant, they believe that it would not take long to provide for each member's energy needs (biodiesel for tractors and generators), thus reducing their cash needs and further enhancing income. In the meantime, large portions of land could be dedicated to food production and animal husbandry. This vision is very different from the scenario experienced by peasants who surrendered all their land to sugarcane when they signed contracts with the Alcídia Mill.

While Rainha's dream has proved difficult to fulfil, the MPA has managed to consolidate a similar vision with the construction of Cooperbio, a cooperative uniting 230 peasant families from ten communities situated in the region of Frederico Westphalen in the state of Rio Grande do Sul (Leal 2010, Welch 2010). Balance in the production of food and energy crops is also characteristic of the agroecological experiments promoted by the MPA, which seeks to use such knowledge to create sustainable communities. Ironically, whereas Rainha blamed Petrobras for frustrating his plans with a non-participation decision, it was Petrobras's decision to invest in Cooperbio's agrofuels production project that enabled the MPA to advance its dream.

The MPA agro-industrial model is designed to process food and energy products from the cultivation of sugarcane, potatoes, manioc, and sorghum. The system produces sugar, molasses, rapadura (a candy derived from sugarcane), cachaça (a distilled alcoholic beverage derived from sugarcane), animal feed, compost, and ethanol used to power vehicles and equipment used by the peasants. For proponents

of the agrarian question, the commercial nature of the MPA experiment does not negate its attempt to challenge capitalism by creating a structure that secures significant autonomy for the peasantry. The challenge, claims a Cooperbio document, is to 'implant a self-sustaining energy project, based on biofuels that considers prices, quality and supply guarantees, providing income and social inclusion for the broader community' (Cooperbio 2010). Group identity is self-consciously with the peasantry: 'Cooperbio is a cooperative organised and directed by peasants and medium-sized family farmers'. As part of the mission, peasant members democratically administer the cooperative, taking part in every stage of product creation, from the land to the market. The development model is decentralised to try to enhance its sustainability. There are five micro-distilleries located around the region (four more are projected for implementation in 2011). Producer members process their crops through the first stage of transformation at these local plants. The syrups produced are then transported to the MPA central processing plant for final conversion into marketable ethanol. Cachaça is produced at another installation. In 2010, the first year of operation, Cooperbio produced some 50,000 litres of ethanol and 5,000 litres of cachaça from the first cutting. The MPA paid about \$.25 per litre for the raw material and sold it back to members as a finished good for \$.70, about 50 percent of what they would have paid on the market. The process employed about 50 people beyond the peasants themselves (Welch 2010).

The recent history of the Frederico Westphalen region is one that documents the ironies of the agribusiness monoculture model. Nearly all the families involved (95 percent) held properties of no more than 50 hectares. When genetically modified seeds began to become available around 2001, many took out loans to try them. Indeed, most of the families who later were to join the MPA and found Cooperbio invested heavily in conventional wheat, soy or corn farming. To reap greater benefits, they followed the advice of government agronomists and seed company salesmen, cutting down forest to expand their grain fields. For a few years, some families enjoyed modest gains but around 2004, no technological combination could overcome the land's exhaustion and drought conditions, partly caused by the deforestation. Encountering a population desperate to escape debt and stay on their land, MPA organisers were able to mobilise the farmers to get access to government financing to recuperate the forests, stop using agro-chemicals and diversify their land use. Gradually the number of family participants grew as they saw their neighbours' conditions improve through the agro-ecological methods recommended. The idea was not only to guarantee their sustainability on the land, but to recuperate the area's natural resources and construct a model of social, economic and political organisation that would help them avoid falling into similar difficulties again. The small Cooperbio mill installed to produce ethanol from limited areas of sugarcane production is part of this holistic process. As in the dream sought by Rainha in the Pontal, the primary consumers of the ethanol produced are the local peasant members of the co-op themselves (Leal 2010, *Entrepreneurstoolkit.org* 2010).

Despite the relative success of these experiences, neither the MST nor MPA currently propose to expand their food and energy production projects to other peasant communities. They also do not have proposals for direct participation in government-sponsored agrofuel ventures, maintaining, in fact, their opposition to such policies, loyal to the line adopted by the Via Campesina, to which they both belong. While the MPA's experience is on a larger scale than that of the MST, neither movement promotes state or national-level agrofuel production initiatives.

The formation of the MCP splinter group from the MPA illustrates some of the different understandings of the agrofuel debate within the organisations affiliated with La Via Campesina in Brazil. Within each movement there are members who favour experimenting with agrofuel and others that oppose any and all contact with it. The groups in resistance can call on a statement issued by La Via Campesina at the World Forum of Food Sovereignty held in Mali in February 2007. The 600 movement leaders from around the world condemned agrofuels as a creature of transnational capital intent on occupying lands better used to produce foodstuffs. 'The single objective', the manifesto states, 'is to maintain existing standards of first world consumption and high rates of profit for the industry's transnational firms'. The document continues,

We can agree that the use of agrofuel is better for the environment than the use of petroleum. Nevertheless, it does not affect the essence of humanity's energy-related problems – that the current energy and transportation system is based on the use of individual vehicles. We defend the radical substitution of the existing polluting, consumerist and individualist transportation model with forms of collective transportation via expansion in the use of trains, subways, bicycle paths, etc.

We do not accept plans to use agricultural products currently grown for human consumption, such as corn, soybeans, sunflower seeds, etc., for transformation into energy for cars.

Even in the case of necessary agrofuel production, we should produce the fuels in sustainable ways. That is to say, we will combat the current neoliberal model of production on large plantations, in the form of monocultures. Monoculture in large scale is prejudicial to the environment and eliminates work opportunities in the countryside. (Via Campesina 2007a)

The Via Campesina position is one that acknowledges the environmental argument that agrofuels are ecologically better than petroleum-based fuels but attacks them on political and social grounds. The political economy of agrofuels is one that contributes nothing to improving the human condition as it merely reinforces established power relations and unsustainable behaviour. In other words, agrofuels are just one more way of commodifying the countryside, a new front in the territorialisation of agrarian capitalism (Via Campesina 2007b).

The more popular points of resistance are summarised in the title of another reference work used by agrofuel opponents: 'The peasantry produces food, agrofuels generate hunger and poverty' (Via Campesina 2008). Issued in August 2008, this movement declaration pronounces the official Via Campesina position on agrofuels. 'Who can eat agrofuels?' it rhetorically asks. The peasantry may not be able to resist, given the few options it has in the context of the predominant system, but it is 'immoral' and an 'insult' to blindly accept the notion that agrofuels represent an alternative to the agrarian capitalist model, the document asserts. La Via Campesina laid out what a majority of members considered to be the correct path: (1) that a moratorium of five years be imposed on the monocultural production of agrofuel crops and the marketing and consumption of industrially produced agrofuels; (2) that a thorough investigation be conducted on the impact of the agrofuel boom on the land and water supply and political and economic relationships; (3) that investments be made to support the development of peasant agricultural and local consumption networks, repudiating consumerism; (4) that explicit support be given to governments and institutions that encourage sustainable peasant forms of agricultural production

and food distribution that leave a low carbon footprint, create employment, respect biological and cultural diversity and make a positive contribution to the problem of global warming; (5) that agricultural policies be oriented toward the support of sustainable rural communities and ways of life that are based on food sovereignty and authentic agrarian reform; and (6) that responsible models of development and consumption be promoted. In other words, the manifesto calls for nothing less than a paradigm shift and consequent social revolution. The paradigm shift is cast as a pilot project for the world with an initial five-year test period.

Even though the MCP is not affiliated with *La Via Campesina*, it has adopted this document as its own, disseminating its arguments widely. We see here the taste of a 'zero sum game' of territorial posturing – either the land is used for agrofuels and thus falls into the capitalist trap or it enters peasant hands and is used for food production. The capitalist form of occupation brings only costs and the peasant form only benefits. Despite the centrality of this dichotomy, the document also suggests the possibility of experimenting with agrofuels. Read carefully, one can see that the MPA's Cooperbio only begins to violate official *Via Campesina* policy through the participation of Petrobras. At the 2007 National Congress of the MST, the MPA was criticised publicly for 'participating in Petrobras meetings'. But MPA national coordinator Frei Sérgio defended the movement's decision saying, 'I am certain we are certain' in establishing Cooperbio (Fernandes 2007). Given the fact that Petrobras is technically a public entity, even this arrangement is sufficiently ambiguous to grant the movement a pass.

The blanket resistance of *Via Campesina* serves as a counterpoint to the accommodation of *CONTAG*, which appears satisfied with nearly every aspect of Brazil's agrofuel policy. These different postures are similar to the differences in perspective that Borras and Franco (2009) identify between *Via Campesina* and the International Federation of Agricultural Producers, in so far as a policy or situation may seem threatening to one while the other sees it as an opportunity. The positions of *CONTAG/FAAFOP* and *Via Campesina/MPA* allow us to see the tendencies of these movements and the parameters of their positions on the two paradigms under consideration. The spaces that are occupied in the debate on production and use of agrofuel reveal the different positions of these two organisational networks. These positions construct territories that are distinct and important references for understanding the nature of territorial disputes, as reflected in the Itapeva case described above.

## Conclusion

The agrarian question and agrarian capitalist paradigm dispute contribute to producing competitive ideas, theories, methods, methodologies, concepts, ideologies, political actions, and territories. Territories are constructed according to power relations and through the elaboration of knowledge. In this respect, they are both material and immaterial. Territorial disputes are not only for land, but also for all such dimensions of what we consider territory. This is the meaning of territory employed throughout the paper.

This paper has adhered to a critical geography logic that holds that actions generated according to different social relations create both space and territory. Capitalist social relations create spaces and territories that are capitalist (Lefebvre 1991). They also create spaces, contradictorily, that are non-capitalist (Santos 1996).

Furthermore, family, peasant and other non-capitalist social relations create capitalist spaces and territories. Yet the distinct social relations that characterise different territories overlap and are in conflict with one another (Raffestin 1993). This paper examined various territories formed by the actions of diverse social relations, some capitalist, some non-capitalist and some in between. In the realm of agrofuels, we have seen different groups dispute the control of spaces and territories both material – such as determining the use of settlement lots – and immaterial – as in lobbying for policies that would include integrationist measures such as the Social Fuel Stamp.

The agrarian question perspective has a long way to go to establish hegemony over a large enough community of scholars to cause a scientific revolution in the human sciences of the sort indicated by Thomas Kuhn. As reviewed here, peasant territorialisation is fragile and most agrofuel policy threatens rather than supports both established small family farms and those on agrarian reform settlements. The joint venture and partnership deals initiated by the sugar-ethanol mills left a bitter taste in the mouths of most Pontal peasants. There, the biodiesel pilot program advocated by FAAFOP brought some rewards and few losses, but the promise of a sustainable agro-industry controlled by co-op members has yet to be fulfilled. The most successful examples of the agrarian question perspective were those created by the MPA and MST, both officially hostile toward the agrofuel industry.

Not only are there few examples of successful projects but they have so little history that next to nothing can be concluded about their eventual influence or longevity. Cooperation is one of the oldest forms of organisation in agriculture. For nearly 200 years, co-ops have been formed at different times in different places to help lower costs, share work, protect members, and sell products. Such efforts almost always start small, depend on member participation, reap benefits for all and gradually disintegrate as true collaborative efforts with the passing or exhaustion of original members and the professionalisation of administrative functions. In the modern age, specialisation of this nature has often created divisions that led co-ops to act like agribusinesses intent on maximising profits for shareholders (Woeste 1998, Welch and Fernandes 2008). Little can be anticipated in regards to FAAFOP's Cooperbioeste. And is too early to say that Cooperbio's methods – from decentralising production to democratising administration – will necessarily become a vehicle for integration and subordination.

In fact, the experiences of the MPA in Frederico Westphalen, like that of the MST in Itapeva, are perhaps best understood not only as biofuel pilot projects of the agrarian question pre-paradigm but also as extraordinary forms of peasant resistance. They are cases of numerous families banding together in coordination with national movements to defend the peasantry by reducing their dependency on the cash nexus and raising their incomes through the innovative exploitation of sugarcane and sunflowers. Unlike the examples examined by James Scott (1985), these families are not hiding their resistance in anonymity 'behind the façade of behavioural conformity imposed by elites' (p. 304). To the contrary, they openly defy capitalist models to develop and sustain peasant modes of production and reproduction. Although they live in a capitalist economy, they seek to build alternative possibilities, convinced that agrarian capitalism threatens their autonomy.

Agrofuel policies implemented since 2004, when Luis Inacio Lula da Silva took office as president, demonstrate how this much anticipated pro-World Social Forum labour government has been oriented, contradictorily, around the agrarian capitalist

paradigm. It has used federal programs like PRONAF and PNDB as well as corporatist organisations like CONTAG to deepen peasant subordination to agribusiness. At the São Paulo state level, we have seen how ITESP policies intensified the subordination of the settled families to the sugar ethanol industry. No single production or nutritional policy in Brazil today has been developed in conjunction with or left under the administrative control of peasant organisations. Also, there are neither governmental institutions nor political spaces for the construction of territorial development policies that could guarantee the sovereignty of peasant territory. Thus the politics of subordination of the peasant to agribusiness are hegemonic.

Although ideas from the agrarian capitalist paradigm dominate governmental institutions and orient their policies, some Brazilian peasant movements have been remarkably innovative in capturing limited resources to sustain peasant territories and experiment with alternative economic models. As presented here, incipient resistance experiences exist and along with them an architecture of paradigmatic ideas. Although no organisation has proposed a biofuels project on a scale any larger than a municipality, the practices put into place by the MST and MPA are seeds for the possible creation of larger political spaces that could transform into larger, more potent territorial development models. The conjuncture for the production of agrofuels in Brazil is still not defined, and while the developmental process remains under the control of agribusiness, peasant movements will continue to dispute the territory.

Translated by Anthony Pahnke/University of Minnesota-Twin Cities.

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