Addressing Deforestation at Country Level
PARAGUAY

GLOBAL CONFERENCE ON SUSTAINABLE BEEF
Banff Springs, Canada
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Where is PARAGUAY?
Western Region or CHACO (62%)

- Size New Zealand
- < 3% population
- Livestock (45%): (Natural Beef)

Eastern Region (38%)

- Size United Kingdom
- 97% population
- Agriculture (99%) + Livestock (55%)

Surface Area: 406.752 km²
Population: 6,568,000

- 50% = 15-49 year-old
- 37% < 15 years old

MILLENIUM ASSETS:
FOOD+WATER+ENERGY
PARAGUAY as Top 10 World Exporter

1st Electric Energy
1st Organic Sugar
2nd Yuca
2nd Stevia
3th River Barge Fleet
3th Yerba Mate
4th Soy Bean
4th Yuca Starch
4th Soy Bean Oil
5th Chia
6th Beef
7th Corn
10th Wheat
10th Sesame
10th Rice

PARAGUAY Produces Food
100 million People in the World
BEEF INDUSTRY in PARAGUAY
Snapshot of the Beef Industry in PARAGUAY

- National Herd: 13.8 Million Head
- 153,084 producers
- 12.4% GDP as Value Chain
- >350,000 jobs (11% EAP)
- Internal Market: (38%)
  Per capita consumption = 36 kg/year
- Grazing Area: 16.2 Million Has
- Stocking Rate: 1.2 Has/Head
- Annual Slaughtering: 2.7 Million Heads
- Annual Production: 650,000 TON (CWE)
- Exports (62%): 400,000 TON (cwe)
- 17 Packing Plants
- 58 Markets
- 5 Continents

Per capita consumption = 36 kg/year
Beef Industry in Paraguay from 2000 – 2015:

- National Cattle Herd grew by 49%
- Annual Slaughtering increased 4x
- Exports (TON/CWE) incremented 6x
- Exports Value (US$) beef and by products raised 21x

Fuente: ARP, CPC 2015
# Beef Export Growth in the MERCOSUR Years 2003 vs 2014 (US$ Millions)

<table>
<thead>
<tr>
<th>Country</th>
<th>2003</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraguay</td>
<td>1244</td>
<td>5570</td>
</tr>
<tr>
<td>Brasil</td>
<td>57</td>
<td>1547</td>
</tr>
<tr>
<td>Uruguay</td>
<td>577</td>
<td>1405</td>
</tr>
<tr>
<td>Argentina</td>
<td>1049</td>
<td>577</td>
</tr>
</tbody>
</table>

**Growth Times (x)**

- Paraguay: **21.2x**
- Brasil: **3.6x**
- Uruguay: **3.7x**
- Argentina: **1.8x**

Top 10 World Beef Exporters (‘000 TON CWE) 2016

India  
Brazil  
Australia  
EEUU  
N. Zelanda  
Paraguay  
Uruguay  
Canada  
UE-28  
Mexico

(Source: USDA, 2016)
Deforestation Public Policy in PARAGUAY

- **Eastern Region**
  - Zero Deforestation Law (2005)
  - 2.5 Million Ha Native Forest Remaining

- **Western Region (CHACO)**
  - Native Forest Transformation LEGAL
  - 14.2 Million Ha Native Forest Remaining

(Source: INFONA, 2015)
Evolution of National Cattle Herd, Country Forest Area and Chaco Forest Area years 2000, 2011 and 2015 in Paraguay

(Source: INFONA, 2015)

<table>
<thead>
<tr>
<th>Year</th>
<th>National Herd (Million Heads)</th>
<th>Country Forest Area (Million Ha)</th>
<th>Chaco Forest Area (Million Ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>9.6</td>
<td>22.2</td>
<td>18.7</td>
</tr>
<tr>
<td>2011</td>
<td>12.4</td>
<td>18.4</td>
<td>15.5</td>
</tr>
<tr>
<td>2015</td>
<td>13.8</td>
<td>16.7</td>
<td>14.2</td>
</tr>
</tbody>
</table>

+ 4.2

(-) 4.5
Evolution of Beef Exports (US$ Million) and Poverty Index (%) in Paraguay from 2006 to 2015

(Source: STP, Senacsa 2015)
Chaco Livestock Systems:

- By Law: 25% Native Forest Reserve
- + 20% of runners and islands of forest
- Use adapted pastures
- Appropriate stocking
- Do Not sacrifice biodiversity
- GHG Minimum contribution (climate change)
- Do Not utilize a lot of surface
- NO Not degrade soils
- REPRESENT Nature in Production within a diverse landscape
**Weight Gain of Steers with cultivated Grasses in the Chaco (Kg/Ha/year)**

Source: Glatzle (2006)

<table>
<thead>
<tr>
<th>Grass Specie</th>
<th>Weight Gain (KG/ha/Year)</th>
<th>Stocking Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pangola <em>Digitaria Decumbens</em></td>
<td>$266^1$</td>
<td>1.2 AU/Ha</td>
</tr>
<tr>
<td>Gatton Panic <em>Panicum Maximum cv Gatton Panic</em></td>
<td>$211^2$</td>
<td>1.1 AU/Ha</td>
</tr>
</tbody>
</table>
Weight Gain in Steers: Consociation of Cultivated Grasses and Legumes in the Chaco (Kg/Ha/year)

<table>
<thead>
<tr>
<th>CONSOCIATION</th>
<th>(KG/Ha/Year)</th>
<th>Stocking Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pangola + Legumes</td>
<td>624&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2.5 AU/Ha</td>
</tr>
<tr>
<td>Gatton + Leucaena</td>
<td>476&lt;sup&gt;2&lt;/sup&gt;</td>
<td>1.7 AU/Ha</td>
</tr>
</tbody>
</table>

<sup>1</sup> Buena Vista, Chaco Central; Legumes: Alysicarpus, Lotononis y Oxley Styloa

<sup>2</sup> Estancia Buena Vista, Chaco

Source: Glatzle (2006)
STRATEGIC OBJECTIVES NATIONAL DEVELOPMENT PLAN PARAGUAY 2030:

1. Poverty Reduction & Social Development
2. Promote Socially Inclusive Economy
3. Positioning Paraguay in the World
SUSTAINABLE PARAGUAYAN BEEF INDUSTRY:
- Economically FEASIBLE
- Socially INCLUSIVE
- Environmentally BALANCED
Paraguayan Beef Industry 2030 Objective

Become 5th Beef World Exporter at least 600,000 TON Exportable Balance
Growth Trend of Paraguayan Bovine National Herd 2016-2026
(‘000 Heads) [Source: MAG, 2016]
DEFORESTATION Perspective in the Chaco

✓ Current Native Forest Area = 59.1%/Chaco Area = Switzerland + Denmark + Holland

✓ Horizon Forest Transformation ≈ up to 7 million Hectares next Decade

✓ Must evaluate the PARADOX of Social & Economic Development versus Deforestation Issues linked to markets and consumers
Efforts Toward Beef Sustainability

✓ Country commitment (COP 21)
✓ Green Commodity Program (United Nations)
✓ Alliance for Sustainable Development (USAID/WWF)
✓ Natural Beef Program (Rural Association of Paraguay/Solidaridad)
✓ Sustainable Finance Table (Private Banks)
Beef Industry has become the symbol of PARAGUAY as an Honest and Prosperous Country.

FEEDING THE WORLD is an OPPORTUNITY but also IS OUR COMMITMENT & RESPONSIBILITY.
PARAGUAYAN BEEF
DELICIOUSLY NATURAL
A PLEASURE ON YOUR
TABLE!

The Best Beef In The World
“IF you want to be happy for an Hour: ...Get Drunk

IF you want to be happy for a year...Get Married

If you want to be happy for a Life... Get a Cow...Produce Sustainable Beef...”

Chinese Proverb (Adapted for GCSB)
Thanks!
Gracias!