Prosperity and marginalization
- An analysis of the expanding meat production in southern Brazil

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Abstract

The production of meat has risen dramatically during the past decades. This process, generally referred to as the *Livestock Revolution*, particularly includes so called “developing countries”, hosting the most intensive augmentation of both production and consumption. As agricultural activities often are performed by small-scale farmers in these countries, the principal question for this study has been how family farmers are affected by the *Livestock Revolution*.

This study approaches the *Livestock Revolution* in Brazil, the world’s biggest national exporter of meats and animal feeds, from the small-scale farmer perspective. Drawing on a case study of Rio Grande do Sul, Brazil’s southernmost state, it is argued that family farmers experience multi-level marginalization. Smallholders of pork and poultry face direct marginalization through vertical integration with the large-scale meat processors (the agribusiness). Other family farmers experience marginalization through the actual exclusion from ‘integration’, as the combined corporate forces of agribusiness and supermarket chains control the principal distributive channels. Small-scale farmers also face indirect marginalization as the increasing production of soybeans (used as animal feeds) and large-scale cattle raising create an unfortunate ‘competition for arable land’. Overall, the case study seems to reflect a national tendency, in which the *Livestock Revolution* intensifies the polarization of the agrarian community in Brazil, thus creating parallel patterns of prosperity for the agribusiness and marginalization for the small-scale farmers.

As the Food Regime analysis aims to approach the global political economy by analysing agri-food structures, this theoretical approach has been used to contextualize the case of *Livestock Revolution* in Brazil. From this viewpoint, the *Livestock Revolution* constitutes an explicit expression of a corporate Food Regime, increasing the power of private companies at the expense of family farmers. However, the Food Regime analysis also identifies divergent patterns of this Third Food Regime, in which the corporate discourse is being challenged by an alternative paradigm of food and agriculture. The marginalization of farmers in rural Brazil has indeed provoked emancipatory responses, including alternative patterns of production and distribution, as well as direct confrontations such as land occupations. This ‘resistance from the margins’ accentuates the conflict between contrasting visions for food and agriculture, apparently embedded in the Food Regime. The farmers’ emancipation is therefore somewhat determined by the rather uncertain progress of the Third Food Regime.
Abbreviations

ABEF  Associação Brasileira dos Produtores e Exportadores de Frangos
ABRAS  Associação Brasileira de Supermercados
ACURS  Associação de Criadores de Suínos do Rio Grande do Sul
AGAS  Associação Gaúcha de Supermercados
AGAV  Associação Gaúcha de Avicultura
CPT  Comissão Pastoral da Terra
DESER  Departamento de Estudos Sócio-Econômicos Rurais
ECLAC  Economic Commission for Latin America and the Caribbean
EMATER/RS  Associação Riograndense de Empreendimentos de Assistência Técnica e Extensão Rural
FAO  Food and Agriculture Organization of the United Nations
FETAG  Federação dos Trabalhadores na Agricultura
FETRAF  Federação dos Trabalhadores na Agricultura Familiar
IBGE  Instituto Brasileiro de Geografia e Estatística
INCRRA  Instituto Nacional de Colonização e Reforma Agrária
MPA  Movimento de Pequenos Agricultores
MST  Movimento dos Trabalhadores Rurais Sem Terra
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1 Analyzing a food revolution

Worldwide, the demand for meat is increasing. The global per capita consumption of animal protein has doubled during the past four decades. This is often said to be an expression of an ongoing food revolution, in which the rising demand for livestock products has caused a dramatic production increase. The augmenting consumption and production of the Livestock Revolution mainly takes place in the so-called developing world, especially in countries with significant economic growth. In this sense, Brazil seems to constitute a clear cut example of this process, as the country has become an increasingly important agri-food player on the global scene, now being one of the world’s leading exporters of both processed meat and animal feeds.

Livestock production in Brazil, especially in the south, is mainly carried out by family farmers; rural families with small-scale production units and generally limited capital. The dominant line of Livestock Revolution research draws on the idea that the globally escalating meat demand is welcomed by these small-scale farmers, as they are believed to have an increasingly important role as providers of livestock products. However, official statistics seem to indicate a decline in agricultural employment and population density in the rural areas of Brazil. It therefore appears imperative to approach this causality more critically, to examine whether the prosperity of the expanding livestock sector is actually reaching the rural population that is depending on agriculture for livelihood. The principal purpose of this study is thus to examine how small-scale farmers in rural Brazil are affected by the Livestock Revolution, with a geographical focus on the southernmost state Rio Grande do Sul.

On a theoretical level, several researchers have argued that the global politico-economic structures of food and agriculture, the so-called Food Regime, are constituted by specific characteristics that involve coexisting patterns of corporate prosperity and farmer marginalization. Since the Livestock Revolution apparently seems to be an important development of the agri-food sector, it appears important to place this process in the Food Regime context, in order to uncover and explore the driving forces behind this global transformation. This theoretical approach is also concerned with changes within the Food Regime, arguing that the dominant way of production and distribution is now being challenged by an alternative paradigm of food and agriculture. In this respect, the second aim of this study is to discuss these alleged changes from the case of Livestock Revolution in Brazil, focusing on how family farmers are responding to the socioeconomic outcomes of the changing livestock sector.
Hence, the objective of this study is to scrutinize how and why Brazilian small-scale farmers are affected by, and responding to, the so called Livestock Revolution. The empirical results of this research process will be presented in section 2, while these findings will be further discussed and analysed in section 3. This introductive section contains a brief background of the ongoing transformation of the global livestock sector, followed by a presentation of the theory and methodology used to analyse these changes.

1.1 The Livestock Revolution

This section aims to introduce the current state of social research regarding the concept of Livestock Revolution, which constitutes the contextual background to the research question of this study. The section will also show the importance of the Brazilian meat industry in the globally transforming sectors of food and agriculture.

The global livestock sector accounts for 40 percent of the agricultural Gross Domestic Product, employs roughly 1,3 billion people and occupies 70 percent of all agricultural land in the world.¹ The demand for livestock products, such as meat and milk, has risen dramatically during the past decades. This process have been termed the Livestock Revolution,² referring to the 1970s major food transformation; the Green Revolution. The main difference between the Green Revolution and the Livestock Revolution, as Delgado et.al. point out, is that the contemporary agri-food transformation is mainly driven by demand while the latter was supply-driven.³ The concept of Livestock Revolution thus mainly refers to the dramatic increase in demand for meat products; where the world average meat consumption has doubled during the past four decades (chart 1).⁴

A common interpretation of this consumer-driven food revolution is that economic growth in developing countries causes a change in dietary preferences, which in turn increase the livestock production.⁵ Dividing the world into nation-states shows that consumption levels differ radically between countries of high, middle and low income. Meat consumption is much higher in high income countries – 93 kilo/capita/year in 2002 – a number which still increases. This trend does however seem to spread to middle income countries, especially since the early 1990s, and meat consumption is now increasing the fastest in countries of strong economic growth. China is the most explicit example of this transformation; consuming ten kg/capita/year in 1979 and 53 kg in

² The term was initially stated by Delgado et al. (1999).
³ Delgado et al. (1999), p 1-4.
⁴ World Resource Institute, Earthtrends database.
⁵ Vercoe (2003), p 81-82.
2002. Low income countries have remained at the same consumption level as in the 1960s; consuming less than ten kg per year (chart 1).

Hence, even though high income countries still are the main consumers of livestock products, many middle income countries, especially China, have increased their consumption dramatically, which consequently seems to cause a food revolution.

![Chart 1. Trends in Global Meat Consumption; 1962-2002](source: World Resource Institute, Earthtrends database)

During the past 15 years, the production of meat has increased mainly in middle income countries like China, Argentina and Brazil. In Brazil, the national focus of this particular study, agriculture has gone through a vast modernization process during the past three decades. Throughout this process traditional colonial products, such as coffee, sugar and cocoa, have been somewhat replaced by ethanol, soybeans and meat products. Brazil’s integration with the neoliberal world economy in the 1990s has intensified the agricultural modernization even further, and production of beef, chicken and pork has therefore risen significantly since the early 1990s. Brazilian export of pork has risen dramatically during the past six years, and Brazil is now the world’s biggest exporter of both beef and chicken. The share of meat products in the total agricultural exports rose from 10 to 19 percent between the years of 2000 and 2005. In 2007, Brazil exported no less than 0.7 million tonnes of pork meat, two million tonnes of bovine meat and 3.5 million tonnes of poultry meat (see export values in chart 2). Besides meat exports,

6 World Resource Institute, Earthtrends database.
7 FAO, TradeSTAT database.
8 Jales et al. (2006), p 3-4.
9 FAO, TradeSTAT database.
10 The 2006 export decrease of chicken and pork should be considered as a temporal fluctuation, since the main cause was the Avian Influenza outburst and a correlated Russian embargo on pork. Fürstenau (2007), p 63, 67.
11 FAO, TradeSTAT database.
Brazil is also connected to external markets as the world’s second largest supplier of soybeans. The increasing soybean production in Brazil is surely an effect of the increasing meat production, since around 85 percent of the global soybean production is used for animal feeds. Brazil thus seems to be linked to expansive livestock production also in Europe and Asia, as an important national supplier of animal feeds.

Consequently, Brazil appears to play an important role in the so called Livestock Revolution, being a developing country with vast economic growth. As Brazil has a huge rural population, often depending on agriculture for livelihood, the dominant line of research seems to assume that the dramatic production increase of the Livestock Revolution automatically would benefit farm level producers. For instance, the renowned researchers Delgado, Rosegrant and Wada state that

> The rapidly-growing markets for animal-derived food commodities present a significant opportunity to the rural poor.

To put it even more clearly, Hall, Ehui and Delgado state that

> [...] small-scale livestock farmers of developing countries [...] view livestock as a way out of poverty.

These researchers hold that rural poverty will decrease as the growing demand for animal protein provides income opportunities for small-scale farmers in developing countries. However, other

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12 FAO, TradeSTAT database.
13 Soyatech, Website.
14 The Netherlands and France are the most important importers of Brazilian soy meal (de-oiled soybeans used as feed stuff), whereas China is the largest national importer of whole soybeans. Soyatech, Bluebook database.
researchers have feared that the gains from the expansive livestock production will not automatically “trickle down” to the farmers, because of potential difficulties to adapt to the necessary technical upgrading demanded by the global markets, which in turn could increase socioeconomic inequalities. In response to these identified risks, researchers positive to the *Livestock Revolution* have suggested that the conditions of family farmers could be improved through vertical integration with the food processing companies, and/or through responsible policy making and state-led institutions empowering the smallholders. Overall, it thus appears as if the dominant line of research generally considers the *Livestock Revolution* an important opportunity for small-scale farmers, given that potential disadvantages are actively targeted by the powers of market and state.

Hence, the principal purpose of this study is to critically evaluate the scientific “consensus” about the allegedly positive outcomes of the *Livestock Revolution*. Focusing on the case of Brazil, one of the leading countries of the expanding livestock sector, the objective is to approach the *Livestock Revolution* from the small-scale farmer perspective. Furthermore, the second aim of this study is to analyse these empirical findings in the light of the Food Regime evolution, a theoretical perspective which will be further introduced in the following section.

### 1.2 The Food Regime analysis

The theoretical framework used in this study, labelled “Food Regime analysis” by Philip McMichael, is a historical-sociological school analysing the characteristics and transformations of the global agri-food structures, in order to

> […] explain the strategic role of agriculture and food in the construction of the world capitalist economy.

Drawing from McMichael’s definition, the Food Regime analysis will be used in this study as

> […] an analytical device to pose specific questions about the structuring processes in the global political-economy, and/or global food relations, […] allowing us to refocus from the commodity as object to the commodity as relation, with definite geo-political, social, ecological, and nutritional relations at significant historical moments

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17 The concept “trickle down” here refers to the line of economic thought arguing that corporate prosperity in the end serve all people, as the profits tend to “trickle down” through the socio-economic hierarchy.
22 McMichael (2009), p 139.
23 Ibid., p 148, 163.
The Food Regime concept, initially formulated by Harriet Friedmann, was originally used to identify hegemonic structures of the global political economy during specific historical periods. Friedmann argued that the First Food Regime, which endured between the 1870s and 1930s, was strongly characterized by the colonial-imperialist world order, in which agricultural products were exported from the “New World” to Europe under a free trade policy. In contrast, according to Friedmann, the Second Food Regime was instead marked by protectionism, caused by the crises and food scares that followed the 1930s depression and World War II. Friedmann points out that protectionism resulted in agricultural surpluses in some of the world’s leading grain producing countries, which gave the United States world hegemony. Grain surpluses were then used as food aid and cheap exports to the Third World, as a way to withhold economic and political influence from the Soviet Union. Subsidized wheat exports from the United States did however, in the long run, create dependence on food import in the Third World, leading to U.S. hegemony and the unequal agro-trade relationship between the First and the Third World.24

Hence, according to Food Regime analytics, the Second Food Regime was certainly constituted by a nationalist discourse, in which food and agriculture were important in the construction of hegemony. In addition, another significant mark of the Second Food Regime, also deriving from the idea of agricultural accumulation, was the transformation of the agri-food industry into large-scale line production, following the industrialization path of “Fordism”.25 In the First World, an agri-food industry of large-scale producers and manufacturers began to flourish, subsidized by their governments, while small-scale cultivators were gradually declining in both the First and the Third World.26 Hence, the Fordist food production initiated a shift in the food and agricultural sector; away from the farming level and towards manufacturers, distributors and food service companies.27

As Food Regime researchers came to identify additional characteristics of the recent agri-food order, it has been suggested that we now experience a Third Food Regime.28 McMichael identifies a “corporate Food Regime”, with the unequal power relations inherited from the Second Food Regime but with private companies, rather than nation-states, as the main

24 Friedmann (1982), p 256-261. Accordingly, the Food Regime analysis derives theoretically from the Wallerstein perception of the world nations relating to each other in terms of core, semi-periphery and periphery, categories clearly constituted by unequal power relations. See for example: Wallerstein (2004).
25 Weis (2007), p 18-19, 60-62; McMichael (1995), p xiii. The concept “Fordism” is often used in Marxist political economy interpretations to describe the patterns of mass production/consumption, originally referring to the specialized production initiated by Henry Ford in the 1940s.
hegemons. The rising neo-liberal ideas of the 1980s, which criticized agricultural subsides, fuelled the shift in agri-food power that was initiated by the Second Food Regime. In this process the power subsequently shifted even further away from the farming level towards manufacturers, distributors and food service companies, since these financially strong agents where able to remain in business without governmental support. Today a declining number of transnational agri-food companies, labelled as “agribusiness” in this study, control the main part of the farmer-consumer relation. Moreover, in recent years the agribusiness has come to conglomerate and form so called agri-food clusters, where input companies like Monsanto and ConAgra have formed alliances with food processors like Cargill and DuPont. Food Regime researchers have pointed out how this transition has worsened the reality for small-scale farmers since their bargaining positions have weakened as the number of buyers lessens. The conglomereration is also causing advance standardization, forcing the farmer to rely on specific inputs and farming techniques which make farming activities profitable mainly for large-scale production units. Hence, since the agribusiness seems to have the ability to become more successful than small-scale food producers, they consequently tend to dominate the contemporary agri-food relations.

Furthermore, another recent trend of the Third Food Regime seems to be the growing power of retailers, that is, national and multinational supermarket chains. Since even the largest manufacturers need to establish relationships with these supermarket chains, challenged by the development of own-brands and fresh food deliveries, the retailers have been a driving force in reshaping the agri-food sector of the corporate Food Regime. Specific demands on quality and standardization, channelled all the way down the production chain from the supermarkets, seem to constitute decreased influence and increased vulnerability for small-scale farmers in producer countries. The growing power of the supermarket chains thus seems to be yet another example of the corporate intensification that apparently constitutes the Third Food Regime.

Hence, according to Food Regime researchers, the corporate Food Regime clearly appears to be marked by economic concentration on a few large-scale actors in the production chain, while

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29 McMichael (2005), p 270-274.
32 Morgan, Marsden and Murdoch (2006), p 54-60.
34 Morgan, Marsden and Murdoch (2006), p 54-60.
35 Lang and Heasman (2004), p 144-151, 158-159.
small-scale farmers seem to face marginalization. However, several researchers have also identified countervailing characteristics of the Third Food Regime, in which the productionist legacy is being challenged by alternative patterns of production and consumption. J. D. van der Ploeg argues that the farmer marginalization, caused by the agribusiness (called “Empire” by Ploeg), also generates emancipatory responses:

Empire equally provokes new forms of resistance, struggle and response [...] [which] outlines the potentials entailed within the peasantry – potentials that are currently being blocked by Empire but at the same time are (re)activated by it.40

According to Ploeg, this farmer resistance includes a “multitude of responses”; both rather concrete resistance such as demonstrations, road blocks and land occupations, but also the action of constructing new practices of production and distribution.41 Furthermore, John Scott’s study of peasant resistance in Malaysia during the large agri-food transformation of the 1970s – the Green Revolution – shows that every day resistance seems to include both an ideological and a material dimension, where counteractions are being intertwined with a counter-vision of socioeconomic equity.42 Hence, given that resistance is both multileveled and ideologically profound, it could be argued that disparate and conflicting agri-food visions, the seed to countervailing action, actually are embedded in the corporate Food Regime.43 Accordingly, McMichael state that the current dynamics of the Third Food Regime is caused by resistance from organized farmers and social movements, aiming to relocalize food distribution by reconnecting the farmer-consumer relation:

Just as the dynamics of the previous regimes centered on tensions between opposing geo-political principles – colonial/national relations in the first, national/transnational relations in the second, so the corporate food regime embodies a central contradiction between a “world agriculture” (food from nowhere) and a place-based form of agro-ecology (food from somewhere).44

Also Friedmann identifies social movements of farmers and rural workers as the key driver in reshaping Food Regimes, thus pointing out the importance of these actors in the allegedly ongoing transition between the Second and Third Food Regime.45 In line with this interpretation, Lang and Heasman have suggested that we are now facing “Food Wars”; an intensifying clash between two contrasting paradigms of food and agriculture. According to Lang and Heasman, the productionist paradigm, legacy of the Second Food Regime, is now heavily challenged by an alternative agri-food paradigm that aims to guarantee socioeconomic and environmental

41 Ibid., p 3-4, 265-273.
43 This perspective evidently derives theoretically from the analytical devices introduced by Karl Marx, due to the apparent similarities between the Food Regime and capitalist economic system regarding its embedded tensions.
44 McMichael (2009), p 147.
sustainability for all production chain agents.\textsuperscript{46} In sum, the contemporary Third Food Regime is apparently marked by the productionist legacy of corporate driven large-scale production, at the same time as countervailing forces are trying to change the dominant condition. The Food Regime analysis introduced in this section will thus constitute the theoretical context of this study, in which the found data on the changing livestock sector will be placed in order to understand the identified characteristics of the ongoing Livestock Revolution.

1.3 Methodology

As stated in the beginning of this introductive section, the objective of this study is to scrutinize \textit{how and why Brazilian small-scale farmers are affected by, and responding to, the so called Livestock Revolution}. The following section will present how this issue was targeted methodologically throughout the research process.

The research focus of this study holds two concrete questions; \textit{how the farmers are affected by the Livestock Revolution} and \textit{how they are responding to these effects}. Answering the “why-dimension” of the research question naturally requires the use of theory, in which I will utilize the Food Regime analysis as outlined in the previous section. In order to answer the “how-questions”, I have searched for empirical data in literature, official and unofficial statistics and through in-depths interviews with selected key actors. All these data was gathered in the state of Rio Grande do Sul between Mars and July 2009. The focus on this particular state was chosen for two reasons. Firstly, a case study of Rio Grande do Sul might provide a rather valid representation of the general Livestock Revolution impacts for family farmers in Brazil, due to the particularly high amount of small-scale farmers involved in the agricultural production in this state. Secondly, as Rio Grande do Sul has had comparably good socioeconomic conditions and well organized farmers, it appears important to scrutinize whether potential marginalization patterns might occur also in a relatively wealthy region with strong civil society.

The literature study has played an important role throughout this research process. Plenty of research in Brazil is concerned with rural development, thus providing a good basis for answering a part of the research question of this study. However, very little of the available research actually treats the potential connection between rural development and the expanding

\textsuperscript{46} Actually, Lang and Heasman identify two paradigms challenging the productionism; the \textit{life science integrated} and the \textit{ecologically integrated} paradigm. However, as the life science integrated paradigm simply adds genetic modification to the productionist legacy, Lang and Heasman describes this paradigm as merely a prolongation of the productionist paradigm. They will therefore be used synonymously in this study, as the focus here is to analyse the tension between the dominant and emerging agro-food models. Lang and Heasman (2004), p 20-34, 36-40, 181, 242.
livestock sector. A literature study alone would thus be unable to answer the research question completely, which is why these data were combined with statistics and interviews, methods which will be more thoroughly discussed below. The literature sources in this study originate mainly from domestic research of the livestock sector, published through universities, or other renowned publishers, and/or in scientific reviews. In order to increase the reliability of the referred literature, my intention has been to compare all gathered data, especially controversial inferences, with other available scientific sources.

The quantitative data used in this study has both official and unofficial sources. Official sources refer to renowned international databases, for instance FAO (Food and Agriculture Organization of the United Nations) and ECLAC (Economic Commission for Latin America and the Caribbean), but also from databases of the Brazilian government, such as IBGE (Instituto Brasileiro de Geografia e Estatística). When official data have been insufficient, I have also used data retrieved from farmer organizations. The reliability of these sources is certainly more clouded, and I have therefore only chosen data from organizations that appear to carry out rigorous and trustworthy research. In addition, as the research question is concerned with the farmer perspective, it also seems important to use the data gathered by the organized farmers. In order to be as precise and valid as possible, all quantitative data has been elaborated with basic calculation methods before presented in this study.

An important part of the empirical data also comes from interviews with selected key actors of the agricultural sector in Rio Grande do Sul. These interviews served many purposes in the research process. First of all, they provided a perspective unreachable through the literature and statistics, namely the viewpoints of the actors involved in, and affected by, livestock production. Secondly, many interviews contributed with valuable information regarding the structure of the livestock production chain, also somewhat inaccessible through literature. Thirdly, the considerations raised by analysing literature and statistics could be confirmed, corrected or denied by the actual experts on the area; the farmers. Hence, the interviews had clearly a contextualizing importance, explaining the data from literature and statistics, and at the same time initiating deeper research into these empirical sources.

Seven semi-structured interviews were carried out for this study. The interviews were in general approximately one hour each, performed in Portuguese and carried out at the organizations’ headquarters. A thematic interview guide was used to create a “semi-structure” for the
interviews. The advantage with using a loose structure was that many interesting issues, overlooked by me when preparing the interview guide, could easily be followed up along the conversations. This led indeed to several important findings. However, a returning problem with the semi-structure was that the interviewees sometimes tended to lose themselves in polemic monologues regarding issues rather irrelevant for my particular study, a problem which might have been more easily avoided with a structured interview.

The interviewees were all directors and/or responsible for livestock production at the organization they represented. There was of course a potential reliability problem with interviewing only representatives and not performing interviews directly with the farmers. I do however believe that the farmers were rather correctly represented, since most farmers are members of at least one of the numerous movements and organizations that exist in the agrarian community. Interviewing representatives from various organizations also gave the possibility to embrace a larger group of farmers, whereas information received from a limited number of farmers would have been problematic to generalize, and thus less useful in a broader analysis.

My intention was to have interview objects from both farmers’ organizations and from the agribusiness. However, none of the five meat processors asked for an interview approved to this. Thus, my original idea with having “both sides” represented in the study did somewhat fall. To compensate this, an interview was carried out with one of the broiler industries lobbying organizations; ASGAV (Associação Gaúcha de Avicultura). Moreover, the agribusiness position could also be somewhat represented by the reports and literature published by the companies, which often gave a quite clear indication of the corporate perspective.

On the farmer side of the production chain, six actors were interviewed. Three of these were organizations of small-scale family farmers. MPA (Movimento de Pequenos Agricultores) is a movement of small-scale farmers fighting for the interests of these actors. FETRAF (Federação dos Trabalhadores na Agricultura Familiar) and FETAG (Federação dos Trabalhadores na Agricultura) are both organizations representing the interests of family farmers and rural workers. I also interviewed the more famous MST (Movimento dos Trabalhadores Rurais Sem Terra), as well as the closely related CPT (Comissão Pastoral da Terra), both rather radical organizations struggling against the exploitation of rural workers and farmers. The Pork Producer Association of Rio Grande do Sul, ACSURS (Associação de Criadores de Suínos do Rio Grande do Sul), was also interviewed.
Alongside the seven semi-structured interviews, I also made brief informal interviews with personnel on INCRA (Instituto Nacional de Colonização e Reforma Agrária), the governmental institute for agrarian reform, and on the government supported technical assistance association EMATER/Rs (Associação Riograndense de Empreendimentos de Assistência Técnica e Extensão Rural). Furthermore, a longer informal interview was made with a pork producer during a visit at his farm in Lajeado, Rio Grande do Sul. Several brief informal interviews were also made with family farmers and farmer activists during visits at MST camps and settlements.

The interviews with farmer organizations naturally became the main empirical source while analysing how the farmers are responding to the effect of the Livestock Revolution, as the farmer representatives are most likely to canalize the farmer perspective. Also in this case were the interviews triangulated with data from literature and statistics in order to present a more complete and reliable picture of the current situation. As indicated in the beginning of this introductive section, investigating the farmers’ responses seemed vital when using the Food Regime analysis. This theoretical framework was therefore used to analyse the characteristics and socioeconomic relations that appear to be embedded in the Livestock Revolution, in order to explain why the farmers are affected and responding the way they are. The Food Regime analysis also became central when reflecting more broadly upon the transforming agri-food sector. In this sense, the case of Livestock Revolution in Brazil somewhat became an empirical foundation to discuss the future direction of the contemporary Third Food Regime.
2 The reality of the small-scale farmer

This section will present the empirical findings of this study. The first section aims to outline the principal characteristics of the agrarian and socioeconomic situation in the Brazilian state Rio Grande do Sul. The following sections will investigate how small-scale farmers of this state might be affected by the Livestock Revolution, due to the system of integrated production, the emergence of the supermarket chains and the competition for arable land. The final sections aim to identify how family farmers have been responding to these alleged consequences.

2.1 Contemporary characteristics of Rio Grande do Sul

2.1.1 Agribusiness and small-scale farming

During the first quarter of the 19th century, a vast number of non-Iberian European immigrants arrived in present day Rio Grande do Sul, Brazil’s southernmost state (see figure 1). The immigrant families concentrated on producing agricultural products for the established residents in the area. Until today, agricultural activities in the region are still carried out mainly by family farmers. Approximately 92 percent of all farming establishments in Rio Grande do Sul are now held by these small-scale farmers (table 1). Hence, due to the high density of family farmers in this particular state, it appears imperative to focus on the case of Rio Grande do Sul while analysing agrarian change that involves small-scale producers.

In accordance with general consensus, family farming will in this study be defined as a small-scale rural production establishment where both labour and management is carried out by members of the family community.\textsuperscript{49} As the legislative definition of the family farm dimension varies by region, small-scale farming here refers to a maximum farm size of 100 hectares.\textsuperscript{50} Certainly this definition includes farmers of various socioeconomic conditions. However, it still appears as if this population can be referred to as a uniform group, given that large-scale farming systems instead use more capital intensive production on area of several hundred to several thousand hectares.\textsuperscript{51} Despite the fact that large-scale farmers together contribute 20 percent of the Gross Domestic Product, while small-scale farmers only account for 10 percent,\textsuperscript{52} family farming is much more common in Brazil. In total, about 89 percent of the Brazilian farms are smaller than

\begin{itemize}
\item \textsuperscript{49} Lago et al. (2006), p 98; INCRA (2009a).
\item \textsuperscript{50} The legislative size definition permits a farm size of four módulos fisciais, which dimensions vary by region. Presidência da República Federativa do Brasil (2006), Lei nº 11.326, Art. n° 3; INCRA (2009a).
\item \textsuperscript{51} Hisano & Altoé (2008), p 246.
\item \textsuperscript{52} Guilhoto et al. (2007), p 88-89.
\end{itemize}
100 hectares. Most of these farms are smaller than five hectares, especially in the north-eastern Brazil. However, most small-scale farmers in Rio Grande do Sul have a farm size between 5 and 20 hectares (table 1).\textsuperscript{53}

It certainly appears as if Brazil has a rather unequal distribution of agricultural land. This is visible all over Brazil, but becomes particularly clear in Rio Grande do Sul where the large-scale establishments only constitute eight percent of all farms in this state, but controls no less than 67 percent of the agricultural land (table 1).\textsuperscript{54} Preliminary results from the most recent agricultural statistics – Censo Agropecuária 2006 – confirm that this unequal land distribution is persisting on similar levels in both Brazil and Rio Grande do Sul.\textsuperscript{55}

<table>
<thead>
<tr>
<th>Table 1. Land distribution in Brazil and Rio Grande do Sul</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Farm size</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>&gt; 100 ha</td>
</tr>
<tr>
<td>&gt; 5 ha</td>
</tr>
<tr>
<td>5-20 ha</td>
</tr>
<tr>
<td>20-50 ha</td>
</tr>
<tr>
<td>50-100 ha</td>
</tr>
<tr>
<td>&lt; 100 ha</td>
</tr>
</tbody>
</table>


Due to the high amount of family farming in Rio Grande do Sul, agricultural production is more diversified compared to other Brazilian states. Most family farmers in Rio Grande do Sul hold some amount of livestock, particularly cattle (for both milk and meat), poultry and pigs. Non-animal production, however less common than livestock production, includes mainly maize, cassava, vegetables, soy and tobacco.\textsuperscript{56} The small-scale farmers generally concentrate their production on one main cash crop, complemented with diversified cultivation for subsistence or alternative income.\textsuperscript{57} The most profitable commodities to produce per hectare are, in falling order; tobacco, cassava, pork, vegetables, rice, poultry, soy, milk, maize and bovine meat,\textsuperscript{58} and the performance of these products varies geographically within the state.\textsuperscript{59}

\textsuperscript{54} Ibid.
\textsuperscript{55} IBGE, Sídra database: Tabela 263.
\textsuperscript{56} Fauth (2008), p 55.
\textsuperscript{57} MPA (2009).
\textsuperscript{58} Fauth (2008), p 55-56.
\textsuperscript{59} MPA (2009).
The yield of family farmers is to some extent distributed locally via small-scale companies and cooperatives (see section 2.3). However, the principal distributive channel for family farmers is via large food processing companies – the agribusiness – which connects the producer with national and international markets. This scenario is clearly visible in the export-oriented production of Rio Grande do Sul. Almost half of the exports from this state originate from agriculture, mainly constituting processed products such as meat cuts, cured tobacco and soybean oil. The export value of these sectors has more than doubled between the year of 2003 and 2008, thus indicating a vast expansion of export-oriented agricultural production. Following the national tendency, export from Rio Grande do Sul is mainly concentrated on food processing companies. The agribusiness is constituted by multinational corporations such as Bunge, Doux and ADM, but also by domestic meat processing giants such as Sadia and Perdigão (table 2).

Table 2: Top 10 food exporters in Rio Grande do Sul; 2008 and 2003

<table>
<thead>
<tr>
<th>Company name</th>
<th>Production focus</th>
<th>Export value, million US$</th>
<th>Export share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bunge Alimentos*</td>
<td>Soybeans</td>
<td>1 016</td>
<td>529</td>
</tr>
<tr>
<td>Perdigão (incl. subs. Avipal)</td>
<td>Poultry, pork</td>
<td>804</td>
<td>304</td>
</tr>
<tr>
<td>Doux Frangosul*</td>
<td>Poultry, pork</td>
<td>752</td>
<td>317</td>
</tr>
<tr>
<td>Bianchini</td>
<td>Soybeans</td>
<td>650</td>
<td>259</td>
</tr>
<tr>
<td>ADM*</td>
<td>Soybeans</td>
<td>536</td>
<td>75</td>
</tr>
<tr>
<td>Sadia</td>
<td>Poultry, pork</td>
<td>270</td>
<td>11</td>
</tr>
<tr>
<td>Alibem (2005-2008)</td>
<td>Pork</td>
<td>195</td>
<td>61</td>
</tr>
<tr>
<td>Louis Dreyfus*</td>
<td>Soybeans, Coffee</td>
<td>186</td>
<td>-</td>
</tr>
<tr>
<td>Frigorifico Mercosul</td>
<td>Bovine</td>
<td>116</td>
<td>30</td>
</tr>
<tr>
<td>Penasul Alimentos*</td>
<td>Poultry</td>
<td>114</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total top 10</strong></td>
<td><strong>4 638</strong></td>
<td><strong>1 586</strong></td>
<td><strong>25,1%</strong></td>
</tr>
</tbody>
</table>

* Multinational

Source: MDIC, SECEX database.

The case of Rio Grande do Sul clearly corresponds to the ongoing concentration trend of the meat processing in Brazil, in which large export-oriented food processors have gained massive control over domestic and export markets during the past decades. In addition, the two principal domestic food processors in Brazil, Sadia and Perdigão, recently announced a merge into a new company; Brasil foods, thus constituting world’s biggest poultry producer and the strongest agri-food agent in Brazil. Due to the export-orientated emphasis of these growing food processors, the Livestock Revolution is evidently connected to the agribusiness expansion. In sum, as the

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61 FEE, Estatísticas FEE database.
62 MDIC, SECEX database.
64 Caminada (2009).
agribusiness play a vital role in the food processing in Brazil and Rio Grande do Sul, small-scale family farmers generally seem to participate as primary product suppliers.

2.1.2 Socioeconomic conditions

Brazil has become a fast growing economy. The incomes of the economic growth are however shared extremely unequally. The richest quintile of the population receives 63 percent of the national income, while the poorest quintile only receives 3 percent.\textsuperscript{65} Hence, the Brazilian Gini coefficient is 0.59, among the highest national rates in the world.\textsuperscript{66} Despite the positive fact that poverty in Brazil has decreased somewhat during the past decade, more than 57 million people still suffer from poverty since 30 percent of the total population remain below the poverty line.\textsuperscript{67}

Brazilian poverty is particularly intense in rural areas. Here people generally have inferior health indicators than the urban poor, and access to education and social services are worse than in the cities.\textsuperscript{68} Rural poverty is particularly concentrated among people in remote areas that have low population density and inadequate infrastructure. Strongest hit by poverty are people relying on agriculture for livelihood, making poverty among family farmers a serious issue in rural Brazil. According to an interviewed farmer representative, the socioeconomic situation is more critical for farmers with less than 50 ha. The situation is however most severe for the subsistence farmer with less than 5 ha, due to the low level of capital and capabilities.\textsuperscript{69} Around 65 percent of the populations in rural Brazil live below the national poverty line. Even though the conditions are worse in the north-eastern region of Brazil, some 33 percent of the rural population in Rio Grande do Sul are currently living in poverty.\textsuperscript{70} Moreover, some 40 percent of the population in Brazil suffer from inadequate access to proper alimentation. The food security is particularly low in rural Brazil, where 50 percent of the population suffer from insufficient nutrition. The northeast states are worse off also in this sense, while southern Brazil generally have better conditions. However, 28 percent of the habitants of Rio Grande do Sul still lack food security.\textsuperscript{71}

Hence, despite the past decades’ immense expansion of the agricultural sector, clearly connected to the \textit{Livestock Revolution}, the socioeconomic situation in rural Brazil appears to be somewhat

\textsuperscript{65} ECLAC, \textit{CEPALSTAT database}.  
\textsuperscript{66} The Gini coefficient expresses national income distribution on a scale where 0 means perfect equality and 1 means perfect inequality, ECLAC, \textit{CEPALSTAT database}.  
\textsuperscript{67} ECLAC, \textit{CEPALSTAT database}; IBGE, \textit{SIDRA database: Tabela 261}.  
\textsuperscript{68} World Bank (2003), p 8, 11.  
\textsuperscript{69} CPT (2009a).  
\textsuperscript{70} Kageyama (2006), p 252-254.  
\textsuperscript{71} IBGE, \textit{SIDRA database: Tabela 3000}.
critical. Consequently, many farmers appear to leave agricultural activities, clearly visible in the case of Rio Grande do Sul. The number of people economically active in the agriculture in this state have decreased with 11.4 percent between 1996 and 2006, from 1,376,985 to 1,219,510.\(^{72}\) The diminishing employment opportunities also become visible in demographic statistics, as Brazil has gone through a process of intense rural-urban migration during the past decades.\(^{73}\) This national urbanization trend is certainly noticeable in Rio Grande do Sul, where the amount of rural population has decreased from 47 to 17 percent during the past four decades (chart 3).\(^{74}\) Even though many migrants succeed to find employment in the cities, many others are not as successful. Research has indicated that rural immigrants arriving in Porto Alegre, the capital of Rio Grande do Sul, generally have lower income and less access to the welfare system than the residents born in the cities.\(^{75}\)

[Chart 3. Urbanization in Rio Grande do Sul]

```
Chart 3. Urbanization in Rio Grande do Sul
Source: FEE, Estatisticas FEE database

<table>
<thead>
<tr>
<th>Year</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>1976</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>1986</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>1996</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>2006</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>
```

In sum, diminishing agricultural employment and rural-urban migration now seem to challenge the socioeconomic conditions of Rio Grande do Sul, which traditionally have been better than in the northern states of Brazil. As the agrarian community apparently is divided between agribusiness and family farmers, it seems important to investigate whether the relation between these actors could provide a potential explanation to the apparent socioeconomic changes now taking place in the state of Rio Grande do Sul.

\(^{72}\) IBGE, SIDRA database: Tabela 561.
\(^{73}\) Ibid: Tabela 202 and Tabela 261.
\(^{74}\) FEE, Estatisticas FEE database.
\(^{75}\) Barcellos and Jardim (2007), p 129-131, 135.
2.2 Integrated meat production

The following sections aim to scrutinize the direct and indirect relation between agribusiness and family farmers in Rio Grande do Sul. The first two sections investigate the direct relation between these actors in the process of integrated production of pork and poultry. Section 2.3 examines how the expansion of supermarket chains might affect the family farmers’ possibility to reach local and urban markets. Finally, section 2.4 aims to analyse how cattle raising and feed crop production affect the small-scale farmers’ access to arable land.

2.2.1 Production of pork

Production of pork meat has increased dramatically in Rio Grande do Sul during the past 15 years. More than 7 million pigs were slaughtered in this state during the year of 2008, producing 576 959 tonnes of pork meat, in contrast to the 220 711 tonnes produced in the year of 1995. This production increase has mainly been a response to augmented demand from Russia and Hong Kong.76 During this time period of dramatic production increase, the number of specialized pork farmers has diminished remarkably; from around 85 000 in 1995 to 10 000 in 2008 (table 3).77 Counting all establishments raising pigs, and not only specialized pork farmers, the number of pork producing units has decreased with 15 percent between the year of 1996 and 2006.78 The quantity of pigs raised for subsistence has also decreased from 19 percent in the year of 2002 to eight percent in 2008.79 In short, at the same time as some pork farmers dramatically increase their production, the smaller and subsistence producing units appears to be marginalized.80

<table>
<thead>
<tr>
<th>Year</th>
<th>Production, tonnes</th>
<th>Exports, tonnes</th>
<th>Estimated pork farmers</th>
<th>Pigs per farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>220 711</td>
<td>5 354</td>
<td>84 904</td>
<td>50</td>
</tr>
<tr>
<td>2002</td>
<td>393 344</td>
<td>86 004</td>
<td>34 000</td>
<td>119</td>
</tr>
<tr>
<td>2005</td>
<td>404 965</td>
<td>161 349</td>
<td>20 000</td>
<td>212</td>
</tr>
<tr>
<td>2008</td>
<td>576 959</td>
<td>237 370</td>
<td>10 000</td>
<td>612</td>
</tr>
</tbody>
</table>


Among the remaining pork producers in Rio Grande do Sul, some 88 percent are defined as family farmers.81 Since the smallest pig raisers appears to be crowded out, the typical pork producer in Rio Grande do Sul is now a family farmer with a property of approximately 20 ha,

77 Ibid.
78 IBGE, SIDRA database: Tabela 562.
79 ACSURS (2009b).
80 IPARDES et al. (2002b), p 166; ACSURS (2009a; 2009b); CPT (2009a).
raising about 400-500 pigs. These farmers often have a diversified production, with grain
cultivation and/or poultry and milk production.\(^{82}\) The most important distributive channel for the
pig producers is to sell the animals to a slaughterhouse controlled by a large food processor. The
sector of food processing is dominated by a few agro-industrial companies.\(^{83}\) The five largest
pork processors, together controlling 63 percent of the sector, have grown substantially during
the past decade (table 4). According to an interviewed representative from the pig raisers
association in Rio Grande do Sul – ACSURS – the extreme concentration could be explained by
the vast production increase and by the fact that several smaller companies and cooperatives have
been bought by the larger agents.\(^{84}\)

<table>
<thead>
<tr>
<th>Table 4. Top 5 pork processors in Rio Grande do Sul</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Alibem</td>
</tr>
<tr>
<td>Perdigão (incl subs. Eleva)</td>
</tr>
<tr>
<td>Doux – Frangosul</td>
</tr>
<tr>
<td>Aurora</td>
</tr>
<tr>
<td>Sadia</td>
</tr>
<tr>
<td><strong>Total top 5</strong></td>
</tr>
</tbody>
</table>

The main production strategy of these food processors is to integrate smallholders vertically in
the production chain. Approximately 80 percent of the pork farmers in Rio Grande do Sul are
formally integrated with the food processing companies.\(^{85}\) However, according to the ACSURS
representative, the “independent” farmers are actually also somewhat integrated. Since the
concentrated pork sector consists of very few buying companies, the “independent” producers
need a fixed market connection which often demands that these producers have to enter a verbal
agreement with the food processor.\(^{86}\) Interviewed “independent” farmers express a similar
opinion in a recent research carried out by Miele in the state of Santa Catarina. The farmers
affirm that there are very few choices but to become integrated and comply with the processors
requirements, and there is little or no difference in terms of autonomy between being integrated
or not.\(^{87}\)

\(^{82}\) ACSURS (2009a).

\(^{83}\) Ibid., ACSURS (2009b). Aurora is a technically a cooperative. However, Auroras integrated production system is,
 at least from the farmer perspective, very similar to the corporate performance and should thus be labelled
 accordingly. See also section 2.3. ACSURS (2009a); Interview with pork producer (2009), FETRAF (2009).

\(^{84}\) ACSURS (2009a, 2009b).

\(^{85}\) ACSURS (2009b).

\(^{86}\) ACSURS (2009a).

The integrated production is carried out through a contract between the family farmer and the buying meat processor – the agribusiness. The contract compels the pig raiser to follow the company instructions regarding production performance, including technical equipment, animal breeds, feeds, environmental and sanitary restrictions etc. In turn, the company is obligated to give technical assistance and purchase animals from the contracted farmer. These contracts have indeed various advantages from the perspective of the small-scale farmer. The producer is offered technical assistance and the opportunity to modernize her production. The contract also guarantees distribution with low transaction costs, offering the farmer reliable and frequent incomes independent of seasonal changes.\textsuperscript{88}

However, integrated production also means rigid requirements of adjusting the production to the uniform model of the integrating company. These adjustments require installations and maintenance of technical equipment, which all have to be paid by the producer. The production also includes other frequent costs, such as required genetic inputs, animal feeds and medication, water, electricity, transportation, labour force and environmental preservation.\textsuperscript{89} The feedstuff also becomes more expensive, since the farmers are not allowed to use maize and soy cultivated at the farm, but has to sell these products to the company, or to another input producer, and then purchase the feedstuff.\textsuperscript{90} An interviewed pork farmer expresses that the high requirements from the integrating company remove the producer’s power of decision, thus making her a worker dependent on the company.\textsuperscript{91}

The most burning problem of the integrated production appears to be the lack of price guarantee, which makes the farmer vulnerable to market fluctuations. Since the farmer has made expensive investments in her production unit, following the agribusiness requirements, giving up pork production is no longer an option for the family farmer in case of low market demand.\textsuperscript{92} Hence, the autonomy of the farmer appears to be lost in the integrated production system. Furthermore, in this scenario the producer becomes the risk taker in the supply chain, since the investments does not guarantee adequate incomes. This has created a harsh reality for the integrated farmers during the past three years when the demand for pork meat has been reduced, which has left the farmer with income actually lower than the production costs (table 5).\textsuperscript{93}

\textsuperscript{89} Miele (2006), p189-192, FETRAF (2009).
\textsuperscript{90} MPA (2009); FETRAF (2009).
\textsuperscript{91} Interview with pork producer (2009).
\textsuperscript{92} ACSURS (2009a).
\textsuperscript{93} ACSURS (2009b).
Hence, despite the vast production increases in the Brazilian pork sector, the ACSURS representative states that;

> Very little profit is actually reaching the smallholder. [...] The price will not guarantee the livelihood of the farmer, including every day expenses like water and electricity. The farmer has a very limited profit, which is insufficient to cover his needs.94

Given the fact that between the year of 2006 and 2008 the production costs has exceeded the farm gate price, leaving the smallholder with an actual loss, it becomes rather clear that the small-scale farmers are not the winners of the production chain. Quite the contrary, the two largest national pork processors, Sadia and Perdigão, ironically enough increased their aggregated annual gross profits with 1,3 billion US$ between 2006 and 2008,95 at the same time as the small-scale farmers could not receive enough income to cover the production costs.

Miele’s interviewed pork farmers also emphasized this uncertain profitability connected with integrated production. The farmers expressed a lack of ability to choose their buyer, the excess of requirements and the subsequent loss of autonomy, as severe aggregated disadvantages with integrated production.96 In addition, pork production also appears to have social disadvantageous that do not correspond to the inadequate incomes, since the intensified meat production requires frequent attention.97 As stated by the ACSURS representative;

> [The integrated producer] needs to be available 365 days per year, there is no Saturday or Sunday, no Christmas, Easter or New Year. The farmer simply has to be at the farm two or three times every day to attend the production.98

Interviewed representatives of the farmer organizations FETRAF and CPT also report that integrated meat producers work extremely hard in order to receive their monthly returns.99 These downsides, in combination with insufficient incomes and low autonomy, is also believed to fuel

<table>
<thead>
<tr>
<th>Year</th>
<th>Production costs, R$/head</th>
<th>Farm gate price, R$/head</th>
<th>Farmer’s profit, R$/head</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,938</td>
<td>2,150</td>
<td>0,212</td>
</tr>
<tr>
<td>2006</td>
<td>2,006</td>
<td>1,600</td>
<td>-0,406</td>
</tr>
<tr>
<td>2007</td>
<td>2,064</td>
<td>1,720</td>
<td>-0,344</td>
</tr>
<tr>
<td>2008</td>
<td>2,650</td>
<td>2,260</td>
<td>-0,390</td>
</tr>
</tbody>
</table>

the increasing urbanization (chart 3), as the younger generation often leaves the farm in order to search employment in the cities.\textsuperscript{100}

Moreover, the marginalization of less fortunate farmers appears to generate further concentration of the pork sector. The interview ACSURS representative reports that the only way to remain lucrative is to upscale the production, as larger output brings more income that hopefully could cover the investment costs. Farmers with more resources can easier increase their holdings since they already have the required infrastructure and the necessary capital.\textsuperscript{101}

Hence, simultaneously as smaller farmers are being crowded out by the low incomes and inability to cope with the requirements, the pork production becomes increasingly concentrated on the more flexible farmers (table 3).\textsuperscript{102} This concentration trend seems to correspond to the general agribusiness strategy. For instance, Sadia has deliberately reduced the number of integrated holders from eleven to three million during the past decade in the state of Paraná.\textsuperscript{103} The meat processors appear to choose producers due to the geographical location in relation to the slaughterhouse, the possibility to follow the production requirements, the technical level of the farm and, especially, the quantitative capacity of the production unit.\textsuperscript{104} In addition, as the smallholders traditionally were responsible for the entire life of the pig; from birth to slaughter, the pork production has now become increasingly specialized. Today, the integrating company generally prefers producers specialized in either the first or second stage of pig raising, which in turn gives the ability to reduce the farm gate price.\textsuperscript{105} Consequently, as confirmed also by Miele’s investigation, the upscaling and increased specialization in the pork sector appears to be the smallholders’ main strategy to handle the low profitability.\textsuperscript{106}

\subsection*{2.2.2 Production of poultry}

The Brazilian broiler production has more than doubled during the past decade. As in the case of the pork sector, poultry production mainly takes place in southern Brazil (table 6). In 2008, Rio Grande do Sul alone held 789 million slaughters of poultry, thus accounting for 16 percent of the total poultry slaughters in Brazil.\textsuperscript{107} Production of poultry has increased dramatically in Rio
Grande do Sul during the past 16 years, from 493 thousand tonnes in 1992 to 1,081 thousand tonnes in 2008. During this period, the production has also become increasingly more export-oriented (chart 4), undoubtedly connecting this sector to the ongoing *Livestock Revolution*.

The poultry sector is also very similar to the pork sector due to the agribusiness concentration. On a national scale, the sector is mainly dominated by Sadia and Perdigão, together accounting for 50 percent of the broiler manufacturing. The concentration of broiler processors is growing continuously in Brazil; the five largest companies constituted 74 percent of the processing in 2007 and only 37 percent in 2000. This concentration is also visible in Rio Grande do Sul, where the five largest poultry processors together controls 85 percent of the broiler manufacturing, and the multinational giant Doux alone controls 43 percent (chart 5).

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110 ASGAV (2009b). It should be noted that Doux domination in Rio Grande do Sul differs from a national tendency where the domestic companies Sadia and Perdigão control most of the broiler processing. ABEF (2008), p 33.
As in the case of pork raising, broiler production in Rio Grande do Sul is mainly carried out by small-scale farmers integrated with the agribusiness. Family farmers are responsible for 87 percent of the state’s boiler production, and approximately 10,500 families are now being integrated with the meat processors. In the integrated production system, the meat processors provide technical assistance and offers high-quality inputs, while the producers have the responsibility to invest in required installations and productive adjustments. From the perspective of the meat processor, the advantages of vertical integration are reduced production costs and enhanced uniformity of the product. The advantage for the integrated farmers is the ability to modernize their production according to market demands and regulations of sanitation and environmental sustainability, thus giving these broiler producers access to the international markets. Another benefit with integrated meat production is that the producer somewhat becomes a worker for the company, since the farmer is entering the contract mainly with her labour force. This gives the advantage, as in the case of regularly employment, of frequent and reliable monthly returns.

However, there are important differences between integrated production and proper employment since the farmer is lacking basic employment rights, such as holidays and overtime compensation. Moreover, the integrated farmer is also, in contrast to a normal employee, financially responsible for all production costs, which clearly puts her in a vulnerable situation. The interviewed FETRAF and FETAG representatives report that the required installations

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113 ASGAV (2009c).
115 ASGAV (2009a); FETAG (2009a); FETRAF (2009).
116 Interviewed pork producer (2009); CPT (2009a); MPA (2009); FETRAF (2009).
117 FETRAF (2009); CPT (2009a).
usually make the farmers heavily indebted, especially as the equipment continuously need maintenance and upgrading.\textsuperscript{118} Since the producers are responsible for the production costs, the meat processors clearly raise their profitability. In addition, the natural risk of accidental damage of installations and equipments is also taken by the farmers as they are responsible for these potential expenses.\textsuperscript{119}

In the corporate trajectory of price reduction, integrated broiler producers have also faced lowered payments for their products.\textsuperscript{120} According to a field research carried out in southern Brazil by DESER (Departamento de Estudos Sócio-Econômicos Rurais), the average farm-gate price for each chicken has been reduced by half during the past decades, being 0,15 R$ in 1990 and 0,07 in 2006. These lowered incomes have been accompanied with dramatic price increase on required inputs between 1999 and 2004,\textsuperscript{121} a development very similar to the negative situation for the pork producers presented in the previous section.

In addition, as the contracts are renewed constantly, the farmers become rather vulnerable to market fluctuations, since lowered demand on meat products will leave the specialized farmer without income. The interviewed FETRAF representative reports that meat processors often close slaughterhouses when the market demand is low, which makes the farmer the principal risk taker of the commercialization.\textsuperscript{122} The interviewed MST representative, living in a farming community producing poultry for Doux Frangosul, expresses that the decreased the international demand for poultry during the avian influenza put the integrated poultry farmers in a severe socioeconomic situation. The representative states that

\begin{quote}
[during] the past years, a lot of farmers have abandoned their properties due to insufficient incomes to live a decent life.\textsuperscript{123}
\end{quote}

The interviewed CPT representative also reports that many poultry and pork farmers have had to sell their land due to the inadequate incomes.\textsuperscript{124} Moreover, as the slaughter age for chickens is 35 days, constituting a production circle that is even shorter than in pork production, the poultry farmer becomes extremely vulnerable to market fluctuations as the processors quickly can end the purchases when the market demand diminishes.\textsuperscript{125}

\begin{thebibliography}{99}
\bibitem{118} FETRAF (2009); FETAG (2009a).
\bibitem{119} IPARDES et al. (2002a), p 179-181.
\bibitem{120} FETRAF (2009).
\bibitem{121} DESER (2007), section 4.7-4.9.
\bibitem{122} FETRAF (2009).
\bibitem{123} MST (2009a).
\bibitem{124} CPT (2009a).
\bibitem{125} FETAG (2009a).
\end{thebibliography}
The relationship between agribusiness and producer apparently seems to create economic dependency for the small-scale farmer, undermining her autonomy. Field research carried out in Paraná has indicated that integrated smallholders have practically no influence at all over their production, as the production costs are determined by the integrating company. The interviewed MST and CPT representatives state that the required investments make the farmer very dependent on the company. Representing the Doux integrated farming community, the MST representative states that:

We still have not succeeded to pay for all these investment up until today and we do not know how to get out of this situation.

The lack of autonomy is also expressed by an interviewed representative of the farmer movement MPA:

The producer is not autonomous; not free to determine the price of the product as he has to accept the tariff dictated by the company. The farmer has to follow the company instructions rigorously, if he does not follow the requirements he will be dispelled from integration. […] Integrated production has generated a vast dependency for the small-scale farmers, since they leave the subsistence production of maize, beans, potatoes and cassava, to produce meat exclusively. […] The producer becomes a worker for the company, which is basically what the company wants; a primary material producer.

Since the agribusiness prefers to integrate producers that are adapted to the required production methods, many smallholders, unable to cope with these requirements, have been excluded by the agribusiness. Moreover, in order to increase the homogeneity of the production output, meat processors seem to prefer larger volumes from fewer and more technically developed producers. This has generated a dramatic upscaling for many poultry farmers during the past 15 years. As in the case of the pork sector, upscaling has become an important strategy for many small-scale farmers to handle the low profitability. However, simultaneously as some farmers succeed to upscale their production, other poultry producers seem to be marginalized by the industry. In 2006 there were 296,354 farms in Rio Grande do Sul producing poultry, also including extremely small properties, representing 10 percent reduction compared with 1996.

126 IPARDES et al. (2002a), p 179.
127 CPT (2009a); MST (2009a).
128 MST (2009a).
129 MPA (2009).
130 DESER (2007), section 4.4.
132 ASGAV (2009a).
133 DESER (2007), section 4.7-4.9; FETRAF (2009).
135 IBGE, Censo Agropecuário 2006, Resultados Preliminares – Tabela 2.3.23.
As the number of production units decreases, simultaneously as the production increases, it becomes rather clear that fewer farmers produce more, while others seem to be excluded.

The agribusiness preference of integrating larger producers also appears to be connected with a geographical shift in the Brazilian meat production. The main production increase of both pork and poultry is now taking place in the Midwest, especially in the state of Mato Grosso (table 6). In this region, the agribusiness is constructing enormous slaughterhouses, some with the daily capacity of slaughtering 281,600 chickens and 3,520 pigs. In contrast to the southern production, these slaughterhouses are supplied by medium and large-scale meat producers. From the corporate point of view, larger providers and slaughterhouses imply advantages of reduced logistic, production and transaction costs.

<table>
<thead>
<tr>
<th>Region</th>
<th>Poultry Slaughter, million heads</th>
<th>Share</th>
<th>Pork Slaughter, million heads</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>-</td>
<td>64</td>
<td>-</td>
<td>1%</td>
</tr>
<tr>
<td>Northeast</td>
<td>16</td>
<td>131</td>
<td>-</td>
<td>1%</td>
</tr>
<tr>
<td>Southeast</td>
<td>614</td>
<td>1,172</td>
<td>29%</td>
<td>24%</td>
</tr>
<tr>
<td>South</td>
<td>1,342</td>
<td>2,925</td>
<td>46%</td>
<td>60%</td>
</tr>
<tr>
<td>Midwest</td>
<td>130</td>
<td>584</td>
<td>6%</td>
<td>12%</td>
</tr>
<tr>
<td>Brazil</td>
<td>2,103</td>
<td>4,876</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: IBGE, SIDRA database: Tabela 603, 604.

Thus, the geographical shift clearly seems to be connected to the process of production intensification, in which the agribusiness prefers larger and more flexible suppliers. As the agribusiness’ demand for producers appears to be stpered, despite the vast demand increase of the Livestock Revolution, smallholders might face severe difficulties in finding buyers for their products. This creates a hazardous scenario for the numerous farmers that are indebted due to the expensive installations, and excluded by the agribusiness’ changing preferences. Moreover, the exclusion of small-scale farmers might increase even more due to the geographical production shift. As the meat processors prefer larger and geographically closer suppliers of the Midwest, small-scale pig and poultry producers in the southern states might be excluded from integration.

The changing preferences of the meat processors makes it rather clear that the main commercial risk of meat production is not taken by the corporate giants of agribusiness, but instead by the

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136 IBGE, SIDRA database: Tabela 603, 604.
138 FETAG (2009a).
financially weak small-scale farmer. The case of Rio Grande do Sul shows that the smallholder has to make all necessary investments and adjustments in order to sell the pork and poultry, while the agribusiness have the ability to choose freely among their suppliers. Hence, despite the advantages of integrated production, it appears as the Livestock Revolution involves a rather direct marginalization of small-scale livestock producers.

2.3 The role of supermarket chains

As integrated production is the dominant distributive channel for small-scale meat producers in Rio Grande do Sul, there are few other conventional market options available.\(^{139}\) However, farmers that are unable to become integrated with the agribusiness sometimes choose to produce for local markets, which require fewer regulations on the production process. This type of production, often carried out on small farms where the animals are fewer and are living closer to the nature, is distributed via local retailers or through direct sells. However, vending on local markets appears to be difficult due to the aggressive price competition from the cheap meat of the agribusiness, which often is preferred by the financially weak rural consumer. Consequently, due to the harsh price competition on the relative small local markets, the principal meat markets in Rio Grande do Sul mainly lie in the more populated urban centers.\(^{140}\)

During the past 15 years, urban markets in Brazil have become exclusively dominated by large-scale supermarket chains, both domestic and multinational. The retail sector has been changing particularly rapid in Rio Grande do Sul, now being responsible for 9,4 percent of the total supermarket sales in Brazil.\(^{141}\) In 1992, the five largest retail companies had a total annual sale of approximately 1 845 million R$, while the top five supermarket sales reached 6 721 million R$ in 2008 (table 7),\(^{142}\) which clearly indicates stronger concentration on fewer retailers.

<table>
<thead>
<tr>
<th>Table 7. Concentration of the retail sector</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retailers in Rio Grande do Sul</strong></td>
</tr>
<tr>
<td>---------------------------------------</td>
</tr>
<tr>
<td>Top five</td>
</tr>
<tr>
<td>Top ten</td>
</tr>
</tbody>
</table>

Source: AGAS (2009).

\(^{139}\) Alternative markets will be more thoroughly treated in section 2.5.2.

\(^{140}\) FETAG (2009a); ACSURS (2009a); MPA (2009); FETRAF (2009).

\(^{141}\) ABRAS (2009a), p 136-140.

\(^{142}\) AGAS (2009).
Today, the five largest supermarket chains control 63 percent of the retail sector in Rio Grande do Sul. The multinational supermarket giant Wal-Mart alone controls 33 percent of the total grocery sales (table 8).\textsuperscript{143} Hence, these statistics indicate a vast concentration of the retail sector, in which supermarket chains strive to dominate the entire market.

\begin{table}[h]
\centering
\begin{tabular}{|l|c|c|c|}
\hline
Company & Sales (R$) & Market share & Number of stores \\
\hline
Wal-Mart\textsuperscript{*} & 3 504 250 000 & 33\% & 95 \\
Zaffari & 1 797 359 830 & 17\% & 28 \\
Carrefour\textsuperscript{*} & 732 983 000 & 7\% & 7 \\
Unidasul & 460 734 887 & 4\% & 45 \\
IMEC & 226 184 187 & 2\% & 24 \\
\textbf{Top five} & \textbf{6 721 511 904} & \textbf{63\%} & \textbf{199} \\
\hline
\end{tabular}
\caption{Top five retailers in Rio Grande do Sul, 2008}
\textsuperscript{* Multinational}
\textsuperscript{Source: AGAS (2009).}
\end{table}

The concentration of the retail sector appears to be connected to the situation of the small-scale producers. During the past decade the supermarket sales of meat products have been exclusively dominated by the two giant meat processors Sadia and Perdigão.\textsuperscript{144} This agribusiness domination derives from the rigid supermarket requirements on quality and uniformity, which in turn require a provider that can deliver a certificated and standardized product in large quantities. This situation makes it rather difficult for small-scale farmers, organized in cooperatives, to access the final consumers through the supermarkets.\textsuperscript{145} Hence, from the small-scale farmer perspective, the development of retail concentration appears to have limited the possibilities to reach the urban consumers. As expressed by the interviewed MPA representative, also representing a small-scale farmer cooperative;

\begin{quote}
We have products and an own brand, but it is very hard for us to reach the larger consumer group. Due to the giant supermarket chains it becomes very complicated, since they always require huge quantities. […] The capital needed to put the product in the supermarket is extremely high, which makes it rather impossible for a small-scale farmer cooperative to enter the supermarkets.\textsuperscript{146}
\end{quote}

Also the interviewed FETAG representative expresses the difficulty for family farmers, even if organized in cooperatives, to access the urban markets, since they cannot offer the required quantities. As the agribusiness has the ability to be much more flexible than small cooperatives, the supermarket chains apparently prefer to retail meat from the larger meat processors.\textsuperscript{147}

\textsuperscript{143} AGAS (2009).
\textsuperscript{145} Farina and Reardon (2000), p 1170-1171, 1174-1175; ASGAV (2009a).
\textsuperscript{146} MPA (2009).
\textsuperscript{147} FETAG (2009a).
order to adapt to supermarket requirements, many meat sector cooperatives have “modernized”, and thus adopted similar performance methods as the major food processing companies.\textsuperscript{148}

According the interviewed FETRAF and ACSURS representatives, it makes no difference, from the farmer perspective, between being integrated with a company or a “modernized” cooperative. The corporate-like cooperatives provide neither price guarantees, nor canalised surpluses to the farmers,\textsuperscript{149} even though contrary to the traditional cooperative discourse. The similarity between large companies and corporate-like cooperatives is also expressed by an interviewed pork farmer, mentioning Aurora as one of these “modernized” cooperatives.\textsuperscript{150} Moreover, it is very hard for small cooperatives to compete with the capital-intensive agribusiness in terms of lowering the production costs to generate higher incomes. The difficulties for small cooperatives to survive the aggressive agribusiness competition have resulted in the recent collapse of the two largest pork cooperatives in Rio Grande do Sul, which unfortunately is “leaving the farmers to pay the bill”.\textsuperscript{151}

The only way for the small-scale farmer to reach the urban markets thus seems to be through integration with the food processing companies or corporate cooperatives, due to both the agribusiness knowledge of markets and production techniques, and the infinite retail concentration of supermarket chains.\textsuperscript{152} Moreover, the expansion of supermarket chains might also affect the local markets through aggressive price competition. Research evidence from Chile has shown that supermarkets entering the local retail scene have generated a fall of local food prices with 7 to 11 percent in fifteen investigated Chilean cities.\textsuperscript{153} This indicates even more marginalization as also the local markets appear to be harder to access for small-scale farmers.

Consequently, many small-scale farmers in Rio Grande so Sul seem to experience that there is no other option than to become integrated with the agribusiness in order to reach the markets,\textsuperscript{154} which clearly constitutes a dilemma due to the disadvantages of integrated production (as discussed in section 2.2). It becomes particularly problematic for the farmer not preferred by the agribusiness, thus having extremely low chances to sell her product. However, it might be worth mentioning again that integrated meat production also has several advantages for the producers, especially in terms of frequent and reliable incomes due guaranteed market access, which partly

\textsuperscript{149} FETRAF (2009); ACSURS (2009a).
\textsuperscript{150} Interview with pork producer (2009).
\textsuperscript{151} ACSURS (2009a).
\textsuperscript{152} ASGAV (2009a); MPA (2009).
\textsuperscript{153} Lira, Rivero and Vergara (2007), p 237-238, 257.
\textsuperscript{154} CPT (2009a).
explains why farmers enter these contracts despite the disadvantages.\textsuperscript{155} On the other hand, the growing power of food processors and supermarket chains apparently seems to leave smallholders no other option than to become integrated with the agribusiness. Consequently, many small-scale farmers are actively striving for alternative solutions to the apparent dilemma of exclusion and marginalization, which will be further described in section 2.5.

### 2.4 Competition for arable land

As livestock production requires a vast amount of agricultural land, both in terms of cattle raising and feedstuff cultivation, the following section aims to investigate how the so called Livestock Revolution might affect family farmers’ access to arable land.

As in the case of pork and poultry, production of bovine has risen dramatically during the past decade, and cattle meat is now Brazil’s second most important export product. Between 1996 and 2006, the export quantity rose with 250 percent, now reaching 1,225,413 tonnes, exceeding an export value of 3.1 billion US$, thus making Brazil the biggest bovine exporter in the World.\textsuperscript{156} However, in contrast to pork and poultry production, export-oriented bovine production does not generally include small-scale farmers. The average property area for cattle raisers in Rio Grande do Sul is 948 hectare, clearly placing bovine production outside the family-farm definition. Furthermore, cattle raising is quite capital demanding and have a relatively low profitability,\textsuperscript{157} indicating that cattle raising is not a reliable source of income for small-scale farmers.

Even though small-scale farmers are not directly involved in the bovine production boosted by the Livestock Revolution, they still appear to be affected by this expansive process due to what the interviewed MST representative calls the “competition for arable land”.\textsuperscript{158} Approximately 169 million hectares in Brazil is used for cattle pastures, 9 million only in the state of Rio Grande do Sul.\textsuperscript{159} The principal export-oriented bovine production is however mainly concentrated to the Cerrado of the Midwest. During the past decade, cattle raising has also increased dramatically in Amazon regions of northern Brazil (table 9), where bovine production becomes more lucrative due to both superior and cheaper pasture land.\textsuperscript{160}

\textsuperscript{155} FETAG (2009a); FETRAF (2009).
\textsuperscript{156} FAO, \textit{TradeStat} database.
\textsuperscript{157} Miguel \textit{et al.} (2007), p 96, 104, 118.
\textsuperscript{158} MST (2009a).
\textsuperscript{159} IBGE, \textit{SIDRA} database: \textit{Tabela 264}.
\textsuperscript{160} Arima, Barreto and Brito (2005), p 23.
Table 9. Regional production of bovine meat in Brazil

<table>
<thead>
<tr>
<th>Region</th>
<th>Slaughter, million heads</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>0.8</td>
<td>5.3</td>
</tr>
<tr>
<td>Northeast</td>
<td>1.1</td>
<td>3.2</td>
</tr>
<tr>
<td>Southeast</td>
<td>3.9</td>
<td>7.0</td>
</tr>
<tr>
<td>South</td>
<td>2.7</td>
<td>3.0</td>
</tr>
<tr>
<td>Midwest</td>
<td>5.8</td>
<td>10.1</td>
</tr>
<tr>
<td>Brazil</td>
<td>14.3</td>
<td>28.7</td>
</tr>
</tbody>
</table>

Source: IBGE, SIDRA database: Tabela 602.

Besides the vast amount of land needed for pasture, the *Livestock Revolution* also requires an immense production of feed crops, mainly maize and soy. Maize is an important input for the domestic pork and poultry industry. In Rio Grande do Sul alone, pork and poultry production require approximately 4.7 million tonnes of maize every year. This demand constitutes about 80 percent of the total maize produced in the state, thus demanding about 11 million hectares of arable land.\(^{161}\) In the case of soybean production, it becomes even clearer that the *Livestock Revolution* requires a vast amount of arable land for production of animal feeds, as approximately 85 percent of the soybeans grown worldwide are used for protein input in meat production.\(^{162}\)

The international demand for soybeans has increased dramatically during the past decade due to the worldwide increased meat production, particularly in Europe and China.\(^{163}\) Export of soybeans is now Brazil’s most important export product, exceeding an export value of 5.6 billion US$ in 2006.\(^{164}\) Production of soybeans is traditionally concentrated to southern Brazil, especially in the state of Paraná. In 2007, approximately 3.9 million hectares were used for soybean cultivation in Rio Grande do Sul, accounting for 19 percent of the total Brazilian soy production. Soybean cultivation has remained on the same level in Rio Grande do Sul during the past decades, while the Midwest region, especially from the state of Mato Grosso, is responsible for the principal production increase during this period.\(^{165}\)

Hence, the *Livestock Revolution* clearly seems to demand a vast amount of arable land for pastures and feed crop production. Research carried out in the Midwest has indicated that this horizontal expansion has generated a rather concrete marginalization of small-scale farmers. As

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161 IBGE, SIDRA database: Tabela 839, Tabela 1612; ASGAV (2009c); ACSURS (2009b).
162 Soyatech, Website.
163 FAO, ProdStat database.
164 Ibid., TradeStat database.
165 IBGE, SIDRA database: Tabela 497.
these small producers often use common or undocumented land, large-scale landowners have unhindered been expanding their production into the small family farmers’ properties.\textsuperscript{166} In addition, the high demand for bovine meat and feed crops makes the arable land more valuable, in turn generating increased land prices. Statistics from EMATER/RS (Associação Riograndense de Empreendimentos de Assistência Técnica e Extensão Rural) show that land in Rio Grande do Sul prices have risen dramatically during the past decade, from 1 632 R$/ha in 1999 to 7 772 R$/ha in 2008 (chart 6).\textsuperscript{167}

From the farmer point of view, this dramatic land price development makes access to agricultural land almost impossible for financially weak small-scale and landless farmers.\textsuperscript{168} The farmer movements MST and CPT interpret the escalating land prices as a direct consequence of the increasing demand for feed crops and cattle meat. The interviewed representatives state that landless farmers face increasing difficulties in accessing the agricultural land, as these low purchase power farmers are unable to cope with the rising land prices.\textsuperscript{169} The “competition for arable land” clearly becomes visible in statistics on land distribution, as small-scale farms in Rio Grande do Sul constitute 92 percent of all establishments, but only use 33 percent of the cultivated area (table 1).\textsuperscript{170} The weak position of landless farmers is also revealed in official statistics on registered landless farmer families in Rio Grande do Sul, living in rustic camps while awaiting land expropriation. Between 1997 and 2008, the number of registered landless families

\begin{itemize}
\item \textsuperscript{166} Gutberlet (1999), p 233-234.
\item \textsuperscript{167} EMATER/RS (2009).
\item \textsuperscript{168} CPT (2009a).
\item \textsuperscript{169} MST (2009a); CPT (2009a).
\item \textsuperscript{170} Mattei (2005), p 16.
\end{itemize}
rose from 1,421 to 2,535 in Rio Grande do Sul alone, thus indicating that the situation is becoming increasingly harsh for the most vulnerable farmers.

Moreover, the intensified large-scale and monoculture production also impedes the performance of the government-led agrarian reform. Since government-led expropriation only becomes legal when the arable land is used inefficiently, the modern *latifundias*, specialized in more intensified production, clearly encumbers the agrarian reform. Hence, from the perspective of the landless farmers, bovine and feed crop production is impeding the agrarian reform since the intensification and rising land prices constitutes an obstacle for potential expropriation.

In addition, feed crop production does not only affect small-scale farmers indirectly through the “competition for arable land”, but also directly when family farmers become soybean suppliers. Cultivation of soybeans is generally carried out on large-scale *latifundias* in Brazil. However, due to the high representation of small-scale farmers in Rio Grande do Sul, around 47 percent of the soybeans in this state are produced by small family farmers. Around 90 percent of the soy cultivated by family farmers is produced for monetary income as soy is an important cash crop. Soybeans are often “pre-purchased” by a contract with the agribusiness, which generally is beneficial for the farmer due to the comparably high payment that is received at the annual harvest. Another advantage from the producer perspective is that soybeans require very limited manual attendance due to the highly mechanized production methods.

However, the production costs of soybean cultivation have increased during the past years due to the necessary investments in machinery, or in hiring machinery service if the farmer lacks capital to invest. Buyer requirements on inputs such as seeds, fertilizers and pesticides have also raised production costs. These investment requirements make soybean cultivation most profitable while producing large quantities. Hence, high input costs, combined with infrequent income, make soybean production increasingly difficult for farmers that lack investment capital and the ability to expand their properties to produce larger quantities. According to the MPA representative, there has been strong urbanization during the past 15 years;

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171 INCRA (2009b).
172 MST (2009a); CPT (2009a).
173 IBGE, *SIDRA database: Tabela 497*.
176 CPT (2009a); MPA (2009).
 [...] due to this agricultural model of monoculture and low incomes, which makes the younger generation leave for the cities to seek higher incomes. [...] The monoculture creates an illusion that investments will cause higher incomes that could repay the loans and generate profits. But this is an illusion and many farmers [face losses and] have to sell their land.177

This rural-urban migration of Rio Grande do Sul, clearly visible in population statistics (chart 3), is interpreted as an effect of the intensive monoculture production also by the CPT representative.178 Moreover, research carried out in Paraguay has also identified vast migration from rural areas due to expansion of monoculture soy production,179 which somewhat support the idea of a positive correlation between the soybean monocultures and urbanisation also in Brazil.

The soybean production, clearly connected to the Livestock Revolution, thus seems to affect small-scale farmers in Rio Grande do Sul directly as soybean suppliers, in which rising production costs reduce the profitability. This indicates a vulnerability of the monoculture soy producer very similar to the integrated pork and poultry producer. Furthermore, small family farmers also seem to be affected indirectly by the Livestock Revolution through the competition for arable land, in which pastures and feed crop cultivation increase land prices, which from the farmer movements’ perspective impedes the agrarian reform in Brazil. In sum, the presented empirical data seems to indicate that the Livestock Revolution, at least so far, mainly have led to increased marginalization for small-scale farmers in Rio Grande do Sul. The following sections aim to scrutinize how the farmers are responding to these alleged tendencies.

2.5 Farmers responses to marginalization

The purpose of the final sections in this empirical section is to discuss some of the responses to the direct and indirect process of marginalization that evidently is connected to the Livestock Revolution in Brazil. The following sections will focus on three particular responses apparently important to organized farmers in Rio Grande do Sul; diversifying the production, identifying and targeting alternative markets, and the occupation of agricultural land.180

177 MPA (2009).
178 CPT (2009a).
180 There are of course several other types of responses but I have chosen to concentrate on these three categories as they seemed to be most important for the interviewed farmer representatives.
2.5.1 Diversifying the production

A trend that appears embedded in the integrated production of pork and poultry is a restructuring in which the farmer specializes in meat production and thus decreases her diversified cultivation. In some cases, integrated farmers are actually not allowed to have side activities since the companies need to guarantee that the animals are given full attention. In contrast to this scenario, one of the objectives of the farmer movement MPA is to promote diversified farming, which is believed to create a greater autonomy for small-scale farmers than monoculture production. MPA also believes that diversification generates more frequent and reliable incomes, which, in combination with subsistence farming, improve the rural food security.

In accordance with the MPA vision, several researchers have emphasized the possibilities embedded in the family farming system for creating better food security. For instance, research evidence from the state of São Paulo indicates that subsistence farming tends to improve the food security, especially among livestock producing farmers due to the domestic consumption of milk, eggs and meat. However, pure subsistence farming is not a viable option for producers with frequent monetary expenses, such as electricity, water, gasoline etc. Many farmers are therefore combining subsistence farming of basic commodities with cash crop production, in order to rebuild their autonomy.

One example of deliberate diversification in Rio Grande do Sul is that soy producing farmers try to complement their monocultures in order to receive more frequent incomes. Soybean producers have often begun to diversify their production with fruit or vegetables. However, the perhaps most common complement in soybean producing regions is milk production. This production is not integrated via contracts, as in the case of pork and poultry. Instead, the milk is collected on a daily basis by the company, while the farmer receives monthly payments for the total milk provided. The advantage of milk production is the frequently received incomes, which constitute a reliable economic contribution to the monoculture soybean production.

However, just as in the case of soy, pork and poultry, production of milk requires expensive investments which, in combination with the low incomes, often make the small-scale milk production unviable. MPA (2009); FETRAF (2009).

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181 ASGAV (2009a).
182 FETAG (2009a).
183 MPA (2009).
184 See for example; Deves and Filippi (2008); Fritz, Waquil and Mattos (2008), p 23.
186 FETAG (2009a).
187 MPA (2009); FETRAF (2009).
producers deeply indebted. In addition, the buying companies are withholding the farm gate price from the producer at the time of delivery, which impedes the farmer ability to receive the best available price by choosing between competing companies. Due to the low incomes, many milk producers have returned to the monoculture soy production. More financially strong producers have instead tried to intensify the production in order to cover the expenses. For instance, many milk farmers in Rio Grande do Sul have increased their daily production from 50 to 500 litres. This trend of upscaling, very similar to the pork and poultry sector, accordingly seems to exclude the smallest producers. This is also is confirmed by World Bank research, indicating that small-scale milk producers in Brazil are being crowded out as the agribusiness increasingly prefers larger suppliers. Hence, since the dairy production seems to follow the same marginalizing pattern as other livestock products, complementing soy cultivation with milk production still appears to put the farmer in a dependent situation vis-à-vis the agribusiness.

Besides diversified production, many small-scale farmers have also begun to diversify economic activities in a broader sense, in which incomes from non-farm employment become increasingly important. Around 20 percent of the farmers in Rio Grande do Sul, mainly consisting of larger families, are involved in so called pluriactivity; non-farm employment complementing the farming incomes. Families involved in pluriactivity have often better living conditions since the diversified sources of income breaks the dependency patterns and helps secure the economic situation of the small-scale farmer. The rural-urban migration of the younger generation is somewhat a part of the pluriactivity process. However, despite potential income complements, the family farm economy is still threatened as the production output tends to decrease when the young labour force leaves the rural context.

In sum, diversified production and/or pluriactivity appear to decrease the farmers’ agribusiness dependency, thus avoiding vulnerability. On the other hand, some of the diversified activities, for instance milk production, appear to follow the same marginalizing pattern as soy, pork and poultry. Moreover, the interviewed FETAG representative expresses that diversifying economic activities might be difficult due to the low amount of labour force available at the farm. Since the

188 FETRAF (2009).
189 MPA (2009); CPT (2009a).
190 FETRAF (2009).
191 MPA (2009).
192 World Bank (2005), p 11.
193 Schneider et al. (2006), p 144-145, 160. The rural-urban migration of the younger generation is also connected to the pluriactivity process. However, despite potential income complements, the family farm economy is still threatened as production outputs tend to decrease when the young labour force leaves the rural context. MPA (2009).
194 MPA (2009).
younger generation often migrates to the cities, attending more than two activities/products might
decrease the productive quality, which in turn is threatening the possibility to receive a reliable
income. However, despite these limitations, diversification have been one of the responses
from individual and organized farmers in Rio Grande do Sul, thus indicating an alternative vision
contrasted to the agribusiness model, which will be further discussed in section 3.

2.5.2 Targeting new markets

According to the CPT representative, one of the strengths of small-scale farmers in Rio Grande
do Sul is the high amount of farmer organizations, since participation in social movements,
associations and trade unions improves the possibilities for the farmers to defend their interests.
The active participation of social movements and small-scale farmer organizations has led to
various attempts to reorganize distributive patterns. An important response to the agribusiness
expansion from organized farmers has thus been to identify and target new alternative markets.

On the local scale, direct trade between producers and consumers becomes possible in the
traditional feira (local street market). This market space has the benefit of both lowering the
consumer price and raising the farmer income, since no value is lost through the middle hands.
Feiras have become increasingly common during the past years, even though these markets still
constitute a very small part of the total distribution. The aggressive price competition from the
agribusiness does however make local distribution rather difficult for small-scale producers.
In addition, according to the FETAG and MPA representatives, this type of commercialization
have, at least until now, been heavily depending on an active farmer organization and/or
governmental support.

Another possibility for small-scale farmers to maintain or find new markets is the innovative
emergence of manufacturing made directly on the family farm (agroindústria familiar). Research
evidence from Rio Grande do Sul indicates that processing at the farm level provides economic
and social benefits, including more influence over the production chain and less vulnerability as
the producers generally sell directly to the consumer and not to the agribusiness. This kind of
production also has the advantage of requiring less capital investments than the expensive

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195 FETAG (2009a).
196 CPT (2009a).
198 FETRAF (2009); MPA (2009); FETAG (2009a).
199 MPA (2009); FETAG (2009a).
adaptation required by the integrated meat production, thus reducing the economic risk taken by
the producer. Hence, on-farm manufacturing is a farmer response that might increase the
autonomy and improve the small-scale farmers’ socioeconomic condition.

In active search for alternative markets, organized family farmers in Rio Grande do Sul have also
entered the public procurement sector. Governmental programs involving food services, such as
food aid and public schools, have been actively targeted by farmer organizations. Since public
procurement often is long termed and reliable, many small-scale farmers have actually had the
ability to carefully replace monoculture soybean production with diversified food production.

Furthermore, many products made by small-scale family farmers are entering niche markets as
“natural”, “artistic” or “unique”, thus contrasted against the allegedly uniform products of the
agribusiness. For instance, FETRAF has actively been marketing independent and locally
produced meat as more natural and qualitative than the agribusiness meat products, when
competing on local markets. Another very important niche market targeted by small-scale
farmers involves organic products. Organic farming has productive benefits as less toxic
pesticides are being used, and distributive advantages due to the increasing market demand for
organic products. Targeting niche markets is often characterised by cooperation amongst
farmers, which increases the competitiveness vis-à-vis the agribusiness. Cooperative action also
makes it easier to reach the specific niche markets with a more uniform product, which is
necessary in order to comply with the specific demands of the niche market consumer.

Another potential niche market for organized family farmers might involve solidarity trade. MST
is promoting products from their connected farmers at feiras and in their own store (Loja do
Reforma Agraria). The products are labelled as “Products of the Agrarian Reform”, which indeed
indicates that costumers sympathizing with the MST struggles are being targeted. However, the
interviewed MST representative emphasizes difficulties with this market channel due to the
infinite competition from supermarket chains. According to the MST representative, small-scale
farmers also face the same situation in organic production, as the supermarket chains increasingly
are influencing this niche market. Also the FETAG and FETRAF representatives express the

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201 FETAG (2009a); FETRAF (2009).
202 MPA (2009); FETAG (2009a); FETRAF (2009).
204 FETRAF (2009).
208 MST (2009a).
difficulties with alternative markets, as cheap products from the agribusiness constantly are competing with the niche products. Another problem is that independent niche production often needs financial and technical support from the government, or from a strong farmer organization, which creates huge obstacles for farmers lacking these assets. In addition, there might also be a severe risk of the supermarkets absorbing these new markets, thus leaving the farmers in the same marginalizing dependency situation as in the case of integrated meat production.

In order to avoid the heavy competition on local markets, organized farmers might instead target markets outside Brazil, preferably through an international network that follows Fair Trade standards, guaranteeing the farmers’ sustainable socioeconomic situation for the foreign consumer. However, since export-oriented production often involves greater risks, in combination with higher requirements on the product, the FETAG representative believes that an external market is not a viable option in the near future. In addition, the MPA representative also point out the contradiction of social movements promoting export-oriented production as long as hunger is persistent in Brazil. As MPA emphasizes food production for the most needed, Fair Trade distribution becomes peripheral as these markets normally are located in wealthier countries with better food security.

Hence, all the interviewed farmer organizations emphasize the need to identify and target new markets at the local level. In sum, these markets include local feiras, public procurement, and consumers searching for specific product qualities, such as uniqueness, organic production, or solidarity with the producer. Even though identifying and targeting new markets appears difficult, especially due to the supermarket concentration in the retail sector, creating alternative distributive channels seems to have been an important accomplishment for organized farmers in order to maintain autonomy and food security despite the agrarian changes in Rio Grande do Sul.

2.5.3 Performing the agrarian reform

The unequal land distribution in Brazil (table 1) has put vast political pressure on an immense redistribution of the natural resources, especially during the past four decades. As a response to threats of agrarian rebellion, the military regime initiated a land reform program in 1971, constituted of two institutions which eventually merged into INCRA (Instituto Nacional de

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209 FETAG (2009a); FETRAF (2009).
211 FETAG (2009a).
212 MPA (2009).
Colonização e Reforma Agrária). The first 20 years of the government-led agrarian reform did however cause even further land concentration, as mainly large-scale soybean producers were targeted. After Brazil’s re-democratization in 1985, the main governmental target became to secure landless farmers, an initially rather slow process but somewhat accelerating since the mid 1990s during the Cardoso and Lula regimes.\(^{213}\)

Simultaneously as the government has been attempting to implement an agrarian reform, farmer movements seeking a more direct land reform have been emerging. In the 1960s, a union of agricultural workers – CONTAG (Confederação Nacional dos Trabalhadores na Agricultura) – started to demand access to arable land.\(^{214}\) The following decade, in 1975, was CPT (Comissão Pastoral da Terra) founded by Liberation Theology inspired catholic priests, with the objective to support indigenous, small-scale and land-less farmers.\(^{215}\) Through the emergence of CPT, rural farmers became structurally organized. In the early 1980s, landless farmers begun to occupy arable land in southern Brazil, which led to the formation of the Movimento dos Trabalhadores Rurais sem Terra (MST) in 1984, having land occupations as their significant method in their fight for the agrarian reform.\(^{216}\)

In tune with the introduction of neo-liberalism in Latin America in the mid 1990s, the Brazilian government adopted a so called *market-led agrarian reform*, aiming to offer landless farmers credits for land purchases. The Lula regime kept these credit programs, but also emphasized traditional expropriation, in which the government forces the largest land owners to sell their unproductive land.\(^{217}\) Due to these rather high redistributive ambitions, the MST was initially supporting the Lula regime. However, MST has recently begun to criticize President Lula for the slow implementation of the agrarian reform, as only 163 000 of promised 550 000 families were given land during 2003-2007.\(^{218}\) MST also criticizes the absent governmental attempts to reduce rural marginalization, for instance through monitoring trade relations, establishing minimum prices, and helping the farmers that recently received land with starting capital.\(^{219}\)

From the perspective of MST and CPT, the fundamental problem of the land situation is the commodification of land, which in the view of these social movements should be available for the people relying on farming for their livelihoods. Hence, clearly built on a Marxist analysis, the
capitalist mode of production is perceived as the fundamental root to the exploitation of small-
scale farmers, which in turn generates a conflict of interests between companies and family
farmers. A market-led agrarian reform, in the view of MST and CPT, will thus mainly generate
profits for the huge land owners, selling their land for high prices, while the problems for the
small-scale farmers continue to exist.220

Hence, in the view of these social movements, a more radical transformation of the agrarian
situation is necessary. In this respect, direct actions to implement an alternative socioeconomic
structure are being carried out by the organized farmers. One example of these direct actions is
the rural road blocs, aiming to accentuate the farmers’ intolerance with the unsustainable
situation. The perhaps most famous direct action is the land occupations, perceived by the
movements as a materialization of the discourse in which the land belongs to the producers
depending on it for livelihood. The land occupations also have the purpose of showing the overall
society the imperative need for an agrarian reform.221

According to CPT statistics, eleven land occupations were carried out in the state of Rio Grande
do Sul in the year of 2008, involving approximately 2 000 rural families. On a national level, 252
land occupations, involving 25 559 families, were performed in the same year.222 These land
occupations are also becoming increasingly common. During the first democratic regime since
the Brazilian re-democratization, between 1986 and 1989, 34 333 families carried out 229 land
occupations in Brazil. The number of occupations have risen steadily and during the Lula regime,
between 2003 and 2008, 343 958 families together carried out 2 913 land occupations in Brazil.223

The land occupations performed by organized rural families appears to constitute a deliberate
condemnation of the agribusiness production model, both through the active preservation of the
family farm model, and through the apparent rural land conflicts.224 For small-scale farmers in
Rio Grande do Sul, the conflict between the disparate interests between family farmers and
agribusiness often becomes very concrete.225 Statistics from CPT show that, on a national level,
more than 350 000 people were involved in rural conflicts in the year of 2008, in which 27
people were killed. However, conflicts between the interests of agribusiness and small-scale

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220 MST (2009a); CPT (2009a).
221 MST (2009a).
223 MST (2009b).
225 CPT (2009b); MST (2009a).
farmers varies from year to year, and in the year of 2003, according to CPT statistics, more than 1.1 million were people involved in rural conflicts in Brazil, leading to the death of 71 farmers.\footnote{CPT (2009b), p 16.}

The consistency of the statements and struggles of the radical farmer movements could indeed be discussed more critically. However, this study does not aim to evaluate these agrarian conflicts \textit{per se}, but instead to identify and analyse the apparent tensions between agribusiness and family farmers in Brazil. As will be discussed more thoroughly in the following analytical section, land occupations and agrarian conflicts seem to constitute rather concrete examples of the severe tensions that apparently are embedded in the \textit{Livestock Revolution} and the Third Food Regime.
3 Livestock Revolution and the Third Food Regime

The objective of this final section is to use the presented empirical results to discuss the research question of this study, namely how and why Brazilian small-scale farmers are affected by, and responding to, the so called Livestock Revolution. The first section will focus on the initial part of the question; how the farmers are affected by the changes of the livestock sector, while the second section will focus on the farmers’ responses to these changes. The theoretical framework, presented as the Food Regime analysis in section 1.2, will be used to interpret the empirical data, in order to contextualize and consider the “why-dimension” of the research question.

3.1 Prosperity and marginalization

The empirical data found in this case study indicate that the agrarian community in Rio Grande do Sul is being increasingly polarized between the agribusiness, a handful of large-scale food processing companies, and its material providers; the family farmers. Accordingly, the export-oriented meat production, a significant expression of the so called Livestock Revolution, does apparently have disparate effects in this context. As the food processors annually report increasing profitability, there is hardly any doubt that the impact of the Livestock Revolution is mainly positive for these companies. However, quite contrary to this corporate prosperity, official statistics instead demonstrate a decline in agricultural employment and population density in Rio Grande do Sul. This makes it rather doubtful that the profits of the expanding livestock sector would be “trickling down” to the rural population that is depending on agriculture for livelihood, as so often presupposed in Livestock Revolution literature.227 In fact, the empirical data of this case study instead demonstrate that family farmers are actually being further marginalized by the Livestock Revolution.

Marginalization was identified in several levels of the livestock production in Rio Grande do Sul. Data from literature and interviews indicate that the integrated production, in which smallholders of pork and poultry become contracted producers for the agribusiness, is severely disadvantageous for the smallholder. Despite the benefits of frequent income and technical assistance, all interviewed informants, corresponding to most literature, instead emphasized the downsides with integrated production. According to these data, the autonomy is lost due to the many requirements from the agribusiness, forcing the farmer into technical transformations that

often increase both the workload as well as the production cost. In combination with extremely low payments, rather inescapable due to the evidently strong concentration in the processing level, the farmer often becomes heavily indebted without any ability to repay the loans they have taken for the required installations. Hence, the empirical data indicate that the family farmer, and not the agribusiness, is the main commercial risk taker in the livestock production chain. This consequently puts the small-scale farmer in an unsatisfactory dependency relation vis-à-vis the agribusiness, thus being marginalized from the main profits of the Livestock Revolution.

Moreover, marginalization does not only occur within the farmer-agribusiness relation, but also through exclusion from integration. The agribusiness evidently prefers producers that are able to comply with the rigid requirements demanded by the integrating company, thus excluding many family farmers lacking the capital to perform the costly technical adjustments that are required. The smallest and most financially weak producers also face exclusion from integration as the food processors mainly prefers providers with the ability to upscale their production, in order to decrease the number of providers. Due to this agribusiness trajectory, production is now shifting geographically; from the southern states to the Midwest region, as the latter have more medium and large-scale farmers with better abilities to comply with the preferences of the food processors.

The empirical data also indicate that marginalization through exclusion becomes more severe due to the emergence of giant supermarket chains in Rio Grande do Sul. The retail sector has quite recently become heavily concentrated on a few but very powerful supermarkets. These actors have requirements on quantity and quality that are almost impossible for small-scale farmers to follow, even if organized in cooperatives. Besides the difficulty to reach the urban markets, due to the immense domination of the supermarket chains, the family farmers also face heavy competition on the local markets from the agribusiness’ cheap and mass produced meat products. Hence, whereas the integrated smallholder faces marginalization within the production chain, the family farmers unable to become integrated are instead being marginalized on the markets.

In addition to these more direct marginalizing effects of the Livestock Revolution, family farmers are evidently being affected indirectly as well. One of Brazil’s main export products; cattle meat, does not involve small-scale farmers as cattle raising exclusively is carried out on latifundias. However, small-scale farmers, in particular the landless, are still being negatively affected by the increasing bovine production due to the large amount of land required for pasture. Statistics show that land prices have increased dramatically during the past decade in Rio Grande do Sul, thus
indicating a correlation with the increased demand for pasture land, an interpretation shared by the interviewed farmer organizations. Furthermore, the expanding livestock sector also requires a huge amount of animal feeds, constituting intensive production of maize for the domestic meat industry, but also a dramatically increasing production of soybeans for both domestic and foreign markets. Consequently, just as in the case of cattle raising, feed crop production apparently marginalizes financially weak family farmers in Rio Grande do Sul indirectly, as the “competition for arable land” raises land prices to a level beyond reach for small-scale and landless farmers. Moreover, land access is also limited as the higher efficiency on latifundias impedes government-led land expropriation. In addition, the soybean production carried out by small-scale farmers also reveals similar marginalizing characteristics as the integrated production of pork and poultry, thus indicating that feed crop production, clearly connected to the *Livestock Revolution*, apparently has direct as well as indirect marginalizing effects on family farmers.

Hence, by analysing the empirical data of this study it becomes rather clear that very few benefits or profits from the expanding livestock sector have actually “trickled down” to the small-scale farmers in Rio Grande do Sul. Quite the contrary, the contextualizing and case specific data found through this study instead demonstrate that Rio Grande do Sul is reflecting a national tendency, in which the *Livestock Revolution* generates further marginalization for the large part of the rural population that depends on agriculture for livelihood. The case of Rio Grande do Sul becomes particularly important in this analysis, not only due to the huge participation of family farmers in the rural economy, but also as the marginalizing patterns of the *Livestock Revolution* apparently challenge the state’s socioeconomic conditions which traditionally have been strong compared to other Brazilian states. Accordingly, this case study shows that the marginalizing effects of the *Livestock Revolution* are also spreading to areas with stable socioeconomic conditions and well organized farmers.

However, it should also be noted that many of the largest meat processors are not multinational but national companies, meaning that important tax revenues might “trickle down” to family farmers in terms of empowering programs and increased welfare.228 Hypothetically, the alleged transition of family farming activities into wage-labour could be facilitated with policies and resources of a wealthy nation-state, thus minimizing the worst socioeconomic effects for small-scale farmers. On the other hand, the interviewed farmer organizations clearly point out that the negative outcomes of the expanding meat industry have not been countered sufficiently by the

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228 Even though quite off-focus here, it might be also mentioned that the *Livestock Revolution* tend to improve the global public health due to increased protein intake for uncountable urban consumers in developing countries.
state. On the contrary, the inferences of this study show that socioeconomic marginalization is still present for most small-scale farmers involved in livestock production in southern Brazil.

The apparent polarization between agribusiness and family farmers, evidently pushing the latter towards a socioeconomic periphery, may indeed be interpreted as an expression of the contemporary Food Regime. As Friedmann and McMichael have pointed out, the legacy of the Second Food Regime clearly involves corporate-led mass production, which often is followed by marginalization of small-scale farmers.\(^{229}\) Moreover, Food Regime researchers have also pointed out that marginalization has intensified dramatically due to the increasing production requirements and agribusiness concentration,\(^{230}\) thus fuelling the unequal access to production chain influence between the agribusiness and small-scale farmers.\(^{231}\) In line with this theoretical approach, the *Livestock Revolution* in Brazil becomes a distinct expression of McMichael’s “corporate” Food Regime, where the power of private companies has intensified dramatically.\(^{232}\) From this theoretical point of view, it is hardly surprising that agribusiness prosperity is accompanied by farmer marginalization, as this duality is believed to be embedded in the corporate Food Regime. Hence, as the empirical data of this study demonstrate coexisting patterns of prosperity and marginalization, fuelling the polarization of the agrarian community in Brazil, the *Livestock Revolution* evidently follows the path of the corporate Food Regime. Consequently, the marginalizing patterns of this Food Regime are also causing huge tensions between the involved actors, in turn generating implicit and explicit resistance from the margins.

### 3.2 Resistance from the margins

Given that the *Livestock Revolution* pushes small-scale farmers towards a socioeconomic periphery, this section intends to discuss to what extent an element of resistance is embedded in the farmers’ responses to marginalization. As Ploeg has pointed out, farmer resistance often include a “multitude of responses”,\(^{233}\) which, according to Scott, involves both an ideological and material dimension.\(^{234}\) The empirical data from Rio Grande do Sul indicates three principal types of responses to marginalization; diversifying the production, identifying and targeting new markets and, finally, the act of land occupation. Even though the latter constitutes a rather explicit expression of resistance, while perhaps more implicit in the other two responses, it is

\(^{231}\) Lang and Heasman (2004), p 144-151, 158-159.
\(^{233}\) Ploeg (2008), p 3-4, 265-273.
\(^{234}\) Scott (1985), 304-306, 310-313.
argued here that all of these responses to marginalization encompass an alternative agri-food vision that implicitly or explicitly countervails the dominating corporate discourse.

The empirical findings from this study show that the agribusiness’ agricultural model requires monoculture production for small-scale farmers, as this production system increases the reliability and quality of the product delivered to the food processors. However, the interviewed farmer organizations apparently have a rather contrasting vision of agrarian performance and development. From the perspective of the organized farmers, the most sustainable agricultural model, socially, economically and environmentally, is a diversified and small-scale farming system. This farmer viewpoint clearly corresponds with the emerging agri-food paradigm, identified by Lang and Heasman as a rising challenge to the productionist model. Hence, using the Lang and Heasman analysis, a production model deliberately exercised in contrasts to the corporate trajectory could indeed be interpreted as an implicit form of resistance.

In the countervailing performance of this alternative agri-food paradigm, many farmers have tried to deconstruct their monocultures, especially in the case of soybean production, and instead strive towards diversification and/or *pluriactivity*. However, several interviewed farmer organizations were worried about the difficulties with diversified production, since other products, especially the increasingly important commodity of milk, follow the same marginalizing pattern as soy, pork and poultry. But even if diversified production do not constitute a sustainable challenge vis-à-vis the agribusiness model, at least not so far, it still represents an act of implicit resistance already put into practice by many farmers.

The polarization of the agrarian community in Rio Grande do Sul, identified in the previous section, does not only include a material separation between the agribusiness and family farmers due to the unequal access to profit and influence. The polarization also proves to be ideological as it apparently involves disparate visions of the performance and future development of food and agriculture. Using Lang and Heasman’s interpretation, the model of small-scale and diversified production could thus be understood as an expression of the emerging paradigm, verbally and practically countervailing the dominant productionist discourse of the agribusiness. Accordingly, this constitutes a clear expression of the two coexisting but radically contrasted agri-food visions that are competing within the contemporary Third Food Regime. The

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236 Disparate positions between these actors have also been identified by Wilkinson (2008), p 199-212.
challenges from the alternative vision, along with the intensified corporate power, thus indicate that the future outcome of the Third Food Regime still appears to be rather uncertain.

The countervailing forces of the farmer community are also expressed in the active search for new markets, an important action for all the interviewed farmer organizations. Examples of specific alternative markets in Rio Grande do Sul include local feiras and the public procurement sector. Also targeted are consumers searching for specific product qualities, such as uniqueness, organic production, or solidarity with the producer. Here, an element of resistance can be identified particularly on the ideological level, as the search for new distribution channels clearly implies what McMichael calls “[…] a place-based form of agro-ecology (food from somewhere)”.

This relocation of the farmer-consumer relation becomes especially evident in the case of local feiras and solidarity trade, deliberately targeting consumers that are interested in purchasing ‘food from somewhere’. Hence, this alternative model of distributing food products, which emphasizes and re-establishes the relation between farmer and consumer, clearly expresses the divergent dichotomy of the contrasted agri-food paradigms also in the level of distribution.

However, it could also be argued that this type of farmer response is not a clear-cut resistance but merely a defensive adaption to the changing reality of the food markets. Even though resistance can be identified at the ideological level, the material actions are still performed within a capitalist discourse since competition remains the main weapon of resistance. If using the terminology of resistance here, it should thus be noted that this rather subtle opposition is extremely weak when acting on the same terms as the meat companies. Both rural and urban consumers are still inclined to prefer the cheap and well-promoted meat products from the agribusiness. Moreover, small-scale farmers face vast competition on the newly identified markets as also the agribusiness targets the organic niche through supermarket chains, which clearly creates obstacles for family farmers’ success on the agri-food markets.

These difficulties might be an explanation for the most explicit form of resistance from the margins; namely the (re)claiming of corporate land through land occupations, which has become increasingly common in the state of Rio Grande do Sul. The occupation of arable land is perhaps the most visual expression of the deep material and ideological tensions between the two entities of the agrarian community. In many cases, the embedded tensions of this dichotomy become so intense that violence takes place between the families and the agribusiness (often legally

237 McMichael (2009), p 147.
238 This argument follows the critique of John Scott’s ‘theory of everyday forms of resistance’ as being too acceptive of oppressive structures, thus unable to explain social change adequately. See for example: Gutman (1993), p 87.
supported by the police). From the landless farmer point of view, this concrete form of resistance is criticizing the agribusiness agri-food model both symbolically and practically. The resistance is practical as the occupied land is actually being used by a previously landless family farmer. The land occupation is also symbolic as it materializes a vision of a redistributive agrarian reform. In this sense, the farmer resistance expressed in land occupation clearly has a material dimension in which arable land is (re)claimed in order to secure the livelihoods of the family farmers. The land occupation also has a clear ideological dimension through the strong symbolic action, but also as small-scale and diversified production is being performed on the occupied land, thus expressing and materializing an alternative vision of food and agriculture.

3.3 Concluding remarks

In sum, this study has demonstrated that enormous tensions are associated with the Livestock Revolution, as powerful forces of the corporate Food Regime constantly conflict the interests of small-scale farmers. The expanding livestock sector fuels the polarization between agribusiness and family farmers, in which the latter are being marginalized. Empirical data from the case of Rio Grande do Sul indicate both direct and indirect marginalization of small-scale farmers, evidently spreading also to areas with relatively stable socioeconomic conditions and well organized farmer movements. Accordingly, as the Livestock Revolution is advancing rapidly in Brazil, coexisting patterns of agribusiness prosperity and farmer marginalization proves to be a significant outcome of this immense agri-food transformation.

Given the reality of marginalization, the apparent discourse of the Livestock Revolution is in essential conflict with the material and ideological interests of the family farmers. These tensions become clearly visible in the farmers’ responses to marginalization; most explicitly through the land occupations, but also implicitly through alternative patterns of production and distribution. Consequently, the process of the Livestock Revolution is in turn expressing an ongoing change of the global agri-food sector. Relating this to the Food Regime analysis, an apparently important characteristic of the so called Third Food Regime thus seems to be its embedded tensions, which the case of livestock production in Rio Grande do Sul clearly expresses. The tensions between the contrasting paradigms certainly point towards intensified agri-food controversies, which Lang and Heasman refer to as the Food Wars.
As the “developing world” now is reaching similar meat consumption levels to those of the high income countries, it becomes rather unclear what this will do to the many small-scale farmers depending on agriculture for their livelihoods. On the one hand, family farmers might continue to be marginalized as the current trend evidently indicates. On the other hand, the small-scale farmers might respond strongly enough to change these marginalizing patterns. As the Food Wars between the disparate paradigms of food and agriculture have not yet come to an end, the Third Food Regime apparently carries on as an unfinished narrative.
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**Databases**


—— *SIDRA database* – Tabela 261 – “População residente por situação, sexo e grupos de idade; 2007”.

—— *SIDRA database* – Tabela 263 – “Número de estabelecimentos e Área dos estabelecimentos agropecuários por grupos de área total - série histórica (1920/2006)”.

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--- *SIDRA database* – Tabela 497 – “Quantidade produzida por produtos das lavouras temporárias e grupos de área total”.

--- *SIDRA database* – Tabela 561 – “Número de estabelecimentos agropecuários e Pessoal ocupado em estabelecimentos agropecuários por laço de parentesco com o produtor”.

--- *SIDRA database* – Tabela 562 – “Número de estabelecimentos agropecuários e efetivo de animais por espécie de efetivo”.

--- *SIDRA database* – Tabela 602 – “Quantidade de bovinos abatidos por tipo de rebanho”.

--- *SIDRA database* – Tabela 603 – “Quantidade de suínos abatidos”.

--- *SIDRA database* – Tabela 604 – “Quantidade de aves abatidas”.

--- *SIDRA database* – Tabela 839 – “Área plantada, área colhida, quantidade produzida e rendimento médio de milho, 1ª e 2ª safras”.

--- *SIDRA database* – Tabela 1612 – “Quantidade produzida, valor da produção, área plantada e área colhida da lavoura temporária”.


### Unpublished data


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