AN OVERVIEW ON AGRICULTURE AND AGRIBUSINESS IN BRAZIL

Rui Samarcos Lora
Coordinator
Office for International Relations
Ministry of Agriculture, Livestock and Food Supply

Summary

1 – Brazilian Agriculture in Figures
2 – Government and Agriculture in Brazil
3 - Main products, production and productivity
4 - Brazilian Agricultural Trade
5 – Trends and perspectives
6 - New challenges: future of agriculture in Brazil
Brazilian Agriculture in Figures

Brazil in Numbers

**Area:**
8,514,876.5 km²  
13% fresh water in the world  
388mi ha of arable land  
90mi hä are not in use

**Agribusiness:**
33% GDP  
42% Exports  
37% Jobs  
17.7mi rural workers

**Borders:**
23,086 km total  
7,367km - ocean  
15,719km - land  
With 10 countries
**BRAZILIAN BIOMES**

<table>
<thead>
<tr>
<th>Biome</th>
<th>Area (M ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon Biome</td>
<td>420</td>
</tr>
<tr>
<td>Crops</td>
<td>60</td>
</tr>
<tr>
<td>Pastures</td>
<td>160</td>
</tr>
<tr>
<td>Planted Forests</td>
<td>6.8</td>
</tr>
<tr>
<td>Brazil</td>
<td>851</td>
</tr>
</tbody>
</table>

Sources: Ministry of Agriculture; Ministry of Environment - 2006

---

**LAND DISTRIBUTION**

<table>
<thead>
<tr>
<th></th>
<th>Farms (thousand)</th>
<th>Area (1000 ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Brazil</td>
<td>5.175,5</td>
<td>329.941,4</td>
</tr>
<tr>
<td>&lt; 100 hectares</td>
<td>86,0</td>
<td>21,4%</td>
</tr>
<tr>
<td>100-1000 hectares</td>
<td>8,2</td>
<td>34,2%</td>
</tr>
<tr>
<td>&gt; 1000 hectares</td>
<td>0,9</td>
<td>44,4%</td>
</tr>
<tr>
<td>South</td>
<td>1.006,2</td>
<td>41.526,2</td>
</tr>
<tr>
<td>&lt; 100 hectares</td>
<td>91,6</td>
<td>37,3%</td>
</tr>
<tr>
<td>100-1000 hectares</td>
<td>6,0</td>
<td>39,9%</td>
</tr>
<tr>
<td>&gt; 1000 hectares</td>
<td>0,4</td>
<td>22,7%</td>
</tr>
<tr>
<td>Center West</td>
<td>317,5</td>
<td>103.797,3</td>
</tr>
<tr>
<td>&lt; 100 hectares</td>
<td>68,3</td>
<td>6,3%</td>
</tr>
<tr>
<td>100-1000 hectares</td>
<td>24,2</td>
<td>24,0%</td>
</tr>
<tr>
<td>&gt; 1000 hectares</td>
<td>6,4</td>
<td>69,6%</td>
</tr>
</tbody>
</table>
Agricultural production started primarily in the southern region and later on expanded to other areas towards the middle-west.

High levels of productivity as a result of investments in tropical technology allow coexistence of expansion of food and energy production along with environment protection.

Agribusiness Expansion: International Partnerships (Japanese Case)
Agribusiness Expansion: Brazilian Agricultural Research Corporation (Embrapa)

Government and Agriculture in Brazil
Ministry of Agriculture, Livestock and Food Supply
Main Products, Production and Productivity
MAJOR AGRICULTURAL PRODUCTS IN BRAZIL
GROSS VALUE OF PRODUCTION (March 2012)

- Beef 17,1%
- Soybean 12,8%
- Sugarcane 12,3%
- Broiler 11,6%
- Milk 8,1%
- Coffee 6,4%
- Corn 7,9%
- Pork 2,7%
- Rice 1,9%
- Orange 1,8%
- Other 17,3%

TOTAL = US$ 195,9 billion

Source: CNA

Harvesting soybean
Corn field
Harvesting cotton
Soybean field
Grains Production

If Brazil had maintained the same technology used in 1960, it would be necessary to occupy more than 145 million hectares of land.

<table>
<thead>
<tr>
<th>Year</th>
<th>Inhabitants (million)</th>
<th>Grain Production (million tons)</th>
<th>Area (million hectares)</th>
<th>Productivity (kilos per hectare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>70</td>
<td>17.2</td>
<td>22</td>
<td>783</td>
</tr>
<tr>
<td>2010</td>
<td>190.7</td>
<td>150.8</td>
<td>47.5</td>
<td>3.173</td>
</tr>
</tbody>
</table>

1 = 10 million inhabitants  
1 = 10 million tons  
1 = 300 kilos per hectare

GRAINS – PRODUCTION AND AREA 1991 to 2012

Source: CONAB
MAIN GRAINS
(2011/12)

<table>
<thead>
<tr>
<th>Product</th>
<th>Area (1,000 ha)</th>
<th>% Grain Crop Areas</th>
<th>1,000 Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybean</td>
<td>25.037,5</td>
<td>49%</td>
<td>66.365,8</td>
</tr>
<tr>
<td>Corn</td>
<td>15.123,7</td>
<td>30%</td>
<td>67.793,7</td>
</tr>
<tr>
<td>Beans</td>
<td>3.402,2</td>
<td>7%</td>
<td>2.971,9</td>
</tr>
<tr>
<td>Rice</td>
<td>2.455,6</td>
<td>5%</td>
<td>11.631,3</td>
</tr>
<tr>
<td>Wheat</td>
<td>2.166,2</td>
<td>4%</td>
<td>5.788,6</td>
</tr>
<tr>
<td>Cotton (cottonseed)</td>
<td>1.398,0</td>
<td>3%</td>
<td>3.258,7</td>
</tr>
</tbody>
</table>

Source: CONAB

CORN PRODUCTION – DOUBLE CROPPING
(1991/92 to 2011/12)

Source: CONAB
Sowing corn (2nd harvest) and No tillage (environmentally friendly)

Harvesting soybeans

Scale, mechanization
Two crops in the same year without irrigation
Livestock

If Brazil had maintained the same technology used in 1960, it would have to direct more than 259 million hectares of land to pasture.

<table>
<thead>
<tr>
<th>Year</th>
<th>Herd (million heads of cattle)</th>
<th>Pasture area (million hectares)</th>
<th>Productivity (heads per hectare)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>58</td>
<td>122.3</td>
<td>0.47</td>
</tr>
<tr>
<td>2010</td>
<td>204</td>
<td>170</td>
<td>1.2</td>
</tr>
</tbody>
</table>

1 = 10 million inhabitants
1 = 10 million inhabitants
1 = 300 kilos per hectare

MEAT PRODUCTION
(1994 to 2011)

<table>
<thead>
<tr>
<th>Year</th>
<th>Beef</th>
<th>Chicken</th>
<th>Pork</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>5.25</td>
<td>4.05</td>
<td>3.49</td>
</tr>
<tr>
<td>2011</td>
<td>10.03</td>
<td>9.10</td>
<td>3.30</td>
</tr>
</tbody>
</table>

Sources: Beef – Fórum Nacional Permanente da Pecuária de Corte da CNA, Chicken – Ubabef, Pork – Abipecs
SUGAR CANE, SUGAR AND ETHANOL

- Ethanol (million m³)
- Area harvested (million hectares)
- Sugar (million tons)

Source: Ministry of Agriculture – Anuário Estatístico da Agroenergia 2010
ENERGY MATRIX: BRAZILIAN RENEWABLE MIX

BRAZILIAN ENERGY MIX (2009)

- Hidro: 13.7%
- Wood: 10.0%
- Sugarcane: 19.1%
- Other renewable: 4.2%
- Natural gas: 8.9%
- Oil: 41.8%
- Uranium: 1.5%
- Coal: 0.8%

Share of renewable energy in the total primary energy: 47%

Source: MME/BEN, 2010

WORLD ENERGY MIX (2007)

- Oil: 34.0%
- Coal: 26.5%
- Natural gas: 20.9%
- Nuclear: 5.9%
- Hydro: 2.2%
- Other sources: 0.7%
- Other renewable: 9.8%

Brazilian Agricultural Trade
2011 RANKING: BRAZILIAN PRODUCTION AND EXPORTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Production</th>
<th>Exports</th>
<th>No. of Markets</th>
<th>Exports (US$ Billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar</td>
<td>1</td>
<td>1</td>
<td>125</td>
<td>14.9</td>
</tr>
<tr>
<td>Coffee</td>
<td>1</td>
<td>1</td>
<td>134</td>
<td>8.7</td>
</tr>
<tr>
<td>Orange Juice</td>
<td>1</td>
<td>1</td>
<td>68</td>
<td>2.4</td>
</tr>
<tr>
<td>Soybean (Grains)</td>
<td>2</td>
<td>1</td>
<td>43</td>
<td>16.3</td>
</tr>
<tr>
<td>Beef</td>
<td>2</td>
<td>2</td>
<td>140</td>
<td>5.3</td>
</tr>
<tr>
<td>Poultry</td>
<td>2</td>
<td>1</td>
<td>145</td>
<td>7.5</td>
</tr>
<tr>
<td>Maize</td>
<td>3</td>
<td>4</td>
<td>48</td>
<td>2.6</td>
</tr>
<tr>
<td>Pork</td>
<td>4</td>
<td>3</td>
<td>74</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Sources: USDA and Ministry of Agriculture, Livestock and Food Supply
BRAZILIAN AGRIBUSINESS TRADE BALANCE
1990 – 2012

Source: MAPA and SECEX/MDIC
* June 2011 – May 2012

BRAZILIAN TRADE BALANCE
1990 – 2011

Source: MAPA and SECEX/MDIC
**AGRICULTURAL EXPORTS**

**MAIN NET EXPORTERS – 2009**

Source: TradeMap / CCI
Elaboration: Ministry of Agriculture

---

**BRAZILIAN AGRIBUSINESS EXPORTS**

**MAIN PRODUCTS – 2010**

Source: Agrostat, Ministry of Agriculture

Total: US$ 76,4 billion
BRAZILIAN AGRIBUSINESS EXPORTS
MAIN DESTINATIONS – 2010

Total: US$ 76,4 billion

Source: Agrostat, Ministry of Agriculture

MARKET SHARE
MAIN AGRICULTURAL PRODUCTS – 2009

Soybean and products: 22%
Fish: 2%
Wheat and wheat flour: 14%
Palm oil: 14%
Dairy products: 22%
Coffee: 19%
Beef: 19%
Rice: 50%
Sugar: 8%
Corn: 0.6%
Wine: 0.1%
Chicken meat: 39%
Shrimp and lobster: 9%
Pork: 9%
Banana: 4%
Animal feed: 1%
Chocolate: 1%
Cotton: 9%
Beer: 1%

Other countries
Brazil

World agricultural imports: US$ 749.7 billion
Brazilian agricultural exports: US$ 54.83 billion
Market share: 7.31%

Notes: Excludes trade among EU-27 member countries.
25-feb-2011 data (aprox 55.1% of world trade in 2009).
Listed products accounted for 51% of world ag trade in 2009.
DOMESTIC CONSUMPTION AND EXPORTS
(2010)

Trends and Perspectives

Sources: Conab, Ubabef, Ministério da Agricultura, Cecafé, CNA
Production Expansion
5% in 10 years

"MATOPIBA"

Production and Exports
Cotton, beef, soybean, poultry, cellulose and paper

Production of Grains and Meat
Projections of the Ministry of Agriculture

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2021</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million tons</td>
<td>24.6</td>
<td>31.2</td>
<td>62.6</td>
</tr>
<tr>
<td>Million tons</td>
<td>135.4</td>
<td>175.8</td>
<td>318.2</td>
</tr>
<tr>
<td>beef, pork, poultry</td>
<td>26.8%</td>
<td>23%</td>
<td>99.3%</td>
</tr>
<tr>
<td>rice, beans, soybean, corn, wheat</td>
<td>23%</td>
<td>81.5%</td>
<td>81.5%</td>
</tr>
</tbody>
</table>
GLOBAL TRENDS

World population growth with increasing *per capita* income

Increasing demand for agricultural products (food, fuel, feed, fiber...)

Shifts in consumption habits (more meat)

Shortage of new areas for agricultural production

Challenges to food security

Continuous need of food production increase

AGRICULTURAL PRODUCTION INDEX: 1992-2019
FAO-OCDE Projections

“Brazil is the fastest growing agricultural sector by far, growing by over 40% to 2019, when compared to the 2007-09 base period.”

(OECD-FAO Agricultural Outlook 2010-2019)

Source: OECD and FAO Secretariats (OECD-FAO Agricultural Outlook 2010)
PRICES WILL REMAIN HIGH

Price trends in nominal terms of agricultural commodities to 2020

Source: OECD and FAO Secretariats (OECD-FAO Agricultural Outlook 2011)

CONSUMPTION IS INCREASING FAST

Growth in per capita consumption of food products (2008-10 to 2020)
Percent change 2020/2008-10

Source: OECD and FAO Secretariats (OECD-FAO Agricultural Outlook 2011)
**BRAZILIAN AGRIBUSINESS COMPETITIVE ADVANTAGES**

- Strong, thriving economy & Institutional framework
- Leadership in tropical technology
- Natural resources abundance (land, water, solar energy)
- Farming vocation & Business entrepreneurship

**EVOLUTION OF FOREIGN DIRECT INVESTMENTS IN BRAZIL 2001-2009**

![Bar chart showing the evolution of foreign direct investments in Brazil from 2001 to 2009. The investments range from 0 to 45,000 US$ million. The years 2001 to 2009 are indicated along the x-axis, and the investments in US$ million are indicated along the y-axis. There is a significant increase in investments from 2006 onwards.]
New challenges: future of agriculture in Brazil
Agricultural Attaché

International Cooperation

Fundão Nacala
Brasília, 04 de Junho de 2012

AFRICA BRAZIL LA
LATIN AMERICA AND CARIBBEAN
Agricultural Innovation Marketplace
Low Carbon Emission Programme (ABC)

Biofuels
Infrastructure Works

**Investment**

- **Ports (1-13):** US$ 722 million
- **Waterways (1-8):** US$ 666 million
- **Tocantins Waterway (A-F):** US$ 1.22 billion

**Total: US$ 2.61 billion**

Source: Macrologística (2010)

**Waterways**

1. Modernization of the Port of Porto Velho (RO)
2. Enhancement of Madeira River Waterways (AM / RO)
3. Building of Mirituba River Port (PA)
4. Dredging and rock removal in rivers Juruena and Arinos (MT)
5. Building of sluice in Cachoeira Meia Carga (MT)
6. Signaling in rivers Juruena and Arinos (MT)
7. Building of sluices in Boa Esperança (Paraná)
8. Signaling, dredging and rock removal in river São Francisco

**Ports**

- Building of port in Outeiro (PA)
- Terminal TERFRON (Büngue) (PA)
- Building of area for general cargo in Itaqui (MA)
- Building of Berth 100 in the Port of Itaqui (MA)
- Dredging of Berths 100-103 and building of backport areas in Berths 100 and 101 in the Port of Itaqui (MA)
- Recovery of Berths 100-102 in Itaqui (MA)
- Modernization of Santana Port (AM)
- Building of Pier 200 in the Port of Santarém (PA)
- Plant bulk terminal in Santarém (PA)
- Multiple use terminal 2 in Santarém (PA)

**Cost Comparison**

Harvest Transportation to Ports

<table>
<thead>
<tr>
<th>Year</th>
<th>Argentina</th>
<th>USA</th>
<th>Brazil</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>14</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>2004</td>
<td>14</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>2005</td>
<td>15</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>2006</td>
<td>16</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>2007</td>
<td>17</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>2008</td>
<td>18</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2009</td>
<td>18</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>2010</td>
<td>20</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>2011</td>
<td>23</td>
<td>23</td>
<td>85</td>
</tr>
</tbody>
</table>

**Source:** Anec (2011)
In Brazil, 80% of a farm in the Amazon must remain forested; in other areas, the requirement is lower, falling to 20%.

None of the world’s large farm producers that compete with Brazil - USA, Europe, China, Argentina and Australia - obliges its producers to preserve any forest.

Conclusion: “Agricultural Relations Brazil and Japan”
どうもありがとうございます

rui.samarcos@agricultura.gov.br
sri@agricultura.gov.br