

# Beyond 'family farming versus agribusiness' dualism: unpacking the complexity of Brazil's agricultural model

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## Summary

Agriculture has played a hugely important role in the recent history of Brazil's economy. The country had a food production deficit until as late as the 1970s, but since the early twenty-first century has been one of the world's principal exporters and a leader in production technologies adapted to tropical climates. Many researchers – and diplomats – have concluded that this is where Brazil can make its principal contribution to the African continent: supporting agrarian transition and helping to find ways of using local natural resources to build an agriculture with high productivity and improved commercial value. Brazil's image of success always appears associated with the experience of programmes such as Prodecer and Proálcool, which led to its excellence in the production of soybeans and sugarcane bioethanol respectively. What underlies this image? The official discourse seeks to present the country as a simple case of complementary coexistence between a modern large-scale corporate agriculture segment and another segment based on small family producers. At another extreme of the debate is an alternative view: the discourse of the social movements, with a different reading but based on a similar dualism. The so-called Brazilian model, this discourse argues, is underpinned by an incurable conflict between these two segments, agribusiness being the antithesis of family farming. This paper seeks to show that a much more complex reality exists behind this binary interpretation. On the one hand, where the usual polarised view sets up the figure of agribusiness there are in reality at least three segments of the economy (one, indeed, made up of family producers, and another of companies that can hardly be described as agribusinesses). And where that view, on the other hand, posits 'family agriculture' as a single category, there are also three distinct narratives within that notion – each one articulated by a group of interests and organisations with different concepts about the role of agriculture in today's world, the uses of technology and nature, and relations with the state and the market.

# China and Brazil in African Agriculture

## Working Paper Series

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This Working Paper series emerges from the China and Brazil in African Agriculture (CBAA) programme of the Future Agricultures Consortium. This is supported by the UK Economic and Social Research Council's 'Rising Powers and Interdependent Futures' programme ([www.risingpowers.net](http://www.risingpowers.net)). We expect 24 papers to be published during 2015, each linked to short videos presented by the lead authors.

The CBAA team is based in Brazil (University of Brasilia, Gertulio Vargas Foundation, and Universidade Federal do ABC), China (China Agricultural University, Beijing), Ethiopia (Ethiopian Agricultural Research Institute, Addis Ababa), Ghana (University of Ghana at Legon), Mozambique (Instituto de Estudos Sociais e Económicos, Maputo), Zimbabwe (Research and Development Trust, Harare), the UK (the Institute of Development Studies, the International Institute for Environment and Development and the Overseas Development Institute).

The team includes 25 researchers coming from a range of disciplines including development studies, economics, international relations, political science, social anthropology and sociology, but all with a commitment to cross-disciplinary working. Most papers are thus the result of collaborative research, involving people from different countries and from different backgrounds. The papers are the preliminary results of this dialogue, debate, sharing and learning.

As Working Papers they are not final products, but each has been discussed in project workshops and reviewed by other team members. At this stage, we are keen to share the results so far in order to gain feedback, and also because there is massive interest in the role of Brazil and China in Africa. Much of the commentary on such engagements are inaccurate and misleading, or presented in broad-brush generalities. Our project aimed to get behind these simplistic representations and find out what was really happening on the ground, and how this is being shaped by wider political and policy processes.

The papers fall broadly into two groups, with many overlaps. The first is a set of papers looking at the political economy context in Brazil and China. We argue that historical experiences in agriculture and poverty programmes, combine with domestic political economy dynamics, involving different political, commercial and diplomatic interests, to shape development cooperation engagements in Africa. How such narratives of agriculture and development – about for example food security, appropriate technology, policy models and so on - travel to and from Africa is important in our analysis.

The second, larger set of papers focuses on case studies of development cooperation. They take a broadly-defined 'ethnographic' stance, looking at how such engagements unfold in detail, while setting this in an understanding of the wider political economy in the particular African settings. There are, for example, major contrasts between how Brazilian and Chinese engagements unfold in Ethiopia, Ghana, Mozambique and Zimbabwe, dependant on historical experiences with economic reform, agricultural sector restructuring, aid commitments, as well as national political priorities and stances. These contrasts come out strikingly when reading across the papers.

The cases also highlight the diversity of engagements grouped under 'development cooperation' in agriculture. Some focus on state-facilitated commercial investments; others are more akin to 'aid projects', but often with a business element; some focus on building platforms for developing capacity through a range of training centres and programmes; while others are 'below-the-radar' investments in agriculture by diaspora networks in Africa. The blurring of boundaries is a common theme, as is the complex relationships between state and business interests in new configurations.

This Working Paper series is one step in our research effort and collective analysis. Work is continuing, deepening and extending the cases, but also drawing out comparative and synthetic insights from the rich material presented in this series.

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## List of acronyms

CAIs	<i>Complexos Agroindustriais</i> , Agro-industrial Complexes
CONTAG	<i>Confederação Nacional dos Trabalhadores na Agricultura</i> , National Confederation of Agricultural Workers
CUT	<i>Central Única dos Trabalhadores</i> , Central Workers' Confederation
Embrapa	<i>Empresa Brasileira de Pesquisa Agropecuária</i> , Brazilian Agricultural Research Corporation
Embrater	<i>Empresa Brasileira de Assistência Técnica e Extensão Rural</i> , Brazilian Technical Assistance and Rural Extension Corporation
FAO	Food and Agriculture Organization
Fetraf	<i>Federação Nacional dos Trabalhadores na Agricultura Familiar</i> , National Federation of Workers in Family Farming
IBASE	<i>Instituto Brasileiro de Análises Sociais e Econômicas</i> , Brazilian Institute for Social and Economic Analysis
MAPA	<i>Ministério da Agricultura, Pecuária e Abastecimento</i> , Ministry for Agriculture, Livestock and Food Supply
MDA	<i>Ministério do Desenvolvimento Agrário</i> , Ministry of Agrarian Development
MST	<i>Movimento dos Trabalhadores Sem Terra</i> , Landless Rural Workers' Movement
Proálcool	<i>Programa Nacional do Alcool</i> , National Alcohol Programme
Prodecer	<i>Programa de Cooperação Nipo-Brasileira para o Desenvolvimento dos Cerrado</i> , Japan-Brazil Cooperation Programme for the Development of the Cerrado
Pronaf	<i>Programa Nacional de Fortalecimento da Agricultura Familiar</i> , National Programme to Strengthen Family Agriculture
PT	<i>Partido dos Trabalhadores</i> , Workers' Party

## Introduction

In an interval of less than half a century – from the 1960s to the 2000s – Brazil changed from a technologically backwards environment, where food supply was always a problem, to a completely different position as one of the world's largest exports of meat and grain. This was achieved through the creation of capacities that made it possible to introduce significant innovations. Two examples are the adaptation for tropical agriculture of species such as soybean, generating an expansion of the farming frontier across the *Cerrado* savannah zone and into the borders of the Amazon region, and the development of technology for production of fuels from biomass, deriving bioethanol from sugarcane. One result has been that these sectors' contributions to Brazilian exports increased considerably; another has been that Brazil became recognised internationally as having a strong capacity for research and innovation in tropical agriculture (Navarro et al. 2014).

In this process of modernisation and intense technological development, clear priority was given to the economic segment made up of large rural properties, in a strong process of transformation of agro-industry characterised by economic concentration (Mattei 2014). But in the last 20 years a group of policies directed towards family-based farming have also been put into effect (Grisa and Schneider 2015). This segment now leads the production of – for example – poultry, pork and fruit (IBGE 2008). Coupled with the expansion of social policies in the countryside, this has expanded the Brazilian rural middle class by 73 percent in the years 2000–2010 alone. This economic group now comprises the greater part of the population that lives in the countryside (Neri 2010). Also in this decade, for the first time, rural poverty rates have fallen below those of urban poverty in Brazil (IBGE 2014).

For all of these reasons – because of its strength in generation of wealth; because of the innovation and the introduction of practices adapted to the reality of the tropics; and because of the coexistence of both corporate and family means of production – Brazilian agriculture has been portrayed, in public relations terms, as a model of success. This situation began to be promoted in Brazil's sphere of international relations under the government of Luís Inácio Lula da Silva, when the priorities in Brazil's diplomacy were reoriented towards cooperation with the countries of the global South. It is in these terms that many see the main contribution that Brazil could offer to the African continent. Due to ecological similarities and a shared past including colonialism and slavery – according to this thinking – Brazil could mobilise its farming expertise and help African nations to develop their agricultural potential, increasing their levels of productivity and thus dealing simultaneously with poverty and with the challenge of achieving more dynamic economies.

The main objective of this paper is to show that beneath the discourse of success of Brazilian agriculture in general, and of the complementarity between a corporate and a family sector in particular, a more complex reality is hidden – one which also calls into question the reduction of conflicts inherent in the Brazilian rural world to an incurable antithesis between agribusiness and family farming.

What this paper intends to demonstrate, then, can be summed up in two principal points:

First, what is now known as the Brazilian agricultural model is the result, shaped by and containing several contradictions, of a non-linear and not totally planned trajectory that can only be understood by reconstructing the configurations that took shape over the last four decades. This trajectory has resulted from the interaction of Brazil's comparative advantages; changes in the international context; characteristics of the social forces and coalitions formed at key moments of recent Brazilian history; and changes reflecting contradictions in the model itself. In other words, it is not a model in the strict sense of the term, but a whole made up of contradictory components involving policies, social forces, and positive and negative effects. The consequence of this first argument is that there is no model to be exported, and that the positive effects achieved depended not on the Brazilian state alone, but also decisively on the pressure exercised by social organisations to create means and instruments to soften the high degree of economic concentration and environmental devastation that were built into the pattern of modernisation undertaken since the 1970s.

Second, at each one of the stages experienced over the last 40 years these elements have combined and given rise to a complex structure of social forms of production – the most well-known of which do, indeed, involve the corporate segment (agribusiness) and the family farming segment. However, as well as this dichotomy, there are important subdivisions within both, and an understanding of this internal stratification is essential for understanding the limits to the inclusion of the poorer segments in the opportunities for participation in markets and value chains. At one pole of this duality – corporate agriculture – there are three different segments, and one of these is, in fact, made up of family producers. At the other pole – family farming – there are also three segments that are relatively distinct in their interests and forms of organisation. Based on these distinctions there are varied conceptions of the use of natural resources, relationship with the market, and use of technology. The principal consequence of this argument is to show that the conception that puts family farming and agribusiness on opposing sides of a single dichotomy has limitations. Not all large-scale agriculture is efficient from the productive point of view. Not all family agriculture is poor, nor produces food only for the domestic market, nor on a more sustainable basis, as many organisations affirm. As a consequence, the very

appropriateness of talking about a Brazilian model is significantly challenged.

To demonstrate these ideas this text is organised into three main parts. The first gives a brief historical overview of the process of modernisation of Brazilian agriculture over the last 40 years, the institutional frameworks and the first investments in the Brazilian Green Revolution, up to the emergence of family farming as a player and a priority in public policies. In the second section, there is an explanation about the internal diversity of each of the two segments – ‘corporate agriculture’ and ‘family farming’. In the third section, the high-profile cases of the *Programa de Cooperação Nipo-Brasileira para o Desenvolvimento do Cerrado* (Prodecer, Japanese-Brazilian Cooperation Programme for Development of the Cerrado) and *Programa Nacional do Alcool* (Proálcool, National Alcohol Program) are used to demonstrate the limitations of the lines of discourse based on the two-group concept for understanding the contradictions and conflicts that exist in the Brazilian farming sector. As part of the *China and Brazil in African Agriculture* Research Project, this paper aims to contribute reflections on the presence of Brazilian cooperation in Africa – demonstrating in this case in particular the domestic tensions that exist within Brazilian agriculture, beyond the current discourse based on the complementarity and coexistence of two sectors which some of its proponents seek to ‘export’.

## 1. The ‘conservative modernisation’ of Brazilian agriculture, its conflicts, and the resistance of a segment of family producers

The origins of the present model go back to the military coup of 1964, at a time when Brazil recorded an ongoing deficit in food production. One of the most acute conflicts put on the country’s agenda was the question of land and farm ownership. The most significant organising forces in the country at the time included rural social movements. An agrarian reform was among the actions being proposed by then president João Goulart, who was in fact deposed by the military in that year. As a response to these pressures, the dictatorial government that was instituted after the military coup put in place a relatively rapid process that would become known as the ‘conservative modernisation’ of Brazilian agriculture (Pires and Ramos 2009), in an adaptation of the classic term used by Barrington Moore. For the military, it was necessary to provide a response to the growing agrarian conflicts, and at the same time boost production and productivity in this sector, so as to reduce external dependence and increase the supply of food – something which was important in the context of both the rapid urbanisation then in progress and also the rise

in the costs of working-class social reproduction that the country was experiencing. All of this, however, had to be done without taking forward the structural transformations that were being called for by the progressive forces at the time, such as redistribution of the ownership of large rural properties.

Two major groups of initiatives gave shape to this project. A first group of measures, even before the end of the 1960s, involved the formation of a complete legal apparatus for the agrarian issue as a whole, to be regulated by the state in a context of authoritarianism (Medeiros 1988; Novaes 1997). The following were two examples:

- a) The creation of the *Estatuto do Trabalhador Rural* (Rural Worker’s Law), under which some of the fundamental rights of these workers were recognised, but differences between the rural and urban labour markets were also established.
- b) The creation of the *Estatuto da Terra* (Land Use Law), which disciplined the use and occupation of land throughout the country. This legal framework was relatively advanced for its time. It provided a classification of farming establishments, and it recognised the importance of the state guaranteeing access to land in units of sufficient size for farmers to sustain themselves. This legal structure was the basis for the creation of the *Instituto Nacional de Colonização e Reforma Agrária* (Incra, National Agrarian Colonisation and Reform Institute) several years later. But a true agrarian reform was never implemented. The means of controlling land conflicts in Brazil consisted principally of transporting agricultural workers who were demanding land in the south of Brazil to the interior of the Amazon region, in areas that were remote and without infrastructure.

If adoption of such measures by a dictatorial and conservative government may appear paradoxical, it is necessary to recognise that this was an effort at modernisation, and absorption of social conflicts into the state domain – the main effect and intention of which was to limit workers’ capacity for mobilisation, and thereby to impede contestation of the agrarian structure.

A second group of actions within the agricultural and land policy of the military period was the establishment of *Complexos Agroindustriais* (CAIs, Agro-industrial Complexes) as a strategy for modernisation of farming (Sorj 1984), which had the following principal instruments:

- a) *Building capacity in technological research, and dissemination of its results*: Aiming to increase Brazil’s agricultural productivity, the state invested heavily in technological research, with the creation of the *Empresa Brasileira de Pesquisa Agropecuária* (Embrapa, Brazilian Agriculture and Livestock Research Corporation), and a highly capillary system of technical support extending into the countryside,

led by the *Empresa Brasileira de Assistência Técnica e Extensão Rural* (Embrater, Brazilian Technical Assistance and Rural Extension Corporation) and also involving similar agencies in the individual states, ensuring that the solutions found by state-of-the-art research reached farmers rapidly. A large number of technical staff were sent to other countries, and international cooperation protocols were established with countries such as the USA and Japan.

- b) *Bringing capital held as land into a business environment, and simultaneous creation of investment opportunities for industrial and financial capital:* A National Rural Credit System was organised, which financed a transition for traditional large land holdings to highly technically-qualified farming companies, absorbing the new technologies generated and disseminated by the research and technical assistance systems. In some of the more dynamic sectors of farm production, conditions were gradually being created for land, industrial and financial capital to be brought together into agribusiness undertakings. Through this process there was strong capitalisation of the sector, formation of a modern entrepreneurial sector and integration between dynamic systems of production and distribution. Further, sectors providing capital goods for agriculture (machinery and equipment), inputs (fertilisers and pesticides) and services (financial and technical) were also gradually created, forming what some of the literature calls an inter-sectorial agroindustrial complex and further increasing the weight of agriculture and its related activities in the Brazilian economy.
- c) *Effects of conditions outside the sector:* A final aspect that cannot be neglected is the fact that certain conditions external to the farming sector favoured its expansion. These include fiscal and foreign exchange measures that gave the farming sector a more privileged position and favoured its competitiveness; and also indirect aspects such as the strong process of urbanisation that took place in the period. In the space of one generation, the proportion of Brazil's population living in rural and urban areas simply inverted: from 80 percent rural and 20 percent urban up to the 1960s, to 20 percent rural and 80 percent urban by the end of the century. This on the one hand enabled the cities to absorb a large contingent of agricultural workers made redundant by the introduction of new technologies, minimising the conflicts generated by the modernisation of agriculture; and on the other hand facilitated the development of a lower-wage urban labour market, due to the enormous availability of manpower that had been made possible by new techniques and technology in the agricultural sector.

Thus, as can be seen, the expansion and construction that has led to modern Brazilian agriculture involved a

very specific context that would be difficult to reproduce in a different set of historical conditions. It was not only a question of investment in a sector, but of a large-scale mobilisation of political and financial resources within a wider project, which brought together a variety of different policy instruments, and sought to shape various demographic, social and economic variables. It should not be ignored that the speed with which this process took place is associated with the context of authoritarianism, which made it possible to adopt measures while avoiding contestations and negotiations with social organisations.

The successful side of this initiative is recognised worldwide: Brazil, over the last quarter of the twentieth century, became a major agricultural producer and exporter. But this process as a whole had heavy social, environmental and financial costs.

It was a period of strong concentration of land ownership. The expansion of capitalist investments in agriculture displaced traditional populations. Technological modernisation made a significant part of the workforce redundant (sugarcane cultivation employs on average one worker for every 100ha; in soybean this figure rises to 200ha, and in extensive cattle-ranching to around 400ha). The counterpart of this was the well-known process of exodus from the countryside, generating excessive growth in the great metropolitan centres (and with this, chaotic urbanisation and a steep rise in the price of urban land), as well as constitution of an industrial labour market with downward pressure on salaries due to the large-scale supply of labour.

From the socio-economic and political angle, this also involved the maintenance of a backwards sector of large landowners which survived due to their part in the alliance that sustained the military regime. Although they had not been integrated into the dynamic circuits of accumulation and capital, this segment of rural landowners maintained its position because its low productivity was compensated for by income transfers operated through subsidised credit and renegotiation of debts, a practice that remained commonplace for decade after decade. In return, these landowners provided political support to the regime. This is one of the strongest centres of conservatism in Brazilian politics. Its bases were described in a classic analysis of the formation of the country, 'The Culture of the "Colonel", the Hoe and the Vote' (*Coronelismo, Enxada e Voto*), by Victor Nunes Leal (Leal 2012). This grouping remains alive, for example, in the 'Rural Caucus' in Congress (a group of congressmen with this profile, who organise themselves around the interests of large rural landowners in the Congress, and consistently support conservative measures and legislative agendas).

From the environmental angle, the consolidation of this pattern in Brazilian agriculture led to a strong move to expand production in the *Cerrado* ecosystem northward, practically eliminating the forests of this biome and generating pressure on the fringes of the Amazon region. As well as the geographical expansion

of agricultural production, the production model, based on monocultures and the use of chemical inputs, had severe side-effects resulting from the intensity with which it used soils and water, as well as high levels of greenhouse gas emissions.

Due to these negative effects, over time, and with the weakening of the military regime, the bases of organisation of Brazilian farming changed, and contestation increased. Starting in the 1980s there were two important changes: the Brazilian state's crisis of financing forced a reshaping of agricultural policy; and the authoritarian government's loss of legitimacy brought with it a resurgence of social movements in the countryside.

In agricultural policy, the priority continued to be the increase of productivity to meet domestic demand and boost exports. But the instruments changed: instead of subsidised credit and heavy investments in technological innovation, the policy became one of support via a strategy of minimum prices and government guarantees (Guanzirolli 2014). This was an attempt to get around financing constraints and create incentives for the transfer to entrepreneurs of a greater role as protagonists in the dynamics of the sector.

In relation to the social movements, the context was one of growing conflict. An increasing number of people died in confrontations relating to possession of land, involving peasants and large landowners, principally in the areas of expansion of the farming frontier such as the *Cerrado* and the Amazon. There was a strong resumption of the activities of rural social movements. The *Confederação Nacional dos Trabalhadores na Agricultura* (Contag, National Farm Workers' Association), created in the 1960s, began to re-mobilise in the context of the country's gradual re-democratisation. The *Comissão Pastoral da Terra* (CPT, Church Land Commission), an expression of the Catholic Left influenced by Liberation Theology which had been created in 1975, exercised influence on a wide-ranging group of rural workers' unions, which took part in the creation of the *Central Única dos Trabalhadores* (CUT, Central Union Congress) in 1983. And in 1985 the *Movimento dos Trabalhadores Rurais Sem-Terra* (MST, Landless Rural Workers' Movement) was formed; its core activity was to be the occupation of lands as a form of denunciation, and the creation of agrarian reform settlement areas as a production alternative. As a response, the landowners and rural employers also grew more radical, creating the *União Democrática Ruralista* (UDR, Rural Landowners' Democratic Union), which argued for the right to use violence in defence of property.

The peak of these confrontations took place around the National Constituent Assembly of 1988, when the new Brazilian Constitution was formulated. It recognised land as having a social function, and acknowledged the demands of social movements for agrarian reform. At the same time, however, various legal hurdles to putting this principle into practice were created, such as maintenance of outdated values for productivity indices

(used to identify areas that were unproductive and thus eligible for compulsory purchase), making the actual redistribution of land an almost unfeasible prospect.

The ambiguity of the state's actions – trying to balance its commitments to the traditional large landowners and the emerging entrepreneurial sector of Brazilian agriculture on the one hand, while responding to social criticism on the other – was maintained throughout the 1990s, but an important realignment gradually emerged in the discourse of the rural social organisations. The UDR, strongly identified with the most conservative segment of the traditional large landowners, left the scene, and representation of the entrepreneurial sector was taken up by other organisations such as the *Associação Brasileira do Agronegócio* (ABAG, Brazilian Agribusiness Association) and later the *Sociedade Rural Brasileira* (SRB, Brazilian Rural Society) and *Confederação Nacional da Agricultura* (CNA, National Agriculture Federation) (Bruno 1997). Brazil's Ministers of Agriculture in the subsequent decade would come from these organisations.

The most important change in the 1990s was the identity expressed by these organisations. All of them began to speak in the name of the 'modern rural productive sector', or of rural entrepreneurs, while nonetheless incorporating alongside this in their claims and agendas the interests of the old traditional large landowners. From that moment until today these organisations would oppose any attempt to change the agrarian or environmental legislation, on the grounds that this would penalise the modern class of rural producers. This is an alliance that maintains the bases of an out-of-date sector, which compensates for its economic inefficiency with transfers of public funds – and does so based on either the old-fashioned exercise of political power or the provision of political support to coalitions that are in control of the state. In return, the members of Congress aligned with the old landowning interests bring pressure to bear on the state to maintain the priority given to the primary sector of the economy.

This period also saw important changes in the representation of small farmers and rural workers. The MST continued to adopt a more confrontational stance, remaining faithful to the fight for agrarian reform – but experienced difficulties in making a practical proposition out of the rural settlements that it created, which were usually islands amid social structures dominated by the large landholdings. The union-linked organisations progressively relegated their struggle for agrarian reform and rights of workers employed on large farms to a second-order priority, and began to call for what their documents call an 'alternative plan for rural development based on family farming' (Favareto 2006).

The abandonment of the identity of 'rural workers' and adoption of that of 'family farmers' has a range of meanings. One of the main ones is an implicit acceptance that even in the absence of structural changes in landholding in Brazil, there is a sector of small farmers that can be efficient, and which thus become legitimate beneficiaries of agricultural policy. The demands of these

segments of small producers led, at the end of the 1990s, to the creation of a specific programme, the *Programa Nacional de Fortalecimento da Agricultura Familiar* (Pronaf, National Programme to Strengthen Family Farming), and a few years later to the creation of the *Ministério do Desenvolvimento Agrário* (MDA, Agrarian Development Ministry). Between 1999 and 2016, when it was downgraded by the new government that came to power after the impeachment of President Dilma Rousseff, the MDA would come to share – albeit with a much smaller structure and importance – the role of leading on agricultural policy with the *Ministério da Agricultura, Pecuária e Abastecimento* (MAPA, Ministry for Agriculture, Livestock and Food Supply).

For several years Pronaf remained a small-scale programme. This changed somewhat in the 2000s, when a new phase of Brazilian agricultural policy began. With the arrival in power of the *Partido dos Trabalhadores* (PT, Workers' Party) of President Luís Inácio Lula da Silva, the struggle against hunger and poverty became part of the priorities of the state. There was a major increase in the funds invested and a creation of various complementary programmes, such as the Food Purchase Programme, the National School Feeding Programme, the More Food Programme, and the Crop Insurance System, all of which centred on strengthening this segment of small farmers. The higher volume of funds did not, however, signify an overall inversion of priorities, because the amounts allocated to the large-farm segment also increased by the same proportion during this period.

At the same time as funding for family farming grew, the MST and the struggle for land underwent an inflection: the full-employment context of the 2000s exhausted the social demand for agrarian reform, thus helping to reduce the tension in the countryside. Amid this situation the interests of agribusiness, instead of being minimised, were supported and strengthened.

The best image of the wide-ranging coalition that formed in the Brazilian state in the 2000s is the ministerial structure, with the leadership of the MAPA being handed to the principal business leader of the corporate farming sector and a former chairman of the SRB, while the leadership of the MDA was given to a former director of the CUT. The presidency of Incra was allocated to an official of the MST, and the second-tier secretariats of the MDA were occupied by officials whose names had been put forward by the family farming unions.

The positive indicators achieved by both segments in this period enabled the Brazilian government to claim that there was a complementarity between the two sectors. However, the rhetoric of the rural social movements and of many non-governmental organisations (NGOs) describes what is really taking place as a situation of conflict. This is expressed in at least four fundamental aspects:

a) *The disassociation between regions of production and regions of employment:* A look at the maps

that show where Brazilian corporate farming is concentrated and where the poorest family farming is concentrated shows clearly that there is a concentration of farming GDP in the regions of more modern and technological agriculture, but with a low degree of creation of farming jobs or presence of small farmers. Looked at from the point of view of the social movements, a pattern of rural development with high levels of wealth creation is established, but 'without people'. On the other hand, the maps show that in the regions where small producers predominate, there is a high level of generation of work and employment but little generation of wealth, making them strongly dependent on transfers of government funds. That is to say, the wealth generated by agribusiness generates negative social counter-effects that need to be permanently compensated for by the state.

b) *The long-term environmental costs that sustain short-term competitiveness could destroy the bases of long-term competitiveness:* The expansion of Brazilian agricultural production has been underpinned by two main factors: gains in productivity and expansion of the agricultural frontier. A large share of the process of conservative modernisation took place with the occupation of the *Cerrado*, thanks to the adaptation of soybean to this ecosystem, with a negative effect on its resilience. At present, the frontier of expansion involves incorporation of lands situated in the Amazon biome. The main factor responsible for deforestation in this area has been a group of three activities: logging, cattle raising and soybean cultivation. In the opinion of many critics, this constitutes a decision to damage the natural resource base that is a fundamental factor for the medium and long-term strategic outlooks, in a context characterised by increasingly acute pressure on the environment and the growing importance of biodiversity and biotechnologies. In longer-established areas of agricultural production the environmental problems are no smaller. For example, the incentive for production of sugar and bioethanol has led to conversion of areas of pasture and food crops into areas for production of sugarcane, with very negative effects on the landscape, an intensification of natural resource use and an erosion of biodiversity.

c) *The political costs of dependence on agribusiness:* The loss of competitiveness of Brazilian industry, associated with the context of a crisis in the international financial system, makes the country's economy dependent on its exports of minerals and farm products, leading to a process of 're-primarisation' of the economy. As well as the problems inherent in the weakening of Brazil's international trade position, making it a hostage to the market for low-added-value products, the country faces a situation of political dependence on this segment. This is something that is highly undesirable when one considers that during the

period when Brazil's Presidency was held by Lula and his PT successor Dilma Rousseff (between 2003 and 2016), the Rural Caucus in Congress was the principal factor responsible for the conservative agenda in Brazil's legislature, blocking an agenda of deeper structural changes of a redistributive and democratising nature.

- d) *An asymmetric model*: Finally, critics point to the strong asymmetry in the support received by the corporate and family farming sectors of Brazilian agriculture. Even when there were two ministries, it was in the Agriculture Ministry that the stronger instruments were found – such as Embrapa, responsible for agricultural research and innovation, and historically aligned with the interests of corporate farmers. The disparity is evident even in the volume of government credit allocated: in the 2014-15 Crop Financing Plan, 150bn Real (approximately US\$39bn) was allocated to corporate agriculture, and approximately 20bn Real (US\$5bn) to family farming, although the latter accounts for 80 percent of the total number of farms.

For all of these reasons, according to some authors there is an incurable conflict between these two segments. The farming model based on agribusiness, they say, sees generation of production and income as the principal function of rural areas and of natural resource use (Buainain et al. 2014); while those who argue for an agricultural model predominantly based on family farming argue that this option would make it possible for rural areas to be seen not only as sites of production, but also as territories for living, since support for these forms of social organisation is more likely to favour the absorption of labour, diversification of production and less intensive use of natural resources (Silva and Miranda 2014).

While this opposition between the entrepreneurial and family sectors is a real one, it is also necessary to consider that it brings with it a certain simplification of the reality. This simplification is certainly useful for the confrontation between two conceptions of rural development. But it oversimplifies the range of interests, narratives and forms of organisation that have been created over the last 40 years of development of agriculture in Brazil. The next section aims to demonstrate this complexity, going beyond the dichotomy that is

often taken for granted in general discussions of the issue and even in a good number of serious academic analyses.

## 2. Beyond the dichotomy

### 2.1 *Two agricultures, or several?*

A decisive moment for understanding the conflict of narratives about the model of Brazilian agricultural development came in 1994, when the UN Food and Agriculture Organization (FAO) published a report in partnership with Brazil's Incra. The document, entitled *Diretrizes de Política Agrária e de Desenvolvimento Sustentável* ('Guidelines of Agrarian Policy and Sustainable Development'), circulated widely and is considered by many to be one of the most influential documents in the construction of public policies for the Brazilian countryside (Guanzirolli 2014; Abramovay and Veiga 1999; FAO/Incra 1994). After summing up the trajectories of Brazilian farming and the whole process of conservative modernisation, the study concluded that, in spite of two decades of priority for large properties in terms of technology and financing, there was an important segment of small producers whose performance was *similar* to that experienced by the large production units. This added a new line of identity, and discourse, according to which it would be wrong to talk about small-scale producers, since in spite of the small size of the establishments, the volume of production they achieved left nothing to be desired in comparison to the large undertakings. The distinctive characteristic, thus, was not the size of output or of the landholding, but the family-based nature of the work and of the management of these undertakings (Veiga 1993; Abramovay 1992). It is important to note that this FAO/Incra study also did not articulate a dichotomy between agribusiness and family farming. The distinction it made lay in whether there was corporate or family ownership. That is to say, in the former there is a separation of management and labour, whereas in the latter they are inseparable – and this view acknowledges that part of the family farming sector will establish itself on a business basis, in the same way as the large establishments.

The table below shows the main distinctions between the two forms of production – aspects that would come to sustain a wide-ranging polarisation of public debate over the two subsequent decades.

**Table 1: Characterisation of family farming based on its comparison with corporate agriculture**

Corporate agriculture	Family farming
Total separation between management and work	Deep relationship between management and work
Centralised organisation	Direction of the production process directly by the farmer and his family
Specialisation	Diversification
Salaried work predominant	Salaried work occasional
Average area 433ha	Average area around 26ha

The report had a high impact at a moment when the Brazilian economy was undergoing a serious crisis, with high levels of foreign debt, growing production costs and increasing unemployment. Its statements lent legitimacy to the narrative of a broad-based coalition involving rural social movements, sectors of the academic community and a portion of the government bureaucracy who were interested in promoting an alternative to the conservative modernisation of Brazilian agriculture.

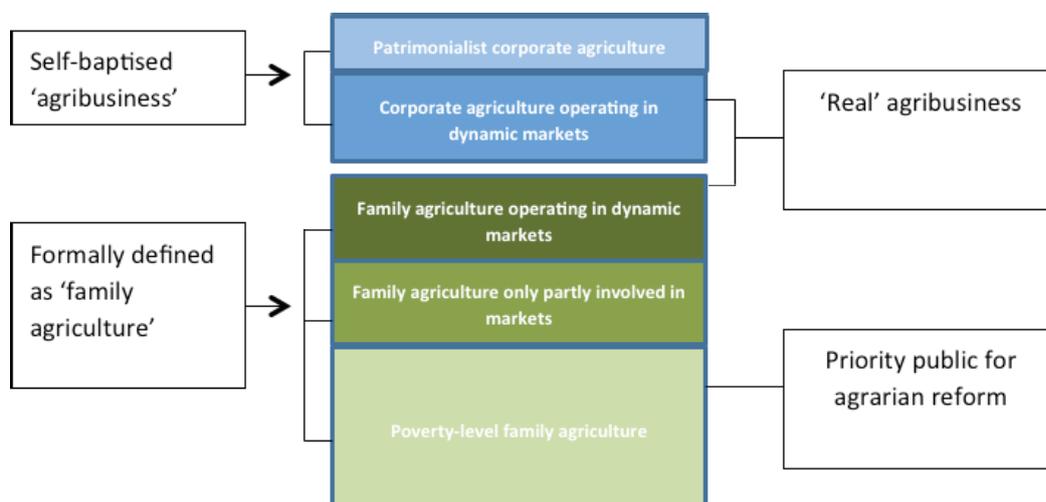
According to the criteria used by the authors of the study, in the mid-1990s, 85 percent of the 4.8m farming establishments in Brazil could be described as family farms, and these accounted for 76 percent of the agricultural workforce. In spite of this, they occupied only 30 percent of the agricultural land, and contributed 38 percent of the total value of production. A specific sub-group of approximately 400,000 units, however, achieved levels of performance similar to that of large-scale farming. This high-yield segment was baptised, in this report, as ‘consolidated family farming’. At the other extreme of the family establishments, the units with low performance were classified as a ‘peripheral fringe’ of Brazilian farming. This contained the greater part of the family establishments – some 2m units. And finally, there was an intermediate group, of 2.4m establishments, referred to as ‘family farming in transition’. These were designated as the target public of a group of policies designed to raise their levels of productivity through a process of modernisation. This logic was mobilised in

the creation of Pronaf, in 1995, as the first credit programme specifically directed toward family farming. One year later the MDA was created, as a response to the land ownership conflicts that were worsening at the time and with the aim of promoting policies to support these various segments.

Although the FAO/Inra study does not mention this, in the large-farm sector the establishments can also be divided into at least two segments: a sector of extremely low productivity, in which the possession of land serves an essentially patrimonialist function; and another with high productivity, organised along entrepreneurial lines (IBGE 2008). Both are supported by the policies coordinated by the MAPA. The two groups, however, have very different interests, reflecting particular economic and social characteristics in terms of relationships with the market and the state.

In practice, thus, Brazilian agriculture includes multiple different groups, and not only the two categories expressed in the ‘two-sector’ narrative – whose institutional expression was marked for a long period by the existence of two ministries. The figure below shows a schematic representation of this stratification of the social forms of production in Brazilian agriculture, going beyond the articulation of a dichotomy between agribusiness and family farming which has become predominant.

**Figure 1 – Schematic representation of the social structures of production in Brazilian farming**



How is this structure of segments represented by the organisations that exist in rural Brazil today? The following are brief notes on the profile of each organisation, and the segments that they represent.

**MST:** The Landless Rural Workers' Movement was created at the beginning of the 1980s, initially from a social base of farmers in the south of the country. With the passing of years it achieved national scope. In the mid-1990s, while maintaining its presence in the five regions of the country (South, Southeast, Centre-West, Northeast and North), it began to give priority to a group of actions in São Paulo, the richest State in the Southeast, as a means of gaining greater press coverage. This was a very successful strategy. At the turn of the century the MST made two innovations in its political project: it began to give greater emphasis to international coordination and communication, becoming one of the principal actors of *Via Campesina* (a significant world network of movements and organisations opposing strategies of transnational companies in the food and agriculture sector), which gave it a network of support and capacity for influence beyond the frontiers of Brazil; and, at the same time, it gave a greater emphasis to agroecology in its discourse, as a model for organisation of agriculture in opposition to agribusiness. The MST's main interest in agrarian reform, beyond meeting the immediate demands of its grassroots constituency, is to make the struggle for land one of the fronts in its struggle against capitalism. In this vision, the measures of success of its land policy are the weakening of political and economic power for the corporate sector of Brazilian agriculture, and the expansion in numbers and importance of what the movement calls the 'peasant sector' (or 'peasant family farming production') in the countryside as a whole. The main social base of the MST is the segment of family farmers that operate closest to the poverty line. In its discourse, it places the 'consolidated family farmer' sector in the same category as the corporate sector.

**Other landless workers' movements:** Over the last 20 years, other movements of landless workers, mainly operating regionally, have emerged from breakaway factions of the MST or been encouraged and motivated by socialist-oriented political groups. Examples include the *Movimento Camponês Corumbiara* (Corumbiara Peasant Movement), operating principally in the Northern Region; and the *Movimento de Libertação dos Sem-Terra* (Landless Workers' Liberation Movement), operating mainly in certain areas of the Northeast. Their differences from the MST relate to organisational aspects, and sometimes to strategies for confrontation with farmers, large landowners and the state itself. There is not a substantial difference in their visions of the process of land reform or the social processes that are under way in the countryside. The different movements' social bases are also similar.

**CPT:** The Church Land Commission is an organisation of the Catholic Church, which has a history of action on the issue of land rights. It was created in the 1970s, and was largely responsible for training the leaders who, years

later, created the MST and reinvigorated the union movement in the countryside. Although it is an organisation linked to the *Conferência Nacional dos Bispos do Brasil* (CNBB, National Conference of Brazilian Bishops), the CPT is relatively autonomous and independent in relation to the hierarchy of the Church. Even at the local level, there are situations in which the operations of the CPT, due to the strong weight of the work of community leaders, are not in accordance with the orientations of the local bishop. And as to its relationship with the movements, although there is a strong proximity between the line of action of the CPT and of the MST, there are places where the activity of the CPT is independent and even more radical than that of the MST itself. The grassroots constituency under the influence of the CPT includes farmers who tend to belong to the movements that identify themselves as involved in a struggle for land, but also part of the 'farmers in transition' segment.

**Contag:** The National Federation of Agricultural Workers was created in the 1960s. During the period of the military dictatorship it maintained a non-confrontational line of action to avoid interventions from the authoritarian state. Historically it has structured its activity around two core themes, land reform and workers' employment rights – in particular because its main social base consisted of rural workers of the northeast, and especially the sugar-growing *Zona da Mata* (Forest Zone) coastal belt. Up to the 1980s, thanks to the fact that Brazilian union legislation allowed only one union of rural workers per municipality (all of which were automatically affiliated to the sector's National Federation), Contag succeeded in establishing a wide network of local organisations. Formally, there are more than 4,000 municipal unions of rural workers (of which approximately 2,800 actually operate, rather than having a merely pro-forma existence), organised in *Federações Estaduais de Trabalhadores na Agricultura* (State Agricultural Workers' Federations) present in all the states, which are in turn organised nationally by Contag. This is in fact the greatest degree of capillarity achieved by any of the Brazilian rural social movements. In the period of re-democratisation, Contag's hegemony was questioned by the unions of rural workers connected to the CUT, created and operating under the influence of the CPT. This line of rural union organisation linked to the CUT had between 700 and 1,000 member unions. The dispute between the two lines came to an end in the mid-1990s, when Contag affiliated itself to the CUT. At that moment the key agendas of struggle for the union movements ceased to be land reform and workers' employment rights. Land reform, from the 1980s, became an agenda championed by the MST, and workers' employment rights lost importance due to the extremely strong reduction in the number of salaried rural workers in the country, as a result of the agricultural modernisation process. In place of these agendas, rural unions began to demand an 'alternative plan for rural development based on family farming and land reform'. In spite of the reference to land reform, it was family farming (defined as comprising small farmers whose livelihoods depend on what their farms produce and who have a maximum

of four 'tax modules' of land) that began to be Contag's public and its support base. In line with this, Pronaf became the most important policy for this organisation. In the mid-2000s Contag formally separated from the CUT, but a good part of its state unions and federations remained affiliated. The social groups most widely represented by these unions comprise the 'family farmers in transition' and the poorest farmers. Legally, the unions also represent the 'consolidated family farmer' segment, but their discourse does not reflect the interests of this segment – which consequently finds itself pushed toward representation by the corporate sector.

**Other family farming organisations:** Some of the rural union organisations linked to the CUT have challenged Contag. In the 1990s this segment created a new organisation, the *Federação Nacional dos Trabalhadores na Agricultura Familiar* – Fetraf (National Federation of Workers in Family Farming). This consisted of leaders originally influenced by the CPT, but who no longer saw their principal demands as represented by the transformational slogans of struggle (such as land reform). Part of their demands are met today by the state, for example through Pronaf. They are significant unions in parts of the southern region, north and northeast. Their line of activity, however, does not differ substantially from Contag's, and their social base is the same.

**Other support and advisory organisations:** There is a wide network of support and advisory organisations that works directly or indirectly on land ownership issues, giving advice to rural social movements or developing public campaigns. It includes the *Instituto Brasileiro de Análises Sociais e Econômicas* (IBASE, Brazilian Institute for Social and Economic Analysis), one of the most important Brazilian NGOs; ActionAid, an international NGO which has a substantial operation in Brazil; the *Conselho Indigenista Missionário* (CIMI, Indigenous Missionary Council); the *Rede de Tecnologias Alternativas para a Agricultura* (AS-PTA, Network of Alternative Technologies for Farming); and many others that operate locally. This network's discourse is addressed above all to the poorest farmers.

In the field of corporate agriculture, recent years have brought some changes to the list of players operating in the public debate about the federal government's land policy. Traditional players such as the UDR and SRB have left the scene, and the expression and representation of corporate farming interests today is concentrated in the CNA and its leading exponent, Senator Kátia Abreu. But even in the corporate sector of Brazilian agriculture there are leaders who are more open to a dialogue with social and environmental demands. Two examples are Marcos Jank, the former chair of the *União da Indústria da Cana de Açúcar* (Única, Sugarcane Industry Federation) who is currently working for the food giant BRF; and the former agriculture minister Roberto Rodrigues.

**CNA:** The National Farming Federation has succeeded in unifying the interests of the whole of the Brazilian corporate farming sector, from the most traditional to

the most up-to-date. More than this, part of the family farming segment has joined the system of unions and federations led by the CNA, attracted by its discourse in favour of rural producers. The CNA has a solid national organisation with strong capillarity. Its keynote is the defence of agribusiness, presented as an up-to-date sector that is responsible for a good part of Brazil's success in the international field of agricultural production. Any proposal to change the legal framework that regulates Brazilian farming, in the direction of penalising the more archaic sectors, is derided by the CNA as damaging and as creating an 'environment of insecurity and instability' that will finish up removing incentives from Brazilian agriculture. As well as opposing modernising reforms, in 2012 this organisation led the reform of the Brazilian Forest Code, and it is currently investing energy in a reformulation of Brazilian legislation on demarcation of indigenous lands. These organisations have disputed, with the unions, the representation of the 'consolidated' family farmers and those in an intermediate situation.

**The Rural Caucus in Congress:** This has been one of the most highly-coordinated and active groups organised in Congress since the 1988 Constituent Assembly. Characterised by predominantly conservative positions, it functions as a species of legislative arm of the CNA. It predominantly comprises representatives of the most archaic and patrimonialist sectors of Brazilian farming. But its power is also used by the corporate sectors to increase their capacity for pressure and claims on the state, underlining the discourse that there is 'only one agriculture'.

## 2.2 ***The dispute between the narratives on the development of Brazilian farming***

The formulations that are built on dualism, and the policies associated with them, do not necessarily shape the behaviour of the political players, whether inside the state or outside. What does exist, reflecting these different positions and interests, is a series of competing narratives about family farming, corporate farming and the use of public funds. Beyond dualism there is a political fragmentation that finds its expression in the debates on family farming – and more widely on agriculture, land use and rural development. The organisations mentioned above tend to converge around one of three dominant narratives (Cabral et al. 2016):

*Narrative 1: 'There is only one agriculture'*

The essence of this narrative is the affirmation that agriculture, whether practiced by family undertakings or major corporations, is all one and the same. In this narrative the subdivisions, above all within the sector of large establishments, are vehemently refuted, and the statement that there are specificities in the family segment is seen as a mere politically-motivated rhetorical construction (Navarro 2010). According to this line of discourse, the producers that are classified as up-to-date

(those which were called 'consolidated' or 'in transition' in the FAO study) are not differentiated from the large producers. All of them need credit, technology and access to the market. As a consequence, the existence of differentiated policies for family agriculture (such as Pronaf) or differentiated institutional spaces (such as the MDA) are seen as unnecessary. The others (the segment classified as 'fringe' in the FAO study) are not seen as a public of real farmers. According to this view, for these farmers social protection policies would be more appropriate, due to their difficulty in attaining the levels of skill and production resources that would enable them to compete with the other segments. Their disappearance as farmers is seen as a natural process in the context of a competitive farming economy (Buainain et al. 2014; Alves and Rocha 2010; Navarro 2010).

This discourse is adopted by corporate leaders who present themselves as modern rural producers, brought together in organisations such as the SRB and CNA. This vision is also adopted by the MAPA and the Rural Caucus in Congress. After the impeachment of President Dilma Rousseff in 2016, it was deployed by members of the new government who argued successfully for the downgrading of the MDA (which was reduced to the status of a Secretariat, initially in the Social Development Ministry and later in the Presidency), though the strength of the reactions that this provoked later led the government to promise to reinstate the MDA's ministerial status.

The constituency that identifies itself with this discourse comprises not only the up-to-date large producers of the south, southeast and *Cerrado*, but also the old landowning class of the semi-arid zone of the northeast, and the Brazilian farming frontier on the borders of the Amazon region. Thus, in this grouping the traditional and dynamic sectors of Brazilian farming mingle, both presenting themselves under a single, up-to-date discourse which covers up the internal differences between groups in the large-farm sector and which tries to take on board part of the family farming sector – that part which is also market-oriented.

#### *Narrative 2: Family farming as a superior social form of production*

This narrative, in its original form, affirms that there is an antithesis between family farming and corporate agriculture – or, in the way it is reframed by the social movements, between family farming and agribusiness. The concept of family farming that it deploys is based on the European model, and even more so that of the US, and incorporates all the segments, from the 'consolidated' to the 'peripheral' (to use the terminology adopted by the FAO/Inca report), setting aside any differences in terms of social or economic position. One of the consequences of this is a certain ambiguity in the discourse of some social movements, in which concepts like 'food sovereignty' or agroecology do not seem coherent with the condition of producers who are well

integrated into global markets, and operate production processes that are standardised by the value chains controlled by the agro-food industries – using, for example, controversial modern technology-intensive techniques, whether in terms of machinery and chemical inputs or cultivation of genetically modified organisms.

Established since the mid-1990s, this narrative was adopted by rural social movements, principally those organised in the farm workers' unions: initially linked to the National Rural Workers' Department of the CUT; later the group of unions associated with Contag; and more recently a group which broke away from that organisation, the Fetraf. Within the state, this narrative found expression in the creation of the MDA.

Those promoting this narrative range from producers with average levels of capitalisation in the south of Brazil to small-scale poor producers in the northeast and the Amazon region. There is a difficult relationship between this narrative and the more capitalised segment of family producers in the south, southeast and *Cerrado*, which often end up aligning themselves with the so-called agribusiness sector, although they are represented by the social movements as being family-based producers.

#### *Narrative 3: Peasant family farming*

At the end of the 1990s and especially in the 2000s a third narrative emerged, which has progressively combined a discourse clamouring for more radical transformations in the agrarian structure with environmental demands. At the centre of this narrative is a sharp criticism of the capitalist character of modern farming, including the segment of family farmers who are involved in markets and using the technologies adopted by the major producers – which are required for integration into global agribusiness. For this reason, over time this narrative incorporated issues such as agroecology and a discourse of food sovereignty, in a radicalisation of the concept of food security.

The main social base of this narrative comprises the poorest farmers who constitute the 'peripheral fringe' identified in the FAO/Inca study and, to a certain extent, part of the farmers in the 'in transition' group. Thus it includes poor family farmers in the south, the Amazon region and the semi-arid region of the northeast, but also landless rural workers from all over the country and those pushed out by the process of conservative modernisation. All the other producers are seen as a small-scale expression of the same model represented by agribusiness.

In political terms, the main voice of this narrative is the MST and its international connection, *Via Campesina*. The same discourse is also shared by a range of NGOs that work with agroecology. At the state level, this narrative has been explicitly represented by Inca, the agency responsible for land reform and resettlement.

### 3. Beyond the images of dichotomy and coexistence between agribusiness and family farming: case study examples

Beyond the fields of organisational discourse, the dichotomy between agribusiness and family farming often also fails to hold up in relation to public policies. In examples such as the Prodecer and Proálcool programmes, which are veritable icons of Brazilian agricultural modernisation, there was the initial expectation that they could benefit small farmers in the effort to leverage the sector's productivity. The results, as will be shown below, were much more ambiguous.

Prodecer followed a cooperation agreement made between the Brazilian and Japanese governments in 1974 (Muller 1990). Its main objectives were to increase the supply of agricultural products, especially soybean, and to stimulate the development of the Brazilian *Cerrado*, an area which at the time was a farming frontier for the country. The agreement involved creation of one holding company in Japan and another in Brazil, which together would form a company responsible for putting the programme into effect. It was the responsibility of Embrapa to adapt soybean lines to low latitudes and more acid soils, which enabled the enormous expansion of the area of central Brazil under cultivation. The programme is in its third phase, and now extends into the northern part of the country, with the expansion of soybean pressing on the borders of the Amazon region.

The main beneficiaries of the investments made were medium-sized and large-scale farmers who underwent an intense process of capitalisation and technical upgrading, supported by the instruments of agricultural policy outlined in the first section of this paper. But it also benefited a segment of more highly-capitalised family farmers, especially in the south of Brazil where the farming frontier expansion process was reaching completion. The children of the family farmers of that region, characterised by the predominance of small farming establishments, saw in the new farming frontier of the *Cerrado* and the borderlands of the Amazon the possibility of acquiring new lands at lower prices than in their regions of origin. Thus a strong process of social differentiation was established, with the constitution of a segment of family producers with an advanced level of technological development using large areas in central Brazil.

In a somewhat schematic form, it can be said that soybean in Brazil is now mainly grown by three different types of producer located in two different regions. In the south, the longer-established region of soybean production, it is cultivated on small properties – from 20ha to 100ha – by family farmers who achieve good levels of productivity and income and are supported predominantly by the work of the family itself, with

temporary workers hired only on occasion. Meanwhile in the center-west of Brazil and in the central plateau, two types of producers have established themselves. There is a generation of medium-sized farmers, usually children of family farmers from the south, who predominantly use family labour on large areas of land, in a highly mechanised model that is very similar to that of the family farmers of the United States. A typical producer in the *Cerrado* of Bahia has 800ha of land cultivated with the work of four people, all members of the same family or with some complementary salaried work. In the central plateau there is also a large number of farming companies, with very large expanses of land, supported primarily by salaried work. Most of these companies' lands are also in the *Cerrado*. For this reason the *Cerrado* is today the region of largest concentration of land holdings in Brazil, and the worker/land area ratio (on average one person working for each 200ha of planted area) are exceeded only by those found in large-scale cattle ranching. A large part of the soybean produced travels 2,000km to the ports in the southeast and south of Brazil to be exported as bulk grain for processing in external markets.

The Proálcool programme had its origins in the first oil shock in 1973 (Nogueira 2008). The Brazilian government sought ways of reducing the country's dependence on fossil fuels and softening the effects of the shock on the Brazilian economy. With the deterioration of the balance of payments and increasing inflation caused by the high price of oil, Brazil, which imported 80 percent of its oil, found itself obliged to look for alternative renewable forms of fuel. Among the various programmes proposed the most successful was Proálcool, launched in 1975, which aimed initially to introduce anhydrous ethyl alcohol (ethanol) from sugarcane, made in distilleries attached to sugar mills, to be added to petrol. The programme was supported by public subsidies and financing, and it was the responsibility of the government, through the state oil company Petrobras, to buy, transport, store, distribute and mix the ethanol with petrol, as well as to decide the product's selling price.

With the second oil shock in 1979 the programme was expanded, in this phase aiming for production of bioethanol as a substitute for gasoline as fuel, with priority now being given to production of hydrated alcohol. The government began to stimulate consumption of ethanol by giving tax incentives for purchases of vehicles running exclusively on the fuel, among other measures. The government also converted its own vehicle fleet to run on ethanol. Thus began what some authors call the 'golden age' of the programme, which lasted until 1986.

The third phase, starting from that year, was characterised by a certain crisis in the programme, to which various factors contributed – including the fall and stabilisation in the price of oil, the increase in the international market price of sugar and removal of financing and subsidies by the government, which was

facing serious fiscal and financial pressures. This resulted in the programme becoming discredited, and this effect was exacerbated by a supply crisis in 1989.

In the 1990s the programme continued at reduced volume, with the government deregulating the market, freeing prices of products and allowing free competition. At the end of the decade the entrepreneurs of the sector began to group together – with the government and the automobile industry – to try to give the programme a new boost. In 2003 it began to re-emerge strongly, supported by the launch of flex-fuel vehicles, the new high price of oil and the increase in external demand arising from increased environmental awareness. In 2007 the future outlook was optimistic but the economic policy of the Brazilian state, which kept petrol prices artificially low, harmed the competitiveness of ethanol, leading to another serious crisis in the sector, with closure of mills and disinvestment.

In terms of the organisation of production, this process of modernisation as a whole led to a change in the geography of sugarcane growing. The most traditional (centuries-old) sugar-producing region is the coastal area of the northeast of Brazil, mainly in the states of Pernambuco, Paraíba and Alagoas. With the Proálcool programme the producers of these regions received many benefits, but did not manage to rebuild their productivity levels. Gradually, production migrated to São Paulo State, where more up-to-date industrial processing plants were installed, attracted by the high fertility of the soils (until then occupied by coffee) and the proximity of consumer markets, which reduced production costs. During the 1990s, especially, production expanded from São Paulo towards central Brazil, pushing soybean cultivation further to the north and helping make soybean itself a factor of pressure on the borders of the Amazon. Another factor that boosted the expansion of production of sugarcane in São Paulo and in central Brazil was the terrain, which facilitated mechanisation more than the hilly landscape of the traditional sugar-growing areas of the northeast. Regardless, large-scale cultivation predominates in all three regions. In São Paulo there was an important segment of small and medium-sized properties which were assumed to be potential beneficiaries at the outset the programme. However, with the passage of time these properties were leased to the major industrial sugar and ethanol companies. This is because the technological model of production of sugar and ethanol in Brazil calls for a large volume of regular supply. Stocking of sugarcane or delay in its arrival at the industrial plants results in a high loss of sucrose, damaging productivity. This model favours the expansion of monoculture and concentration of production as conditions for the sector to be viable.

As can be seen from this brief history, although the sugar/ethanol segment is one of the most powerful parts of Brazilian agribusiness and has up-to-date entrepreneurial corporations, it is extremely vulnerable to government policies, whether for leverage or for its stabilisation. Also, although it is a traditional sector, with

origins going back to the colonial period, the effort of modernisation in the last forty years had to be strongly supported by government investments in the form of research, credit and other support policies, especially in the field of energy planning (with the stimuli for replacement of petrol by ethanol) and industrial policy (with the introduction of flex-fuel vehicles).

Another important aspect is that in the original documents of the *Proálcool* programme there was an expectation of benefiting small-scale sugarcane producers. The technological model adopted, however – based on large industrial plants – practically eliminated the viability of that group. In practice, the Brazilian model was something of a two-edged sword in terms of regional disparities, and had negative effects from the social and environmental points of view. In regional terms, its effect was, initially, to stimulate concentration in São Paulo, and in a second phase to dilute this concentration in the direction of central Brazil. But it did not have positive effects on Brazil's northeast – the country's poorest region. In the social and environmental dimensions, there was a tremendous stimulus to expansion of monocultures, replacing food crops; pressure on biodiversity; and indirect effects on ecosystems such as those of the Amazon region, as areas of pasture and soybean had to move further north to make room for the expansion of sugarcane.

Summing up, the case of Proálcool shows how even when a programme is planned with the expectation of benefiting small farmers, the political dynamic can dictate technology choices, and public and private investment decisions, in a way that makes it difficult to achieve this initial purpose. In this sense, the idea of coexistence and complementarity between the family and corporate segments does not stand up to scrutiny of the effects generated by Brazilian policy on the sugarcane production sector, including severe socio-environmental problems. This image could be used to strengthen the other established narrative – of the clear dichotomy between the corporate and family segments. On the other hand, the experience of Prodecer shows that even when a programme undeniably favoured concentration of land ownership, there was a small segment of family producers who benefited from the incentives and technological innovations that it made possible. That is to say, Prodecer helped generate a segment of family producers who, at the same time, are now part of Brazilian agribusiness.

The same exercise could be carried out for Embrapa, another icon of Brazilian farming modernisation that is associated with the success of corporate agriculture. There is no doubt that this organisation was one of the principal moving factors responsible for building the competitiveness of large-scale Brazilian corporate agriculture. But some of the technologies it generated also benefited a segment – albeit undoubtedly numerically smaller – of family farmers. Furthermore, Embrapa also reveals an ongoing internal dispute, as its workforce includes a group of technical staff and

researchers who resolutely seek to influence the corporation's strategies in a way that will bring it closer to family farmers and their needs and interests, thereby reducing the emphasis given to the corporate sector.

## Conclusion

This paper has highlighted some of the contradictions and conflicts that have been involved in the Brazilian agricultural sector's pathway of modernisation. The purpose was to offer an alternative vision to the 'dualism' that characterises the predominant approaches to the experience or model of Brazil's rural development, in its two versions. The aim has been to make clear how the image of complementary coexistence between the corporate and family sectors of Brazilian agriculture obscures a series of economic, social and environmental aspects that need to be taken into account by those who aim to find, in this experience, an inspiration for framing public and private policies and investments.

It must be made clear that everything that is being indicated here, based on the examples given, does not eliminate the distinctions that do in practice exist between family producers and the corporate segment. There is a totally legitimate ideological and political dispute and one that has very clear empirical grounds. There are, in practice, distinct and different interests between these two segments. If on the one hand their coexistence is undeniable, it is equally undeniable that it is far from being harmonious. At the same time, the aim has been to make clear how a 'dichotomy' approach to these two sectors disguises a reality that is much more nuanced, in which some of the groups of family farmers are shown to have interests that one recognises also in the narrative of agribusiness, and some farmers who are presented as rural entrepreneurs in practice are using their land only in pursuit of political power. A vision that is more in line with the reality would thus need to go beyond the two-dimensional view, and take on board the heterogeneous nature of the various social structures of production in Brazilian farming.

As well as presenting this alternative vision – developing the predominant two-aspect narrative about the so-called Brazilian model into a more nuanced portrait – it should be clear from the pages above that this trajectory has not resulted solely from a strategy directed by the social groups that have controlled the state at certain points. The final outcome of the experience of agricultural modernisation in Brazil includes a group of effects that were not anticipated by the policy planners. That is to say, Brazilian agriculture and land policy processes have also responded – and to a very substantial extent – to the dynamics of the conflicts and tensions between different social organisations. The rules of the game in Brazilian farming are the result of a further game played around those rules, a situation in which social actors permanently dispute the legitimacy and the meaning of each social form of production, in a struggle which is at the same time material and symbolic,

characterised by contestation over narratives of success or failure.

This is perhaps the principal consequence of everything that has been discussed in this paper: these processes could be described as challenging the very existence of a Brazilian farming development model. There is not, in reality, a model *per se*, but a whole that contains, and is built from, many conflicting parts, as the result of an historical process.

If this experience is to contribute to shaping policies and programmes in other countries, such as, for example, part of the African continent, it is necessary to take into account the learning processes that have been generated beyond the scope of the official world of policy, and to understand that the final results of any exportation of models will be the absorption of those narratives into and by a social fabric that has its own specific characteristics. In other words, the effects generated will obey this social dynamic much more than they will obey the intentions of the technical experts and the planners of policies.

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