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Meat-ing the challenge: expanding integrated protein supply chains across Asia
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BRF Asia-Pacific
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BRF from farm to fork: an integrated supply chain for maximum safety

- Technical Assistance
- Genetics
- Feed

**Contract Farmers**
- 14,000 contract farmers
- Integration: sanitary control and larger productivity

**Processing**
- 34 units in Brazil
- 16 units overseas: Europe, Argentina, UAE, Singapore, Thailand, Malaysia, HK, Turkey
- 2.3 million tons of food annually

**Distribution**
- 27 Distribution Centers
- 2,300 items (SKUs)

**Domestic mkt**
- More than 240,000 points of sales
- Present in 120 countries in 5 continents

**International mkts**

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- **Comprehensive and integrated chain**, from farm to fork
- **8th biggest food company in the world** (US$ 12 billion market cap)
- **#1 chicken exporter in the world** (14% of the world total)
- **#1 Halal poultry company in the world** (by volume)
- **#1 agri-food company in Brazil** (US$ 12 bn net sales in 2014)
- **4th largest Brazilian exporter**
- **5th largest brazilian employer company** (115,000 employees)
- **Top of Mind brands** in Brazil, Argentina and Middle East
- **Listed on NYSE and Bovespa BM&F**
- **Listed on the 100 most innovative companies** in the world by Forbes
- **Superior corporate governance and Investment Grade** by Moody's/S&P/Fitch
BRF’s production footprint in Middle East and Asia:

- **Moving East**
- **Strategy**: domestic market → trade → investments → local presence → innovation

<table>
<thead>
<tr>
<th>Country</th>
<th>Details</th>
<th>Mode of set-up</th>
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</table>
| UAE (Abu Dhabi)  | - BRF’s largest international plant  
                   - US$160 million FPP plant supplying UAE and GCC countries  
                   - Originally built with 72,000 MT/year capacity, with expansion plan to over 100,000 MT/year by end 2016  
                   - Employs 1,400 workers                                                                                         | Greenfield (Nov 2014) |
| Singapore        | - JV with SATS  
                   - Value-added processing, as well as distribute BRF brands (Sadia and Perdigao) to retailers, food service and ship chandlers | JV (Apr 2015)        |
| Thailand         | - BRF acquired the #3 largest chicken exporting company in Thailand for US$ 360 million  
                   - Fully integrated operations: feed mill, slaughterhouses and processing plants  
                   - Offers strong expertise in cooked chicken products                                                             | Acquisition (Dec 2015) |
| Malaysia         | - Halal hub platform for BRF to export to regional and global halal markets  
                   - Leverage Malaysia’s strong halal positioning and sophisticated consumer base to innovate for the halal world  
                   - JV with PPB (Wilmar) for FPP production                                                                        | JV (Dec 2016)        |
Uneven distribution of consumption and resources

Consumption (% world)
28% poultry
20% beef
31% dairy
37% sugar

- 51% of world’s population
- 19% of GDP
- 18% of available land
- 23% of renewable water

SOUTH AND SOUTH-EAST ASIA: Bangladesh, Bhutan, Brunei, Cambodia, China, Hong Kong, India, Indonesia, Lao, Macao, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, East Timor, Vietnam

One dot represents 100,000 people
MEATS - Per Capita Consumption (kg per capita/year)

Source: USDA, OCDE
World Food Security (1990-2025)
Net intra-regional trade

Note: “Million tonnes equivalent” for cereals, oilseeds, animal proteins, biofuels and cotton.

Source: OCED and FAO Agricultural Outlook 2016-2025
Food chains: different drivers, different speeds

- Labor intensive agriculture
- High number of very small farms
- Self-sufficiency policy
- Social concerns: inflation, urbanization

- Quality
- Healthy & safe food
- Global players
- Value chain coordination
- Consolidation
- Economies of scale
- Traceability

- Variety and branding
- Differentiation
- Taste
- Labeling
- Speed to market
- Convenience
- Food service
- Infrastructure

- Individualized & emotional needs
- Environment issues
- Animal welfare
- “Buy local”
- GM/antibiotics free
- Organic, veggie, bio
- Land use changes

Top global trade surpluses and deficits in the agri-food sector

Source: WTO. Note: China: Mainland China + Hong Kong + Macau
Brazilian Agri-Food Export Destinations

Source: MAPA (Agrostat).
Evolution of Food Self-Sufficiency in China

China’s receptivity to the top agri-commodity exports (based on tariffs or access)

<table>
<thead>
<tr>
<th>Free access</th>
<th>Restricted</th>
<th>Highly Restricted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soybeans</td>
<td>Beef (12%)</td>
<td>Sugar (50%)</td>
</tr>
<tr>
<td>Coffee</td>
<td>Chicken (14%)</td>
<td>Corn (54%)</td>
</tr>
<tr>
<td>Wood pulp</td>
<td>Pork (18%)</td>
<td>No imports</td>
</tr>
<tr>
<td>Cotton</td>
<td>Wheat</td>
<td></td>
</tr>
</tbody>
</table>

% indicated = Tariff rates faced by Brazil into China; Nil = no exports in 2015. Source: TradeMap using UN ComTrade data
Market access for animal protein more complex than feed

**Soybean: free access**

Note: Assessment of market access based on tariffs and NTMs for frozen chicken and soybean meal

**Chicken: Access remains an issue in Asia**

Note: For soybeans, crush volume is approximated for consumption volume.

**% imports/consumption**

**Value per tonne (USD):**
- Grains → 300 to 500
- Meats → 2,000 to 5,000

Sources:
1. USDA reports on Livestock & Poultry, Grains and Oilseeds (2014 data)
Increasing import access into China for soybeans and beef, but decreasing for poultry. Access for meats remain very low.

<table>
<thead>
<tr>
<th>Year</th>
<th>Soybeans</th>
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<tbody>
<tr>
<td>2006</td>
<td>66%</td>
</tr>
<tr>
<td>2007</td>
<td>76%</td>
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<tr>
<td>2008</td>
<td>71%</td>
</tr>
<tr>
<td>2009</td>
<td>82%</td>
</tr>
<tr>
<td>2010</td>
<td>81%</td>
</tr>
<tr>
<td>2011</td>
<td>73%</td>
</tr>
<tr>
<td>2012</td>
<td>77%</td>
</tr>
<tr>
<td>2013</td>
<td>80%</td>
</tr>
<tr>
<td>2014</td>
<td>82%</td>
</tr>
<tr>
<td>2015</td>
<td>87%</td>
</tr>
</tbody>
</table>

Sources: USDA annual GAIN reports, 2006-2015, TradeMap trade data derived from UN ComTrade.
Refrigerator Ownership x Meat Consumption

Growth of household refrigerators ownership is favouring the consumption of perishable products, including meat.

**Fonte:** Rabobank, FAO, OCDE. Elaboração: M. Jank BRF
Top priority issues is a challenging trade-off

How to achieve?

Food Security

Food Safety & Quality

Affordability
Low Inflation

Sustainability

…with import restrictions and self-sufficiency policies?

Trade is still very limited…

✔ New protectionism: tariffs and subsidies → complex non-tariff barriers

✔ Trade: economic efficiency and sustainability

Feed (grains) vs. Animal Protein → better carbon/water/energy footprints
**Conclusions**

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<tr>
<th>AGENDA</th>
<th>OLD</th>
<th>NEW</th>
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<tr>
<td>Drivers</td>
<td>Food security</td>
<td>Food safety, quality, value added, new trends</td>
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<td>Relationship</td>
<td>Commodities</td>
<td>Contracts, traceability, certification, private standards</td>
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<td></td>
<td>Spot markets</td>
<td>sustainability (water &amp; carbon footprint, climate change)</td>
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<tr>
<td>Markets</td>
<td>Traditional/wet</td>
<td>refrigeration, modern retail, food service, QSR, brands</td>
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<tr>
<td>Geographies</td>
<td>Developed countries</td>
<td>Emerging economies: Asia, East Europe, Africa, LAC</td>
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<tr>
<td>Trade</td>
<td>WTO</td>
<td>Bilaterals (spaghetti bowl) and strategic partnerships</td>
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<td>Mega-regional</td>
<td>“New” mercantilism</td>
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<tr>
<td>Protectionism</td>
<td>Tariffs and TRQs</td>
<td>Complex Non-Tariff Barriers (NTBs): sanitary (SPS), technical (TBT),</td>
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<tr>
<td></td>
<td></td>
<td>bureaucratic (plant approvals), environment</td>
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<tr>
<td>Food companies</td>
<td>Commodity exporters</td>
<td>Consolidation, local players in 3rd countries</td>
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<td>globally integrated supply chains</td>
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Thank you

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