FAGUNDES Delia
ETI 6008

Essay:
The Evolution of Brazilian Agricultural Commerce in International Markets Dominated by Export Subsidies

Work presented to:
Erick Duchesne

Université Laval
Institut Québécois des Hautes Études Internationales
February 4 2013
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AoA</td>
<td>Agreement on Agriculture</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>GATT</td>
<td>General Agreement on Tariffs and Trades</td>
</tr>
<tr>
<td>GMOs</td>
<td>Genetically modified organisms</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>INCRA</td>
<td>Instituto Nacional de Colonização e Reforma Agraria</td>
</tr>
<tr>
<td>MERCOSUR</td>
<td>Common Southern Market</td>
</tr>
<tr>
<td>NAFTA</td>
<td>North American Free Trade Agreement</td>
</tr>
<tr>
<td>R</td>
<td>Brazilian Réais</td>
</tr>
<tr>
<td>SPS</td>
<td>Sanitary and Phytosanitary Measures</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
</tbody>
</table>
Table of Contents

Introduction

1. General Legal and Theoretical Background
   1.1. International legislation .......................................................... 4
       1.1.1. The Agreement on Agriculture (Art. 6) ............................... 4
       1.1.2. Export subsidies in international trade negotiations ............. 6
   1.2. Economic policy measures ..................................................... 10
       1.2.1. Protectionist measures: Tariff reform ................................. 10
       1.2.2. Import Substitution in Brazilian Agriculture ......................... 11

2. Brazilian Agriculture
   2.1. Background ............................................................................ 13
       2.1.1. The role of family farming in Brazilian export capacity ...... 16
   2.2. Strategic planning of the Brazilian government ............................. 18
       2.2.1. Eliminating export subsidies to equalize trade ................. 26
       2.2.2. European export situation ............................................... 31

3. Brazilian export potential
   3.1. Case studies: Soya and sugar-cane ........................................... 35
       3.1.1. Brazilian export capacity in sugar and soya ....................... 36
   3.2. Genetically modified organisms and the public response ........... 40
       3.2.1. Main producers (Monsanto) ................................................ 45

Conclusion
List of figures

Figure 1: Commodity price and preferential credit support in Brazil

Figure 2: Soybean and soybean meal exports: United States compared with Argentina and Brazil

Figure 3: Map of Brazil
Introduction

Brazil is an emerging power that has benefited enormously from a number of protectionist trade policies in agriculture. Intent on becoming a major trading partner with agricultural powerhouses such as the European Union (EU), the government of Brazil has begun questioning trade regulations in international forums such as the World Trade Organization (WTO). The Brazilian farming industry has undergone a number of transformations in the country’s evolution from a minimal contributor to agricultural trading to one of the most important players in international markets. Throughout this process, the issues surrounding the import and export of agricultural products have become one of Brazil's top priorities. Export subsidies in developed countries, such as the United States, have caused concern among the BRIC countries, an emerging group of countries that include Brazil, Russia, India and China. The economic potential of these countries has become one of the most important subjects in economic forums the world over. All of these countries are anxious to expand their international trading capacity, and developed countries are anxious to take advantage of the wealth of resources and the young, increasingly educated workforces that exist in these countries. In Brazil, the question of export subsidies puts the needs of their farmers up against their European and American counterparts, who benefit enormously from national policies designed to increase their export potential.

A general understanding that the elimination of export subsidies would facilitate and possibly augment trade has been developing since the failed trade talks of the Doha Round. Meanwhile, Brazilian farmers have also taken advantage of government policies designed to favour import substitution, thus increasing incentives for trade. Would it be beneficial for Brazil to push for the elimination of export subsidies to increase the competitive potential of countries such as theirs, in advanced stages of development on international markets, particularly in competition with European farmers? The EU is Brazil's main export destination and it is possible that Brazil will cede to the directives of European farmers in future negotiations. Does Brazil have the political and economic clout necessary to counteract agricultural policy initiatives dictated by their Northern
counterparts? Do they have a say in international negotiations and proposals put forth by the World Trade Organization? Is Brazil immobilized by unfair competition in international, agricultural markets? The unprecedented growth of Brazilian agriculture has given their government some power against the distortionary trade practices used by the Americans and the Europeans. It is increasingly evident that by becoming one of the most dominant exporters of agricultural goods, Brazil has become a model for other emerging countries trying to establish themselves in global trading markets.

Brazil, like a number of countries in the advanced stages of development, is suffering from the massive take-over of agricultural lands by market leaders such as Monsanto and Cargill. Nevertheless, the arguments in favour of supporting local farmers with subsidies have dominated the economic landscape in both developed and developing countries for a number of years. With the intensification of globalization, countries in both the North and South are even more convinced that there are benefits to exchanging surplus production, or even producing directly for export. In the majority of these economies, agricultural policy is mandated at the national level, and major decision-making on economic integration is based on these core regulations. International organizations, such as the World Trade Organization, would like to see the elimination of tariff barriers established to protect farmers at the national level. Unfortunately, European farmers, among the most subsidized in the world, refuse to give up this minimal guarantee of profit that results in an unfair competitive advantage for them.

Brazil is one of Europe's most important trading partners, and is also one of the most diverse, agricultural economies in the world. This is due in large part to Brazil's initial resistance to using genetically modified organisms (GMOs) in their production. Unfortunately, in certain parts of the country, the encroachment of these products has managed to undermine laws put in place to ensure that GMOs are not introduced into the food supply. Nevertheless, international investors are vying to become part of the Brazilian system, traditionally closed to outside ownership. The government is favourable to the implantation of international companies, such as Monsanto, so long as
they can prove that the majority of the ownership rights remain under Brazilian control. These international organizations, and the multitude of non-governmental organizations working in favour of Brazilian farmers and their rights, are highly influential, and have a large impact on national agricultural policy.

With this strong governmental and non-governmental foundation, the Brazilian government is well poised to become one of the most dominant voices in agricultural trade markets. The evolution of Brazilian agriculture can serve as a model for other developing countries wishing to enter into the fray of international, agricultural export markets. Even so, it is difficult to judge whether Brazil will be able to continue increasing their export capacity by ceding to the demands of other industrialized countries, particularly through international trade organizations such as the WTO. On the other side of the equation, countries in the European Union are faced with an unprecedented challenge to their own export capacity by a country now capable of dictating price changes without fear of retribution. Future negotiations in staple crops, such as sugar cane and soy, will depend on the ability of these two agricultural powerhouses to reach a deal and ensure that agriculture remains a competitive industry, regardless of economic status.

A general introduction on the legal and theoretical background underpinning the debate on export subsidies will be followed by a brief, historical description of the rise of Brazilian agriculture. An exploration of the growing importance of family farming as a so-called means of ensuring the crop diversity fueling this expansion will follow, with a short introduction on the importance of Brazil's two primary staple crops: soybeans and sugar cane. The concept of multifunctionality will be defined and described as a means of explaining other benefits, aside from the economic advantages, to preserving traditional farming. The argument for the elimination of export subsidies and the impact this would have on developing countries is the primary focus of this work, largely dedicated to determining whether Brazil has the capacity to be a model for other emerging economies that depend on agriculture for their survival. The debate on genetically modified organisms will also be explored, as it is an important aspect of
Brazilian agriculture that plays a dominant role in their international trading capacity.

Companies such as Monsanto, known for their intensive use of genetically modified organisms, are changing agricultural production in the country, and countries that are in the midst of developing legislation against GMOs are taking note. The European Union is among those wary of trading with producers that cannot guarantee a GMO-free product. Considering the EU is one of Brazil's most important trading partners, a look at their trading situation will provide the necessary contrast to Brazil's export situation. Exploring the theoretical and historical background of Brazilian agriculture will also allow for a better understanding of how countries on the brink of economic prosperity suffer from the imposition of export subsidies by developed countries. International legal regulations have struggled to keep up and govern this unfair export situation with legislation such as the Agreement on Agriculture, largely criticized for its vagueness and its outdated nature. Nevertheless, it is within this complex legal and political framework that a durable solution to the problems posed by export subsidies on agricultural products will emerge.

1. General Legal and Theoretical Background

1.1. International legislation

1.1.1. The Agreement on Agriculture (Art. 6)

Even though protectionist policies have been used for centuries as a way of ensuring economic prosperity, they have recently become the subject of an intense debate, and have led to the ongoing development of international legislation. In Brazil, the government was faced with challenges to their domestic markets by the World Trade Organization and their Agreement on Agriculture (AoA). The Brazilian government thought that they would stand to benefit from the expansion of their domestic markets to outside competition. Focused on building their national corporations, they soon realized that their protectionism was detrimental to their international economic policies. They
decided to adapt their legislation to be able to enter into the fray of the asymmetrical, American-dominated exchange markets. This legal framework helped shape the policies that have created increasing inequality between local populations in the North and South.

The Agreement on Agriculture attempts to equalize the growing disparity between developed and developing countries competing on the same playing field and minimize the effects of export subsidies. Due to the fact that there had been so many challenges to agricultural trading rules, the WTO decided to extricate agriculture from general trading agreements during the Uruguay Round. This was one of the first multilateral trade agreements dedicated to agriculture that attempted to create fair competition and a less distorted sector. The Agreement aims to reform trade and make policies more market-oriented in order to increase import and export predictability and security. This convention tackles three main issues: market access, domestic support and export subsidies. It allows countries to support their rural economies with policies that minimize trade distortion (WTO, 1994: 3), but its weak, institutional infrastructure makes it difficult to incorporate this key criteria into the confines of neoliberal, expansionist ideology. Much like in environmental negotiations, countries who have a growing GDP, and a prosperous industrial sector, find that restrictions imposed on them are unfair, while advanced, industrialized countries consider them satisfactory. Neither will accept drastic changes that could impede their economic development.

Agricultural subsidies are an attempt to equalize the differences between the North and the South that, oftentimes, have the exact opposite effect. These subsidies have been categorized by the WTO according to whether they satisfy the conditions outlined in the Agreement on Agriculture. This categorization is based on that of a traffic light, where green means go and red means stop. Yet in the agricultural sector, negotiators decided to replace the red box with an amber box, meaning that countries need to slow down, or reduce their subsidies. Into this category goes all the domestic support measures deemed as distortive impediments to production and trade. Art. 6 of the Agreement simply defines these measures as everything that does not fit into the blue or green
boxes. The green box regroups all subsidies that have no impact on trade, or at the very least, minimal distortion (WTO, 1994: Annex 2). Income support for farmers that is "decoupled" from current production levels or prices qualify for inclusion under this section. The blue box is for subsidies that would normally be in the amber subsection, except that they require farmers to limit production (WTO, 1994: Article 6).

As it currently stands, blue box subsidies are not limited, much to the approval of a number of countries that see this as a way of eliminating distortionary measures currently in the amber category. Other precautionary parties would prefer to fix limits, or at least engage countries in reducing their subsidies, and categorize all forms of domestic assistance as amber. This categorization serves to distinguish between acceptable protectionist measures and those that could affect the market conditions of a trading partner. Even if the success of long-term, agricultural reform does not rely on this distinction, it is an important tool for further policy-oriented expansion. Sufficient land rights and the right to basic nutrition, two key priorities in Brazilian agricultural policy, could stand to benefit from WTO rulings that aim to promote equality between trading countries. The common ground created by these types of cases could also allow international organizations and national policymakers to build up legislation aimed at minimizing the disparity between local populations on both sides of the equator. As such, these categorizations are important to the expansion of Brazil's agricultural sector.

1.1.2. Export subsidies in international trade negotiations

In terms of international trade, the volume and composition of Brazilian agricultural trade has not been significantly altered by the implementation of the Uruguay Round Agreements, or by the policies of other countries in their trading circles. This is largely because the results of this round of trade talks created little new liberalization, and was simply a redefinition of the rules governing international trade. The creation of MERCOSUR, an important regional agreement for Brazil, and the tariff reforms across the country in 1990, had a greater impact on agricultural trade than these international negotiations. This change in tax laws reduced average applied tariffs from 32 percent to
close to 14 percent, and agricultural tariffs from levels ranging to between 0 and 10 percent (FAO, 2003). MERCOSUR is essentially an attempt to increase the power of Latin American countries in international trade. Greater regional integration would be a means of increasing the capacity of each country in the trading bloc. Given the predominance of Brazilian agriculture, the country has taken the lead in ensuring an increased presence by Latin American countries in international trade negotiations. The Brazilian government dominates agricultural markets in the South, especially given their growing capacity to subsidize agricultural trade.

Nevertheless countries such as Brazil need to realize that government support in the form of subsidies must be a short-term reprise from a temporary downturn, and not something vital to the existence of an enterprise. Governments should see subsidies only as start-up funding, and should couple these cash infusions with a transfer of information on best practices. In actual fact, a complete overhaul of the system is required, but will only be accepted if framed in such a manner that companies can weigh the costs and benefits, and the long-term effects, of their immediate decisions. The categorization of export subsidies, such as that of the WTO, avoids labelling unfair business practices in an attempt to appease large, multi-national corporations built on misappropriated funds. Going beyond labeling, transnational companies and governments should be subject to regular evaluation to ensure that their business practices are efficient, and that they are using natural resources in such a manner that future generations will also be able to profit. Brazil is no exception, as they continue their evolution away from being a have-not country.

Brazil has the possibility to continue using export subsidies as per their commitments under the Agreement on Agriculture, but they have yet to grant any significant export subsidies on their agricultural products. Brazil stopped their tax exemption program for certain processed, agricultural products and no longer conducts special sales of government stock destined specifically for export (FAO, 2003). In 1996, Brazil made changes to their export tax policy in line with the principles of the WTO. They decided to eliminate the export tax on agricultural goods and semi-processed foods, which led to
an increase in the export of these goods. The Brazilian government also decided to eliminate a number of export quotas on key products such as coffee, cocoa and sugar (FAO, 2003). With these decisive, political actions, they were able to increase their export potential within the confines of international legislation, without recourse to government subsidization.

Despite the positive impact these changes have had, agricultural export revenue still makes up only about 30 percent of total exports in Brazil. The country has a wide variety of products that are shipped to a number of different countries around the world. Naturally, they stood to benefit from recent changes to international agricultural policies, but this sector did not experience any positive growth during the Uruguay Round. In Brazil, the agricultural sector began to expand in the early 1990s, years before this agreement. The AoA also did not have an impact on the commodities where Brazil has a competitive advantage, such as sugar cane, and thus did not result in any significant reductions in protection on these products. Nevertheless, export subsidies on agricultural products shipped from the Organization for Economic Cooperation and Development (OECD) countries continue to distort export markets in the country. Commodities such as soybeans still suffer from high levels of domestic support in a number of developed countries, and tariff escalation often creates unfair and uncompetitive price levels, making trade with emerging economies largely unequal (FAO, 2003). Brazilian agricultural policy has been able to counteract these distortionary export subsidies levied by more industrialized countries, but it difficult to assume that other developing countries would be able to do the same. Countries without the necessary capital to invest in initiatives focused on improving agricultural trade suffer under current international regulations, much like Brazil did before its most recent agricultural reforms.

OECD countries, on the other hand, are famous for providing assistance to their farmers through domestic support measures, low market access and export subsidies, distorting markets in commodities in which they have a comparative advantage. In so doing, they are able to exclude most developing countries from the market. Developing countries
are often reliant on the production of high-yield commodities, such as soybeans, which are among one of the most subsidized crops on the market. Brazil, who is not a member of this group, is in favor of negotiations that prioritize changes to the three aforementioned pillars of international trade. In addition, both OECD and non-OECD countries are concerned about differential treatment and other non-trade concerns, always present in the background of inter-state relations. Even if these two issues can be negotiated outside of international negotiations, their outcomes often have an effect on global trade. Brazil's interest in the ongoing negotiations on agriculture are focused on the following four priorities: elimination of export subsidies and the removal of all the means of avoiding prohibitions, reduction of tariff escalation and a decline in domestic support that distorts trade (FAO, 2003). The Brazilian negotiators would also like to see general tariffs reduced, with an expansion of tariff rate quotas on products such as sugar, soybean oil and other processed agricultural goods (FAO, 2003). Instead of shielding their farmers from market competition, as developed countries are often accused of doing, Brazil prefers to level the playing field, promoting the removal of all measures that could cause an unfair competitive advantage for them and their trading partners.

The Government of Brazil has been involved in a number of international negotiations in agriculture due in large part to the pressure of non-governmental organizations working in the country. Brazil's non-profit sector has a very strong influence, both at home and abroad, and it is this sort of pressure that has contributed to the idea of multifunctionality in agriculture: "essentially the range of goods and services arising from agriculture, other than the production of agriculture goods for commercial use, to which states attach a cultural or social value" (Parent, Duchesne, Gervais, Breault & Morales, 2011: 2). The concept of multifunctionality has become popular in recent debates over the value of the family farm. The residual benefits of traditional agriculture, such as the maintenance of scenic farmlands, and the preservation of natural resources, have turned into important factors in the argument against large-scale farming initiatives. These public goods cannot be accounted for in international trade, but are nevertheless important contributions to society and to the community (MAPAQ, 2012). This concept
leads governments, NGOs and international organizations into wanting to incorporate environmental and social values into their agricultural policy. Unfortunately, the Brazilian government is still more concerned with increasing economic activity, and considers multifunctionality to be the domain of civil society. It is possible that they will eventually incorporate this idea into their legislation, following the example of the European Union, but for the moment, it is not a priority on their agenda (Marques & de Lacerda, 2009: 11). It is easier to take what some may consider secondary issues, such as environmental concerns, into consideration in countries where wealth is more evenly distributed and where the public consciousness has changed to accommodate these values. Brazil still has, despite their rapid economic advances, a large part of the population that lives with the vestiges of a military dictatorship, a regime that created a society where prejudice, violence and inequality had an impact on personal economic capacity. Even if environmental concerns are shared by a number of Brazilians in major urban centres, rural populations do not consider the environment a top priority. So for now, the concept of multifunctionality promoted in the realm of international law remains a theory upheld only by civil society.

1.2. Economic policy measures

1.2.1. Protectionist measures: Tariff reform

The Brazilian government's focus on economic progress has made them an important force in recent international negotiations. With a new economic outlook, with inflation under control, and with sizeable improvements in their domestic and international trade policies, Brazil is ready for the challenge of becoming an important world economy. They have reduced their economic protection measures, particularly since the restructuring required for MERCOSUR. In 1999, the average applied tariff on agricultural goods stood at 13 percent and the average bound tariff was at 37 percent. These figures can be contrasted against other OECD countries, where the average is approximately 62 percent (FAO, 2003). It is clear that supporting farmers with advantageous tariff regimes in one country will prejudice trading capacity in another.
Brazilian trade authorities have been very vocal about this difference in tariff levels, and the subsequent discrepancies in prices. It remains to be seen how the international legal structure, and the countries under its protection, will react to new changes in agricultural policy in expanding economies such as Brazil’s.

Average tariff levels in the country declined by half in the years from 1990 to 1994. President Collor (1990 - 1992) was one of a group of Brazilian leaders that were in favour of eliminating tariff barriers, abolishing many of them early in his career. This rapid change exposed a number of domestic firms to intense competition from foreign companies. Between 1990 and 1999, the ratio of imported goods to GDP rose from 4.4 percent to 8.9 percent (Amann & Baer, 2002: 948). While this increase in imports did raise overall income in agricultural production, it also led to larger concentrations of capital. Small firms could not compete with the price points being offered by bigger agri-business companies, and so a number of them were forced out of the market. This concentration has created a domestic situation in Brazil where small-scale farmers are forced to compete against international conglomerates, creating one of the greatest levels of income inequality in the world.

1.2.2. Import Substitution in Brazilian Agriculture

As import substitution began to dominate the economic landscape in Brazil, the country was able to rapidly climb out of poverty to become one of the biggest emerging economies in the world. A re-orientation towards home-grown agricultural products and strong government intervention created an environment where farmers were able to specialize and trade excess supply. Farmers began to benefit from farm credit and price supports provided by the Brazilian government, and the country soon grew out of a pattern of subsistence agriculture into a country able to compete in international exchange markets.

At the global level, organizations such as the International Monetary Fund (IMF) are adamant that increasing market access for agricultural products from developing
countries would rapidly decrease poverty levels, and hopefully reduce inequality. Rural poverty has benefited from an increased demand for unskilled labour in manufacturing and the urban service sector, but close to three-quarters of the world's poor still live in rural areas, where agriculture is the dominant source of economic sustenance. While estimates vary among organizations, the numbers are similar: agriculture accounts for approximately 27% of GDP in developing countries and approximately 50% of employment (Geithner & Nankani, 2002: 42). In Brazil in particular, international agricultural reform would reduce the exodus from rural areas to already overcrowded cities such as Sao Paulo and Rio de Janeiro. Addressing this concern with national policies that shy away from traditionally protectionist policies could benefit farmers in Brazil struggling to compete with American and European farmers. The importance of leveling the playing field guides the actions of organizations such as the IMF, working to eliminate inequality through the support of economic incentives in developing countries. Brazilians, despite their hostility to the IMF (based on their track record in Latin American countries) need to take this organization's policies into consideration, and realize that they could stand to benefit from an outsider's perspective.

Brazil's agricultural sector has changed from a system largely based on protectionist policies to a much more liberal system, which has led to a more efficient private sector. Even so, trade liberalization is far from complete in Brazilian agriculture, as this transformation depends largely on the willingness of their government to encourage more open trading practices, and on the results of forthcoming multilateral trade negotiations (FAO, 2003). The Brazilian government has preferred to cede their state-owned enterprises to private, domestic companies in an attempt to focus on increasing their export capacity. A country once largely reliant on foreign imports has quickly become more independent, particularly in commodities such as petrol, sugar cane and soybeans. Even though the country has become increasingly productive as an exporter of agricultural goods, their climb to this level of market dominance was not without its challenges. The country still suffers from a number of chronic social problems that make investors wary of channelling foreign capital into the country.
Brazil has experienced major economic growth despite the hesitation of international investors. The AoA, an iconic shift in agricultural legislation, was not a significant factor in this recent economic up-swing. The country benefitted more from regional agreements such as MERCOSUR, which allowed them to increase their export activity in Latin America. Even so, the categorization of protectionist policies that was developed in this agreement has served as a means of comparing agricultural initiatives among parties to the WTO. In terms of economic progress, Brazil's decision to eliminate import tariffs on a number of key products gave them a competitive edge in international trading markets. Moving away from an economy largely dependent on foreign imports in the 1960s to one where almost all consumer goods were produced in the country allowed Brazil to maintain control of its key industries, contributing to its increasing economic stability. With the support of an international legal framework that benefits from the contributions of Brazilian policy-makers, and a more independent economy, the country is poised to become a leader among countries dependent on agriculture for their future prosperity.

2. Brazilian Agriculture

2.1. Background

Today Brazil is one of the most successful agricultural producers in the world, exporting the majority of its production to a variety of export recipients. According to FAO estimates, Brazilian agricultural production will increase faster in the next ten years than in any other country, and is set to double by 2019 (Tollefson, 2011: 38). For years, deforestation in favour of agricultural development became the norm, but in 2010, deforestation rates declined, and are predicted to do the same in 2011. Thus it can be assumed that the Brazilian government is in the process of developing sustainable policies to feed their population with minimal environmental degradation. Brazil has veered in this direction as a result of progress in agro-economic research, stricter environmental laws and pressure from consumers (Tollefson, 2011: 38). Even so, the
country still has a number of hurdles to overcome as conflicts over the use of fertile land are frequent.

In terms of agricultural policy innovation, some analysts believe that the neoliberal reforms adopted in Brazil in the late 1970s and the early 1980s were not beneficial for a number of groups in society, particularly small-scale, rural farmers. The IMF imposed a policy agenda onto the Brazilian government that favoured big business in trade negotiations, forcing the agricultural sector in Brazil to conform to the status quo in developed countries. This restructuring exacerbated income inequality and increased the concentration of fertile land in Brazil in the hands of a few major companies. Rapid urban migration and environmental degradation were also a direct result of this liberalization of agricultural production. Despite the government's best efforts to ameliorate the sluggish economic conditions caused by these changes, they are still apparent in Brazil, where inequality and rural poverty continue to be some of the most important issues facing this government (Huddell, 2010: 93). Nevertheless, there have been some socio-economic improvements, with programs such as the *Bolsa Familia*, aimed at ensuring that rural populations, particularly farmers, are able to stay afloat during difficult economic times.

After this period of political instability, Brazil experienced spectacular economic growth between 1980 and 1998, with a rise in GDP of over 40 percent, and a rise in agricultural output of about 70 percent. Soybeans and sugar cane became important export commodities, as yields increased and more harvest areas became reserved exclusively for export. Agriculture in the country grew in importance due to a macroeconomic environment conducive to trade reform. These changes focused on eliminating the industrial protection that had characterized initial attempts at agrarian reform, and the removal of taxes and quantitative restrictions on agricultural exports (Bussolo, Lay & Van der Mensbrugghe, 2006: 6). With reforms to agricultural credit and price support policies, Brazilian farmers became more powerful in international export markets. Brazil's restructuring programs included extensive changes in the allocation of land, and the deregulation of domestic markets for agricultural goods, two important drivers of the
increased agricultural export activity in the country (Bussolo, Lay & Van der Mensbrugghe, 2006: 6). This evidence points to the fact that Brazil has grown as a result of the government’s dedication to increasing their market dominance, and not necessarily as a result of export subsidies.

In developed and developing countries alike, governments profit from subsidies and incentives given to their farmers. The difficulties arise when the majority of developing countries cannot afford to subsidize their farmers to the same extent as rich countries. This logic also goes against free trade arguments and puts the same products harvested in developing economies at a great disadvantage. Brazil has been a victim of this situation for quite some time, even though they have been able to overcome trade barriers on certain key products (Igléicias, 2007: 76). Brazil has, in many ways, become a model for developing countries wishing to compete against the subsidized exports of the United States and Europe. Unfortunately, corruption and general mismanagement impede successful growth in agriculture in certain developing countries and countries on the brink of economic stability, and that is an internal barrier to trade that cannot be corrected with international legislation.

Brazil has been able to correct some of these domestic problems to become an economy largely dependent on agricultural exports for their spectacular growth. According to the Ministry of Agriculture, Fisheries and Provisions, Brazilian agribusiness accounted for 33% of the GDP, with 42% of that total being concentrated in exports. 37% of jobs in the country were concentrated in the agricultural sector in 2004, and in that same year, the GDP related to agriculture reached $180.2 billion US, an increase from $155.2 billion US the year before (Igléicias, 2007: 83). The ministry predicted that between 1999 and 2003, total GDP-related agricultural growth increased by 4.67% per year. In 2005, agricultural exports totaled $43.6 billion US, increasing to $49.4 billion US the year after (Igléicias, 2007: 83). These impressive figures demonstrate Brazil’s exemplary agricultural performance, putting the country among one of the world’s most rapidly rising economies. The Brazilians have been able to increase agricultural exports despite the recent economic crisis, largely due to the fact
that their export capacity is not completely dependent on price points dictated by their major competitors.

2.1.1. The role of family farming in Brazilian export capacity

It is often the case that farmers in developing countries are at the mercy of agri-business companies that are capable of dominating international markets. Small-landholder farmers are rarely the ones that profit the most from their own agricultural exploits. In countries such as Brazil, it is the companies that distribute the seeds and equipment that these farmers require that make the largest share of the wealth (Belik & Del Grossi, 2003: 20). This concentration of the means of production has led to extreme income inequality in Brazil, one of the biggest problems the government is trying to tackle by investing in agricultural expansion. The Northeast of the country, where the majority of the farms are small-holder enterprises, contains the majority of the country’s poor. In the Southern states, where the bulk of agricultural export happens, farmers live relatively well in conditions far different from their Northern counterparts (Belik & Del Grossi, 2003: 20). This inherent income inequality is one of the reasons why farmers have had no choice but to accept the government’s trade liberalization policies. With a concentration of ports and shipping companies in the South, Northern farmers work to feed these companies, and are often at their mercy in terms of pricing. Even if the government intervenes with price support policies and export tariffs, it is difficult to control the actions of a few major agricultural companies, who can have an enormous impact on price levels, both domestically and around the world. This corporate control has coincided with a general decline in small-scale enterprises that were once able to survive and prosper, providing swaths of the population with the capacity to earn a living as entrepreneurs.

This move away from family farming is not restricted to Brazil, as a number of countries face the eventual demise of the traditional family farm. Lubello is one of the few researchers who believes that agri-business does not include family, local or
subsistence farming (2010: 97). Most researchers are convinced that, despite the increase in production from large-scale, international companies, there is value in maintaining the family farm, and ensuring the crop diversity that this kind of production guarantees. In Brazil, a study by Guanziroli and Cardim revealed that family farming is more efficient than large-scale crop plantations. Their study revealed that in terms of overall production per hectare, a hectare on a family farm renders a crop value of $104 reais per year while a commercial hectare results in a crop yield of approximately $44 reais per year (Guanziroli and Cardim, 2000: 21). Unfortunately, the family farm is on the decline, as agriculture has become an industry of large-scale plantations and agri-business negotiations. Despite some recent government interventions to spur a return to traditional agricultural practices, farmers in countries such as Brazil have preferred to accept the guaranteed price points offered by competitive international firms, who are then able to offer them a certain level of financial security.

This phenomenon is especially poignant in the Southern region of Brazil, where the priority is on courting investors to the detriment of family-owned enterprises. Despite the fact that a large number of farms in the South are still family-operated, they have not shied away from industrial investments to increase production. Forced to compete with international agri-business, some smaller establishments have focused on increasing their investments in machinery and new plant varieties. Contrary to land abandonment in the North, Southerners have been buying up land to increase their production capacity; the purchase of land for agricultural expansion occupying close to 18% of all investments (Guanziroli & Cardim, 2000: 60). Given the ease at which international companies are able to buy up local competitors, farmers in the South see the purchase of land as one of the only means of ensuring their foothold in an industry increasingly dominated by agri-business firms. This type of investment is particularly important in markets dominated by subsidized products arriving from developed countries. Countries less reliant on export subsidies, such as Brazil, have developed other strategies to ensure that they can compete against these multi-national companies.

In the Southern region of Brazil, where colonization patterns favoured the maintenance
of family farms over large-scale plantations, the overall production value of the former is higher than the national average. This is a clear indication of the economic and productive potential of family agriculture. The Southern region’s economy is largely dependent on agriculture, with close to 29.3% of the land being dedicated to farming. This small portion of the country is responsible for 24.6% of all sugar cane and 45.7% of all soya produced in Brazil (Guanziroli & Cardim, 2000: 61). The economic potential of this region, given the importance of agricultural exports in international trade markets, is evident. Unfortunately, an influx of young people to the major urban regions of the South diminishes the prospects of expansion and continued growth in regions traditionally dependent on agriculture. A number of economic incentives are being developed by the government of Brazil to try and stop the movement of agrarian populations to the cities, and a number of them are showing positive results. If they continue to encourage maintaining small farms, it is possible that the number of Brazilians above the poverty line will keep rising.

Nevertheless, despite these government initiatives, and the best efforts of the family-owned enterprises still operating in Brazil, a number of indicators point to their eventual demise. With the increasing presence of international, agri-business companies in the country, the family farm will either have to submit to industry standards or produce without the intention of exporting internationally. This will have a big impact on market conditions, even with the minimal price supports offered by the Brazilian government.

2.2. Strategic planning of the Brazilian government

Even prior to recent debates on the impact of export taxes on agricultural exports, the Brazilian government had decided to eliminate a number of domestic and export taxes on agricultural exports such as soybeans, cotton and meat as a means of increasing their prominence in the region. As early as 1985, economic reforms in the country also allowed for the elimination of import licenses on corn. Opening up their markets to
outside competition meant easing their requirements on ownership, allowing outside companies to invest in Brazil through the purchase of import permits (Valdes, 2006: 31). By the early 1990s, it became noticeable that the government wanted to intervene less in agricultural markets. By privatizing state enterprises, eliminating minimum price supports and decreasing their purchases of staples such as wheat and milk, the government allowed the market to regulate itself. Brazil eliminated marketing boards for coffee, sugar and wheat long before other developed countries, and decided to focus on national credit programs instead (Valdes, 2006: 31). By focusing on increasing the potential of farmers in the country, they were able to overcome the price differentiation resulting from the elimination of taxes. Markets in developed countries, on the other hand, have become so reliant on export tax revenue that the removal of this price support would have a serious impact on their agricultural export potential.

Instead of focusing on subsidizing production, as a number of other countries have done, the Brazilian government has concentrated their efforts on research and development, creating a number of agencies responsible for ensuring their increasing agricultural potential. Since 2006, the Brazilian government’s agricultural research centre, Embrapa, has been creating maps showing the ideal plants for each climate to ensure that government credit is supporting plants that will yield the best returns on their investment. As a result, banks and local governments can now take into consideration a farmer’s development plans to ensure that they are taking full advantage of seasonal and environmental conditions. Government officials estimate that this new system will increase crop yields by at least 20%, and that it will be able to counter some of the predicted destruction caused by climate change, estimated at a loss of 4 billion dollars per year (Tollefson, 2011: 39). By not funding agricultural exploits through subsidization, the government has been able to focus on increasing farming potential through direct credit to farmers, and through innovative program development. As of yet, this type of agricultural support structure has not been ruled illegal by the WTO.

Developed countries, on the other hand, stand firm on their right to subsidize their agricultural industries, with more than $160 billion US being spent each year to shield
their markets from competition rules, despite international legislation preventing this type of spending. These countries also channel a large amount of funding into ensuring that international trade regulations are observed by their trading partners (Cardoso, 1998). A sort of double standard has been created as emerging countries, such as Brazil, try to protect their markets from this sort of behavior, responsible for much of the unfair competition that exists today. Meanwhile, developed countries are not ready to accept that their protectionist policies will need to be eliminated if they want to open up international markets to outside competition.

Another problem caused by the support of agricultural production in developed countries is the dumping of excess products in developing country markets, one of the main targets of international legislation. Prices fluctuate with availability, which is often skewed by the illegal dumping of excess stock by developed countries (Science, 2010: 812). Frequently cited as a means of providing development assistance to poorer countries, dumping leads to the devaluation of local stocks and a decline in food prices, which hurts local farmers. While the WTO considers dumping illegal, the phenomenon has not ceased to wreak havoc in markets where price volatility can mean the difference between poverty and prosperity. In terms of agricultural exports, Brazil has moved into the category of countries whose export activity determines global food prices. Given their recently acquired competitive advantage, price fluctuations are not as detrimental to their export markets as they are to other developing countries. Nevertheless, the Brazilian government is against the dumping of excess, often subsidized, goods in developing markets.

Issues of dumping aside, what determines whether a country is capable of participating in agricultural trade at the international level is global food price patterns, and Brazil’s increased presence in agricultural exchange markets has had a great impact on food prices. A number of developing countries struggle to feed their own populations, and most cannot support an agricultural export sector that is capable of competing with powerful trading partners such as Brazil. Developing country export capacity is also often far beyond the realm of European producers and their export potential.
Brazil has moved into the arena of countries that are garnering attention from domestic and foreign investors, and rapidly shedding its status as a developing country. Governments intent on expanding their agricultural production are keen on identifying "idle" lands in the country and turning them over to agri-business operators. The Brazilian government courts commercial investment and sees it as the best means of ensuring maximum returns on their initial investments (Vermeulen & Cotula, 2010: 23). With a decreasing interest in maintaining family-run operations among the newer generations, the government has had no choice but to welcome international investment.

As a result, the agricultural sector has been expanding in Brazil, leading to one of the largest agricultural trade surpluses in the world, valued at $27.5 billion US (Valdes, 2006: 30). This is partly due to Brazil's efforts at increasing liberalization up until 1999. Since that time, the Brazilian government's incentives for agricultural production are what have contributed enormously to their agricultural growth. Incentives such as credit programs for potential farmers, tax exemptions, financing for agricultural research, changes to marketing and infrastructure, and a number of other incentives at the federal, state and local level have allowed farmers to expand production to levels that render them competitive in international exchange markets (Valdes, 2006: 30). They have been able to increase their export capacity with other non-distortionary means, and in doing so, have become a model for developed and developing countries alike.

Nevertheless, these rapid changes in Brazil's agricultural sector were a knee-jerk response to changing economic conditions in the region. Institutions and policies were created in domestic markets to comply with international trading requirements. While it is natural for a developing country wishing to break into international trading to adapt their national policies to the those of their competitors and partners, it is uncertain as to whether such changes will be able to address poverty concerns in the country. Brazil is at a crossroads in terms of its ability to affect international trade negotiations, especially given its extremely powerful position in regional trade agreements (Castro & Carvalho,
While it is still subject to the protectionist tendencies of its major trading partners, it is now able to navigate with confidence through changes resulting from their increased export potential. Increasingly comfortable as a powerhouse in international agricultural markets, Brazil has grown to have an important influence on the direction of local markets, despite internal problems such as land distribution.

Another important issue that has an impact on international export markets is the allocation of land for agricultural exploitation. In Brazil, land use varies across the country due to a large variety of opportunities and constraints faced by each household. The Instituto Nacional de Colonização e Reforma Agrária (INCRA), an organization mandated to create an agrarian reform program in the country, created a farm credit line intended to support agricultural activities such as the cultivation of perennial cash crops. As a result, credit incentives slowly moved from cattle ranching, the focus of earlier government intervention strategies, into harvested products (Futemma & Brondizio, 2003: 388). With the introduction of cash crops as the primary driver of farm markets, agricultural companies required extensive land for large-scale plantations. Farmers were often forced off their land by big business and poorly compensated, with these companies often intent on profiting from the government credit program. Since then, the allocation of land has been a contentious issue in the country. Even though the government tries to support small-scale farmers, preference is always given to companies that are able to produce on a large-scale and export their production.

Nevertheless, there are a few, ongoing government initiatives that focus on supporting traditional farming enterprises, such as the Ministry of Agriculture, Fisheries and Planning’s objectives for the year 2011 - 2012. They are planning to continue contributing to the National System for Rural Credit, hoping to increase interest in farming in rural regions in the North. They are also working towards keeping tariff levels steady in compliance with their WTO obligations (Plano Agrícola, 2011: 11). One of the most ambitious programs put in place to induce production can be found in the sugar cane industry. The government is willing to provide up to $1 million reais in credit for the planting or revitalization of sugar cane fields. Included with these credit incentives are
flexible repayment options and the support of government agencies, such as *Embrapa*, tasked with helping farmers succeed (*Plano Agricolo*, 2011: 16). These efforts pale in comparison to the extravagant discourse on export potential that the Brazilian government promotes on the international scene, but yet, they do serve to appease large parts of the population that depend on agriculture for their livelihood. Nevertheless, despite these small attempts to bring small-scale farmers into their agricultural expansion plans, the government's primary focus has always been export over ensuring food security at the national level.

When it comes to agricultural exports, it is not uncommon to have policies created in the aftermath of a problem, as Brazil has done on a number of occasions. National governments tend to respond to increases in food prices with uncoordinated national policies, which are a serious, "human-induced" threat to market stability (*The State of Food and Agriculture*, 2010: 82). These policies most often concern domestic food security, and are able to wreak havoc on international markets, destabilizing global food supply levels. The Brazilian government is not concerned with ensuring food security for its trading partners, especially given the income inequality suffered by large part of its population. Even so, international food markets have become so interwoven that governments have had no choice but to confront price volatility on a global scale. Avoiding counter-productive policy responses should be a goal of all countries involved in agricultural export markets, but it unclear whether they will ever be able to agree on a common policy that ensures price stability (*The State of Food and Agriculture*, 2010: 82). Given that policies are often created to counteract market volatility, it is difficult for countries to fix policies, particularly at the national level, without knowing how the market will react.

Nationally, the expansion of Brazil's agricultural sector has had to take into consideration programs that address the needs of both the rural poor and farmers, two of the most marginalized groups in the country (*Wise*, 2007: 538). Considering the overlap between the two, the Brazilian government has often categorized them at the same level in terms of poverty, even though their needs are markedly different.
Distinguishing between them has been left to civil society, where groups representing their rights have flourished as a result.

Even with the presence of a strong non-governmental sector, the Brazilian government still has a number of hurdles to overcome in their ascent to agricultural supremacy. From the beginning, they were convinced that the best way to assist the rural poor, and farmers in particular, would be to liberalize the markets and free them from government intervention. The Brazilian government decided to render their agricultural policy official with resolution 155, specifying that "exports of soybeans, meal, oil, cotton fibre, rice and corn shall be freed from quantitative and qualitative restrictions" (Helfand, 1999: 22). The background report preceding this resolution aptly stated that "the Brazilian agricultural sector no longer relies on the subsidies that to a large extent motivated the policies of restricting exports and government intervention in the market ... Access by this sector to more open and competitive markets can no longer be denied without condemning it to stagnation and technological backwardness ..." (Helfand, 1999: 22).

There is no doubt that credit subsidies were inextricably linked to trade restrictions, but opinions differ on whether these trade limitations contributed to a form of compensation through credit subsidies, or vice versa. Regardless of the relationship between the two, once the regime of subsidized credit ended, the rationale for trade restrictions also disappeared (Helfand, 1999: 22). The Brazilian government had enough foresight to see the negative effects of heavy subsidization and other trade restrictions long before the beginning of agricultural trade talks in the WTO. Now Brazil competes in markets dominated by countries that are heavily dependent on offering trade-distorting assistance to their farmers, making the elimination of these subsidies one of their primary goals in international trade talks.

Brazil is a prime example of a country that was able to develop a flourishing agricultural sector without recourse to export subsidies. They decided, amidst their debt crisis in the early 80s, to drastically cut agricultural assistance. As a result, credit support for agricultural expansion dropped from $27 billion in 1986 to $6 billion in 1996, as measured in 1996 U.S. dollars (Pereira, 2003: 45). Various price supports were also
removed to reflect a new, restrictive agricultural policy. At the time, Brazil was
determined to create a more market-driven economy with makeshift policies quickly
turning into the ideal development strategy of the moment. Without government
assistance, a number of small farmers were forced to "sink or swim", and a number of
farm workers soon found themselves out of work. To offset potential conflicts and
struggles among the working class, the government started to increase spending on
social programs such as welfare and rural social security (Pereira, 2003: 45). This
drastic change in the way that agricultural production was conducted was difficult for the
Brazilian public to accept, especially considering the considerable support that the
government had offered in the past. Adjusting to a more independent farming strategy
resulted in the elimination of a large number of small farms, being forced either into
abandoning their business, or buying into the large-scale production of foreign
companies.

Despite the massive changes in the way farming was conducted, agricultural exports
still generated the largest positive trade balance in the Brazilian economy in 2001,
accounting for $19 billion US. The exceptional part of this performance is that it was
achieved with far fewer subsidies than the United States or the European Union.
Brazilian agricultural subsidies provided assistance to about two million farmers, while in
the U.S., the government spent 2/3 more on only 250 000 farmers (Pereira, 2003: 46).
This difference has created a situation in which American farmers have become heavily
dependent on export subsidies, while Brazilian farmers continue to see exponential
growth with very little government intervention. As a result, the Brazilian government
has been able to increase their export capacity even while providing large-scale
assistance to their farmers.

Agri-business now accounts for almost half of Brazil's exports, serving markets in 215
different countries around the world. They are among the United States' biggest
competitors with their ethanol made from sugar cane. The US has imposed restrictions
deemed "protectionist" by the Brazil authorities because of their production of a similar
corn-based product (Folha, 2010). Brazil has been able to counteract American export
subsidies, and has now become strong enough to counter their unfair trading practices in international markets. They were able to do so with their credit program, which provided the financial start-up required by farmers, this being just one example of the kind of competitive measures that have made Brazil such a commercial success.

Despite this progress, Brazil's commercial credit industry has suffered from years of high inflation and frequent changes in government policies, resulting in interest rates of more than 15%. To counter this, the government created a commodity loan program for farmers constrained by credit terms beyond their means. With this program, farmers are able to put up 70% of the projected value of their crops as collateral for loans. Crop value is established as per the governments' established price points. With this program, farmers benefit from an interest rate of 8.75 percent, which is equal to -3 percent if adjusted to include inflation. Loans are conducted in collaboration with private banks, meaning that loan limits are limited, most producers being only able to finance the production of approximately 250 - 300 hectares (Matthey, Fabiosa and Fuller, 2004: 6). This government program has been most successful in regions with small farms. In the central region of the country, a number of medium-sized and large-scale farms are under the financing constraints of those that supply their inputs, usually multinational grain companies such as Monsanto. Given their international clout, they are able to hedge the value of the credit they have on a futures market to secure a given rate of return (Matthey, Fabiosa and Fuller, 2004: 6). This level of security increases confidence in Brazilian exports on international markets. By giving small start-ups the financial incentives they require, and forcing large-scale plantations into the hands of foreign investors, Brazil has been able to expand its export sector without recourse to export subsidies.

2.2.1. Eliminating Export Subsidies to Equalize Trade

With a push towards eliminating export subsidies to increase trading opportunities, Brazil is well-poised to be the spokesperson for other countries trying to break into
international agricultural markets. Anderson, Cockburn and Martin are just some of the authors that are convinced that poverty and South-South inequality can be eliminated with greater commercial liberalisation of agricultural markets. Using simple economic modeling based on export levels, they conclude that agrarian reform is necessary to ensure greater equalization between developing and developed countries (2011: 502). Their study also concludes that eliminating import tariffs is more important than the suspension of export subsidies in developed countries. Nevertheless, they believe that a fairer system will emerge if international trade markets force developed countries to eliminate export subsidies (Anderson, Cockburn & Martin, 2011: 502). This belief in the ability of the market to regulate itself without export subsidies is supported by a number of scholars and financial experts, particularly those working in international organizations such as the WTO. To support their argument, a recent study by the World Bank shows that price distortions caused by agricultural subsidies in developed countries have gone down by one-third since the end of the eighties (from 51 to 32%). In developing countries, assistance to farmers has disappeared despite the fact that it had risen from -41% (1980) to 1% at the beginning of the years 2000 - 2004 (Anderson, Cockburn & Martin, 2011: 490).

These changes show the capacity for poverty alleviation if agricultural subsidies were removed. International and inter-country inequality could also be eliminated with the liberalisation of agricultural and trade policies (Anderson, Cockburn & Martin, 2011: 498). Their study demonstrates the positive net increases in income that would result from the elimination of export subsidies. Global food prices are largely affected by the imposition in each country of indiscriminate taxation, levied on all imports regardless of origin. While developed countries have taken these taxes as a given, developing countries cannot afford to pay taxes to the same extent, resulting in an unfair market system dominated by the countries capable of paying.

In another study conducted by the World Bank, agriculture is cited as the best means of reducing poverty in countries with low GDP levels due to the fact that it has an impact on a number of other sectors. In addition, the lowest levels of society benefit more from
agricultural expansion than from growth in any other economic sector (Sorgho, 2011: 6). Brazil realized this in the early 1980s, when farmers were among the most marginalized members of society, leading them to increase support for the agricultural sector.

Since then, from the perspective of the World Trade Organization, Brazil has become one of the world's most important producers and exporters of agricultural goods. Government assistance has been on the decline in the country, and the support that is provided now is intended to support low-income farmers in disadvantaged areas. It is not these minimal price supports and rural credit programs that have an effect on international trade. Brazilian authorities continue to express their disappointment at the WTO about the fact that the support provided to farmers in other countries is causing distortion and price volatility for all countries engaged in agricultural trade. The changes in market pricing caused by subsidies in agricultural markets need to be eliminated to ensure that all parties to international agreements are able to profit from their export potential (WTO, 2000). Price supports such as those that Brazil uses to encourage the poorest sectors of the population into agricultural exploitation do not have an impact on export markets, whereas the support provided to farmers in developed countries does. The Brazilian government is determined to eliminate these, what they consider, unfair trading practices.

Not all researchers are convinced that export credit systems, such as the one in place in Brazil, have an impact on the international trading system. A recent OECD study documented the minimal impact of export credits on the trade of agriculture products. Even though there are certain credit programs that do change importers' purchasing decisions and have a distortionary effect on markets, the majority do not have a substantial impact on trade. Their study revealed that total export credits facilitated approximately 4.4% of world trade between 1995 and 1998, but of these credits, only a small number created any distortion on world markets (Peters, 2006: 9). As a result, Brazil would benefit from maintaining their credit program to encourage development in the agricultural sector.
A similar case study was conducted on subsidized sugar exports in the European Union. The WTO ruled that these subsidies were higher than the amount permitted. The EU claimed that there were no subsidies on their non-quota sugar exports, but the investigation discovered that this sugar was in fact benefitting from the high guaranteed prices paid for quota sugar. Even though there were no subsidies on their products, they still maintained a strong market position in sugar export markets due to this quota system. In the EU, export subsidies are small and on the decline, but their comparative advantage is often hidden in domestic support measures such as this one (Peters, 2006: 10). These price supports are a sticking point in international negotiations, especially considering the fact that the agricultural community has come to depend on them for guaranteed returns on their investments. Farmers in developed countries understand that commodity prices will increase if export subsidies are removed. However, since the majority of export subsidies are not levied on commodities, but rather on primary resources, this means of helping developing countries expand their trading capacity is limited.

It is not simply a question of eliminating export subsidies; developing countries need to establish strategies that focus on improving their supply capacity and their ability to move products. Transportation systems in developing countries are one of the biggest impediments to trade expansion, and need to be revamped (Peters, 2006: 33). It is easy to lay blame for an uncompetitive agricultural sector on export subsidies and internal credit regimes, but realistically, a number of other internal barriers to trade exist in developing countries. In Brazil, the transportation system is a serious detractor from their increasing potential in agricultural trade. If the country wants to increase its competitive potential, a major restructuring will be required, and will likely have a much bigger impact than the removal of export subsidies in developed countries. This type of investment at the national level will only increase a developing country's ability to compete against countries dependent on guaranteed price supports.

In addition to improving transportation in the country, the main negotiators in Brazilian agri-business would like to see the end of agricultural subsidies in developed countries
so as to allow them, and their globalized production capacity, to compete on world markets. They also insist that they be able to continue their agricultural reform, based on granting access to farmers that want to live in rural areas. They argue that it is not this sort of internal reform, designed to increase the quality of life in rural areas, that will act as an impediment to international trade (Valente, 2008: 26). The argument that credit measures, such as those put in place to assist small-holder farmers, cause distortion on world markets is highly unlikely, especially considering the number of policies in place in developed countries that maintain prices artificially high. Developing countries and developed countries alike should be able to assist their farmers with national policies and incentives to farm, but this assistance cannot be considered a long-term solution to the problem of food security.

If rich countries decided to eliminate their subsidies and other barriers to trade, Brazilian agriculture would likely expand. The World Bank has estimated that full liberalization would increase the value of agricultural output by 34% and net farm income by 46%. For Brazil, this would mean a rise in income of approximately $3.6 billion a year (The Economist, 2005: 1). This is why the Brazilian government is so invested in the Doha round of trade negotiations, hoping to lower barriers to agricultural trade on a worldwide scale. Nevertheless, Brazilians are skeptical about the negotiations because they fear that the outcomes will be a number of "impressive-sounding reductions in maximum tariffs without lowering much the ones actually applied" (The Economist, 2005: 1). Even so, at the national level, eliminating export taxes on commodities in 1997 cut costs by 10 - 20%, causing what Sergio Barroso of Cargill's local operation calls "the biggest stimulus to agriculture in Brazil" (The Economist, 2005: 1). The Brazilian agricultural sector is an example of what can occur when barriers to trade are reduced, long before they become a mainstay in an industry. Now that developed countries rely on these subsidies, they are finding it incredibly difficult to eliminate them.
2.2.2. European export situation

The debate intensifies with the backlash against GM crops in the European markets, one of Brazil’s largest export markets. As a member of MERCOSUR, Brazil has been in negotiations with the European Union to create the largest free trade area in the world. The European Union has been hesitant to embark, especially considering the weight of the less developed countries in MERCOSUR. Offers of exchange are on the table, and negotiations have recently revolved around agriculture, one of the most important and sensitive parts of the negotiations. The Brazilian government believes that "substantial gains in opening EU agricultural markets are essential for Brazil" and they will not cede to EU demands until the process of eliminating tariff barriers is at least started (Iaquinto, 2011: 21). With these negotiations has come a pressure to increase production to satisfy demand from export recipients. In order to allow for increased trade between the two, a number of changes will have to take place. For Brazil, it will be changes to their safety standards, while the EU must agree to modify existing distortionary policies.

The experts are divided on how to measure the importance of technical barriers to trade. Henson and his colleagues decided to submit questionnaires to exporters and government officials in 65 low and middle-income countries. They asked respondents to take a position on certain factors that would affect their country’s ability to export food products to the European Union. The researchers created a 5-point scale ranging from 1 "very significant" to 5 "very insignificant" on factors such as sanitary and phytosanitary measures (SPS) requirements, technical requirements, transport and other direct export costs and tariffs. The biggest factor affecting export to the EU cited by respondents was SPS requirements. Other technical requirements such as labeling regulations and compositional standards were also often cited as important barriers to trade with the EU (Geithner & Nankani, 2002: 17). Unfortunately, SPS measures are often imposed by customer preference, and are non-negotiable in international trade regulations. Even though export subsidies are the most controversial means of causing market distortion, there are a number of others factors to take into consideration when discussing
potential barriers to trade between the North and the South. If Brazil wants to compete in European markets, they must maintain safety regulations on par with European standards.

In addition to improving their safety standards, Brazil must deal with a number of problems that have arisen due to intensive agricultural processes with products destined for export. In the case of soy, a number of plantations have been affected by *Asian Rust*, a disease that kills large parts of the plant and renders it unfit for consumption. As a result, lands that have been consecrated for soy production often end up becoming pasture for cattle. Given the market obligations of companies that have dedicated large swaths of their territory to soy production, a number of these companies have been moving into the Northern regions in search of land (Dufumier, 2005: 4). Land degradation has become a problem as Brazil struggles to feed European markets. These problems have arisen as a result of intensive agriculture, and did not exist before the introduction of monoculture production.

Despite this pressure to produce in Brazil, European trade officials have expressed their preference in trading with MERCOSUR as opposed to dealing directly with each country involved. This kind of set-up would be detrimental to Brazilian trade as a generally uncompetitive business sector would be exposed to strong European competition. As a result, the Brazilian government has slowed integration in its own regional trading bloc, and has decided against advancing too quickly into free trade negotiations with Europe despite recent short-term profits from agricultural exchange (Klom, 2003: 356). This type of trade relationship is a monumental undertaking that will require a number of changes in both Brazilian and European export markets. This experience has hopefully shown Brazil the importance of being competitive on a regional scale before venturing into long-term trade talks with external trading partners.

In Europe, The Common Agricultural Policy (CAP) is warming up to the idea that small farms need to be protected, and European politicians are working to prevent their continuing decline (Matthey, Fabiosa and Fuller, 2004: 20). Given the profitability of the
agricultural sector, developed countries are beginning to feel the need to re-examine their market structure to ensure their predominance. Fortunately, countries such as Brazil have been able to apply the same strategies employed by developed countries in their agricultural sector. By focusing production on commodities in which they are able to have a competitive advantage despite export subsidies levied on them, they have succeeded in export markets traditionally dominated by agricultural powers such as the European Union.

Europe is one of Brazil’s biggest trading partners, receiving 22.5% of total exports. Brazil is an important factor in the EU’s ongoing agricultural negotiations as the EU is interested in increasing trade within the MERCOSUR community. Brazil is the biggest exporter of agricultural goods to the EU, with 12.4% of total EU imports. The two are inextricably linked given the trade deficit that the EU holds with Brazil, valued at over 4.1 billion euros. This is counteracted by the fact that the EU holds a surplus in commercial services trade of over 4.1 billion euros. In terms of investment in the country, the EU is the biggest foreign investor in Brazil and has stakes in a number of new economic initiatives (European Commission, 2010). Given this high level of interaction in trade between the two, the agricultural policies of one will automatically impact on the other. Brazil has an interest in increasing export levels to the EU but is still blocked by protectionist policies favouring exports from already established trading partners. Both countries would benefit from reducing barriers to trade through international negotiations at the WTO, yet it is difficult to know with any certainty if the EU will ever give up the export subsidies that support their agricultural sector, and ensure their dominance in international agricultural negotiations.

Brazil is also a market that is not completely free of barriers to trade. They profit from customs tariffs of approximately 12%, levels unacceptable to EU trade officials, who are constantly encouraging Brazil to reduce tariff and non-tariff barriers. They are also pushing for a stable, regulatory environment to ensure the continued interest of European traders and investors. The relationship between Brazil and the EU is important for both parties, as they continue to watch each other closely, trying to predict
their respective moves in the on-going WTO Doha Round of trade talks (European Commission, 2010). While Brazil does not maintain nearly half of the protectionist policies that European farmers benefit from, both need to reconsider how to increase trade and decrease unfair competition on international markets. Brazilian farmers have had to learn to compete in a market situation dominated by the directives of European trade policies, but with the imposition of international agri-business, Brazil has recently been able to have a say in international trade negotiations. Nevertheless, both parties have a ways to go before they can increase their trading capacity to a level that is both efficient and sustainable. Brazilian officials will continue to push for an overall decrease in existing trade barriers, while the EU suffers through one of the worst economic crisis in its history.

Brazil has made many major improvements in its agricultural policy since its debut in international export markets, without resorting to subsidies that could influence trade. Even so, Brazilian farmers have suffered through a number of government decisions that have limited their potential for expansion. For one, the family farm is an institution that is being threatened by large-scale agri-business, as they move into areas traditionally controlled by small-scale farmers. Land allocation has become a problem as these companies try and get the best return on their investment with massive plantations oftentimes developed on what were once family farms. The Brazilian government has responded with credit programs and the creation of agencies tasked with helping traditional farmers compete against international heavyweights, but it is unclear as to whether this effort is enough to stave off economic stagnation in the agricultural industry.

A number of researchers point to the elimination of export subsidies, particularly in countries such as the United States, as a means of reducing income inequality between the North and the South. These barriers to trade create unfair market conditions, forcing farmers in developing countries to compete with heavily subsidized producers in more developed countries. The Brazilian government has been able to improve their position on agricultural export markets without relying on subsidies, and spends a lot of time
trying to convince other countries to do the same. Brazil has also pursued a number of trading partners, both on its own, and as a member of MERCOSUR, the most recent being the European Union. Europe is keen on increasing trade with Brazil, provided they can deliver on their commitment to improving, among other things, their sanitary and phytosanitary measures. Nevertheless, Brazil and its export partners have quite a bit of work to do before they can trade in a market that is not dictated by domestic and international barriers to trade.

3. Brazilian export potential

3.1. Case studies: Soya and sugar-cane

With an increase in the production of their two staple crops, soya and sugar cane, Brazil will be able to increase exports, particularly if they are able to ensure the required level of internal safety standards. Brazil owes its agricultural dominance to its ability to expand soy production, having adapted plants traditionally grown in the South to conditions across the country. They now rival the United States with their elevated soy crop yields. Since 2006, the principal Brazilian soy exporters have accepted a moratorium on the destruction of fertile lands. They are monitored by satellite and by non-governmental organizations, such as Greenpeace, that have confirmed their commitment to this pact (Tollefson, 2011: 38). With this commitment to sustainable harvests, Brazilian exports have increased in importance on world markets. Nevertheless, there are still a number of questionable land practices being used, particularly by large multi-national corporations.

Companies such as Monsanto, in the country since the 1930s, have been buying up land and using it to plant crops destined primarily for export. With these acquisitions comes the question of property rights, which has always had an impact on land use and the cultivation of crops for export in Brazil. A number of households hold to traditional farming practices and reject more intensive systems of production. These households,
when given the opportunity to expand production with credit initiatives, did so, but not
with the intention of export, as the government originally intended. Small-landholders
were intent on keeping their traditional practices of crop rotation, as this was the ideal
way to guarantee the best returns each year (Futemma & Brondizio, 2003: 391).
Initially, farmers were not interested in the production of crops for export, as their
primary concern was ensuring that they could provide for their families. Early credit
initiatives were met with high levels of out-migration and land abandonment, with
farmers leaving behind small farms for the city (Futemma & Brondizio, 2003: 397). They
hoped to take advantage of industrialization and development in the service sector,
which seemed to be a much more profitable enterprise in the early 1990s. As a result,
agri-business took advantage of the large amount of abandoned land to begin
production for export.

3.1.1. Brazilian Export Capacity in Sugar cane and Soya

Despite increasing interest in crops such as sugar cane and soybeans in international
export markets, the Brazilian government, in the late 1990s, decided to focus on tax
incentives and credit lines for cattle ranching. This led to an increase in the number and
size of farms dedicated to cattle production, to the detriment of crop production
(Futemma & Brondizio, 2003: 370). These incentives were intended to increase export
production, but unfortunately, this government interest in cattle-ranching turned out to
have a detrimental effect on the environment. Local non-governmental organizations
began to lobby government to change their incentives to encourage ecologically
sustainable ways of expanding the cultivation of the Amazonian rainforest. Eventually,
the government decided to focus on crops, such as soybeans and sugar cane, which
became important export commodities, particularly for export to the European Union.

Among these, sugar cane production is second only to petrol in terms of the most
important energy sources in the country, accounting for 18.2% of all energy produced in
Brazil. With the announcement of expansion in production in a number of key crops for
the 2011 - 2012 harvest came a number of credit initiatives geared at increasing and expanding sugar cane production (Plano Agricolo, 2011: 83). The Brazilian automotive industry was quick to take advantage of advances in crop science aimed at increasing the use of cash crops as a source of fuel. Since then, sugar cane has become among one of the most exported cash crops in the country, and has had an important impact on increasing economic activity in agricultural markets.

At the international level, OECD countries have been under extreme pressure in international negotiations to liberalize their sugar production models. Estimates predict that prices could rise by as much as 40 percent if these countries were to eliminate all the trade-distorting policies that exist in this sector. This would be a major advantage to a number of developing countries that benefit from a natural competitive advantage in sugar production, and Brazil is among one of the countries that stands to benefit the most. Brazil is currently the largest producer and exporter of sugar worldwide, responsible for 28 percent of the world's sugar cane production and 25 percent of our supply of refined sugar (Krivonos & Olarreaga, 2006: 1). This dominance in sugar cane production puts Brazil among the most important negotiators in international legislation in this sector.

Most sugar producing countries, aside from Brazil, have support policies for this product, regardless of whether they are developing or developed countries. Both domestic and international trade are highly distorted as government support to sugar cane cultivators and factory owners occurs in the majority of sugar producing countries. The majority of these countries also rely on market intervention by government, be it by taxation or by subsidization (Gawali, 2003: 4515). Brazil has been able to expand production without subsidization due to their strong production-based internal credit system. Aside from sugar, soybeans are among the most protected crops in national and international agricultural policy.

Soybean production accounts for a large amount of total agricultural exports in Brazil, and has become one of the most contentious products on international exchange
markets. Brazil has recently become a key competitor alongside market stalwarts such as the United States and the European Union. In Brazil, the majority of the soybean production is found in the state of Mato Grosso, with Rio Grande do Sul (insert Figure 3 here) coming in second in terms of output in this product category (Ferreiro Filho & Horridge, 2006: 365). Cultivation of soy is found predominantly in the center-west and the southern tip of the country, where the majority of large-scale plantations are found. This product has become an important export commodity for Brazil and has created a foothold for them in international markets, especially given their substantial increase in production capacity.

With this expansion, talks of loosening export restrictions and opening up a market to international trade have increased despite the fact that this is not necessarily the best way of increasing production in a particular sector. Brazil, with the support that they provided to their soybean sector, is often lauded as an example for other developing countries looking to break into international trade markets. Government support allowed an increase in earnings in soybeans from $393 million US in 1980 to $2.7 billion US in 2001. As a result of this initial support, Brazil is now the second largest producer of soy in the world (insert Figure 1 here). Nevertheless, this level of support is now considered illegal by the WTO. This level of state intervention in this sector has resulted in the concentration of the means of production in the hands of a few producers. Soybean producers in Brazil tend to be large scale operations, which have been detrimental to the family farm, unable to compete with the competitive advantages afforded to large-scale production and investment (Cassel & Pattel, 2003). Large-scale plantations now dominate a landscape once dotted with traditional family farms. This concentration of the means of production has caused a number of problems, even though there was an overall increase in gross domestic product (GDP) in the agricultural sector.

The government had invested with the intention of increasing food security across the country, but soybean production actually ended up reducing access to food. The government’s initial policies aimed to increase food security by reducing the cost of feed for poultry (made with soy), which would in turn make chicken more affordable for the
average Brazilian. Unfortunately, soy production began to compete with food crops for land and the expertise of local farmers. With these incentives, farmers turned to soybean production in the early 1970s and soybeans soon displaced 90% of the area used to grow other staple crops such as rice, beans, manioc, potatoes and corn. Realizing this, the government mandated the expansion and cultivation of new, previously unused lands. Nevertheless, soybean production for export has continued to compete and often replace the production of traditional food staples (Cassel & Pattel, 2003). This is not a new problem in developing countries struggling to break into international trade markets. Government assistance is often channelled to businesses that are intimately linked through previous contracts often lacking in accountability. The promise of increased profits for exported goods overshadows the fact that the country's population cannot feed itself. It has ceased to be a question of production capacity, and is now more than ever a question of distribution. Most farmers will concentrate production in goods in which they can get the best price on international markets. Increased exposure to international markets does not necessarily ensure increased food security, and more often than not, has the opposite effect. Brazil is a victim of this mentality, focusing on export profits over ensuring food security at the national level.

In addition, Brazil's export potential and its ability to compete against other OECD countries has been constrained by Northern agricultural policies aimed at prioritizing Northern products over Southern exports. Exports are heavily subsidized, and despite rhetoric to the contrary, a number of trade barriers in potential markets still exist. In the case of soybeans, the Producer Support Estimate (which estimates the value of transfers to producers) in the United States, Brazil's primary competition, increased from 4.5 percent in 1997 to 23.1 percent in 2000, when expressed as a share of total farm receipts (insert Figure 2 here). In the Europeans Union, oilseeds are considered duty-free but taxes are levied on vegetable oil and oil seed meal (Geithner & Nankani, 2002: 25). These subsidies create a competitive advantage for products originating in the US and the EU.

The sugar market also has a very high Producer Support Estimate in both the European
Union and the United States, with estimates ranging between 47.1 and 48.9 percent. In both markets, producers usually receive more than three times the world price for the same products being produced in developing countries. This kind of protectionism is detrimental to Brazilian exporters, who are low-cost exporters trying to compete against Caribbean producers, who are able to profit from tariff-rate quota allocations negotiated at these higher prices (Geithner & Nankani, 2002 : 25). The developed countries have had agreements with Caribbean producers for decades, and these taxes have become standard in price negotiations. Now that developing countries are trying to increase their dominance in international export markets, these support estimates are being criticized, especially because of the impact they have on the overall price. With price supports causing extreme differences in prices, developing countries and countries without subsidization are finding it increasingly difficult to sell their products in international export markets.

It is difficult to consider Brazil a developing country facing domestic support measures that inhibit their ability to compete on international markets. With such strong export growth in key commodities such as soy and sugar, the Brazilian agricultural sector has become a key competitor in international exchange markets. Their initial protectionist policies were a means of concentrating their expertise on a few key products in which they were able to become competitive. Even though they have a keen interest in seeing the barriers to trade abolished, it is difficult to ascertain if future agricultural negotiations will have an impact on current export levels. The debate on genetically modified organisms (GMO) has, to a certain extent, overshadowed attempts at reforming international trading standards.

3.2. Genetically Modified Organisms and the Public Response

Despite the protests of small-scale farm enterprises and the non-governmental organizations that support them, genetically modified (GM) products exist in Brazil. The issue is a contentious one in the country, especially considering recent bans on genetically modified organisms in Europe, one of the biggest recipients of Brazilian
produce. While American investors in the country welcome the use of genetically modified plants, European export partners are hesitant to sign long-term contracts for fear of impending government legislation in their own countries banning GM crops.

Monsanto is among one of the most important promoters of GM crops in the country. A number of Monsanto’s Round-Up Ready seed producers under contract in Brazil, such as Monsoy, Embrapa, Codetec and the Fundação Meridional, are realizing that their productivity is not as high as they predicted. These organizations have therefore banded together to announce that productivity in the country will not increase unless the country reverts back to traditional breeding methods that mixed native North American varieties with the once extremely productive local varieties. It is evident that the monocultures that dominate the landscape cannot render the productivity expected with the introduction of GM crops (Lubello, 2010: 100). Producers need to alternate crop varieties to increase their yields, which requires a flexible market economy, one that allows for variations in the products that are planted, harvested and exported.

In a number of cases, modern agriculture has evolved faster than the government legislation meant to govern it. The agricultural economy is now dominated more by profitability and efficiency than safety and quality. As farming as a career choice fails to entice younger generations, the fate of the world’s food system lies in the hands of tens of thousands of agricultural producers that are forced to compete in international agricultural exchange markets (Deléage, 2008: 10). Food security has become a secondary concern behind ensuring profitability for agri-business despite the work of a number of non-governmental organizations across the globe working to make food a priority for government. Déleage is one among a number of authors advocating for an evolution away from the industrialisation of our food supply, one that currently puts human and ecological concerns in the background (2008: 14). There is no doubt that as agri-business becomes more a question of trading at the best price, traditional farming methods are being lost. Additionally, environmental degradation has become the norm, exhausting lands that were once abundant with monoculture agriculture, the effects of which we have yet to research further (Deléage, 2008: 14). While the government is
tasked with ensuring the safety of its citizens regardless of the economic system, it is not unusual for economic concerns to trump human security.

Luckily, civil society has been growing in response to the overtaking of agricultural production by large corporations. In Brazil, a number of interest groups and social movements have sprung up in response to rapid industrialisation of the agricultural sector (Castro & Carvalho, 2003: 472). Unable to affect change with government intervention, local NGOs have been the biggest critics of the changes to agricultural policies that favour exports over sustainability.

Even so, it is not unusual for the government to impose legislation with little or no consultation with civil society. A number of trade liberalisation reforms during the reign of President Collor (1990 - 1992) were pushed through the Brazilian Congress with no input from external, political groups. The government also failed to use its dominance in the agricultural sector to increase economic opportunities in favour of Brazilian interests in international forums such as the WTO. Increasing access to their markets created a serious advantage for foreign companies wishing to increase their presence in the Brazilian market, but it is uncertain as to whether this was the best economic decision for Brazil (Castro & Carvalho, 2003: 477). It is possible that the country underestimated its negotiating power in early international negotiations. Opening up their trade markets seemed to be the ideal means of alleviating poverty and stagnant growth. Now that they are among the dominant players in agricultural export markets, they no longer necessarily need to accept directives from their American and Europeans counterparts. They are in a position where their actions impact on markets regardless of the actions of their competitors. It will be interesting to see how much Brazilian negotiators are willing to accept in terms of market protectionism when the Agreement on Agriculture is re-visited in subsequent negotiations.

At the national level, internal measures aimed at equalizing export capacity for small-holder farmers are largely based on financing initiatives, and rarely take into consideration other issues that affect a farmer’s ability to produce. In order to address
these issues, all farmers that have acquired land in recent reform settlements conducted throughout the country are required to become members of one of the various formal organizations established to assist farmers, such as the *Movimento dos Trabalhadores Sem Terra* (MST). These associations are tasked with ensuring that farmers have access to all the materials they require to begin their businesses, such as seeds and agricultural credit payments (Wittman, 2009: 123). Civil society has become responsible for ensuring that government policy directives can be implemented at the local level.

Organizations such as the MST are also responsible for political education, teaching farmers about how to negotiate through the bureaucracy with collective action. They are taught how to take advantage of the support initiatives (land, credit, technical assistance) to which they have right as rural producers. This movement also helps them to learn about problems particular to their position in the context of global trade, and the influence of neoliberal policies on their trading capacity. With this liberalization has come decreasing support for small farmers as governments continue to focus on large-scale export agriculture in their policy initiatives (Wittman, 2009: 124). This underlies the importance of agricultural organizations such as the MST in countries where governments are not necessarily primarily concerned with the fate of the average farmer. Increasingly, policies aimed at helping to increase agricultural export potential are being allocated to those with the means to produce on a large-scale. As a result, Brazilian civil society organizations are playing an increasingly important role in agriculture.

Brazil is among one of the few major, large-scale soybean producers that does not officially allow for the use of genetically modified organisms in their food supply. Given the number of stakeholders on the Brazilian agricultural scene, the debate over genetically modified organisms is heated and grounds for a number of disagreements. The government's lack of consistency in legislation on GMOs has only increased the confusion. Producers want the option of being able to plant both the genetically-modified and normal versions of seeds as a means of reducing costs and taking
advantage of increased productivity. Yet there are a number of opponents concerned that allowing genetically modified soybeans into the mix will block off access to European markets. The Brazilian government has not been consistent in their stance, allowing Monsanto to plant Round-up Ready soybeans in 1998. This move by Brazil's National Technical Commission on Biosafety met with extreme opposition from international non-governmental organizations and consumer groups concerned with the long-term effects of genetically modified foods. This extreme lobbying forced the Brazilian courts to impose a ban on planting genetically modified soybeans (Matthey, Fabiosa and Fuller, 2004: 11). With this lack of enforcement, the fate of GMO crops depends on the country's ability to negotiate with agri-business. Confusion abounds as local groups lobby against the imposition of large-scale GMO plantations.

Given the unclear policy directives issued by the Brazilian government, a number of companies have decided to eliminate certain operations from the country. After a recent court challenge on genetically modified soybeans, Monsanto removed all of its GM test plots from the country. Nevertheless, imported seeds from Argentina were filtered into the country without proper instructions on use and handling. Given the illegal nature of these plants, accountability in these unforeseen circumstances will be hard to determine. Illegal GM seeds also hurt the profit margins of certified seed producers who do not see any profits from royalties on illegally imported seeds. This haphazard way of introducing genetically modified soybeans into the country may also increase the chance that international buyers on European markets will refuse these products. Without sufficient labelling and a guarantee that their imports are not genetically modified, Brazilian companies will have a hard time selling their goods in European markets (Matthey, Fabiosa and Fuller, 2004: 12). All of this confusion has nevertheless been good for companies such as Monsanto, profiting from the unclear strategies on the use of GM plants. Companies must now take the risk of producing a product that may not be welcome in European markets, but that has become common-place in competitor markets such as the United States.
3.2.1. **Main producers (Monsanto)**

Companies such as Monsanto began to offer incentives to farmers that were more attractive than government credit lines in the midst of the GMO crisis, and soon agricultural companies began to dominate a landscape once pepped with small-holder farms. In 2008, 40% of Brazilian farmers were dependent on financing from agricultural companies (Science, 2010: 811). While this seems high for a country that was at one time largely dependent on subsistence farming to feed their population, as the country became more competitive in international export markets, they entered into the fray of agriculture business dominated by the large agricultural companies such as Cargill. Brazil soon became an important player in international export markets with the imposition of big business.

Monsanto is among these large agricultural producers intent on producing without regard for traditional farming methods, touting their fertilizers as the remedy for increasing crop yields. Initially, the Brazilian government was against the introduction of GM varieties in the country. Unfortunately, this ban simply encouraged companies such as Monsanto to lobby government with a bevy of proposals to satisfy their concerns. Each agreement contributed to the current state, where Monsanto’s Round-Up Ready seeds are integrated into the free trade of crops such as soy. Since 2005, the soy industry has been dominated by GM crops despite the public backlash, both at home and abroad (Lubello, 2010: 102). Companies with their own scientific laboratories, as is the case with Monsanto, are able to quickly conjure up the required documentation that confirms the safety requirements government agencies need to ensure that their products are safe for human consumption. This is not the best means of ensuring a safe product that is able to be exported to countries that are opposed to GM crops and consumed locally. It is simply a means of increasing profits despite government legislation that questions agricultural expansion by the means employed by these corporations. Unfortunately, agriculture is no longer the domain of smallholder farms that were able to produce the products in which they were specialized. The agricultural economy is now largely governed by agri-business companies that have more power.
over international markets than the farmers themselves. As an example, the
government was obligated to legislate on seeds that entered the country illegally
through Argentina. The government issued two laws, one in 2003 and another in 2004,
which allowed for the temporary commercialization of genetically modified crops
(Lubello, 2010: 106). Despite an initial ban on GM crops, the government could not stop
the spread of Monsanto's seeds across the border. Even though Monsanto refused to
claim any involvement in the matter, this is simply one incident that shows the power
international corporations have over production in the country.

Despite the number of negative aspects of the implantation of Monsanto in Brazil, there
have been a number of positive innovations resulting from their presence. The national
seed sector has profited from the technological innovation brought into the country by
these companies. Local companies have gained from this innovation, being able to
increase their competitive capacity in agricultural export markets (Lubello, 2010: 106). It
is difficult to determine what impact GM crops have on export markets, but it is an
important issue underlying the relationship between major agricultural producers in
Brazil and the European Union. As governments in a large number of European
countries face populations intent on banning GM products in their markets, international
trading companies will also have to accommodate these changes.

**Conclusion**

Regardless of the rhetoric offered by both sides in recent international negotiations,
subsidies are here to stay and no country will willingly concede to eliminating these
protectionist measures. Pending a collapse of the international trading system, the best
future actions will centre on trying to increase the potential of local populations to
compete with international conglomerates. Unfortunately, individual actions at the local
level will not succeed without the support of international organizations and states
willing to put human priorities before profits.
We are living in a time of dramatic changes in the way that we produce and live, and Brazil is one of those most affected by these changes. The majority of their rural populations are moving into metropolitan areas, letting a rich tradition of cultivation and agricultural knowledge disappear. This tendency is more prevalent in countries with rapid economic success, such as Brazil, where cities overflow with inhabitants incapable of feeding themselves. Food security is broadly defined as being able to provide sufficient nutrition for you and your household. Even though international legislation holds states responsible for assuring this right, the burden often falls to non-profit organizations and local community movements, as we have seen in Brazil.

In addition, a lack of democratic values and transparency on the part of governments has created a situation where unstable conditions have precipitated the decline of the agricultural system in most developing countries. International law must continue building a support framework within which local and regional groups can continue working to ensure that the right to food is prioritized over foreign exports. Developed countries such as those of the European Union should work towards the reduction and eventual elimination of export subsidies. These protectionist measures are only barriers to exchange that prevent Southern, agricultural workers from participating in the competition for foreign export contracts.

Massicotte succinctly summarizes the evolution of the right to food and food sovereignty:

Food security was the goal of the green revolution and was often used to justify large-scale monocultures and the use of GMOs. In contrast, food sovereignty is framed as a right, and food sovereignty movements seek to ensure that local communities produce and provide healthy, nutritious food for their people, in harmony with their culture and with the ecosystem. Only food surplus, they argue, should be dedicated to trade (2010: 82).

It is likely that this was the original intention of those that saw the value in increasing collaboration and exchange in international markets. Unfortunately, profit-driven companies have taken this basic premise and distorted it, marring a large majority of cross-border trade in the Americas, and around the world. This has become an
unrealistic ideal in a society dominated by markets striving to maximize profits. The fate of the average farmer is overshadowed by the priorities of big-business and their desire to increase market trade.

Farmers in rich, developed countries struggle with similar, unpredictable working conditions much like the farmers situated geographically below. In order to combat this uncertainty, there needs to be an increase in information exchange and an exchange of best practices, both of which will reduce the ecological waste that characterizes our current trade regime. Would you rather continue to be kept in the dark regarding where your food comes from, and the legal and economic ramifications of your purchase, or be invited to the farm where your banana originated? Decision-making power has been placed in the hands of individuals and organizations in advanced, industrialized nations. Our goal now is to make sure that our Southern counterparts can make the same decisions on their own with the support of the international legal community.

Brazil will play an important role in future agricultural negotiations, and is well poised to counteract its heavily subsidized trading partners. The country has the economic clout necessary to counter any policies that rely heavily on export subsidies. With an agricultural sector functioning independent of export subsidies, Brazil has been able to counteract the unfair competitive advantage of export partners such as the European Union. With civil society picking up where government policy falls short, the country has succeeded in protecting a rich heritage of family farming despite the increasing encroachment of international agricultural companies. Companies such as Monsanto, while seemingly important to Brazil's export model, are being criticized for promoting GMO crops without assuring their long-term safety. It is also possible that future agricultural reforms will incorporate the concept of multifunctionality, expanding the importance of sustainable farming practices across the country.

The Brazilian agricultural model will continue to be profitable and there is no doubt that their export capacity will continue to grow. Brazil will benefit from increasing trade liberalization and reduced domestic support for farmers. Yet it is difficult to predict with
any certainty if markets will continue on the trend of liberalization. With no agreement in sight on the future of export subsidies from the major players, the current deadlock may become permanent. Even though there is an increasing trend towards less trade-distorting national policies, a number of farm groups and politicians are beginning to realize the social benefits of small-holder farms. There is no doubt that in countries such as Brazil, the farm sector has an impact far beyond the simple commodities produced, as swaths of the population live and depend on agriculture. If liberalization of export markets is the answer, a number of countries have a long way to go before international trade can be characterized as free and fair. The challenge now lies in convincing the large companies that dominate agricultural production to increase crop diversity and work towards ensuring sustainable food security on a global scale.
Bibliography


BELIK, Walter and Mauro DEL GROSSI, 2003, "Brazil's Zero Hunger Program in the Context of Social Policy", Instituto de Economia; The State University of Campinas (Unicamp), 1-35.


FERREIRA Filho, Joaquim Bento de Souza and Mark Jonathan HORRIDGE, 2006, "Economic Integration, Poverty and Regional Inequality in Brazil", Revista Brasileira de Economia, 60 (4), 363-387.


FOOD AND AGRICULTURAL ORGANIZATION OF THE UNITED NATIONS (FAO), 2011, "The State of Food and Agriculture", 1-146.


GAWALI, Suresh, 2003, "Distortion in World Sugar Trade", Economic and Political Weekly, 38 (43), 4513-4515


PEREIRA, Anthony, 2003, "Brazil's Agrarian Reform: Democratic Innovation or Oligarchic Exclusion Redux?", *Latin American Politics and Society*, 45 (2), 41-64.


VERMEULEN, Sonja and Lorenzo COTULA, 2010, "Making the most of agricultural investment: A survey of business models that provide opportunities for smallholders", *FAO and International Institute for Environment and Development (IIED)*.


Annex

Figure 1

Figure 1. Commodity price and preferential credit support in Brazil.

Note: Before 1965, there was price support for coffee, sugar cane, milk, and grains.

Figure 2

Soybeans and soybean meal exports: United States compared with Argentina and Brazil

Million metric tons 1/

1/ Soybeans plus soybean meal converted to soybean-equivalent weight.


Figure 3
Map of Brazil