Feedlot expansion and integration with rapidly changing agriculture in central Brazil

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Extension and Outreach

Iowa Beef Center
What we can learn from a rapidly growing, immature beef industry... 
And what they can learn from us.

- Brazil and beef production
- Brazil and grain production
- Livestock and crop integration
- Feedlot production marketing
Brazil’s “Forest Code”: 20-80% of each farm must be conserved in forest, depending on the region.

Cattle herd and deforestation in Brazil

Source: BeefInfo, 2013.
1,000 miles in 3 days

Infrastructure

Highway 163

10,000 TRUCKS PER DAY

Corn basis FOB Sao Paulo ports = $3.00
Figure 3: Sharp increase of Brazilian grain production by 2023 to allow for beef intensification, 2012/13-2022/23F

- **Legend:**
  - Summer corn
  - 2nd corn crop
  - Soybeans
  - Total (RHS)

Source: Rabobank, 2014

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Figure 4: Brazilian feedlot capacity to double, 2006-2023F

- **Legend:**
  - Million head

Source: Rabobank, 2014
The Cattle

- Nellore breed
  - 36 months of age
  - 1100-1200 lbs FBW
  - Cattle sold on HCW
  - No quality grade value

- The use of artificial insemination
  - Angus #1 breed used in AI in 2013

Braganca Feedlot
(Lucas do Rio Verde, MT)

- 2013 Nelson Pineda National Award Winner for most efficient feedlot
- 25,000 head per year planning to expand to 50,000 next year
- Integrated crop-livestock farm with corn-soybeans and edible beans.
- Excellent nutrition, data management, animal health
The ideal Nellore
Intensification of cow herds and integration with crop rotations

Agropecuarias Mafra e Propecus - Elder Bruno

- 44,000 ha: 12-15,000 in crops and 3,000 ha perm pasture
- Goal = 22,000 ha crop system
- Transitional rainforest area so 50% must be in forest
- 9,000 cows; 5,000 hd feedlot
- Crossbreeding, retained ownership, innovative crop-cow herd integration through crop rotations and cover crops
Crop rotations Mafra e Propecus

- Three cropping systems:
  1) Soybeans-annual tropical grass-millet
  2) Soybeans-corn-annual tropical grass
  3) Soybeans-grass (panicum) for 3 years then back to 1 or 2.

Crop rotations Mafra e Propecus

- 4,000 cows fixed time AI
- Reproductive data
  - 60% success timed AI
  - 92% weaning rate, 5% jaguars
Bortoluzi Farm (Matupa)

- 25,000 hd/year
- Also planning to double next year
- 9 months of rainy season
- Very interested in managing mud
Fazena Mirante Feedlot

- Goiania (Goias State)
- Poorer soils, less farming
- Sorghum, corn silage, cottonseed, tomato waste
- Custom feedlot
- Test lot for GA feedlot software
- “Most photogenic” feedlot in Brazil
Traceability and Marketing
Brazilians consume 80% of production.
### Brazilian beef exports, Jan - Sep

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total fresh/frozen (000 tonnes)</td>
<td>609.9</td>
<td>678.5</td>
<td>851.5</td>
</tr>
<tr>
<td>To: Russia</td>
<td>193.4</td>
<td>205.9</td>
<td>238.3</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>48.4</td>
<td>67.3</td>
<td>162.2</td>
</tr>
<tr>
<td>Ven</td>
<td>40.6</td>
<td>54.2</td>
<td>96.7</td>
</tr>
<tr>
<td>Egypt</td>
<td>62.2</td>
<td>96.0</td>
<td>93.8</td>
</tr>
<tr>
<td>Chile</td>
<td>18.4</td>
<td>45.4</td>
<td>56.0</td>
</tr>
<tr>
<td>EU-27</td>
<td>33.6</td>
<td>37.9</td>
<td>50.7</td>
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</tbody>
</table>

Source: GTIS

### Destino / Country

<table>
<thead>
<tr>
<th>Destino / Country</th>
<th>U$S (000)</th>
<th>TONNES</th>
<th>UT</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGIPT</td>
<td>520.818</td>
<td>150.477</td>
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</tr>
<tr>
<td>HONG KONG</td>
<td>521.813</td>
<td>130.989</td>
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</tr>
<tr>
<td>RUSSIA</td>
<td>494.518</td>
<td>148.985</td>
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<tr>
<td>VENEZUELA</td>
<td>440.061</td>
<td>78.440</td>
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<tr>
<td>KOREN</td>
<td>315.902</td>
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<td>325.834</td>
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<td>CHILE</td>
<td>214.225</td>
<td>44.563</td>
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<tr>
<td>ITALY</td>
<td>154.236</td>
<td>22.408</td>
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<tr>
<td>NETHERLANDS</td>
<td>108.278</td>
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<tr>
<td>ALGERIA</td>
<td>76.038</td>
<td>17.070</td>
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<tr>
<td>SAE</td>
<td>58.700</td>
<td>13.120</td>
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<tr>
<td>LEBANON</td>
<td>59.313</td>
<td>11.120</td>
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</table>
Defining sustainability

Integration of livestock and cropping systems are sustainable solutions to expanding the cowherd.
Can the US and Brazil provide beef for a hungry world?

- Competition
- Communication
- Cooperation
IFBF Brazil Market Study Tour

Guzerat Cattle

The IFBF Group
### Global Ranking of Brazilian Production and Exports

<table>
<thead>
<tr>
<th>Main Products</th>
<th>Global Ranking</th>
<th>World Comercial share</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>Exports</td>
</tr>
<tr>
<td>Orange Juice</td>
<td>1º</td>
<td>1º</td>
</tr>
<tr>
<td>Sugar</td>
<td>1º</td>
<td>1º</td>
</tr>
<tr>
<td>Coffee</td>
<td>1º</td>
<td>1º</td>
</tr>
<tr>
<td>Beef</td>
<td>2º</td>
<td>1º</td>
</tr>
<tr>
<td>Chicken</td>
<td>2º</td>
<td>1º</td>
</tr>
<tr>
<td>Soybeans</td>
<td>2º</td>
<td>2º</td>
</tr>
<tr>
<td>Corn</td>
<td>3º</td>
<td>2º</td>
</tr>
<tr>
<td>Soybean oil</td>
<td>4º</td>
<td>2º</td>
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<tr>
<td>Soybean meal</td>
<td>4º</td>
<td>2º</td>
</tr>
<tr>
<td>Pork</td>
<td>4º</td>
<td>4º</td>
</tr>
<tr>
<td>Cotton</td>
<td>5º</td>
<td>3º</td>
</tr>
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</table>

Source: USDA; Estimation of 2014 and 2015

### Brazilian Beef Industry Location & Density

[Map of Brazilian Beef Industry Location & Density]
- 5 million cattle farms; 208 million head inventory;
- 43 million head annual slaughter; 521 lb avg carcass
- 10.2 million tons beef; 80% domestic consumption; 20% export
Quality Breeding Stock

Alta Genetics Facility
Brazilian Beef Industry Facts

• Angus is #1 breed for semen sales in Brazil.
• Live carcass weight of 350 kg.
• 70-80% of beef produced in Brazil is consumed in Brazil.
• Panacum is the main grass; grow to 35 inches and graze down.
• Average herd size is 600 head; a good life is 1,500 head.
Lush Pastures

Pasture & Grass Research
Grid Sampling Pastures

Integrated Forestry & Beef
• Eucalyptus trees are harvested at 12 years of age.
• The trees reduce grass production by 12% but the profitability of wood production easily offsets the decreased grass production.
• The middle row in the row of three produces straight trees and thus wood that is good enough quality for furniture and the other trees are sold for paper products.
• Rows of 1 tree are not profitable enough to offset the loss of grass production.
Zebu & English Crossbreds

Crossbreds in a feedlot
Soybeans and Sugarcane in the background of the feedlot

JBS “Swift Black” Feedlot
Integrating Corn, Pasture & Beef

10 miles of this road to get to the farm
Working Corral

Recently Weaned Calves
Water Tower for Farm Supply

Housing for Farm Employees
Waygu Beef Farm near Sao Paulo

Mato Grosso do Sul
Major Soybean Production Areas in Brazil

CORN PRODUCING REGIONS IN BRAZIL

Source: IBGE (2011)
Grain Cleaning

Sugarcane fields
Harvesting Sugarcane

Conclusions

• Brazil – Great Potential, but…..
  – Infrastructure issues
  – Cultural issues
  – Political issues
  – Industry structure
Questions?