

The Industrial Meat Chain

Sharing ideas and strategies
to confront the global industrial
food complex



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♦♦♦♦

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Contents

List of acronyms	7
Presentation	11
The Industrial Meat Chain workshop	13
Introduction	13
Brazil's role in the transnational meat chain	15
The global industrial meat complex: time to act Shefali Sharma – IATP	15
The meat production chain in Brazil Sergio Schlesinger – Consultor Fase	17
Brazil and the transnational meat processing chain Adhemar Mineiro – Dieese and Rebrip	22
The Brazil – European Union connection Tobias Reichertr – German Watch	26
The meat complex in Brazil and its territorial, social and environmental impacts.....	29
The industrial meat chain: food security and sovereignty and agroecology Claudia Job Schmidt – CPDA	29
Labor relations and workers' health André Campos – Repórter Brasil	32
Social and environmental impacts of the industrial meat chain in the state of Mato Grosso	35
The current situation in the state Leonel Wohlfahrt – Fase MT	35
The current situation in one region Nilfo Wandscheer – STTR de Lucas do Rio Verde	36
The environmental safeguards and restrictions of the BNDES Maria Elena Rodriguez - Ibase	37
The industrial meat chain in the social movements' agendas	41
The current situation of small farmers Aloísio Lopes – MPA	41
Family farming and animal protein production Celso Ludwig – FETRAF	42
Work in rural areas Elias D'Angelo Borges – CONTAG	45
Public policies Paulo Polese – CONTAG	46
Animal welfare Elizabeth MacGregor – FNPDA	49

The Meat Atlas in Paraguay: impacts and citizen participation	
Elías Días Peña – Sobrevivencia, Friends of the Earth Paraguay	52
Agroecology	
Maria Emília Lisboa Pacheco – FASE, ANA and Consea	54
The current situation in the west of Paraná	
Centro de Apoio ao Pequeno Agricultor (CAPA)	56
Final observations and expectations for the future	58

List of acronyms

- ABIED** – Associação Brasileira das Indústrias Exportadoras de Carne (Brazilian Association of Beef Exporters)
- ABIOVE** – Associação Brasileira das Indústrias de Óleos Vegetais (Brazilian Vegetable Oil Industry Association)
- ABPA** – Associação Brasileira de Proteína Animal (Brazilian Animal Protein Association)
- Abrafrigo** – Associação Brasileira de Frigoríficos (Brazilian Association of Meat Corporations)
- ABRASCO** – Associação Brasileira de Saúde Coletiva (Brazilian Association for Collective Health)
- ANA** – Articulação Nacional de Agroecologia (National Agroecology Coalition)
- ATER** – Assistência Técnica e Extensão Rural (Technical Assistance and Rural Extension)
- ANVISA** – Agência Nacional de Vigilância Sanitária (National Health Surveillance Agency)
- BNDES** – Banco Nacional de Desenvolvimento Econômico e Social (Brazilian Development Bank)
- BNDESPar** – BNDES Participações S.A.
- BRICS** – group of countries formed by Brazil, Russia, India, China and South Africa
- CAPA** – Centro de Apoio ao Pequeno Agricultor (Small Farmer Support Center)
- CAR** – Cadastro Ambiental Rural (Rural Environmental Registry)
- CEPEA** – Centro de Estudos Avançados em Economia Aplicada (Center for Advanced Studies on Applied Economics)
- CFS** – United Nations Committee on Food Security
- CLT** – Consolidação das Leis do Trabalho (Consolidation of Labor Laws, the Brazilian labor code)
- CONFAB** – Companhia Nacional de Abastecimento (National Supply Company)
- CONSEA** – Conselho Nacional de Segurança Alimentar e Nutricional (National Council for Food and Nutrition Security)
- CONTAG** – Confederação Nacional dos Trabalhadores na Agricultura (National Confederation of Agricultural Workers)
- CO₂** – Carbon dioxide
- CPDA** – Curso de Pós-Graduação em Desenvolvimento, Agricultura e Sociedade, da Universidade Federal Rural do Rio de Janeiro (Graduate program in Development, Agriculture and Society at the Federal Rural University of Rio de Janeiro)

CPI – Comissão Parlamentar de Inquérito (parliamentary inquiry commission)

DIESSE – Departamento Intersindical de Estatísticas e Estudos Socioeconômicos (Inter-Union Department of Statistics and Socio-economic Studies)

EMBRAER – Empresa Brasileira de Aeronáutica (Brazilian Aeronautical Company)

EMPRAPA – Empresa Brasileira de Pesquisa Agropecuária (Brazilian Agricultural Research Corporation)

EU – European Union

FAO – Food and Agriculture Organization of the United Nations

FASE – Federação de Órgãos para a Assistência Social e Educacional (Federation of Organizations for Social and Educational Assistance)

FAT – Fundo de Amparo ao Trabalhador (Workers' Assistance Fund)

FETRAF – Federação Nacional dos Trabalhadores e Trabalhadoras na Agricultura Familiar (National Federation of Family Farm Workers)

FIESP – Federação das Indústrias do Estado de São Paulo (Federation of the Industries of the State of São Paulo)

FNPDA – Fórum Nacional de Proteção e Defesa Animal (National Front for the Protection and Defence of Animals)

GHG – Greenhouse gases

GTA – Guia de Trânsito Animal (animal movement permit)

HDI – Human Development Index

IATP – Institute for Agriculture and Trade Policy

IBAMA – Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute of Environment and Renewable Natural Resources)

IBGE – Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics)

IMAFLORA – Instituto de Manejo e Certificação Florestal e Agrícola (Institute for Agricultural and Forest Management and Certification)

INSS – Instituto Nacional de Seguro Social (National Social Security Institute)

ITPGRFA – International Treaty on Plant Genetic Resources for Food and Agriculture

MAPA – Ministério da Agricultura, Pecuária e Abastecimento (Ministry of Agriculture, Livestock and Food Supply)

MDA – Ministério do Desenvolvimento Agrário (Ministry of Agrarian Development)

MMA – Ministério do Meio Ambiente (Ministry of the Environment)

MP – Ministério Público (Public Prosecutor)

MPA – Movimento dos Pequenos Agricultores (Small Farmers Movement of Brazil)

OECD – Organization for Economic Cooperation and Development

NGO – Non-governmental organization

PADRSS – Projeto Alternativo de Desenvolvimento Rural Sustentável e Solidário (Alternative Project for Rural Sustainable Development and Solidarity)

PPA – Programa de Aquisição de Alimentos (Food Acquisition Program)

PIL – Programa de Investimento em Logística (Program of Investment in Logistics)

PREVI – Caixa de Previdência dos Funcionários do Banco do Brasil (Banco do Brasil Employees' Pension Fund)

ProAgro – Programa de Garantia da Atividade Agropecuária (Agricultural and Livestock Activity Guarantee Program)

PRONAF – Programa Nacional de Fortalecimento da Agricultura Familiar (National Program for Strengthening Family Farming)

REBRIP – Rede Brasileira pela Integração dos Povos (Brazilian Network for the Integration of the Peoples)

RSI – Repetitive strain injury

SEAF – Seguro da Agricultura Familiar (Family Farming Insurance program)

SECEX – Secretaria de Comércio Exterior (Secretariat of Foreign Trade)

SIF – Sistema de Inspeção Federal (Federal Inspection System)

SINDIVEG – Sindicato Nacional da Indústria de Produtos para Defesa Vegetal (Brazilian Crop Protection Industry Union)

STF – Supremo Tribunal Federal (Federal Supreme Court)

STTR – Sindicato dos Trabalhadores e das Trabalhadoras Rurais de Lucas do Rio Verde (Lucas do Rio Verde Rural Workers' Trade Union)

SUASA – Sistema Unificado de Atenção à Sanidade Agropecuária (Unified System of Agriculture Health)

TAC – Termo de Ajustamento de Conduta (adjustment of conduct agreement)

UN – United Nations

UNASUL – Union of South American Nations

UNEP-FI – United Nations Environment Programme Finance Initiative

UNFCCC – United Nations Framework Convention on Climate Change

UNICOPAS – União Nacional das Organizações Cooperativistas Solidárias (National Union of Solidarity Cooperative Organizations)

US – United States of America

USDA – United States Department of Agriculture

USP – University of São Paulo

WG – Working group

WTO – World Trade Organization

Presentation

On September 10 and 11, 2015, peasant movements, social organizations, trade unions, and representatives of universities from Brazil, the United States, Germany, and Paraguay participated in the workshop entitled “The Industrial Meat Chain”, held in Rio de Janeiro. The objective of the workshop was to share ideas and strategies for confronting the global industrial meat and food complex. The proposal was initially developed by the Institute for Agriculture and Trade Policy – IATP, Bread for the World, Germanwatch, and the Heinrich Böll Foundation based on the observation that the meat industry intensifies corporate power, has major impacts on the lives of small producers, and is going through structural changes. The implications of these changes are not yet fully understood.

The U.S., Europe, China and Brazil each play a key role in the concentration of corporate power in this industry and the impacts it generates. Given Brazil’s importance in this chain, these organizations invited FASE (*Federação de Órgãos para a Assistência Social e Educacional*) to assume the coordination of a debate on the meat industry in Brazil. FASE accepted the invitation and introduced the issue of the global meat and food industry in the cycle of debates it was promoting in 2015 on development, resistance and alternatives for social movements in the country. The Brazilian Network for the Integration of the Peoples (*Rede Brasileira pela Integração dos Povos*, or Rebrip, for its acronym in Portuguese) joined this process due to its experience in articulating and lobbying on agriculture and Brazilian trade policy, mainly via its Working Group on Agriculture.

This publication is based on the debates held during the two-day event. We hope it will serve to strengthen the actions discussed during the workshop, especially those related to communication and coordination among participant organizations, and to further discussions on agribusiness in Brazil and its implications for social movements and their processes of resistance.



The Industrial Meat Chain workshop

Introduction

The meat industry is a sector in which the actions of a few large conglomerates serve to intensify corporate power and generate negative – and, in some cases, irreversible – impacts on the ways of life of small farmers and workers, and on the environment. At the same time, it is an industry whose operations are masked, mainly by its relationship with other sectors (such as soybean). This makes it difficult for social organizations and movements to identify what drives it and plan their strategies for confrontation accordingly.

The concentration of corporations in the sector is growing constantly. In the United States (U.S.), four corporations control over 80% of the sector. Three of the largest meat companies in the world are from Brazil. The Brazilian corporation JBS S.A. is buying a growing number of companies all over the world. A large portion of the pork chain, for example, is controlled by the U.S. and the European Union (EU), where the activities of small-scale producers have become so marginalized so as to be nearly imperceptible. The same process is taking place in China.

It was in this context that international civil society institutions decided to launch a process to conduct research and coordinate among organizations from the U.S., China, Brazil, and the EU. The goal was to analyze what was happening in the meat industry, identify similarities and the concerns of small producers, and link them to other current issues such as climate change, changes to land use, and the defense of the ways of life of family farmers and traditional peoples. In the EU, for example, a coalition of civil society groups has emerged to challenge the meat industry.

The workshop sought to achieve the following objectives:

- Identify the most urgent concerns with industrial livestock and food production, while highlighting the problems caused or exacerbated by international factors such as trade, investment, and the strategies of large global corporations; draw attention to the impacts of the meat production chain on biodiversity, climate, workers' health, land concentration, and the food and nutrition sovereignty and security of the populations involved;
- Share the background of the current process and the objectives that the partner organizations from Germany and the IATP hope to achieve through this initiative with Brazilian organizations;
- Interact with local groups to jointly assess the level of engagement at the national level (if there is sufficient interest or not) and the challenges related

to the livestock and animal feed industry, the strategies needed to politicize these issues, the crucial next steps to take, etc.;

- Share analysis on the global state of affairs and develop a common understanding of the points where national and the global contexts intersect; determine how coordinating global strategies can contribute to resistance efforts at both levels – in other words, identify the lessons learned and what worked and did not work in the political actions undertaken at the regional and global level;
- Establish articulation mechanisms to improve coordination among actors working on this issue; examine the possibility of creating a global coalition on the meat and food industry; and evaluate the interest of Brazilian partners in creating this coalition.

To meet these objectives, the discussion was organized around the following questions:

- What are the implications of the meat industry and the current changes in its dynamics for land, water, and social and environmental justice?
- How relevant are the efforts to challenge the meat industry to the struggles of social organizations and movements?
- What would a national campaign on this issue look like?
- How can we connect a national campaign to global processes and build a global campaign? Campaigns related to the extractive industry already exist, but the meat industry is not normally considered extractive. The analysis presented in this publications demonstrate, however, that in many ways it is.

To achieve these objectives and address these issues, this publication is organized as following. After a brief introduction, it presents a summary of the results of the debates held during the two-day workshop. This summary is divided into four sections. The first section examines Brazil's role in the global meat chain and presents data on concentration in the livestock sector, trade relations and investments, and other relations in the sector. Section II examines the territorial, social and environmental impacts of the meat complex in Brazil in greater detail. This is followed by a discussion on the place of the industrial meat chain in the agendas of the social movements. It ends with the presentation of final considerations and proposals for building alternatives and confronting the industrial meat chain.

Brazil's role in the transnational meat chain

The global industrial meat complex: time to act

Shefali Sharma

IATP

When someone mentions the word “agribusiness”, it is quite common for soy-bean or corn to come to mind. However, behind these products lies another chain – one with tremendous corporate power – which is rapidly being consolidated, especially in the past ten years. It controls an entire value chain and generates various uses and unsustainable impacts. It is this chain – the meat chain – that we analyze below.

When we talk about corporations, we think of examples such as Nestlé or Coca-Cola, rather than Cargill, JBS, Tyson or Nippon. However, in the United States (U.S.), only four corporations – Tyson, Cargill, JBS and National Beef – control the production of meat. In thirty years, these corporations increased their control over cattle production from 36% to 85% and of pork, from 34% to 65%. In the case of poultry, the process is similar. In Europe, the industry is less concentrated, but the trend is moving towards further and further concentration.

In 2011, 2012, and 2013, JBS led the global meat processing market, followed by Tyson Foods and Cargill. From 2011 to 2012, Brasil Foods (BRF) jumped from 9th to 4th place, maintaining this position in 2013. In other words, it moved up five spots in the ranking in only one year. Global champion of the sector, JBS alone produced more meat globally than the ten companies that ranked 11th to 20th together. The ten largest corporations control almost the entire market; after them, the percentage of the control falls to 4%. In other words, there is a very high level of concentration in the global meat industry.

Other parts of the value chain – such as seeds and biotechnology, agro-chemicals, machinery, genetics and animal health – are also highly concentrated. In 2009, four corporations controlled half of all animal medicines. This concentration is even higher today: around 60%. As for the animal genetics sector, the US and the EU control the market. Only four transnational corporations control over half of this global market.

The map of meat production in the world shows that a large proportion is produced in the U.S., Brazil, the EU and China. In the case of animal feed and grains, North and South America lead the market. As for cereals, one-third of production goes to animal feed and this percentage continues to grow. China is a major contributing factor in this because of its large imports and the U.S. and Brazil are strong competitors in feed exports. In 2010 and 2011, 35% of the

soybean imported by China came from Brazil; in 2011-2012, this amount rose to 45%. These corporations often also control the processing and marketing of animal feed.

In this scenario, what are the prospects for the global market? Even though meat consumption is higher in industrialized countries, there has been a significant increase in consumption in the BRICS countries. The poultry sector is the fastest growing sector.

Impacts of Industrial meat production

This expansion is alarming, as the meat industry is unsustainable and destroys land and water resources, which are finite and diminishing. High levels of land, water, and air pollution exist in places where manure is produced and fertilizers are used. Fifteen thousand liters of water are needed to produce 1 kg of meat. The US is the largest consumer of water in the world, although consumption is also high in Brazil. Furthermore, the meat industry threatens food security and sovereignty, as it puts food and animal feed in competition with one another, increases land grabbing, and violates human rights. The forests and the savannahs – where most of the industry’s expansion takes place – are being turned into crops and pastures. And who lives on this land? Often, the most marginalized do. These impacts are intensifying as a result of the increase in exports and the percentage of land being cleared to make way for pasture.

China has been modifying its policy on imports. In the 1990s, it began to import soybean to focus on domestic animal production. However, this measure has been insufficient, and therefore, the country imports other grains for animal feed and seeks to invest in purchasing land abroad. For China, the issue of food is a matter of national security. China needs land and animal feed in order to produce more meat, which is why it is increasing its investments abroad. China is targeting its feed investments in the Ukraine, as well as in other regions in Asia, Eastern Europe and Brazil.

In terms of social injustice, in the early 2000s, a large portion of pork producers in China were small farmers, whereas in 2015, this number dropped to 27%. The sector is now more industrialized and is losing its small producers, who are migrating to the cities.

What goes on during the industrialization process? The US uses a system of contracts in poultry and pork. This pits one small producer against another. Farmers cease to be farmers and become producers for these multinational meat corporations. In India, integration in poultry production is on the rise. The income producers receive depends on the quality of the chicks they receive and if they have enough resources to invest in the infrastructure to raise them. This sector used to be dominated by women, but now taken over by men who have more capital. In China, slaughtering operations are becoming increasingly concentrated in the hands of fewer and fewer companies, which means less jobs and more pressure on prices farmers receive. Furthermore, one of the most dangerous places to work in terms of accidents and disease in the US are the meat packing

plants. This is where the poorest people work, namely those who are Latin American, Asian and of African descent.

Another impact that is not discussed very much is the growing resistance to antibiotics, which is leading to the creation of super-bacteria. Over 80% of antibiotics sold in the U.S. are used on food animals. The more they are used, the more they pollute the soil and the water and generate anti-microbial resistance in the environment. There is no treatment for people who are contaminated by the super-bacteria, as the bacteria are resistant to antibiotics.

As for the animals' living conditions, they are bred to guarantee that they gain more weight in the least amount of time possible. Chickens lose their feathers, and pigs, their tails. They are treated as commodities pumped full of antibiotics and hormones, which we eventually consume.

When US President Obama came into office, he adopted a serious stance on the corporations' monopoly over the sector. For over a year, public consultations were held, during which numerous producers gave testimonies. The testimonies pointed to the conclusion that this system does not work and confirmed the need to put an end to this monopoly. Many recommendations were made as a result of this process. However, agribusiness fought back. Many elected politicians are in the hands of the corporations of this sector. All of the proceedings are available online, but nothing came of them. The government did not take action.

Other processes are also underway in the US. A movement has been formed to demand an increase in the national minimum wage. Groups are also mobilizing for better working conditions, also in the meat processing industry. A challenge is that US trade unions have lost their political power over time due to laws supported by corporations that have weakened their ability to organize.

There is also the "slow food" movement (in opposition to "fast food"), which is connected to agroecology. This movement is beginning to gain ground on the dominant corporate food culture, but still only represents a small portion of the market.

Consumers continue to eat this horrible, cheap food, but they are more aware about it than they were before. Concerned with the possible loss of profits, corporations like McDonalds and Tyson Foods are now talking about the possibility of eliminating antibiotics from their products. Consumers in the US are starting to wake up on some of these issues—and this is the right time to reflect and act on political opportunities.

The meat production chain in Brazil

Sergio Schlesinger

FASE consultant

Before we begin to reflect on the chain of meat production in Brazil, it should be highlighted that this chain includes everything from the production of animal feed, such as soybean and corn, to meat processing and packaging and

its sale in supermarkets. The data below shows Brazil’s position in global meat production and exports.

Table 1: Brazil’s position in world meat production and exports

Product	Ranking in production	Ranking in exports
Beef	1 st place	2 nd place
Soybean	2 nd place	1 st place
Chicken	3 rd place	1 st place
Corn	3 rd place	2 nd place
Pork	4 th place	4 th place

As can be seen above, Brazil is the largest beef producer in the world and the largest exporter of chicken and soybean. Soybean and the meat sector alone accounted for half of Brazil’s agricultural exports in 2014: soybean represented 14% of total exports, and meat, 8%.

Even though meat consumption has been historically linked to income levels, data on global consumption per inhabitant point to the existence of issues related to culture and where meat is produced. While per capita meat consumption is high in Europe and the US, in the South American continent of underdeveloped countries, consumption is disproportionately higher.

The government attributes Brazil’s leading position in world meat production and exports to the country’s “vocation for agribusiness”. However, what kind of vocation is this if it needs to be constantly stimulated? Stimulus was provided in the form of changes to legislation that, in 1980, led to a historical reduction of taxes on imports – on everything from agrochemicals to seeds – and exports of unprocessed commodities such as soybean. The changes also liberalized royalties and allowed profit remittances. The Biosecurity Law sanctioned the use of genetically-modified organisms and, more recently, the new Forest Code cleared the way for the expansion of production.

Official incentives for the export-oriented agribusiness sector include subsidized loans for crop production, livestock raising and purchasing machinery and equipment. Other subsidies include debt relief, the lowering of unpaid interest, the creation of Brazilian transnational corporations such as JBS and BRF, support for mergers and acquisitions, and exemptions from or decreases in other taxes. Furthermore, incentives are also provided in the form of research conducted by the *Empresa Brasileira de Pesquisa Agropecuária* (EMBRAPA, or the Brazilian Agricultural Research Corporation) on agribusiness products – and not basic food staples such as rice and beans. The latter are only the object of studies when the goal is to create genetically modified organisms.

Another important tool for providing incentives to agribusiness is state support for infrastructure. According to the 2015 *Programa de Investimento em Logística* (PIL, or Program of Investment in Logistics), for example, the government planned to invest nearly BRL 200 billion in infrastructure works that, in many cases, are closely linked to the export of commodities. The projects include, for example, ports and railway lines for transporting grain.

As part of this stimulus package for corporate agribusiness, public resources from the Brazilian Development Bank (*Banco Nacional de Desenvolvimento Econômico e Social*, BNDES) have been used to finance the international expansion of Brazilian corporations. Not only does the BNDES provide loans, but it also owns shares through the BNDESPar, a company created to manage the bank's shares in various companies. In the case of JBS, the Bank owns 24.58% of the company's shares; a *Caixa Econômica*, which belongs to the federal government, holds 10.8% of its shares. Although the BNDES does not have capital invested in *Brasil Foods*, large pension plans have invested in the firm.

In terms of the importance of this production chain in the Brazilian territory, 200 million hectares are currently being used for cattle raising – that is, an average of one cow per hectare. In the current harvest year, 32 million hectares were used to grow soybean, 15.7 million for corn, and 8,4 million for sugarcane. Beans, rice, and wheat – the basic food staples in the country – are cultivated on less than 8 million hectares of land.

The map of soybean production reveals a high concentration of this crop in the Central-west region. At the same time, soybean production is expanding in the states of Maranhão, Piauí, Tocantins and Bahia. It has stagnated in the south; there, soybean was traditionally produced by family farmers, but its production is increasingly dominated by large landowners.

Also in relation to soybean, there is a high level of concentration in terms of corporations and production. The US is the world's largest soy producer, and Brazil, the second largest. In South America, in addition to Brazil, soybean is also being extensively grown in Argentina, Bolivia and Uruguay. Even though this model is presented as a Brazilian model for success, it is not all that Brazilian. Borders do not exist. The largest area for the expansion of soybean production is South America.

The production of chickens in Brazil is geared primarily towards the domestic market: 68.4% of production is consumed internally, whereas 31% is exported. Concentration is high in this sector as well. Brazil is the world's largest exporter, with the US coming in second, and other countries exporting considerably lower amounts of chicken.

Global poultry production is concentrated in the US (19%), China (16%), Brazil (12%), EU (12%), Russia (4%), and Mexico (3%). JBS internationalized its operations by expanding to the US and Mexico – which are the first and sixth largest poultry producers in the world, respectively. The corporation is still having difficulty penetrating the EU and Chinese markets. In terms of consumption, the US leads with 15%, followed by Brazil with 9%, and Mexico, 3%. These are the countries where JBS is located. Global poultry sales are led by Brazil, with 34%, followed by the US, with 32%. Again, JBS is present there.

In relation to pork, JBS – which used to only produce beef – is now also active in this sector, especially in the US.

India has the largest bovine cattle herd in the world, with 30% of all cattle on the planet. The herd was considered non-commercial for religious reasons, which

is why cattle are highly concentrated in terms of space. Brazil has the second largest herd in the world, with 20.9% of all cattle. The agricultural census of 2005-2006 – the last one published – demonstrated that the state of Mato Grosso has the largest bovine herd in Brazil. It is also one of the biggest soy and corn producers in the country.

In terms of global production, Brazil produces 14% of all meat, coming in behind the US (16%), and ahead of the EU (11%). As for the different kinds of meat mentioned, Brazil is both a large producer and consumer. 11% of all beef is consumed in Brazil, which once again places it second behind the US, which consumes 16%. In terms of consumption per capita, the biggest beef consumers are Argentina and Uruguay, despite the fact that they are not rich countries, followed by Brazil and the US.

As for beef exports, India leads with 21%; followed by Brazil and Australia, with 19% each; and the US, with 12%. JBS is present in some of the largest exporting countries, such as Australia and the US.

In Brazil, the main corporations in the meat production chain are:

- agrochemicals: Bayer, BASF, and Bunge;
- seeds: Monsanto, DuPont, and Syngenta;
- machinery: John Deere, Case New-Holland, and AGCO;
- agricultural production: Tejar, SLC, Bom Futuro, and Vanguarda;
- grain trade: Bunge, Cargill, Dreyfus, and ADM;
- processing: JBS, BRF, Marfrig, Bunge, ADM, Cargill, and Dreyfus;
- processed food: Nestlé and BRF.

The importance of these corporations can be seen in the country's exports as well. Corporations from the meat, soybean, and corn industry were among the ten largest exporting companies in 2014: Bunge, JBS, BRF, Cargill, Dreyfus, and ADM. The majority of them are transnational corporations.

One of the main impacts is the concentration of land ownership. In Brazil, the level of concentration is higher in the state of Mato Grosso. In the municipality of Diamantino, for example, one can find large farms from 1,000 to 2,000 hectares in size, as well as farms of over 2,500 hectares. Another grave impact linked to the meat production chain is the use of agrochemicals. Unfortunately, Brazil leads in this area, being the largest consumer of agrochemicals in the world since 2008. Soybean, pastureland and corn account for 2/3 of consumption.

Jobs are also affected, as soybean production is increasingly migrating towards large farms. As production multiplies four-fold, jobs are divided by five. Paradoxically, the number of jobs falls drastically while production increases.

The shift towards integrated production systems, mainly for chicken and pigs, brings about a deterioration in working conditions, as farmers begin to work as if there were employees of the corporations, but with no job contract. Their workdays are exhausting, and they have no weekly day off with pay. Health and safety regulations are not followed. The corporations impose adhesion

contracts with abusive clauses on farmers, fail to pay enough to cover the full costs of production, establish prices unilaterally, and constantly demand that farmers make investments that require resources they do not have, leading them to take on high levels of debt.

One issue demanding a more thorough analysis in terms of impacts on human health in Brazil is the water pollution caused by the antibiotics in meat production. This process stimulates the development of super-bacteria and allergies, as well as a series of other problems.

The adoption of livestock raising models that prioritize confinement over free range (which is still predominant in Brazil) is one of the aspects of current changes to the sector that is cause for concern. Taking inspiration from models implemented in the US and the EU, JBS is beginning to experiment with confinement in Brazil. Even though the model may reduce deforestation, it generates other problems for the environment, such as increases in water and air pollution, and for animal welfare.

As mentioned earlier, the meat chain is occupying a growing amount of farmland, which is affecting the production of food staples, such as rice. As a result, 90% of the food consumed in Mato Grosso – the so-called “granary” of Brazil – is brought in from outside the state. This fact largely explains the inflation in food prices. Less food is produced there, the population continues to grow, demand is increasing, as are the prices.

While the high levels of water consumption are an important issue, there is yet another more serious problem with even greater impacts. The Central-West region – where soybean, corn production, and cattle raising are concentrated and the deforestation rates are the highest – is where the sources of seven of the primary water basins of Brazil are located. The country is experiencing a serious water crisis, which is being blamed on the lack of rain, while the direct connection between the impacts of meat production, deforestation, and the destruction of water sources is not being discussed.

As for greenhouse gas (GHG) emissions, livestock raising (namely cattle) alone is the largest source of emissions due to enteric fermentation (the digestive process that takes place in the rumen of ruminant herbivores, which produces methane). Moreover, it is provoking changes in land use, which also contribute to emissions.

In this context, the media and consumers have an important role to play. Society is generally not aware of the situation in rural areas and the problems generated by the meat industry. In the past, almost everyone had some connection to their food and knew where it came from and how it was produced. Today, with people being forced off the land and urban growth. Not only do people not know where their food comes from or how it is processed, but they often chose what they eat without knowing, for if they did know, they would have to stop eating.

Brazilian society is not mobilized on the issue of meat production and its impacts. JBS, for example, can produce and present food whatever way it wants in Brazil, without having to worry. In other countries, however, the corporation is

being forced to treat animals better. Civil society in Europe and the US have greater capacity to mobilize on this issue than we do here in Brazil.

There is yet another issue that is not often discussed due to the lack of information: fish. In many rivers today, there is no longer any fish – a fact that is also related to the production of other kinds of meat, such as beef, and the use of agrochemicals on corn, soybean, and cotton crops, which pollutes the rivers. Fish are also affected by the construction of hydroelectric dams and lack of sewage treatment. In some cases, the proposed 'solution' is to integrate artisanal fishermen into large-scale fish farming. Small fishermen are given eggs, feed, and antibiotics to raise fish based on the same model used for other types of meat.

Therefore, the meat production chain is an unsustainable global system of production and consumption that is rife with problems and that needs to be rethought. It is impossible to produce enough meat to ensure that everyone can consume the same amount.

Brazil and the transnational meat processing chain

Adhemar Mineiro

DIESSE and REBRIP

On September 10, 2015, two important news stories appeared in the *O Dia* newspaper in Rio de Janeiro. The first, published in the economy section, stated that Brazil was about to export dairy products to Russia for the first time. One of the dairy products mentioned was powdered milk. Second, in the section on politics, there was an article on JBS, the largest corporate group in the industry in Brazil. It was reported that with the help of the "cattle coalition" in Congress, JBS managed to have a summons that had been issued to one of its directors to testify in the Parliamentary Inquiry Committee on the BNDES canceled. Several representatives of corporations were called on to testify, but the JBS group – an important agent in the process of concentrating corporate ownership over the meat chain – was able to avoid the inquiry.

These news reports illustrate that the corporations involved in the meat production chain are part of a highly influential coalition. It also shows that Brazilian agribusiness's power is not only economical and financial; it is one of the sectors with the most political power in the country. Its power is the result of its influence on not only the National Congress, which it exerts through the parliamentary coalitions defending its interests, but also the executive branch. It is worth recalling that the corporations from this sector are among the biggest funders of the elections campaigns of both members of congress and senators, as well as candidates for positions in the executive branch.

The current Minister of Agriculture, Livestock and Food Supply, Kátia Abreu, for example, is the former president of the *Confederação Nacional da Agricultura e Pecuária* (CNA, the National Confederation of Agriculture). As the CNA is the main entity representing Brazilian agribusiness, it is obvious that

agribusiness corporations have easy access to and influence in the government, which enables them to guarantee financial support from the state.

Financial leverage is provided to the sector not only in the form of credit from the banking system (namely via public banks such as the Banco do Brasil and the BNDES) and shares owned by the BNDESPar, but also more generally, via budgetary resources that allow the corporations to renegotiate their debts. Debt relief is a kind of subsidy, which reveals the power of these corporations. What is more, there are also some less visible branches of the state that favor the private meat sector financially, such as the pension funds of state enterprises.

The three largest agribusiness corporations in Brazil – JBS, BRF and Marfrig – are perhaps the ones that responded the best to two demands made by the then President Luís Inácio Lula da Silva. In 2004, during an important speech, Lula stated that Brazil should not be only an exporter of agricultural and mineral commodities; instead, the country should advance in the value chain. In other words, it should not only extract minerals, but also have a steel industry to process them. Similarly, it should not only produce meat, but also process it and add value to it. All three corporations not only adopted the official discourse, but also received substantial financial support from the state. The other demand President Lula presented at the time was that Brazilian corporations internationalize their operations. That is exactly what they did.

Data on the chicken market demonstrates that the three largest slaughterhouses account for more than two thirds of the domestic market. One company alone – BRF – dominated a large portion of this market. This figure is from 2012, however, which means that the level of concentration is probably even higher today. In regards to pork, the four largest slaughterhouses slaughter 50% of pigs raised in Brazil – another figure that is likely to have increased, as it is from 2007; it is likely to be around 80% today. In the area of beef, the 10 largest meat processing plants – belonging to five corporations – account for nearly 30% of all animals slaughtered in Brazil. Again, this number dates back a few years.

The concentration in the sector is recent. Each group now has specialized in an area of the international meat market: JBS and Friboi, in cattle; Brasil Foods (BRF), chicken; and, Marfrig, prime cuts and veal.

It is important to highlight that BRF – which was the result of the merger between Sadia and Perdigão S.A. – was also an outcome of the international financial crisis. The Sadia Group was hit hard by the 2008 crisis due to its administrators' attempts to make easy money from derivatives. When they went bankrupt, the company followed suit. As a result, concentration in the market increased dramatically.

There is also a process that seeks to coordinate among chains of suppliers, supplies in general and machinery. Most access to credit today is conditioned on the mechanization of production, which generates demand for the machinery sector. Therefore, the process of financing the meat sector is also connected to transnational corporations specializing in machinery and supplies.

Furthermore, the Brazilian economy becomes increasingly dependent on the surplus in the balance of trade generated by the exports of the meat industry. Brazil exports numerous products, but in relation to the industrial sector, it also imports much of the industrial products it consumes. This means that the balance is negative in terms of balance of trade and manufactured products. The country's balance of trade is dependent on the export of primary goods, such as agricultural commodities, especially those that are linked to the initial phases of processing.

As mentioned earlier, the process to internationalize corporations from the meat industry was stimulated by financing, namely with the resources of the BNDES, which the meat corporations used to buy companies in other countries. While leverage was provided mainly in the form of credit, other resources from the state budget were used as well: debts were renegotiated and the government imposed legal obligations on the banking system to get it to fund agriculture. The main financial agents involved here were the *Banco do Brasil* and the BNDES. In addition to providing credit the sector, they also became shareholders in these corporations: debts that could not be paid were converted into company shares. BNDESPar and pension funds such as the *Previ* (the *Banco do Brasil* Employees' Pension Fund), which involve large corporations, now operate as a bloc and have a controlling stake in the corporations. This happens in not only the meat chain, but also other sectors, such as mining.

Therefore, one of the strategies organized civil society could adopt in relation to this chain is to intervene in the use of public resources and demand that criteria be adopted on how these funds are used, imposing, for example, the obligation to purchase products from the family farming sector. A dialogue – including one at the theoretical level – needs to be promoted on the use of capital from public funds. Workers can intervene directly thanks to their participation in the funds.

With regards to working conditions, livestock farming has the highest incidence of slave and forced labor in Brazil. Informality is also extremely high in this sector. This is part of our historic heritage, which has not been eradicated by the Lula and Dilma administrations. In the meat processing sector, work is described as extremely strenuous¹. At the same time, the meat industry operates in areas where it is very difficult for trade unions to intervene. Negotiations are not held, or when they are, they are conducted in a paternalist way. It is also very difficult for the Public Prosecutor's office to monitor and carry out inspections. Therefore, it is important to address the difficulties related to negotiations and the weaknesses of trade unions.

In terms of connections within the chain of production, integration processes exist in the southern part of the country that end up being a sophisticated form of subordination. Farmers are now far from being farmers and their roles have been marginalized in the industrialization process.

1 The entities involved in the organization of this workshop invited the workers from this sector, but for various reasons, they were not able to participate.

Furthermore, there are changes in the area of dairy production that we need to better understand. Up until 10 years ago, little value was given to the production of milk. Since then, however, production has expanded and begun to be considered an important element in the chain. Brazil began to produce milk and export dairy products. This change took place, however, as part of the process to concentrate ownership and mechanize production. Incentives were provided, but access to them was dependent on the fulfillment of requirements to mechanize production and on refrigeration, which demand major investments from workers integrated in the chain. These workers end up becoming dependent on distribution systems of either supermarkets or cooperatives that set the standard and the price. Prices are lowered and farmers who do not have anywhere else to sell are forced to accept the lower prices. The same process exists in the global fast food and processed meat markets, which demand specialized products that are only served to a certain type of consumer.

The main environmental impacts include changes to soil and water use and waste management, especially in areas near meat plants. These impacts affect the local population directly, but also reach the macro level.

In the context of the meat production chain, one can see how agribusiness uses the media to win over “hearts and minds” in Brazilian society. When the Constitution was being finalized in 1988, large landowners had a very negative image. Today, the old, unproductive “latifundia” system is known as “agribusiness”, a symbol of productivity and sustainability, and the sector appears to have been absolved of its negative past. To change their image, the corporations invested heavily in publicity. They even hired famous artists and athletes such as Pelé and Tony Ramos for their advertisements and rural programs.

The negative image of the large landowners has been altered to the point where this dispute must be taken up once again at the symbolic level. The problem is that not only has the sector gained considerable political and economic strength, but it has also succeeded in modifying its image and overcoming the idea of it being backward and primitive in nature. It has transferred this image to everything that is not agribusiness. Today, family farming is treated as primitive, something that can be kept as a picturesque activity, since it is impossible to hire all farmers. It must, however, remain on the edge of the market – in rural tourism, for example. They are turning family farmers into a tourist attraction. Organic products free from antibiotics are being sold with no guarantee that they are in fact organic and free from antibiotics. What is more, they are very expensive for the majority of the population.

Organic markets and systems to buy directly from small producers exist, but they do not affect the hegemonic meat production system and are unable to put forth a more comprehensive critical analysis that points to something new. In fact, there is concern that these initiatives might actually reinforce the system by remaining as an alternative niche that does not alter the system. Instead, they allow a portion of small farmers to continue working and certain classes of the urban population to have a clear conscience.

The Brazil – European Union connection

Tobias Reichert

German Watch

Livestock raising is one of the main factors contributing to many global environmental and social concerns. In this context, the connection between the different markets need to be analyzed, especially the growing transnationalization of animal production – of both meat and dairy products – and the links to trade agreements. As Brazilian corporations from the meat industry are not very active in Europe, and the country does not maintain strong trade relations with the continent, we will address one of the main ingredients in and motors of the chain: soybean.

Over the past 40 years, the system of meat production in Europe has undergone structural change. In Germany, there used to be more than 800,000 pork producers, 600,000 dairy producers, and 200,000 chicken producers. These numbers decreased substantially, especially in the case of chicken. Of the 200,000 producers, there are only 4,000 today; 98% have left the sector in the last 30 years. The situation is similar for pig farming: today, there are only around 35,000 producers. At the same time, production has increased. Germany stopped being a net importer of pork and became a net exporter. Its cattle production is extensive, and its pork, cheap. It now exports as much as the United States does.

It was mentioned earlier that historically, Brazil has not been a net exporter of products with high value-added. The same can be said for Germany in relation to the meat industry: its exports are dominated by unprocessed goods with low value-added, such as pork and powdered milk.

In the case of dairy products, there has been a slightly slower decline in the number of producers. This was mainly due to the policy that up until 2015 limited the quantity of dairy products produced in the entire European Union by demanding that producers purchase rights to produce. This limited the extent of the structural changes in the dairy industry in comparison to other sectors, which had reduced their area of production by approximately 80%. In April 2015, this policy was abandoned and prices fell drastically, which means more structural changes in the near future.

Structural change entails modifications to land use as well. The area for permanent grassland and pasture in Germany was drastically reduced from more than 6 million to less than 5 million hectares, even though the country grew in size since the fall of the Berlin wall. The tendency is for this number to continue to drop.

There is also pastureland on which no animals are raised, but where the grass is cut for stables. This is the most environmentally sustainable form of grazing, which was reduced from nearly 3 million hectares in the 1950s to less than 1 million hectares today. What has increased in terms of land use is the area planted for corn. In 1950, there was practically no corn grown in the country, as it is not a staple in Germany. Corn is now being produced for animal feed.

However, as corn does not contain protein, energy needs to be supplemented with a source of protein and the best way to do that – for both the animals' digestion and in market terms – is to use soybean. As such, 80% of soybean is used to feed animals and 20%, for oil. This data is for Germany, but the trend is similar in the rest of Europe.

The EU imports agricultural products – not in value, but in quantity: more than two thirds is used for animal feed. Half of this amount is soybean, which is used especially for animal feed and human consumption, and not so much for oil. A large part of agriculture in the EU is based on soybean imports. In the early 1960s, soybean imports were low in the EU. They increased significantly, mainly in the early 2000s, due to the outbreak of the mad cow disease, which led to the ban of animal feed based on animal by-products; this, in turn, led to more soybean imports. Since 2008, even though the production of pork and dairy products have increased, the upward trend in soybean imports was brought to a halt by the adoption of a biodiesel policy that subsidizes the replacement of soybean with grape seeds. China's growing demand for soybean has also been increasing competitiveness and the prices.

Where does the soybean come from? Soybean production rose in the US and there has also been a significant increase in Brazil. Argentina also produces it and Paraguay, to a lesser extent. Germany imports over half of its soybean from Brazil, 20% from Argentina, 15% from the US, and 7% from Paraguay. Brazil is the main source of soybean for the EU.

This process has led to the concentration of livestock production mainly in north-eastern Germany, and then Sweden, Denmark, the Netherlands, northern France, and the south of England. While there are several reasons to explain the location of this production, the existence of the primary ports in Europe makes the feed supply more competitive.

As for environmental impacts, in the regions where production is concentrated the most, nitrogen levels are high as a result of the manure. The quantity of animals is so high that the soil is unable to process all of the manure dumped on it. This concentration is increasing due to the liberalization of the limits on dairy production, which is migrating to regions where the industrialized production of poultry and pork already exists. Dairy production relies heavily on soybean as a source of protein: one third of soybean is used to produce dairy products.

China and Sub-Saharan Africa are the main destinations for the majority of dairy exports. Dependent on soybean, dairy production in an industrialized system is currently expanding and exacerbating the environmental problems related to water and soil contamination.

The EU's trade relation with Brazil is mainly focused on soybean imports. The EU does not import much meat from Brazil due to the foot-and-mouth disease. The disease led to a decrease in the consumption of beef, which has been replaced by chicken and other products. This affected Brazilian exports. The EU is Brazil's main competitor in terms of pork exports.

The meat industry has the worst record for working conditions in Germany. A large proportion of workers are migrants, especially from eastern European countries, such as Poland, the Ukraine and Belarus. Workers are paid on the basis of their productivity: the more pigs they kill, the more they receive. Companies use this to avoid paying minimum wage in Germany.

There are also serious health problems, namely resistance to antibiotics. It is very difficult to treat farmers contaminated by the bacteria: as they are in direct contact daily with antibiotics, the antibiotics stop working in their bodies.

In terms of concentration, among the largest corporations in the world, only two are from the EU, as the EU meat market is fragmented. Even so, similar effects caused by industrial meat production can be seen. Furthermore, an important pattern is emerging due to the liberalization of the milk quota system and the relation with soybean imports, which allow for high levels of meat and dairy production that would otherwise be impossible without feed.

As for the political situation, Europe is diverse and schizophrenic. There is enormous concern with animal welfare – that is, with the fact that pigs have their tails cut off, and chickens, their beaks burnt to prevent them from engaging in cannibalism in confined spaces. Even though this situation is causing growing discontent among consumers, they continue buying cheap meat. They are more aware, but not to the point where they will pay more so that different production methods can be used.

In relation to votes, in the region that produces the most meat in Germany, the Green Party made important advances in the last election thanks to people concerned with the pollution, smell and dust from production. Also, the Minister of Agriculture is from the Green Party. These are examples of some elements that stimulate some changes.

While there are many forces in favor of change, the agribusiness model is still well organized and therefore, there is not a clear picture on what direction things will take. The corporations want to improve the issue of animal welfare, but if they do, they will not be able to export as much as they do now. There are many mobilizations, such as the ones against agricultural fairs. There is a highly mobilized minority and a large majority that believe that things are wrong, especially in regards to animal well-being. At the same time, however, the majority prefers to avoid structural change.

What is most troubling in relation to agriculture in the European Union is the current composition of the European Commission. This Commission appears to be the most favorable one towards agribusiness in a long time. The previous Commission used to perceive the problems in the meat industry and, therefore, presented proposals to improve the chain of production. Now, however, with the current president of the Commission, there is a real risk of proposals that will make the situation worse being approved. The public wants more rights for animals, but the European Parliament is not showing any signs of being able to defeat the industry.

The meat complex in Brazil and its territorial, social and environmental Impacts

The industrial meat chain: food security and sovereignty and agroecology

Claudia Job Schmidt
CPDA

The expansion of the grain and meat complex to gigantic proportions, which has led to the establishment of a dysfunctional global agro-food system, is a phenomenon that occurred over a period of less than 50-60 years. In the post-2008 crisis period, we began to face an intense process of corporate concentration, in which these two sectors generate synergies that favored their tremendous growth. If we were dealing only with the production of soybean for human consumption, there would be limits. But since animals are also devouring soybean, there are many other impacts as well.

It is important to highlight that in the family farming system, livestock plays several roles that are unrelated to the production of commodities. The animals represent a labor force that is not linked to fossil fuels and a product that serves as a reserve, a guarantee of food security, a means of transportation, and a store of value – that is, something that can be sold on the market for money when a health problem arises in the family. This “reserve” also recycles nutrients, even though the synergy of the system is being weakened, and is a source of various raw materials. Animal farming plays a central role in our culture and produces a series of sub-products that we use.

If we look at the intensive large-scale system and the proportions it is reaching globally, we can see that other forms of production are suffering not only from the expansion of this complex, but also due to other dynamics, such as difficulties in accessing land, water and biodiversity, and competition in rural areas. In Brazil, for example, the “faxinal” systems in the South and the pastoral systems in the Northeast that are based on the collective use of the land, water and biodiversity are increasingly under pressure. As a result, many are being forced to settle, as they increasingly lose access to areas of common use. This, in turn, has a series of impacts on their ways of life. Mixed family farming systems are also under pressure.

Another very extensive system that they are attempting to impose on the pastoral communities, which involves the use of enormous areas, is the commercial system used by ranchers, who are constantly plundering nature.

To reflect on what the transition from the current system of meat production would be like, we need to take into consideration this plurality of systems and expressions, and the possibilities that each one of them has to offer.

We now come to the great tale told on the relation between supply and demand, technology and productivity, which began during the Green Revolution and continues up until now. This great tale is founded on a few core ideas: (1) there is an enormous demand for food; (2) the people who demand food are in cities, a situation that is seen as permanent and does not open up any possibility for alternative configurations; and (3) people live better today because they eat more meat.

This is quite a nebulous and inexorable symbolic construction, which makes adopting other approaches difficult. From a food security perspective, who would be against the poor having access to a regular supply of protein? There are estimates on how much meat is necessary to satisfy this demand.

In this context, our attempts to build an alternative discourse that can dialogue with a broad range of sectors of society are limited. The way the issue is presented makes it appear as if it is a question of adjusting supply and demand and, as such, technology is needed to guarantee supply. Thus, livestock production has taken an incredible biological leap, not in terms of quality or energy efficiency, but rather in volume: there has been an increase from 30% to 60%. Therefore, we have all the elements we need to understand the process: according to this view, it is a question of access to food, and not the quality of food. This dimension outweighs all others: the energy crisis is not being contemplated, nor is the stability of the food supply or other related issues.

We are thus becoming dependent on large land surfaces. There is a general perception that we are running out of areas to incorporate in this process. This increase in productivity will have to be achieved, then, via the intensification of production on larger units of land. Due to competition for the use of land, this same area will have to be capable of producing biofuels as well. As a result, the door is beginning to close on the possibility of building alternatives.

There is yet another complication in the case of the meat chain. The sector has been developing its discourse on sustainability and building a global agenda on the sustainable production of meat. A global articulation already exists that seeks to respond to criticisms raised on pollutants, emissions and animal welfare.

Nonetheless, we can identify some weak points in the great tale on the transition. First, the environmental costs of agribusiness's extensive production, the emissions it generates, and the use and contamination of water are cause for concern. These are points on which we have to continue fighting. The second issue is food quality and security. This is an issue that bothers people and therefore, it is in dispute. Here, we were able to advance in the fight against agribusiness with the work of the "A warning on the impacts of agrochemicals on health"

campaign elaborated by *Associação Brasileira de Saúde Coletiva (Abrasco*, or the Brazilian Association of Collective Health) and by relating agrochemicals to animal production. There was talk on hormones and the industry denied it. There is a void on antibiotics. There is also concern on the need for a genetic pool, which explains certain efforts to involve family farming. The problem is that a lot is being justified in the name of family farming. They are refuting the need to eliminate the use of antibiotics by arguing that family farmers who depend on cattle need to control disease, for example. And finally, there is the issue of energy and the use of oil. Just as there was talk of peak oil, there is now talk of a phosphorus crisis.

It is a myth that this type of corporate agriculture is efficient. Various elements show that in terms of energy use and external inputs, it consumes more than it generates. Technology is understood from a narrow point of view, which sees it as a technological artifact and not the capacity to generate technological processes based on a different conception of productivity in the long term. Industrial agriculture uses an external energy source to generate productivity. Studies on organic farming, on the other hand, demonstrate its productivity and its capacity to fix nitrogen in the soil.

The agriculture of the future will be able to respond in terms of diverse productivities, for instance in the productivity of biomass. It is clear that a growing population will increase the consumption of biomass. We need to disseminate more information on what we understand as ecologically-based technology and put forward elements to unmask this oil-based agriculture that is concentrated on productivity and focused on very specific crops. It is expensive and dependent on oil, whose future is uncertain.

In relation to the issue of consumption, problems also exist. While consumption did not increase much here in Brazil, it did for certain types of food. This increase occurred because the data collected is per household, when nearly 30% of food is consumed outside the home.

To conclude, then, it is important to highlight that we are dealing with a technical discussion on the transition of the meat chain, in which industrial aspects take precedence over social issues, and over traditional ways of life in particular. However, we need to think of how we can translate this discussion that is becoming increasingly technical, as if variables could be manipulated. In fact, there is less and less public regulation over the processes and that what we have now are large private complexes. Changes have been made to agricultural policy and in legislation in general, as in the case of health surveillance. This forces us to analyze the role of the state in controlling transnational corporations and our room to maneuver to take action.

We need to reflect on how we can strengthen alternative experiences, knowing that, at least in Brazil, it is somewhat harder to find an excellent agro-ecological experience in animal production that is well connected to the market than one that is focused on producing vegetables.

Labor relations and workers' health

André Campos

Repórter Brasil

In 1995, Brazil recognized that modern forms of slave labor existed in the country and set up a group to investigate. Since then, the investigation process has expanded considerably: 2,000 estates are now inspected every year. Data reveals that between 2003 and 2013, in Brazil, the sector with the highest number of workers freed from situations of slave labor was the livestock sector: in this sector alone, more than 11,000 workers were liberated, which represent 27% of the total. Sugarcane followed with 25%. Other plantations such as soybean and corn are also important in this sense. It is worth recalling that even though these numbers are high, they do not provide an accurate portrait of the situation. There are not enough resources to follow up on all denunciations and many cases have not been denounced.

According to data from the first half of 2014, livestock raising did not come in first place. It ranked third, after non-agricultural activities and other types of agricultural production. However, it would be misleading to believe that the problem is being resolved. Its third-place ranking has more to do with the dynamics of the inspections, which were expanded to urban areas. There is no indication that slave labor is on the decline.

In 2003, Reporter Brazil was requested to investigate the meat market and identify the profile of meat suppliers in relation to the use of slave labor. The study revealed that, contrary to what one imagined, rudimentary, regional producers were not involved in this practice. Modern forms of slave labor were found on large farms linked to the international market and transnational corporations. We began, then, to pressure corporations to make commitments in relation to their suppliers.

It was in this context that the National Pact for the Eradication of Slave Labor emerged. It was presented as the corporations' commitment to not buy from producers that are found to be connected to slave labor according to information provided by the government's blacklist on slave labor. The meat sector has always been very resistant to making any commitment along these lines. However, this began to change in 2010 and 2011 when some companies signed the Pact. We have managed to reach the point where the largest corporations in this sector – JBF, Marfrig, Minerva and BRF – are signatories, meaning they have formally committed to not do business with farmers on the "dirty list".

In 2015, the discourse of these corporations – expressed via the Corporate Sustainability Forum, for example – is that they have resolved the problem of slave labor in the chain of production, and have put policies in place to combat this problem and that of illegal deforestation. The discourse is being built as if the meat chain no longer had any connection to deforestation and slave labor. However, more recent studies indicate that while the largest corporations did adopt policies that prohibit purchasing directly from producers on the slave labor blacklist, intermediaries have appeared that allow this meat to get to the

meat processing plants. In some cases, this intermediation also takes place in the form of “cow laundering” – that is, when a producer on one of the dirty lists falsifies the sale of an animal to a relative, who then sells it to the meat processing plant.

Reporter Brasil conducted a case study on this issue. The producer Ezequiel Castanha and his father, Onério Castanha, were accused of forming a land-grabbing gang. Both were arrested and tried and are on the blacklists for slave labor and illegal deforestation. The case study revealed that Onério Castanha transferred a thousand head of cattle that were in his name to Cirineide, his wife and mother of Ezequiel, which were then sold to JBS. In other words, the discourse that the meat processing plants are no longer part of the problem is fallacious. Reporter Brasil is attempting to pursue this study further to show that this is not an isolated problem, but rather one that happens on a large scale. The livestock industry is about to win over the opinion of the big markets by selling the idea that it has resolved the problem. We must therefore mobilize to show that this is not what is actually happening.

One of the problems we face today is in relation to the government’s dirty list on slave labor. In December 2014, the Federal Supreme Court issued an order that prevented the government from disclosing this information. The court order was a response to a complaint the corporations filed in which they allege that the list punishes actors without ensuring them the right to a defense. In May 2015, we obtained an “alternative dirty list” by using the access to information act, but this list is not used as a regulatory reference for restricting public financing and there are no formal guarantees that the private companies are using it. Therefore, there is currently a gap in information on slave labor, at a time when the meat corporations are expanding.

Thus, we face the following challenges in relation to livestock farming: guarantee access to information on employers caught using slave labor by reinstating the use of the “dirty list”; until we are able to do so, get companies committed to limiting business with producers involved in slave labor to use the “alternative dirty list”; make it possible to trace bovine cattle from their birth to their slaughter and ensure transparent access to animal movement permits (*Guias de Trânsito Animal*, or GTA in Portuguese); and promote among small and medium-sized meat processing plants practices to restrict buying from livestock producers involved in slave labor.

As for the situation in industrial meat processing plants, workers who prepare the meat face a series of situations that are harmful to their health, such as constant exposure to sharp instruments, which can result in accidents and mutilations. Another problem is repetitive strain injuries (RSI). Furthermore, workers are subject to long workdays: they often work more than 10 hours a day, which exceeds the 8-hour workday established by the Brazilian labor code, the *Consolidação das Leis do Trabalho* (CLT, or the Consolidation of Labor Laws), and work on Saturdays. This reduces their working life: they spend 5 to 10 years in the industry, and after that, they are unable to work in other areas that involve manual labor. Moreover, there is intense psychological pressure to deal with the hallucinating production rate. Workers are demanded to maintain

high productivity levels: they have to keep the production line moving, cannot stop to go to the washroom, look up from their work, or talk. There is a list of people fired for being less productive. The environment is suffocating and cold, which also worsens the workers' health. As production is linked to the volatile commodity market, reports from workers show that the speed of the production line and the demands only increase.

Statistics from the information reported to the government show that workers who slaughter cattle have 3 times more injuries to the abdomen, shoulders, and arms than other workers, and 2.5 times more back problems. Those who work slaughtering chickens and pigs suffer 4.26 times more from inflammation in their muscles and tendons, and 7.4 times more wrist injuries. While these numbers seem high, they are lower than they should be, as numerous accidents and diseases go unreported. The situation is even worse when one considers the number of workers hired: in 2012, 750,000 workers were hired to work on the assembly lines of the meat processing plants. The *Instituto Nacional de Seguro Social* (INSS, or the National Social Security Institute) does not, however, recognize RSI as a disease, making it difficult for workers to obtain leave with pay.

With this in mind, a regulation (NR 36) was adopted two years ago to institute 60-minute breaks throughout the workday. It also promoted rotating tasks among workers and alternating between working while seated and working standing up, as well as changes in security and the ergonomics of machines and the workplace. Inspections show, however, that companies are not complying with this regulation and it has not succeeded in introducing change, as the problems continue. In February 2015, in the municipality of Passo Fundo, JBS received 32 notices of violation for failure to comply with the norm. In March 2015, Frigorífico Silva was closed for non-compliance with ergonomic standards. In May 2015, Marfrig's operations in Bagé were halted for failure to comply with security measures. This shows, therefore, that further investigation is needed.

It is also necessary to reflect on the role of the Brazilian Development Bank (BNDES) and the contradiction that lies in demanding certain practices from companies that receive financing from the BNDES when the bank itself is a shareholder. It is important to highlight that the BNDES is a state bank, and therefore, the social and environmental impacts of the projects it funds generate costs for the state. The Brazilian health care system is often called on to cover the cost of workers who are sick, injured or retired for disability as a result of their work in the meat plants. Furthermore, it is necessary to create an external audit system and direct information channels to modify the logic of self-declaration; otherwise, cases of injury and illnesses will continue to go underreported.

It is worth highlighting that the industry's ramifications go beyond meat. The case of cattle, for example, brings the following phrase to mind, "the only part of the cow that does not get used is its moo". There are also by-products, such as leather, energy, and biofuels generated from cattle tallow; after soybean, this kind of biofuel represents 20% of all biofuels produced for the automotive sector. Therefore, it is important to consider to what extent the companies producing these by-products are being held responsible for the socio-environmental

impacts of the meat chain in Brazil. We need to expand our scope to include the wide range of companies and sectors linked to animal production that contribute to this process. It is, in fact, a very broad market.

Social and environmental impacts of the industrial meat chain in the state of Mato Grosso

The current situation in the state

Leonel Wohlfahrt

FASE-MT

The population of the state of Mato Grosso (MT) is estimated at 3 million people in 2010 and was predicted to increase 7.59% in 2015. The situation varies, though, from one part of the state to another. In the soybean region, migration reached 21% during this period.

Close to 14% of all cattle in the country are raised in the state of Mato Grosso, where there are 8.9 heads per inhabitant. As for pork, there are nearly 2 million pigs, of which sows do not make up 10% of the total. This reveals a problem that exists in relation to the continuity of production. There are also 39 million domestic fowl, of which 10 million are hens. This indicates that the industry is prepared to grow.

Nearly 8 million hectares are used to produce soybean. While this represents less than 10% of the state's territory, the 13th parallel passes through the state. The area above the parallel is considered the Amazon region, where soybean production is only allowed to occupy 20% of the area. This limit is not respected and the situation is likely to get worse with the changes made recently to the Forest Code, which helped to legitimize deforestation and the privileges of large producers. It is estimated that soybean production will increase 4%. Corn is grown on 3.5 million hectares, which is estimated to increase 6%. Cotton – the crop that uses the most agrochemicals – occupies a small area, but the estimates of its increase remain concealed. Cassava, which is used as feed for fowl, is also grown in the state, as well as sugarcane.

Soybean production, which is the most sellable item in the meat chain, causes various impacts, such as internal migration. Production is migrating to more peripheral areas, including the lowland plains, mainly because of land prices. Prices are extremely high wherever soybean is grown. Wherever the HDI is lower, the price is lower.

In relation to public health, soy production has grave impacts on the quality of water and on land due to the intense use of agrochemicals. In Brazil, the largest consumer of agrochemicals in the world, 7.2 liters of agrochemicals are used per inhabitant, whereas in MT, this number jumps to 40 liters per person, increasing the incidence of illnesses such as cancer exponentially.

Traditional communities and the peoples of the lowland areas – and thus, their crops – are being destroyed by the arrival of soybean in municipalities where there is extensive cattle raising. The implementation of the Paraguay-Paraná waterway, which is strongly linked to agribusiness, also has severe environmental impacts. Furthermore, Mato Grosso comes in second place in terms of the use of slave labor.

Some delays in production still exist, especially for cattle, and, as a result, productivity levels are low. Pork and poultry is shipped to the south of the country for processing, which creates transportation problems and accidents. Furthermore, JBS is buying slaughterhouses and meat processing plants and shuts them down later, thereby eliminating thousands of jobs. In the region of Grande Cárcere, which is made up of 20 municipalities and has the lowest HDI in the state, JBS acquired and then closed down meat processing plants, eliminating over 2,000 jobs and leaving two municipalities in disarray.

A strategy has been adopted in the state to strengthen livestock production. For nearly two years now, an aggressive campaign has been circulating in the media in the region to get people to view the model differently. In the Grande Cáceres region, for example, where many traditional communities live, local authorities promote agribusiness in the media and organize meetings to “sell” its positive image and affirm, among other untruths, that the Lucas do Rio Verde municipality is rich because producers there plant soybean. Furthermore, legal and judicial instruments have been used to advance this strategy. The new Forest Code, for example, created the *Cadastro Ambiental Rural* (CAR, or Rural Environmental Registry), which will end up legalizing land grabbing and serve as an assessment tool that the corporations can use to identify the paths they will take.

Agribusiness and the general approval of soybean and corn end up masking the ills of the meat chain. It is more complex than just “an issue”, but we have not been able to address its complexity and incorporate this chain into our approaches to resistance in our territories.

The current situation in one region

Nilfo Wandscheer

STTR Lucas de Rio Verde

All of the cities in the north of the state of Mato Grosso, such as Lucas de Rio Verde and Nova Mutum, are part of the largest complex of soybean, corn, and pork and poultry processing plants in Latin America. It is a region marked by large-scale grain and meat production and, therefore, deforestation and slave labor as well.

To make things worse, there is a lack of government investment in family farming. How do we demand a new model for agriculture and livestock production in a state where 90% of fruit and vegetables is brought in from outside? In addition to deforestation and pollution, there are the problems linked to the use of agrochemicals and raising cattle in confinement. There is also the fact that the

majority (90%) of the workers in the pork and poultry industry are from the Northeast. Houses were built for them by the *Minha Casa, Minha Vida* (My House, My Life) program, and every week, 3 or 4 buses full of workers from the states of Paraíba, Maranhão and Pernambuco arrive in the area. They are now returning to their states of origin because their salary does not even cover the minimum: after deductions for transportation, food and housing, there is not even BRL 400 (about USD 112) left over for the workers and their families.

In parallel to this, our experience shows that consumers are concerned with the situation and are looking for healthier food to consume. The population is beginning to question this model.

However, a strategy has been developed to strengthen the model in the region. One radio station airs a program of more than 30 minutes on agribusiness. But does the *Federação Nacional dos Trabalhadores e Trabalhadoras na Agricultura Familiar* (FETRAF, or the National Federation of Family Farm Workers) and the *Confederação Nacional de Trabalhadores na Agricultura*, (CONTAG, or National Confederation of Agricultural Workers) have space to talk about family farming? Small farmers, land reform settlers and the population hear only about agribusiness. They do not hear anything about the real situation of family farmers.

This production chain also has a project to link the local and the regional to the global level: multinationals are building a large ethanol industry in Lucas do Rio Verde. Studies indicate that the region has certain advantages in terms of climate and logistics (with the railway that is being built); but the most attractive element is the fact that there is no lack of water.

Therefore, we need to assess how we can intervene and coordinate our efforts in a region like this one, while taking into consideration our weaknesses. How can we promote the debate in the region in order to mobilize social movements that are somewhat demobilized? We no longer produce leaders, as people are being bombarded with information on the other model. Alternatives must therefore be built. If one day, we are not able to produce anymore, the same thing as when the truck drivers went on strike – when food ran out in the supermarkets – will happen. How many days will we last? A study is needed to show the importance of an alternative model and how the current model is unsustainable. Agribusiness has money to pay its researchers to produce knowledge on its model's viability. And what about us?

The environmental safeguards and restrictions of the BNDES

Maria Elena Rodriguez
IBASE

The *Banco Nacional de Desenvolvimento Econômico e Social* (BNDES, or the Brazilian Development Bank) has had a policy to promote the development of the meat industry since 1994 – a time when the sector was considered particularly strategic for the national economy. Since then, the bank's investments in the sector

have quadrupled. Up until last year, the BNDES had provided BRL 11 billion (UDS 3 billion) through BNDESPar, and BRL 8 billion via the regular loans system to the sector. The BNDES is thus responsible for this sector in Brazil and the current boom it is experiencing in the national and international economy.

When we are thinking of safeguards and restrictions, it is important to keep in mind the fact that the BNDES is forking out a lot of resources to strengthen the meat industry. The industry continues to have privileged access to sizeable loans thanks to the BNDES' role as a shareholder. Investments increased in the first half of this year in comparison to 2015. Thus, even at a time of "crisis" and a contraction in loans, the BNDES continues to favor the meat sector by providing it with privileged access to financing.

In relation to its environmental commitments, the BNDES is a signatory of the *Protocolo Verde* (Green Protocol) set up by Brazilian public financial institutions and the Ministry of the Environment, as well as the *Protocolo de Intenções pela Responsabilidade Socioambiental* (Protocol of Intentions for Socio-environmental Responsibility). It is also governed by the Central Bank regulations adopted in 2014, which stipulate that all banks must have an environmental policy. The BNDES is in the process of adjusting its environmental policy.

On the international level, since 1992, the BNDES has been involved in a partnership between the international financial and banking sectors and the United Nations (UN) on the promotion of sustainable and social policies. The partnership is part of the United Nations Environment Programme (UNEP FI). The BNDES is not a signatory of the Equator Principles.²

The BNDES states that it recognizes that respecting socio-environmental principles is of fundamental importance when granting credit and confirmed its commitment to "making resources available for the promotion of socially and environmentally sustainable activities".

In terms of instruments, the BNDES has sector-based resolutions (such as criteria and guidelines for cattle raising), specific policies and other regulations in place. The projects go through a risk assessment and internal social and environmental evaluation process. The socio-environmental guidelines provide methodologies to use to assess beneficiaries and credit risks, and to monitor and assess project impacts. Supposedly, one fundamental element of the guidelines is that they show employees how to elaborate environmental policies. Although the guidelines should include mechanisms for dealing with risks and the concrete measures that need to be taken to avoid them, they merely present general information on the sector. The BNDES' policy could be considered educational and conducive to improving its internal and external practices, but it does not lead to sanctions.

The BNDES has socio-environmental guidelines for cattle raising that must be followed by corporations applying for financing or stakes in companies.

2 The Equator Principles are a set of socio-environmental requirements used to assess large projects for funding.

Meat processing and packing corporations must prove that their suppliers have not been found guilty of invading indigenous peoples' land, discrimination, child or slave labor, or operating in areas that have been embargoed by the *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* (IBAMA, or Brazilian Institute of Environment and Renewable Natural Resources). They must commit to keeping their list of suppliers up-to-date and verify compliance with rules. They must also elaborate a plan for implementation with targets and timelines for obtaining environmental permits, set up environmental management systems, and improve liquid and solid waste indicators. Furthermore, they have to sign up for a tracking system used to trace cattle throughout the entire chain of production – from the animal's birth to its slaughter – and verify the compliance of the supply chain with environmental standards. When purchasing animals registered in the tracking system, the system allows them to follow the criteria established for direct suppliers and verify if the farms involved are complying with environmental regulations based on information from official institutions, including Resolution nº. 1854 from 2009 – that is, the BNDES's socio-environmental criteria.

The BNDES' "Criteria and Guidelines for the Cattle Raising Chain" include measures on direct suppliers' compliance with socio-environmental standards; meat corporations' socio-environmental development plans; the implementation of a tracking system; support to ensure the entire supply chain's compliance with socio-environmental regulations; and an independent audit to verify compliance with the socio-environmental guidelines.

The socio-environmental guidelines must contain: a description of the main technical aspects of the project; the information needed to determine the socio-environmental profile of the project/applicant and for risk assessment; and indications on the BNDES' socio-environmental policy for the sector, with the criteria and guidelines established by the Board of Directors' resolutions. However, concrete measures are not included.

In regards to the classification of the projects submitted, environmental aspects must be taken into consideration throughout the project's entire cycle, up until the time the loan is released. The first part of the classification process is based on a self-declared questionnaire that includes: project location; project description; the company's vision and environmental practices; the status of the company's permit; the status of the permit for the project; and the existence of environmental liabilities.

Environmental risks are classified as level A, B or C. Level "A" is for activities that risk causing significant or regional environmental impacts. To obtain a permit for such projects, impact assessments, preventative measures and mitigation actions are required. Level "B" activities are those with less severe or local environmental impacts for which assessments and specific measures are required. Level "C" is for activities that do not, in principle, pose a risk to the environment. The projects of the meat industry are classified at the low-impact level. More general recommendations also exist, such as incentives for energy efficient projects and socio-environmental certification for suppliers.

When making the decision to approve a project or not, the BNDES must consider: compliance with the country's legislation (tax, labor, social and environmental laws); opportunities for socio-environmental investments; the socio-environmental guidelines; compliance with environmental regulations (installation permit, adjustment of conduct agreement); and other conditions.

The monitoring process involves monitoring compliance with socio-environmental regulations and other conditions, the status of the operating permit, and socio-environmental performance, as well as conducting independent audits.

Officially, the only procedure that is robust enough to be considered a safeguard in the process of evaluating projects for funding is the verification of the legal background and the competency of those who will execute the project (checklist on formal compliance with environmental and labor laws). The BNDES does not monitor the projects' impacts, much less the effectiveness of the compensation measures for socio-environmental damage foreseen in each project, even though it is aware of the limitations of the government monitoring, control and inspection systems.

Lack of transparency is a problem found throughout the project cycle. The BNDES should be forced to make the socio-environmental classification of the projects public. In general, its assessment is that there are no risks. If this were made public, we would be in a better position to contest it. The BNDES does not give continuity to the process once funding has been granted. Post-funding monitoring is nonexistent, even in cases where the BNDES provides more funding to the project at a later date.

Therefore, we present the following recommendations on the BNDES:

- Adopt administrative measures for the implementation of Resolution nº 1854/2009.
- Conduct independent audits of the loans granted to corporations who have not fulfilled their legal obligations.
- Restrict credit to livestock producers and meat processing plants that are not adopting measures to ensure compliance with environmental and social legislation.
- Adopt the "dirty list" on slave labor as a criteria for granting credit. The BNDES has already made a commitment on this.
- Establish mechanisms to assess the impacts of projects funded by the BNDES, which includes pre-defined methodologies and criteria, and ensure transparency to allow for social control and monitoring.

The BNDES needs to see socio-environmental issues as assets, and not liabilities. It must also recognize not only the criticisms that it receives, but also the assets it can set into motion. The issue that needs to be raised is: what development model are we funding through this bank? It is a public bank that uses the resources of the *Fundo de Amparo ao Trabalhador* (FAT, or the Workers' Assistance Fund) and the national treasury, and therefore, it has a responsibility to the public interest.

The industrial meat chain in the social movements' agendas

The current situation of small farmers

Aloísio Lopes

MPA

The growth of agribusiness is undermining the social basis of the *Movimento dos Pequenos Agricultores* (MPA, Small Farmers Movement of Brazil). We have debated this issue many times to show that the greater the integration of farmers into the supply chain, the more indebted they become and the less autonomy they have.

Numerous conflicts exist between peasants and agribusiness. There is the conflict over milk, for example, brought on by Normative Instruction nº 56. While we have succeeded in stalling the implementation of certain regulations until now, several others exist, such as 56, 51, and others that end up favoring the inclusion of farmers into the process and increasing their indebtedness. However, even though we managed to discuss the importance of diversity in production with farmers in the movement, many of them did not join the process. There is also conflict over eucalyptus – a type of monoculture that causes drought, pollutes water, takes land away from farmers, and destroys culture and the landscape. Eucalyptus plantations isolate the majority of farmers from their neighbors, as they are no longer able to see them. Then, there was the conflict on tobacco. Farmers are turned into slaves: there is physical slavery, at work, but also ideological slavery. An ideological struggle is going on in the Northeast, as farmers do not want to migrate anymore. They want to stay on their own land and live with the drought. There is also a discussion on corn in the Northeast. Therefore, there are many disputes and what links them together is meat.

The women of the MPA stay at home with their children while the fathers migrate. Sometimes, their husbands send them money; sometimes, they do not. Based on the data we use, we estimate that 20,000 small farmers will stop selling milk for different reasons. They end up migrating to livestock production, as cattle becomes an alternative source of income. If we are not part of the chain of production, we can help strengthen the struggle, but we have already been weakened by this process. The first people to stop eating meat are the poor, and eating meat in the south is cultural. It is more than a meal and a source of income; it has political and historical significance. In southern Brazil, where small farmers raise cattle, they do not have anyone to sell to because the corporations want “better quality” meat – that is, fat cattle fed on soybean. Friboi only buys cattle that meat a certain genetic standard. This kind of cow dies the first

week because the farmers cannot feed them only soybean. We used to take cows, fatten them up, take them to the meat processing plant for slaughter and sell the meat to the *Programa de Aquisição de Alimentos* (PAA, or the Food Acquisition Program). However, the program is in the process of being dismantled.

What we are discussing, then, is our capacity to resist. We need to build alliances with those living in the peripheries – ex-farmers who have been excluded from production and share the same logic – the logic of producing food based on natural resources. Agribusiness does not want others to see that the people it forced from their land are now living on the outskirts of the cities and facing vulnerability. Furthermore, we need to build alliances with small meat processing companies. If I am not good enough for the meat chain and I have no training, where am I going to find work? I go to the periphery and take any job I can find.

How can we mobilize the people who are swamped with work? In the industry, they are left without protection. There are no trade unions because the pace of work eliminates the possibilities of organizing. At the same time, we must not neglect the possibilities that still exist in terms of alternative ways for peasants to produce protein during their lifetime. The minimum that we were able to win – the PAA – is being destroyed.

This dire situation is not talked about in the media. Agribusiness has several rural media outlets and invests heavily in advertising, whereas our activities do not appear in the media. The media has to be addressed, as it induces small producers to adopt a model that leads them to bankruptcy. We have to find a political alternative and alter the correlation of forces in our favor.

Family farming and animal protein production

Celso Ludwig
FETRAF

We are living in a country that is becoming increasingly urbanized. In this context, we are beginning to discuss a master plan for rural areas, because if we are unable to guarantee the farmer's son, who is a good doctor, a farm with the title deed so he can stay in the country, he will move to the city. If this farmer goes to the city, his girlfriend, who is his neighbor, will also go, and others who are watching this change happen will go too.

The basic problem here in Brazil is that we have a lot of land and fewer people in rural areas. Either way, the trend is to export food as grains or processed food.

Milk is an important product for family farming. Recently, in Brazil, considerable efforts began to be made to establish regulations for milk production and dairy exports. Milk is a renewable type of protein because cows can be milked every day; meat is not, because one must kill the cow to get it. In relation to

chicken, the cycle is rapid. Therefore, we believe that there will be an expansion of dairy and chicken production.

In relation to the treatment of animals, we can see what pig raising was like in the past and what it is like today. Pigs used to have space to move around, and nowadays, they are confined, as are chicken and cattle. Furthermore, they are fed feed.

Changes have been introduced to dairy farming as well. Ten years ago, cows were milked by the farmers themselves. Through the *Programa Nacional de Fortalecimento da Agricultura Familiar* (PRONAF, the National Program for Strengthening Family Farming), a lot of resources were invested in this industry. We went from producing 19 million liters to 35 million liters per year. Family farming has been an important protagonist in this process. It used to be an area where women were prominent, but when it began to generate profit, more men got involved. Today, cows are milked by machines.

Pork production has changed significantly since integration was introduced. We visited some farmers who have been integrated into the chain. One said that he used to be responsible for the entire production cycle: he would raise the piglets with his own corn, fatten them up, and slaughter them. He thus dominated the whole process, and even chose to whom he would sell them. Two years ago, this was all suspended and he began to enter the integrated system. He no longer grows corn to feed pigs. The pigs are taken off the truck that goes to the feed factory, loaded onto another truck, taken to another farm where they are fattened up, and then they go to the meat plant, where they are finally loaded onto another truck to be exported. There are thousands of trucks coming and going in meat-producing regions. All the farmer does is receive the piglet with 25 kg and hands it over with 100-120 kg in 100-110 days. They have to produce 1 kg of meat per day per pig. In the past, the farmers we used to represent grew up on pig and chicken farms and worked in these industries for years. That is not the case today.

Mechanization of work in rural areas is expanding significantly, which means high levels of investment and professionalization. All activities are highly integrated with the industries – as can be seen in the case of pork, chicken, dairy and tobacco, for instance. The amount of grains produced per hectare has grown significantly, as has the intensive use of high technology seeds and farm supplies, which generate major environmental impacts. The concentration of land ownership, land purchases and rentals are on the rise, which is contributing to the rural exodus, especially among youth.

In the integrated systems, farmers do not participate in the control and decision-making process. Corporations demand that they make large investments, but with no guarantee that the corporations will pay them. Farmers do not know why they receive the amount they do and cannot question it. The contract they sign does not allow them to organize trade unions. Farmers are increasingly becoming “caretakers” of technologies that control all aspects of production: humidity, temperature, water, food, and light. However, if the technologies fail,

everything dies, which means that farmers must stay on watch for weeks on end, without being able to leave or shut things down.

Different sectors of family farming – such as dairy and tobacco – are part of this process. However, we cannot just say that we will not participate; we have to be present. We need to develop actions to establish a more just coexistence between family farming and the integrated animal protein production systems. We must guarantee that public resources – from the BNDES, for example – oblige corporations to create more sustainable standards for food production. We need to ensure that farmers are able to unionize, as well as more transparent mechanisms for relations between the industry and farmers.

We need to revisit our concepts and think of ways to ensure that those who live in rural areas are able to fulfill their dreams there. Plans for rural areas need to be revisited. If we continue on with a system where rural areas are seen only as a place to produce food and not to live, the youth will not stay there. We have to insist on the idea that rural areas serve to produce food, fabric, energy, water, clear air, and many other things. They are places to live, rest, have fun, enjoy a good quality of life, participate in theatre and so many other things.

Over the past fifty years, the Brazilian state – through the health surveillance system – undermined a significant part of food culture that existed. In the 1970s, part was lost due to the closure of corn mills, which forced farmers to start producing wheat, and, more recently, for the agro industry. Through legislation and the judicial system, the state gradually established a context in which Brazil became a major exporter of grains and meat. As a result, a lot of history has been lost. After all, there is nothing better than a hot bun baked in a clay oven with molasses. The problem is that today, what is consumed the most is a mini-pizza cooked in the microwave. Youth today do not know how to cut up a whole chicken, much less pluck its feathers. Kitchens are no longer designed to prepare food unless it is pre-cooked or ready-made. We are forced to face a situation that was created by the Brazilian state itself, and the corporations knowing what they wanted to achieve.

Another observation is on the profound contradiction we are experiencing in the country and around the world. Even though we all know about the problems with food, we still buy it. It is impossible for a new-born chicken to be ready to eat in 30 days. Everyone knows that they are full of hormones, but even so, consumption is growing. The state reinforces this contradiction and even funds it through the PRONAF. The Brazilian state promotes the Zero Hunger Program (*Programa Fome Zero*) and social programs for family farming, but also funds the expansion of JBS.

We must intervene to create more positive solutions for farmers and build our projects. These projects involve: diversified food production; farmers staying in rural areas where they enjoy a good quality of life and preserve their food traditions and cultures; all agroindustrial production and commercialization activities being short-cycle in order to guarantee food sovereignty; increasing food production significant by using agroecological methods and principles, with low environmental impacts and high yields of nutrients per hectare; the

use of seeds, plants and animals to maintain biodiversity, which is the heritage of humanity; and land redistribution through agrarian reform programs, as well as land credit and especially in ways that ensure that youth can remain in rural areas.

We have to strengthen family farming so that its produce is as agroecological as possible, and ensure that it gets to consumers – through short, medium or long chains – with the least amount of intermediation possible. Selling this food in shopping malls at extremely high prices is not a viable solution. If we produce organic food, it has to be accessible to all workers.

Our project on agricultural development aims to show that Brazil needs water, public policies, and, above all, men and women in rural areas. The goal of our actions is to revisit the concepts held by farmers, trade union leaders, the market, and society in general. We need use the media to promote the importance of the products of family farming, which are produced according to an alternative, sustainable vision of the environment that includes industrialization and direct commercialization. We are fighting for a countryside full of people producing food and generating income, which keeps farmers in the fields doing what they do best: produce our daily bread. The countryside is a beautiful place to live; we just have to build ways to live with dignity and grow quality food there. Farmers are not to blame for the current system. If they could chose, we surely would have a much wider variety of food on our tables.

Work in rural areas

Elias D'Angelo Borges

CONTAG

We are living in a difficult context in which labor relations in rural areas are rife with agony. One source of agony is the attempts of the rural coalition in congress (*bancada ruralista*) to weaken rights protections by increasing the number of hours in the workday. This coalition has already succeeded in getting this change passed for machine operators, who are now facing 12-hour workdays. Furthermore, the number of temporary contracts grows every day. They are based on the logic, "I need you today, but tomorrow you go." They have also succeeded in putting an end to the right to compensation for unsafe working conditions in some sectors, but their dream is to put an end to this right also in rural activities. The other negative thing affecting both urban and rural areas is the legalization of the outsourcing of labor.

The incidence of informal employment in rural areas is very high. Workers rights are not protected in the informal sector. In addition to labor rights, which are only recognized if a worker files a lawsuit against his or her employer, the rights of these workers and of their families to social security is not respected. Over 60% of all workers – or 2.5 million of the 4.1 million workers in rural areas – find themselves in this situation. In some states, this number is even higher due to mechanization. In the states of Piauí and Pará, it is as high as

80-90% of all workers. This factor makes workers invisible and conceals the real situation in terms of accidents.

The chain of meat production – which includes pork, chicken and beef – employs about 10% of rural workers, or more precisely, 452,000 workers. According to official data, there are 211,590 workers working in cattle and pig production. Of them, 120,342, or 57%, are formally employed. This is slightly higher than the general average. 90,117 are informally employed. As for poultry, there are approximately 221,400 workers, of which 55,350 (25%) are formally employed, and 166,050, informally employed. Informality in the poultry industry is higher than average in Brazil. Another challenge is that informality is just as high on family farms as it is among large ranches.

The workday in the industry that raises cattle for beef is much longer. For these workers, there is no beginning or end of the workday. What is more, these workers work more on weekends and holidays because that is when their employer is on the farm: these are the days when the employer wants to bring in, vaccinate and take a look at the cattle, etc. The situation of these workers is very critical, considering that there are no restrictions on the market; when there are, they are not respected, since the state is not efficient when conducting inspections to enforce labor laws.

Other aspects must also be taken into consideration. As mentioned earlier, livestock raising is one of the champions in the use of slave labor in Brazil. For every 500 hectares being exploited, one job is created. But the situation is even worse. From 2006 to 2012, 172,000 work-related accidents were reported in rural areas. Cattle raising came in 3rd place, with 12,000 accidents; followed by poultry, with 8,000; and soybean, with 5,000. Given the high level of informality that exists, the number of accidents is ten times greater than what is actually reported, which confirms the importance of reflecting on the official numbers.

Grain and livestock production share characteristics that need to be noted in terms of the social impacts they cause. They replace activities that generate more employment with ones that create fewer jobs, use slave labor and is one of the leading sectors in terms of the number of work accidents. This demonstrates how the meat industry does not respect workers rights in relation to health and safety. Therefore, we must unite to defend the rights of rural workers.

Public policies

Paulo Polese

CONTAG

The time line of public policies on family farming won between 1995 and 2015 reveals the challenges we faced, but also the mobilizations we held to confront them. In 1995, we decided to construct the *Projeto Alternativo de Desenvolvimento Rural Sustentável e Solidário* (PADRSS, or Alternative Project for Rural Sustainable Development and Solidarity), which gave rise to the debate

on family farming. In this process, the *Confederação Nacional dos Trabalhadores na Agricultura* (CONTAG, or National Confederation of Agricultural Workers) held its first congress. The *Programa Nacional de Fortalecimento da Agricultura Familiar* (PRONAF, or National Program for Strengthening Family Farming) was the first concrete project to emerge from this discussion and gave rise to several challenges.

Since the elections of 2003, we have had a series of interesting victories. Before then, our victories were modest and more related to the harvest. However, since the Ministry of Agrarian Development (MDA for its acronym in Portuguese) was created, the Family Farming Act was passed and the *Sistema Unificado de Atenção à Sanidade Agropecuária* (SUASA, or Unified System of Agriculture Health) was established. Both facilitated production and the insertion of family farming products into the formal market. As for the chains of production, the greatest challenge regarding the meat chain is health surveillance. We succeeded in getting other policies approved that have provided a more solid foundation for family farming. The *Lei de Assistência Técnica e Extensão Rural* (ATER, or Law on Technical Assistance and Rural Extension), which was passed in 2011, created a system that provides technical assistance to our farmers. We also used to have to deal with high interest rates; they have been reduced to 2%, which contributed significantly to family farming. Furthermore, we have gained access to public policies that guarantee income and provide insurance. Some policies that structure the model are more recent, which does not mean that they were not on our agendas.

The first action of the PADRSS was to discuss the development model. From 1997 to 2000, 70,000 family farming leaders discussed what development is in rural areas. Since then, we have succeeded in getting many public policies passed, but our mistake was to not have insisted more on the debate in the schools and on the agenda on education in order to strengthen our position on various issues and changes in the current context. Also, the National Policy for Agroecology and Organic Production was adopted in August 2012. We built and continue to build some policy instruments in this area. We can question how these policies are put into practice, but we must not forget the advances we have made.

Outsiders may look at the credit available – via the PRONAF and the *Plano Agricultura de Baixo Carbono* (ABC, or Low Carbon Agriculture program) – and think that not much funding was available, and what little there was did not find its way to the farmers. One can also criticize credit because it leads many farmers into debt. Despite these challenges, however, it is important to remember that credit was an important advance in rural areas, namely in relation to democratizing access to resources. Currently, the programs reach only one third of their potential and one third of farmers have access to credit and technical assistance.

Another challenge is related to the quality of the projects for which the resources are used. We need technology and knowledge, but they are concentrated and designed to benefit one group in particular: agribusiness. No one appears to be willing to do research on other technologies, such as agroecological ones, for

example. There is a good group in the *Empresa Brasileira de Pesquisa Agropecuária* (EMBRAPA, Brazilian Agricultural Research Corporation), but according to the president of EMPBRAPA, “printers will soon print food.” It is difficult to get research on agroecology done when this is the view of the leadership at the EMBRAPA.

Furthermore, the hegemonic agribusiness model is what orientates financial institutions, ATER and research. We could have advanced more with credit cooperatives, but it is difficult to do so. The *Banco do Brasil*, which distributes 70% of the credit, is aligned with agribusiness.

The last challenge is that of organizing family farmers into associations, cooperatives and productive groups. We have to rely on our capacity to revisit the credit issue in order to gear it towards the PADRSS. We need to invest in the *União Nacional das Organizações Cooperativistas Solidárias* (UNICOPAS, or the National Union of Solidarity Cooperative Organizations), study this issue further, and deepen the debate.

Another important issue is that of security and income. Here, we have the *Programa de Garantia da Atividade Agropecuária* (PROAGRO, or the Agricultural and Livestock Activity Guarantee Program), the PROAGRO Plus program, and the *Seguro da Agricultura Familiar* (SEAF, or Family Farming Insurance).

We have just built the Rural Development Plan that challenges the entire credit structure. We do not have the structure we need to regulate our mechanisms. We are left, then, with integration.

We have a problem in terms of information. We are criticized for using sources such as the Food and Agriculture Organization of the United Nations (FAO), but what other sources can we use? They know more about our agriculture than we do. What we have is the *Censo Agropecuário* (Agriculture Census), but it is, by no means, an accurate portrayal of the situation here. Our information is outdated. We have never sat down with the *Instituto Brasileiro de Geografia e Estatística* (IBGE, or Brazilian Institute of Geography and Statistics) to develop a methodology for this.

Two more projects should be mentioned: the project to expand the rural middle class promoted by the Minister of Agriculture, Livestock and Food Supply, (Kátia Abreu); and EMBRAPA’s “Alliance for innovation in agriculture” project. These projects have a lot of money. The project for the middle class includes close to 50,000 farmers from the rural middle class who each receive on-site technical assistance once a month. In other words, when they want it, they get it, which is not the case for the majority of family farmers in Brazil.

There is, then, a dispute over public policies and credit for agriculture. We must insist to get the PADRSS implemented.

Animal welfare

Elizabeth MacGregor

FNPDA

The point of departure of the debate on meat and animals is the issue of sentience and animal welfare. Neuroscience, which is the study of anatomy and the way the brain works, and ethology, which studies animal behavior, serve as the basis for our debate. Dr. I. Prada from the *Universidade de São Paulo* (USP, or the University of São Paulo) uses a diagram of an animal's central nervous system to show that while the physical constitution of animals is not exactly the same as ours, the biggest difference lies in the more complex thought processes. There are studies that demonstrate that all mammals, birds and reptiles have a limbic system (responsible for controlling behavior linked to survival and emotions). This has already been well mapped out. As Charles Darwin would say, "there is no fundamental difference between man and animals in their mental faculties. The difference is in the degree of complexity and not the type". This complexity is what blinds us.

In 2012, a group of 13 neuroscientists from renowned institutions published a manifesto that said, "the study of neuroscience has evolved to the point where it is no longer possible to exclude mammals, birds and even octopuses from the group of living beings that possess consciousness. The brain structures responsible for generating consciousness are similar in humans and other animals... Our role as scientists is to make what we see public".

Furthermore, even for those who do not have access to scientific knowledge, newsstands are full of publications on this kind of subject matter. For example, the title on the cover of one edition of *Super Interessante* magazine published in May 2015 reads "how animals think" – that is, not *if* animals think, but *how* they think. We can also find scientific studies that prove that animals are intelligent and have emotions, and show that animals are sentient beings capable of experiencing emotions such as fear, pain, joy, and contentment. Therefore, the approach aims to identify not what makes us different from animals, but rather what similarities there are between us. Looking only at our differences is what has created various problems, such as racism among humans. The challenge is linked to the classification of animals as sentient and self-moving. The European Union already considers animals as sentient, while Brazil still classifies them as livestock. At the same time, an increasing number of people are considering the concern for animal welfare as a new and logical step in the evolution of human ethics.

Addressing animal welfare means taking into consideration not only the physical conditions animals are in, but also their mental state and natural behavior, based on animal welfare science. Scientific criteria define parameters for assessing animals' conditions known as the "five freedoms": freedom from hunger and thirst, with ready access to fresh water and a diet to maintain full health and vigor; freedom from pain, injury and disease through prevention or rapid diagnosis and treatment; from discomfort by providing an appropriate environment

including shelter and a comfortable resting area; from fear and distress by providing conditions and care which avoid mental suffering; and freedom to express normal behavior by providing sufficient space, proper facilities, and company of the animal's own kind. It is possible, then, to monitor compliance with these scientific parameters.

There is a big difference between agribusiness and the free-range or organic systems. The meat industry treats animals like machines. Agribusiness is not sustainable – not for the environment, people, nor animals. Work on animal welfare could be a tool to fight agribusiness. Agribusiness normally involves activities with high animal density and uses antibiotics and drugs on a permanent basis, thereby causing harm to human health and the environment. It also mutilates the animals to prevent them from expressing their stress by, for example, trimming birds' beaks and docking the tails and pulling out pigs' teeth, without the use of anesthesia.

Strengthening a campaign against the confinement of pigs is important. Pigs are one of the most intelligent animals on the planet – even more than dogs. Their intelligence is similar to that of large primates, elephants and dolphins. Confinement, which looks like a concentration camp for animals, means animals will spend their entire lives in cages that are practically the same size as their bodies, without being able to turn around or take more than one step. What is more, sows are separated from the piglets. The consequences are: mental disorders, stress, frustration, and urinary infections. These animals are treated like machines, as if they do not have feelings or are incapable of reasoning. Even in agribusiness, group housing in confinement can make a working environment better and mean less stress and suffering for the animals. A stressed animal is a dangerous one.

In the case of birds, they are kept in spaces smaller than a piece of A4-size paper, which stops them from flying, scratching the ground, walking, or spreading their wings fully. They are unable to lay eggs in nests, roost or take flight. The consequences are constant stress, loss of feathers, liver problems, bone fractures, and fragile bones.

Battery cages have already been banned in over 30 countries, such as New Zealand, Bhutan, various states of the European Union and India. Corporations such as Nestlé, Unilever and Heinz have global policies that are implemented in Brazil, whereas fast-food corporations – such as McDonalds, Burger King, Subway and Walmart – have policies that are only implemented in the United States or Europe; Brazil is always one of the last countries to adopt this type of policy. Animal testing has also already been banned in Europe. We have to insist that the same applies here.

Again, even under the agribusiness model, the cage-free system for birds creates a more adequate environment for animals and represents an improvement for public health, as there is less risk of contamination. The free-range and organic systems are even better and work well for family farmers. Eggs are sold at prices that are 40% to 60% higher in retail stores, thus compensating the

producer. On the other hand, we know that the more expensive they are, the less people buy them; increasing the supply helps to bring the prices down.

One of our campaigns is “Meat Free Mondays: Discover new flavors” – for the good of people, animals and the planet. This initiative opted for “the middle path” to encourage people to reduce consumption. As the global population continues to grow, it is important to reflect and debate on reducing consumption so we can manage this growth.

According to the FAO, animal production is one of the sectors with the greatest responsibility for the most serious environmental problems on all scales. Livestock raising generates between 14% and 18% of the world’s greenhouse gas (GHG) emissions, which is more than what the transportation sector generates. To produce 1 kg of beef in Brazil, 335 kg of carbon dioxide (CO₂) are emitted, which is the equivalent of the emissions from driving one medium-sized European car 1,600 kilometers. Moreover, animal raising involves the intensive use of water and land, and is responsible for the majority of the deforestation of the legal Amazon region.

To make things worse, 60% of corn and barley and 97% of soy meal are used to feed animals. Meat consumption is highest among the rich. One billion people in the world suffer from hunger.

Meat is an extremely inefficient source of food. Producing it demands scarce resources such as water and arable land that should be used directly to produce human food. It generates modern slavery and deplorable working conditions. Furthermore, it causes health problems due to the “super-bacteria” resulting from the excessive use of medicines in animals, which generates resistant micro-organisms. Doctors are already recommending limiting the consumption of meat to three times a week.

A study by *Instituto Akatu* in 2012 on the criteria that matter when deciding to buy the same kind of product for the same price showed that for 87% of respondents, the most important criteria was “that during production, the animals have not been mistreated”. In other words, the study indicates that progress has been made in relation to consumers’ concern with animal welfare.

Another positive aspect is that a secretariat of the Municipality of São Paulo has endorsed the Meat Free Monday campaign. Moreover, last year, we pressured BRF into announcing the end of gestation crates. We have not succeeded in having this practice halted as soon as we had hoped, and the corporation’s relationship with its supplier chain is not clear. Even so, this advance helped us to pressure JBS. The next major campaign will target Burger King.

The *Frente Nacional de Proteção e Defesa Animal* (FNPDA, or National Front for the Protection and Defence of Animals) also has a humanitarian environmental education program on animal welfare, whose objective is to provide more information to the population, which is notoriously misinformed on this issue. The program helps to raise awareness. As Nelson Mandela would say, “education is the most powerful weapon you can use to change the world”. The program’s objectives are to create awareness among educators; develop

knowledge on sentience, animal welfare, and the environmental impacts of animal use; and provide educational resources and facilitate their use. We always work in partnership with the Secretariats of Education, normally upon the initial invitation from the Secretariats of the Environment. I have already trained close to 8,000 teachers, trainers and multipliers, who can reach many more people. We also work with children and their families. What is more, we are receiving a growing amount of support from celebrities, who are increasingly aware of what is happening and interested in learning more. Work has also been done on rodeos – one of the side effects of the meat chain that involves abuse. The FNPDA launched a video on this issue narrated by Brazilian actor Paulo Vilhena.

Animal welfare is an issue that needs to be included in all discussions on meat production. It is not only an ethical and moral issue, but also a tool capable of expanding perceptions and the debate on the consequences of consuming meat. Building a better world requires taking a better look at the billions of animals with whom we share the planet. And as Gandhi would say, “you must be the change you wish to see in the world”.

The Meat Atlas in Paraguay: impacts and citizen participation

Elías Días Peña

Sobrevivencia, Friends of the Earth Paraguay

Brazil-Paraguay relations in regards to the meat industry involve the export of soybean produced by Brazilians in eastern Paraguay, and the acquisition of large extensions of land in the Chaco region in Paraguay by large landowners from the states of Mato Grosso do Sul and São Paulo who are cutting down forests there to raise cattle and start producing meat.

In 2009, Paraguay exported a little over 2,000 tons of soybean per year, whereas in 2013, this amount increased to nearly 300,000 tons per year. The main destinations are Russia (46%), Chile (19%), Brazil (12%) and Hong Kong (9%). Meat production rose to nearly 400,000 tons annually in 2010 and it is estimated that this value will reach close to half a million tons by 2020, which represents an increase of 26.3%. A large part is for export; the percentage destined to domestic consumption is declining and meat is becoming increasingly more expensive.

Studies by the FAO affirm that if we include the emissions from land use and changes to land use, the livestock sector is responsible for 9% of global CO₂ emissions resulting from human activities. Changes in land use is a euphemism used to describe deforestation. Also, the sector is responsible for 37% of all methane produced by human activity – a gas 23 times more harmful than CO₂ and that originates in the cattle’s digestive system. This percentage is higher for more dangerous GHGs, such as nitrous oxide, which comes from manure and is 296 times more harmful than CO₂. 64% of ammonia also comes from livestock,

which contributes significantly to acid rain. The FAO explains that due to livestock raising, 30% of the planet's surface is used for pastures and 33% for fodder. Cutting down forests to make room for pasture is one of the main causes of deforestation, especially in Latin America.

In 1961, emissions from the Latin American region originating in cattle totaled 388 million tons. Today, this amount is more than 1 billion. The main sources of GHG in Latin America are deforestation and the destruction of ecosystems due to agribusiness, especially livestock production.

Genetically-modified soybean entered Paraguay legally from Brazil and Argentina at the end of the 1990s and spread rapidly to the main farming areas of the country. Soybean production leads to the clearing of native forests, soil contamination and erosion, the destruction of water resources, and people being poisoned due to the indiscriminate use of agrochemicals. A large part of the land that belonged to the Guaraní indigenous people has already been deforested and turned into one of the largest soybean producing areas. Nearly the entire Atlantic forest, which we share with Brazil and Argentina, has been cut down; less than 3% of the total area is left. Approximately 6 million people, namely the Tupi-Guaraní people, lived in this region for over 3,000 years in harmony with the forest.

Since the coup d'état in 2012, 13 new GMO projects have been approved for crops such as corn, which affects the native seeds of the indigenous people.

In terms of the evolution of soybean production in Paraguay, in the 1990s, Paraguay produced around 3 million tons. In 2013, this amount increased to 8.1 million and is growing rapidly, as it advances towards the Gran Chaco region, where it has potential to grow even further.

This map, which I call the "map of terror," manufactured by Syngenta, presents the Argentina-Brazil-Paraguay-Bolivia region as the "United Soybean Republic," with an area of 500,000 km² planted in soybean in 2013. This is more than double the size of the United Kingdom, which has 244,023 km², and Italy, with 301,338 km². *In the list of the world's leading soy producers, Paraguay appears in 6th place, and it places 4th in terms of world exports. These exports are intimately linked to the production of animal protein. In 2011, they were shipped mainly to the European Union (57%), Russia (9%), and Turkey (8%). In 2012, 47% went to the EU, 13% to Russia, 7% to Turkey, and 7% to Brazil.*

The expansion of soybean production forces farmers and indigenous peoples off their lands, cuts down forests, destroys biodiversity, and generates unemployment. Much of the water used in the meat chain is polluted. To produce 400 hectares of soybean, 2 or 3 workers are needed. In family farming, one worker is needed for every 10 hectares.

Deforestation began to be a problem in Paraguay around 1945 when forests started to be cleared to build highways. It became worse in 1980, when Brazilian settlers arrived in 2012, due to the expansion of agribusiness. By 2013, a large part of the country had already been covered in soybean.

The inhabitants of numerous peasant villages left their homes and as a result, more than 500 schools were abandoned and surrounded by soybean plantations. In the department of Alto Paraguay, one can find family farms beside industrial farms growing genetically-modified soybean. Coexistence between these two systems is impossible.

Large landowners invade communities, offer money to one or two peasants, buy the land, and then force others to leave by using chemicals, which makes it impossible to practice traditional farming methods and guarantee their own sustenance. The only solution is to regulate land use and legally establish zones for ecological and organic farming that are free from agrochemicals.

Another consequence is that many of the peoples who were forced to leave their territories end up working in garbage dumps in the city. The Tupi-Guarani people, for example, had a large area of land that covered southeastern Paraguay, southern Brazil, parts of Bolivia and Uruguay, as well as land in Misiones, Argentina. They were isolated. However, the majority have now been forced off their land. When they migrate to the cities, they are unable to find jobs and are exposed to problems such as drug use. After resisting for 500 years, in ten short years, they have been expelled from their land by soybean production.

With its more than 400,000 uninterrupted kilometers that extends from the great wetlands to the Rio de la Plata river, the Rio de la Plata basin was known for being a large producer of animals and fish for millions of people and a reservoir of biodiversity. This is being destroyed by soybean production.

What can we expect from this process? At the mouth of the Mississippi River in the United States, there is a large area called the Gulf of Mexico dead zone. The Mississippi basin is the same size, produces the same amount of water and has an ecosystem similar to that of the Rio de la Plata basin. An engineer from the US estimated that to make the dead zone disappear, 30 million kilometers of the floodplain region would have to be restored. The cost would be US\$20 billion for an area of 800,000 hectares. Imagine what the cost would be to restore the 30 million hectares of the Rio de la Plata basin. The Rio de la Plata basin will be turned into a dead zone by this process. This is why we all – producers, consumers, and inhabitants of the North and the South – must confront this model.

Agroecology

Maria Emília Lisboa Pacheco
FASE, ANA and the president of CONSEA

We have a historical debt with Paraguay and we can no longer to stay passive about the way the corporations and the Brazilian government operate in Paraguay. The *Conselho Nacional de Segurança Alimentar e Nutricional* (CONSEA, or National Council for Food and Nutrition Security) will address the international agenda. We will therefore take up this debate because the process of destroying and expropriating peasant communities in Paraguay is alarming. It is ethnocide, and we must incorporate this issue into Brazilian foreign policy.

It is important to emphasize that the position of the *Articulação Nacional de Agroecologia* (ANA, or National Agroecology Coalition) is to oppose the dominant agricultural model. There is no room for the coexistence of these models. Although ANA has not held an internal debate specifically on the meat chain, our vision is ecosystemic and based on the will to go beyond the dominant patterns in the technical and ecological organization of so-called “rural development” in Brazil.

The agroecological perspective must not be confused with, nor restricted to ‘best practices’, or a policy for a niche market. It is a systemic vision seeking more profound transformations. Intrinsically associated with the agroecological perspective, what we understand as socio-environmental science, techniques and movement incorporates the social function of property, biodiversity, and the right to water and seeds. Agroecology must not be confused with “climate smart agriculture” or “nutrition-sensitive agriculture”, which are, to a certain extent, integrated into the Low Carbon Agriculture program. From a technological and ideological point of view, they correspond to the model we are opposing.

We have recently promoted interactions between actors from the field of agroecology, environmental justice, the feminist movement, and the movement for food sovereignty and security with the goal of integrating the various perspectives and overcoming the vision that argues that food must be thought of only in terms of access. We want to make the linkages between the different aspects and build interactions among various fields, as this is the only way we will be able to oppose the dominant model. Therefore, we ask what kind of food we are or are not consuming. Even though there is no mass movement of consumers seeking healthy food, important initiatives do exist, such as the ones that follow.

The meat industry uses very aggressive food advertising campaigns. Sadia is currently promoting an ad that uses a sentence it appropriated from a phrase we built at the National Conference on Food and Nutrition Security: “real food, in the country and the city, for rights and food sovereignty”. Sadia’s advertisement says, “real food, with “y” for yours”, and portrays an image of a society with the kind of food the company produces – cold cuts, canned food, etc. – flying around. This is one of the contradictions of this government: the same government that supports the meat industry is the one that launched a “food guide” condemning over-processed food and defending quality food. There is a movement or an articulation in favor of regulating advertisements on food.

Efforts are also being made to bring together sectors linked to health and nutrition and agroecological production to push for a national program to reduce agrochemicals. These groups oppose aerial spraying and subsidies to produce agrochemicals, and are in favor of the creation of a fund for the expansion of agroecology. The National Policy on Agroecology and Organic Production is recent, from 2012, and therefore, we have a lot of work ahead of us.

Another battlefield involving various sectors of society is the adaptation of health norms so that they recognize artisanal food production and Brazilian food cultures, and treat food as a cultural heritage. We must not give up our heritage.

We are currently defending a motion that aims to defend food culture in the state of Santa Catarina and oppose the abuses of the health surveillance team of the Public Prosecutor's Office, which is part of the process to criminalize the movements. We need, for example, to make alliances with the *Fórum Nacional de Defesa e Proteção Animal* (FNPDA), because today, free-range chickens are being made to appear as if they pose greater risks than chickens full of antibiotics. There is a debate in the National Congress on changes to the labeling of genetically modified products and the criminalization of the movements. The context shows just how necessary it is for us to mobilize together with actors from various fields.

A group of scientists committed to nature and society in Latin America is being formed and will be based in Argentina. We have always said that there will be no change without new paradigms of science. Therefore, it is good to know that there are scientists defending this issue. Many are being persecuted, just as they are here in Brazil, especially those who denounce agrochemicals and who have sustainability, justice, equality, cultural diversity and the application of the precautionary principle and the principle of prevention as a premise. It is a long and very difficult struggle.

The current situation in the west of Paraná

Centro de Apoio ao Pequeno Agricultor (CAPA)

The *Centro de Apoio ao Pequeno Agricultor* (CAPA, or Small Farmer Support Center) from the west of the state of Paraná, a member of the agroecological network Eco-Vida, sent the contributions that follow, as they could not be present today.

Farmers have been raising animals in the west of Paraná for decades. Although the meat production chain was originally focused on the production of primary agricultural products during colonial times, in the 1960s and 1970s, it became an industrial agriculture complex of great economic importance. The majority of grains (soybean and corn) produced in large scale operations in the region are used for animal feed. The integrated production system has been adopted. In this system, the meat processing corporations supply the animals, the necessary supplies and technical support, and the families contribute with the use of their installations and their labor.

The region currently plays a leading role in the production, processing, and export of pork and chicken. One can find large slaughtering and processing companies that maintain partnerships with a large number of rural producers in the region. On one hand, they add value to primary products and generate thousands of jobs, as they employ a large proportion of the rural and urban populations, thereby contributing to regional socioeconomic development. On the other hand, as operations are intensive and large scale and keep animals concentrated in small spaces, they have enormous potential to pollute the environment. This holds especially true for pig raising. In some municipalities of the

region, the number of pigs is 5 to 8 times greater than the number of inhabitants. Other negative effects include the farmers' loss of autonomy and the reduction of biodiversity on farms.

Meat is produced in the region for both domestic and foreign markets, and production is not monopolized, as various cooperatives and companies are active in the sector. Currently, the majority of meat destined for export is transported by rail (FERROESTE). It is also worth highlighting that when we export meat, we are in fact exporting water, which liberates countries that import the meat from the onus of assuming the high environmental costs involved.

Small scale initiatives in the area of poultry production exist as alternatives to this production system and to counter the industrial process. Examples include ecological poultry farms, in which farmers, their organizations, entities providing technical support, and universities are involved. The main constraint on these alternative systems is legislation, especially in relation to slaughtering and the production of animal feed.

Final observations and expectations for the future

The debates held during the “Industrial Meat Chain” workshop revealed a key difference between actors in relation to resistance to the dominant agricultural model and the building of alternatives, on one hand, and the need to work within the system and support farmers who have been integrated into the agribusiness model on the other. Arguments on the need to promote actions to regulate the industrial agriculture system are based on the fact that it will not be eliminated in the short, medium or long run, and therefore, it is necessary to build more just processes where the farmers involved have better working conditions. Others believe that the construction and strengthening of alternatives requires breaking with and overcoming the current model.

The mature and responsible recognition of this difference, and the analysis of the current context itself were important for realizing that the conditions required to advance more incisive proposals to confront the industrial meat complex were not in place. The international organizations’ expectation on building a global campaign on this issue, for example, could not be met at the time, as it requires having a common position.

At the same time, there is agreement on the need to dismantle the power of large corporations, on the impacts of the meat industry, and the role of the state. The meat industry is an industry regulated by mega-corporations that wield enormous economic, financial and political power. They invade and occupy large areas of land, which increases and concentrates land ownership and sparks territorial conflicts. They also violate workers and environmental rights (especially by employing modern forms of slave labor and deforestation), threaten food security and sovereignty, and cause health problems. They benefit from state subsidies and incentives and are fueled by the well structured relations between the international chains of production and the domestic chains; policies on trade and foreign affairs; and public policies (not only on the development of crops and livestock raising, but also health surveillance). They also receive major funding from, for example, the Brazilian Development Bank (BNDES). These policies lead to the commodification of land and seeds. Mass media helps consolidate and legitimize this industry in society.

Peasant and indigenous communities have been and continue to be displaced and become forced migrants of this system of production. Furthermore, rural organizations note that the integration model of production is advancing and increasingly incorporating family farming, which causes several problems. Therefore, it is important for family farmers, rural workers, indigenous and traditional peoples, and all those interested in issues related to the environment and food to discuss the meat production chain.

It is worth highlighting, however, the difficulties related to the balance of power, especially when considering the powerful political connections among actors in the industrial meat chain. The position of organizations that are critical of this production chain do not reflect the view of society in general. Altering the current balance of power in society is complex, as the pattern of development in Brazil is rooted in agribusiness, extractive industries, mining and oil. Changing the productive matrix of Brazil is, therefore, a herculean task in a society that sees this as “progress and development”. The visibility of social movements and peoples affected by the expansion of this model is low and they are seen as remnants of the past and as resistant to “development”. Therefore, it is important to discuss the way the meat chain appears in the debate on development and analyze the changes taking place at the territorial level, while taking into account social and cultural issues.

It is also fundamental to remember some of the movements’ victories and remind society that food is a right and not a merchandise. Cultural aspects must also be incorporated. We have a heritage that was built by social movements and that must be defended. Therefore, it is essential for society to debate access to quality and just food in rural areas and the cities.

Therefore, the analysis of the current context and the recognition of the different perspectives presented during the debate highlighted the need to rearticulate the struggle against agribusiness and its social, environmental, cultural and economic impacts. We must also further our analyses and strengthen our strategies vis-à-vis the different dominant actors – the government, corporations, the media and financial institutions – as well as consumers, universities, and the groups building alternatives and in resistance, such as family farming, traditional and indigenous peoples and agroecology. The main proposals presented during the workshop are to:

- Promote dialogue among international civil society organizations, especially those from Europe, that are already coordinating campaigns on the issue. Changing Brazil’s productive matrix is a difficult task in a society that sees it as a synonym of progress and development. The social movements and people affected by the expansion of this model have no visibility, or they are seen as remnants of the past or as being resistant to development. It is, therefore, an extremely complex matter;
- Demand careful use of public resources in Brazil, which, in the case of food, should be directed, preferably, to family farming. Eliminate all forms of subsidies for corporations and the possibility of the state being a shareholder of their capital;
- Promote debates on the use of the resources of public funds, such as the BNDES and state enterprise pension funds, in this type of business. Through their holdings in these funds, workers can directly influence how they are used. This would be an important way to impact the meat industry;
- Take some agendas up again, such as the establishment of limits on property size and areas free from genetically-modified organisms. At the same time,

fight against all proposals going through the National Congress that represent a threat to or setbacks in the rights and victories won by civil society;

- Organize campaigns to contest the double standards used by large corporations in the global South and North and demand that they adopt the best labor, social, environmental and animal welfare standards in effect in developed countries. The same applies to transnational fast-food chains (McDonald's, Burger King and others) so that they begin to impose new demands on their suppliers, such as the elimination of the use of antibiotics in animals. Also contest the double standard used in the liberation of agrochemicals, many of which are banned in their countries of origin;
- Promote campaigns on the impacts of meat production and seek to develop new partnerships with other sectors of civil society. Warn people about the harm caused to health by excessive meat consumption, which is being stimulated by the companies of the sector. Give greater value to the cultural dimension of food;
- Seek to reinforce meat production by family farmers and small meat processing plants and stimulate their potential to produce healthier food. Defend changes to food safety inspection rules that unjustifiably exclude small producers from the market;
- Denounce the precarious working conditions in meat plants, where migrants also work in conditions of extreme poverty and with no social organization to represent them and guarantee their rights. In Brazil, these migrants come mainly from the Northeast region of the country, Africa, Haiti, and Muslim countries;
- Set up a regional and international North-South coordinating body to address this issue. Create a roundtable with representatives from civil society, the government and, perhaps, the agriculture industry to debate these issues;
- Identify gaps in the information available on the chain of meat production. Some examples are: how many family farmers gave up milk production in recent years; how many meat processing plants have been closed; what is the current volume of fishery in Brazilian rivers; what are the impacts of agrochemicals on the population in rural areas; etc;
- Give visibility to the problems analyzed here, while seeking to win the support of urban consumers. A communication strategy is needed to reach the media, as the interests of the large majority of news agencies are tied to those of agribusiness corporations, who are major advertisers;
- Seek to concretize the proposals presented through the organization of a small working group that will organize a workshop with this objective.

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On September 10 and 11, 2015, peasant movements, social organizations, trade unions, and representatives of universities from Brazil, the United States, Germany, and Paraguay participated in the workshop entitled "The Industrial Meat Chain", held in Rio de Janeiro. The workshop was built based on the observation that the meat industry intensifies corporate power, has major impacts on the lives of small producers, and is going through structural changes. The implications of these changes are not yet fully understood. This publication is based on the debates held during the two-day event. We hope it will serve to strengthen the actions discussed during the workshop, especially those related to communication and coordination among participant organizations, and to further discussions on agribusiness in Brazil and its implications for social movements and their processes of resistance.

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