Where we are.
Brazilian Agribusiness: “The food production country”

<table>
<thead>
<tr>
<th></th>
<th>Orange Juice</th>
<th>Sugar</th>
<th>Coffee</th>
<th>Beef</th>
<th>Soy Complex</th>
<th>Poultry</th>
<th>Maze</th>
<th>Pork Meet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>1st</td>
<td>1st</td>
<td>1st</td>
<td>1st</td>
<td>1st</td>
<td>1st</td>
<td>2nd</td>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>80%</td>
<td>46%</td>
<td>27%</td>
<td>20%</td>
<td>40%</td>
<td>34%</td>
<td>18%</td>
<td>9%</td>
</tr>
<tr>
<td>World Production</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>1st</td>
<td>1st</td>
<td>2nd</td>
<td>2nd</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>57%</td>
<td>22%</td>
<td>35%</td>
<td>16%</td>
<td>31%</td>
<td>15%</td>
<td>7%</td>
<td>3%</td>
</tr>
</tbody>
</table>


Oil Palms: Where in Brazil
State of Para Ecological, Economical Oil Palm Zoning

Total area: 2,325,000 ha
Highly suitable area: 1,138,000 ha
Total suitable area in Brazil: 31,000,000 ha


Oil Palm/Palm Oil current status in Brazil

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total area*</td>
<td>161,782 ha</td>
</tr>
<tr>
<td>Smallholders</td>
<td>27,562 ha</td>
</tr>
<tr>
<td>number of families</td>
<td>1,070</td>
</tr>
<tr>
<td>Direct Jobs**</td>
<td>20,607</td>
</tr>
<tr>
<td>CPO production forecast 2014</td>
<td>416.323 MT</td>
</tr>
<tr>
<td>Palm products importation forecast 2014</td>
<td>600,000 MT</td>
</tr>
</tbody>
</table>

168% growth in the past 10 years
36% growth in the past 5 years
Average growth of 9% per year

Source: ABRAPALMA. [* and **] members of ABRAPALMA, USDA, Alice Web/MINDIC
Why such a huge area and little investments?

• **Constraints:**

  ▪ Rigid environmental laws requiring statutory forest reserve of 50% out of the total area, or more.
  ▪ Need for maintenance of riparian forests in all watercourses, ranging from 30 to 100 meters each side depending on the watercourse width.
  ▪ Difficulties in land records and registration within the local authorities and agencies.
  ▪ Prohibition on land purchase by foreigners since August 2009.
  ▪ Rigid and expensive labor laws that make Brazil the highest labor cost place among the 44 countries growers of oil palm, reaching US$ 14,000 per harvester per year.

...and how to be profitable?

• Investments in training and social benefits for the works. Self productivity must be as high as possible.
• Mechanization.
• Market protection: 10 % import tax for CPO coming from any country outside the MERCOSUR.
• Heavy investments in sustainability that translates in higher selling price (premium)

Some producers have managed to increase labor productivity from 8 to 11.7 hectares per worker, a gain of 46.3% in the past 10 years. The goal is 1 per 15 ha in 2024 (28% growth) due to mechanization.
How to match Economy and Sustainability?
Palm oil plantations and deforestation evolution in Brazil

Sources: INPE (2014), for deforestation. Built with data from Embrapa, Oil World, IBGE and Abrapalma, for planted area.

How to match Economy and Sustainability?
A case study of AGROPALMA in Brazil

➢ The program started in 1998 and these are the main topics covered since then:
  • Technical certification to bring/spread knowledge and trust along the entire process such as ISO 9.001, ISO 14.001, ISO 22.000, FSSC-22.000-1 and OHSAS 18.001.
  • Biodiversity identification and monitoring program started in 2004, in partnership with several NGOs and Universities.
  • End of the use of contractors in 2007. Only direct workers are used.
  • Strong social activities internally and within the surrounding communities.
  • Training, productivity, mechanization and automation.
AGROPALMA S.A.

Overall information:
• 32 years investing in the Brazilian palm oil business.
• 40,000 ha of own oil palm plantations.
• 10,000 ha of oil palms in partnership with smallholders.
• 6 extraction mills (1 exclusively dedicated for organic palm oil).
• 2 refineries (one fully operating and another one under construction) including CPO and PKO fractionation, shortenings, margarines, interstereification, sterrification and hydrogenation.
• 100% RSPO certified.
• Brazilian, privately owned.

3 Pilars Program

People

Science and Technology

Profit

Environment
**People**: Food, Transportation, Health care, housing, education, etc.

**People + Economic**: Smallholders / outgrowers, training courses, Women's Union, technical assistance, health care
**Profit:** Clones, seeds, mechanical fertilization, mechanical agrochemicals spraying

**Profit:** Harvesting and transportation to mills
Savings/year after mechanization

- Road maintenance: US$ 107,623
- Mineral fertilization: US$ 235,875
- Weed management: US$ 380,000
- Mechanical slashing/Pruning: US$ 270,000
- FFB collection: US$ 1.5 million
- Organic fertilization: US$ 753,363
- 10% less workers: US$ 4.4 million
- **Total**: US$ 7.7 million/year = US$ 46.70/ton CPO. This will more than double when the investment is finished

**Profit**: Logistics, integration, quality and innovation
Savings/year in logistic

- Replacing trucks by barges in the transport of CPO and PKO helped us to eliminate 6,250 trucks/tankers trips per year (2.9 million kilometers avoided), reducing costs and emissions.
- The total cost reduction in freights accounts for US$ 2.35 million/year or US$ 13.4/ton of CPO

Environment:

- 1.6 ha of forests for 1 ha of oil palm
- Protection of riparian forests
- Water management
- IPM
- Fauna monitoring
- Flora monitoring
- Underplanting
- Footprint
Results: Forests reserves + Zero deforestation + certifications

GHG emissions sources/sinks (Inclusive of family farms and outgrowers)

Due to the high proportion of forests with high level of sequestration, Agropalma is carbon negative, sequestering 272,392 tons of carbon annually, translating to a carbon negative footprint of -1.50 MT CO2 eq/MT CPO, without a methane capture system, that is not done yet.

Sustainability premium forecast for 2014 =US$ 4 million

Smallholders - Partners

Family farmer gross income from oil palm per year (BRL$ - Brazilian Reais)

<table>
<thead>
<tr>
<th>Year</th>
<th>Highest Income</th>
<th>Lowest Income</th>
<th>Average Income</th>
<th>Brasil GNI per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- US$ 34,782.00/year
- US$ 26,086.00/year
- US$ 10,435.00/year
- US$ 5,083.00/year
Conclusions

• Brazil today is in-farm more costly when compared to SEA countries, but it has other advantages to be watched..
• how prepared are SEA to face increasing cost in the next 15/20 years? Will the cost structure be the same as today? What about labor?
• Agropalma proves that working with the right people, technology and sustainability is possible to be profitable in a high production cost environment.
• **REFLECTION:** Is the absence of labor in Malaysia and in some parts of Indonesia really a lack of man power, or a lack of good working, social benefits and payment conditions?
• The market is there, open and hungry for people, companies and products that breaks paradigms. Tomorrow will be different from today.

**YOU ARE ALL WELCOME IN BRAZIL!!**

Thank you.

• Marcello Brito contacts:
  E-mail: marcello@agropalma.com.br
  Twitter: @msabrito
  Phone: +55 11 3175 5465
  [www.agropalma.com.br](http://www.agropalma.com.br)