

## Importance of the Main Agribusiness Products to the Brazilian Economy

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### Abstract

The performance of the agribusiness sector has significantly contributed to the consolidation of the Brazilian economy, which is currently the sixth largest in the world. The sector is responsible for 27% of the Gross Domestic Product (GDP). Moreover, it also accounts for nearly 40% of the values generated in the export and employs around 26% of the economically active population of the country. The objective of this paper is to present and discuss updated information regarding the importance of the main products of the agribusiness sector to the Brazilian economy. Special attention was given to the beef and soybean chain. The perspective and challenges of the sector are briefly presented.

**Keywords:** *agribusiness, agricultural products, Brazil*

### 1 Introduction

Brazil has very favorable conditions for agricultural production as diversified climate, regular rainfall, abundant solar energy, almost 13% of all available fresh water on the planet and plenty of arable land.

Brazil is the fifth largest country in area in the world. According to the Research Institute of Amazonia - IPAM, the potential area for farming in the country ranges from 303 million hectares to 366 million hectares, ie 36% to 43% of the national territory. Such land availability puts the country in a leading position in the global agribusiness scenario.



**Figure 1.** Brazilian main regions and its available arable land compared with selected countries. Source FAO, prepared by The Economist, 2010.

The modernization of the Brazilian agribusiness has resulted in significant growth in international trade, although it is still small considering the recent country development, GDP and regional leadership. According to the International Monetary Fund - IMF, the country's GDP in 2011 was U.S. \$ 2.493 trillion, representing a stake of 2.9% in world GDP. According to World Trade Organization (WTO) in its annual statistics of foreign trade, Brazil is at 22nd in the world ranking of exporters and accounted for 1.4% of global sales.

The agribusiness export increased by almost 400% in the last 10 years (MAPA, 2012). Grain production has also expanded allowing the attendance of increasing share of the world demand. The United Nations Conference on Trade and Development (UNCTAD) predicts that the country will be the world's largest producer of food in the next decade.

Basically, the country increased its exports by diversifying its key destinations, which historically were concentrated in Latin America, the United States and Western Europe. Currently countries like China, Japan and Saudi Arabia are also among the biggest buyers of Brazilian agribusiness products

The agribusiness exports have guaranteed for a decade the Brazilian trade surplus. Despite the international economic crisis, the fall in the average price of some important products for the trade balance and the occurrence of adverse weather, agribusiness secured new record for exports in 2012 reached the mark of U.S. \$ 95.8 billion (MAPA, 2012).

In this scenario, some products are critical to the success of Brazilian agribusiness. The country is a world leader in the production and export of several agricultural products. It is the leading producer and exporter of coffee, sugar and orange juice. Moreover, leads the ranking of external sales of alcohol and chicken (MAPA, 2012). The country is also among one of world leading producers of cotton and biofuels made from sugar cane and vegetable

oils. Corn, rice, fresh fruits, cocoa, chestnuts, walnuts, plus pork and fish also are featured in the Brazilian portfolio. The market share of world production and exports of Brazilian products is depicted below.

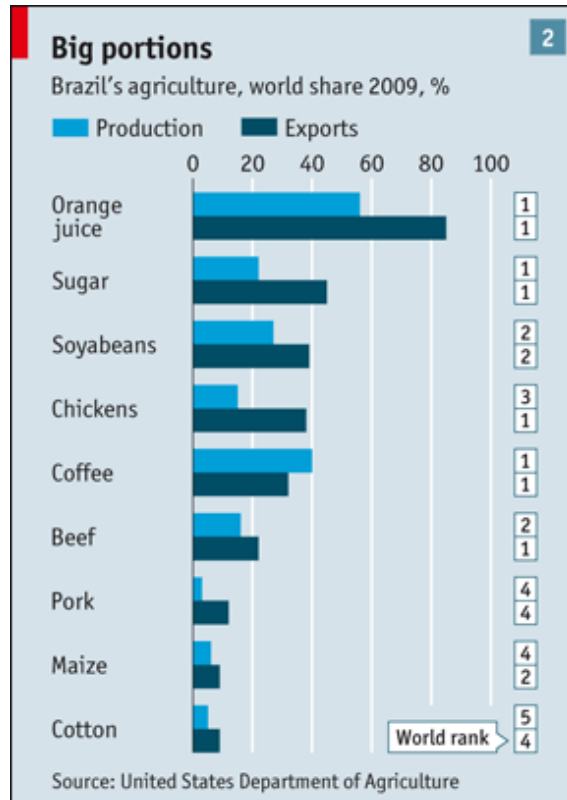


Figure 2. Brazilian world share on production and exports of selected agricultural products. USDA, cited by The Economist, 2010.

## 2 Main Products

The Brazilian **grain production**, which in 1991 was around 60 million tons cultivated in an area of 38 million hectares reached, in 2011, a record of 162.8 million tons and a gross production value of around R\$ 215 billion, occupying a area of 50 million hectares (MAPA, 2012). The main grains produced are soybeans and corn, which reached a production of 75.3 and 57.4 million tons respectively in 2011 (CONAB, 2012).



Figure 3. Gross value of production (vegetal products): Source IBGE/FGVDADOS. AGE/MAPA

**Coffee** is also a very important item. Brazil is by far the largest producer and exporter and the second largest consumer of coffee in the world. The estimation of national coffee production for the crop of 2012 is 3 million tons (IBGE, 2012).

After a severe crisis in the 90's, the **cotton** production chain has re-emerged as an organized and competitive production chain in the savannah region of Brazil. Capitalized soybean farmers adopted modern technology in production and first processing on the farm. Brazil currently ranks 3<sup>rd</sup> and 5<sup>th</sup> place in cotton seed and cotton lint production, respectively. The country has also gain a World Trade Organization (WTO) dispute settlement against USA for unfair subsidies on cotton (Schnepf, 2011).

The export competitiveness of the Brazilian **orange juice** sector is impressive. Consolidated after the 70's and 80's frost in the Florida, USA, the Brazilian producers in the State of São Paulo, adopt modern technology and count with a competitive and internationally driven industry. According to NEVES (2012) *“Brazil produces the half of the orange in the planet, bringing it from US\$ 1.5 billion to US\$ 2.5 billion in orange juice eports annually. In nearly 50 years, the citrus supply chain has brought in nearly US\$ 60 billion to Brazil directly from orange juice consumers.*

The **sugar cane** sector has a great importance for the Brazilian economy since the colonial period. The sector GDP is around US\$ 28.1 billion, equivalent of almost 2% of the Brazilian GDP – or almost all the income generated in a year in a country like Uruguay. The majority of the industry's inputs are local, explaining its favorable trade balance situation (NEVES, 2010). Brazil has a consolidated biofuels program since the middle of the 70's based on ethanol from sugar cane, with give an additional contribution to the competitiveness of the sector.

The **animal production** in Brazil occupies the whole country and has an utmost historical, social and economical important. The main meat production chains (cattle, chicken and pig) are efficient and organized around an internationally very competitive industrial sector. In 2011 Brazil produced respectively 11,04; 9,22 and 3,23 million ton of chicken, cattle and pig meat, and contributed to 12,33%; 14,78% and 2,97% to the world production, also of chicken, cattle and pig meat. (FAOSTAT, 2011).

Although Brazil ranks worldly in the first place of chicken and cattle meat export and fourth in pig meat, the internal consumption is very important as respectively 86%, 88% and 79% of whole production is directed to the internal market.

The **cow milk** has reached a production of around 32 million ton of raw cow milk in 2011, which represents 5,29% of the world production. The milk production is especially important to around 1 million small scale farmers spread around the country, although a core of 100,000 dairy farmers supply most of the milk processed by licensed processors. The industrial sector is in process of modernization and the sector faces challenges in improving the agricultural efficiency to meet increasing quality requirements.

The **poultry** and **pig** industry are well organized and very competitive. They are organized under contract and are closely linked to the grain production (maize and soybean). In 2011

the gross value of the Brazilian production has reached 15,7 billion US\$ for the chicken meat and 4,9 billion US\$ for pigmeat (FAOSTAT).

Considering the value of production the 20 important products of the Brazilian agribusiness are listed below

**Table 1.** Brazilian value of production in billion US\$.

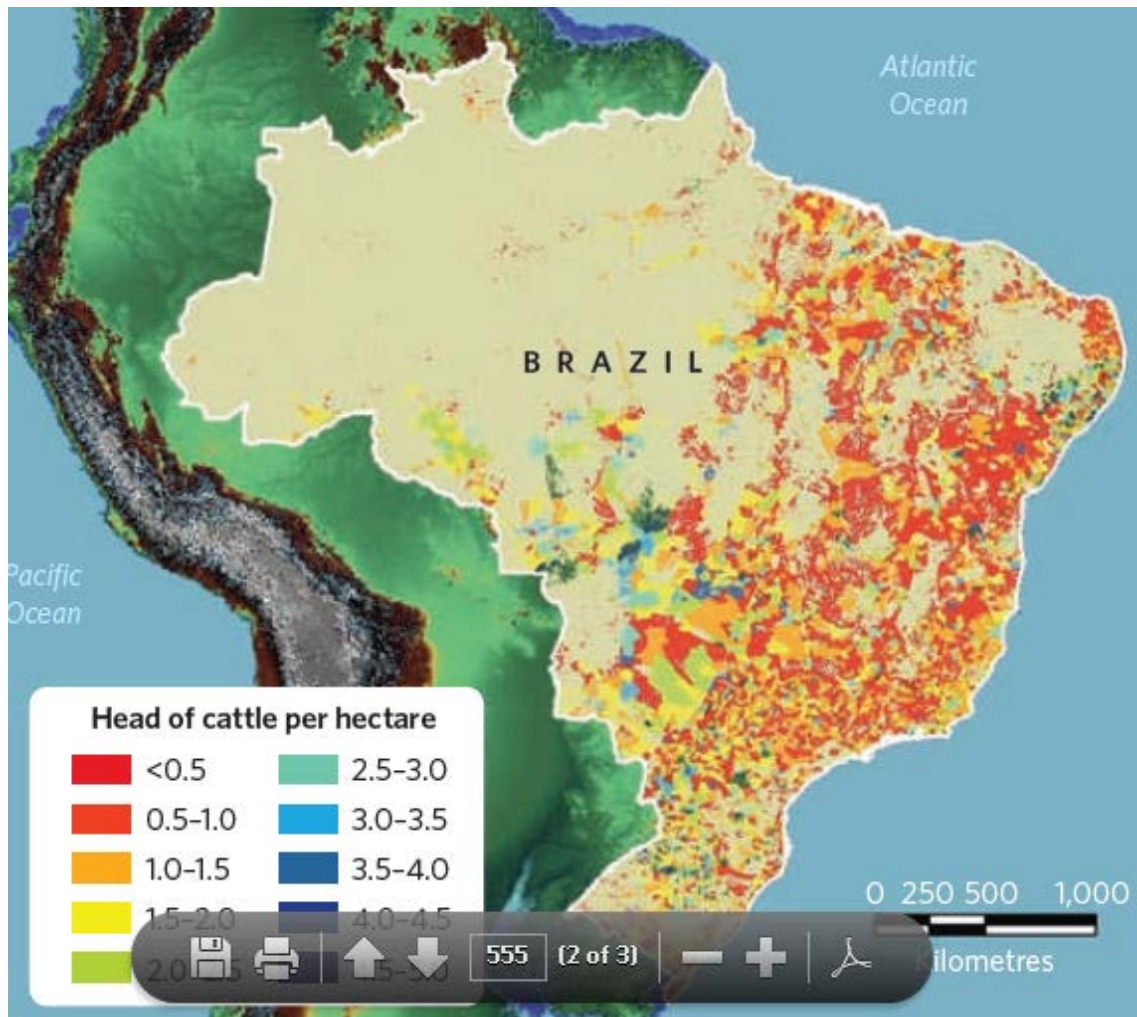
1	Indigenous Cattle Meat	24.96
2	Sugar cane	23.89
3	Soybeans	18.16
4	Indigenous Chicken Meat	15.73
5	Cow milk, whole, fresh	9.91
6	Indigenous Pigmeat	4.96
7	Oranges	3.83
8	Rice, paddy	3.40
9	Maize	2.96
10	Coffee, green	2.90
11	Cotton lint	2.39
12	Bananas	2.06
13	Beans, dry	1.97
14	Hen eggs, in shell	1.69
15	Cashewapple	1.69
16	Tomatoes	1.63
17	Tobacco, unmanufactured	1.51
18	Cassava	1.33
19	Cottonseed	1.03
20	Grapes	88

Source: FAOSTAT, 2011.

The cattle meat and soybean production chain will be discussed next.

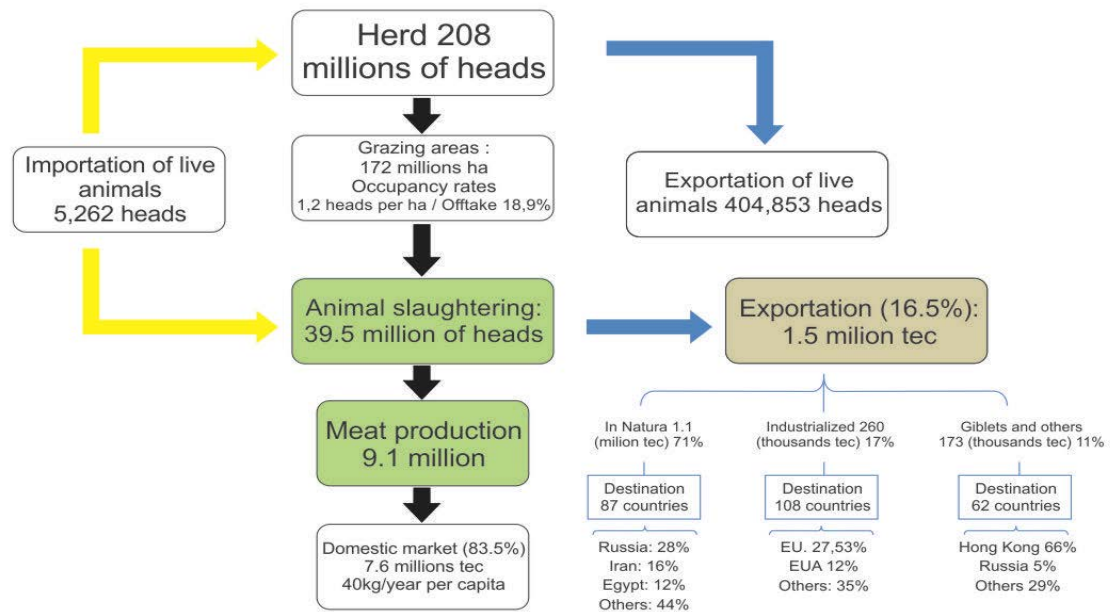
### **Cattle Meat**

The Brazilian livestock sector has undergone huge changes in the last few years, especially the ones related to the applications of more efficient production techniques, such as the development of forages adapted for local conditions, diet supplementation, selection and systematic genetic improvement and reproduction techniques such as artificial insemination in a fixed time and embryo transference. These technologies brought to the sector extraordinary gains of volume and productivity, determining factor to put Brazil in a leading position as a beef producer. The following map depicts the distribution of beef production in Brazil.



**Figure 4.** Distribution of cattle production in Brazil. Source Nature, 2010.

In the year of 2011, more than 39.5 million heads were slaughtered and 404,853 were exported, alive. In addition to being a big exporter, Brazil is also a great beef consumer and, according to data from ABIEC (Brazilian Association of Beef Export Industries), in the year of 2011, the Brazilian internal market consumed 83.5% of the 9.1 million tons in equivalent carcass (tec) of the meat produced. The other 16.5% were exported in great part *in natura* (71%); but also industrialized (17%). The insides and others represent 11% of the total exported (ABIEC, 2011).



**Figure 5.** Meat production chain description in 2011, in Brazil. Source: CNA, Sigma Consultoria, SECEX, IBGE, ABIEC (2011).

## Soybean

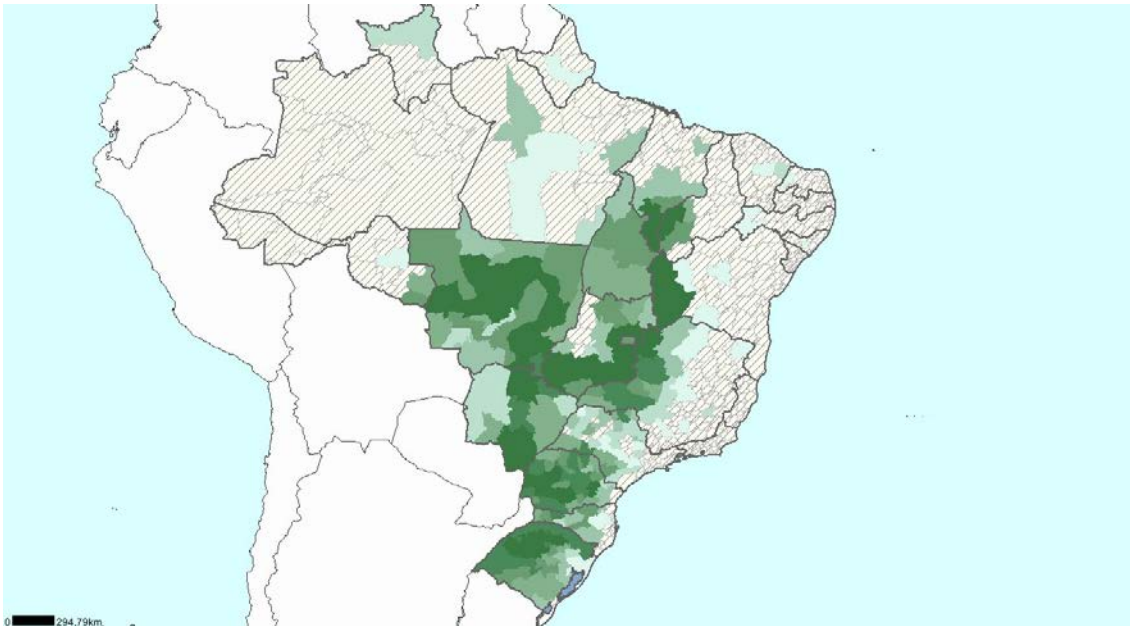
Between the 1960s and the 1970s, the southern region, especially the states of Rio Grande do Sul and Paraná, was the one with significant soybean production in the country. Currently the largest national producer of the grain in volume is the State of Mato Grosso.

After the 1980s, the region called *cerrado* formed by the *Triângulo Mineiro*, the states of Mato Grosso do Sul, Mato Grosso, Goiás, Tocantins, the south of Maranhão, south of Piauí and western Bahia consolidated itself as the largest soybean producer in the country. Studies about soil fertilization, plain topography and the development of appropriated varieties to this region were the main factor which contributed to the expansion of the cultivation in *cerrado*.

The country passed from an incipient producer, to the second largest in the world, besides being the largest exporter of the product. The Brazilian soy reaches, nowadays, the most rigorous markets in a global scale, such as the European, and it highlights itself for its quality. Brazil had some changes not only because of the amount of soybean produced. Nowadays the central-west region is the largest producer and it was unthinkable some decades before, since this region was considered infertile and inappropriate to the agricultural cultivation (EMBRAPA, 2004).

It is important to stress that the soybean production in Brazil is very closely linked to the poultry and pig industry.

The figure below depicts the distribution of soybean production in Brazil.



**Figure 5.** Soybean production in Brazil. Source: IBGE, 2006.

Brazil becomes more and steadier in the soy production because of its structure in the chain over the time and because of the high investments made by Brazilian people and foreigners. However, there are a lot of points to be improved, mainly the ones related to the logistics of production flow. At this point, Brazil is quite behind the countries considered its competitors in the soy market, since 65% of the agricultural production is directed to the Brazilian highway network, where according to the National Company of Transports, only 3.5% of these highways are paved.

The consequences of this barrier affect the price of the commodity and consequently, its competitiveness. Alternatively, the climate, the rainfall regime and the higher cost of production than the Brazilian one, equalize the balance of this competition. In the last American harvest (2011/12), the climate worried the buyers, because the hot and dry weather damaged the growth of the plants, reducing the productivity and the volume fixed for the harvest. Besides the climatic diversity in the USA, the reduction of the American and the Chinese soy area encourage the Brazilian soy plantation.

The internal market has been growing with the use of the grain to produce biodiesel and it also encourages the plantation. The main competitor tillage, the corn one, has good prospects to the season of 2011/12, but the speed of sales in the crop turns the soy more attractive (FNP CONSULTORIA & COMÉRCIO, 2012).

### **3 Final Remarks**

Brazil is an important food producer in the world. The share that Brazilian agribusiness occupies in the world trade makes the country an economic reference and, on top of it all, a reference to food safety when it comes as questions about the availability of food in the world. However, the country has a potential to be better than it is currently. Some sectors could improve their techniques and chains. Others still could expand the explored area.

According to a report of the Ministry of Agriculture, Livestock and Supply of Brazil (MAPA, 2012), the most dynamic products of Brazilian agribusiness in the next decade should be cotton, soybeans, chicken, sugar, corn and cellulose.



The growth of agricultural production in Brazil should continue to be based on productivity gains. For grains (rice, beans, soybeans, corn and wheat), for a 21% increase in production acreage is expected to expand by only 9% between 2011/2012 and 2021/2022. Despite strong growth in exports, the domestic market will continue to be an important growth factor. For soybeans, for example, 56% of production shall be for the domestic market.

Projections for meat production for Brazil show that the sector must present strong growth in the coming years. Among meats, projecting higher growth rates of production in the period 2011/2012 to 2011/2022 are the chicken, which is expected to grow annually at a rate of 4.2% and beef, which is expected to grow at a rate 2.1% per year. The pig meat has projected a growth of 2% (MAPA, 2012).

The Brazilian participation in world trade in soybeans, beef and chicken meat will grow and continue to be highly significant. The Brazilian soybeans should take 2021/2022 participation in exports in the world for 43% to 23.2% beef and chicken 43.5%. Besides the importance in relation to those goods Brazil will maintain leadership in the global trade in coffee and sugar.

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