The Road to 2050: The China Factor

Mary Shelman
Director, Agribusiness Program, Harvard Business School
President, International Food and Agribusiness Management Association
June 13, 2012
Agribusiness at Harvard Business School

Agribusiness 50+ year history

• A Concept of Agribusiness, Davis and Goldberg (1957)
• Agribusiness Seminar (Executive Education) since 1960
  • Boston in January
  • Offsite (China, Brazil, India, Argentina, France) in May/June
• Hundreds of cases, thousands of program alumni
HBS Agribusiness Cases 2008-2011

Nestlé (Switzerland)  Monsanto (USA)
Olam International (Singapore)  Rabobank (Netherlands)
GlobalGAP (Germany)  Ebro Puleva (Spain)
Taylor Farms (USA)  DaChan (China)
JBS (Brazil)  Diamond Foods (USA)
COFCO Xinjiang Tunhe (China)  Hungerit (Hungary)
Arcadia Biosciences (USA)  Cosan (Brazil)
Syngenta (Switzerland)  PureCircle (Malaysia)
ViniBrasil (Brazil)  Woolf Farming (USA)
Marks & Spencer (UK)  Codevasf (Brazil)
AGRA (Africa)  Red Tomato (USA)
Kepak (Ireland)  FreshTec (USA)
Zespri (New Zealand)  Asian Agri (Indonesia)
Yum! (China)  CME Group (USA)
Los Grobo (Argentina)  CHS (USA)
Associated British Foods (UK)  Jain Irrigation (India)
Domino’s (USA)  K&N’s Poultry (Pakistan)
Marine Harvest (Norway)  Fonterra (New Zealand)
Brasil Foods (Brazil)  Doug Rauch/American Food Paradox
Major Trends

- Globalization
- Consolidation
- Technology
- Retail concentration
- Sustainability
- Scarcity of land, water and talent
- Volatility
- Food security
- Traceability and Transparency
- Consumer engagement/activism
- Food and health
China
Why China is so important

- Feeds 22% world’s people with 7% world’s farmland
  - < 1 hectare per person v. 100 hectare per person in US
- Only ¼ average per capita water supply
- Pork consumption doubled since 1990 to 40 kg/person
  - 660 million hogs (100 million in the US)
    - Mainly small producers
China produces over half the world’s pork output and a third of world horticultural output.

<table>
<thead>
<tr>
<th>Product</th>
<th>Percent in 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pork</td>
<td>52</td>
</tr>
<tr>
<td>Fruit and vegetables*</td>
<td>37</td>
</tr>
<tr>
<td>Rice</td>
<td>30</td>
</tr>
<tr>
<td>Cotton</td>
<td>25</td>
</tr>
<tr>
<td>Corn</td>
<td>20</td>
</tr>
<tr>
<td>Broilers</td>
<td>17</td>
</tr>
<tr>
<td>Wheat</td>
<td>16</td>
</tr>
<tr>
<td>Beef</td>
<td>14</td>
</tr>
<tr>
<td>Soybeans</td>
<td>7</td>
</tr>
<tr>
<td>Milk</td>
<td>5</td>
</tr>
<tr>
<td>Population*</td>
<td>20</td>
</tr>
<tr>
<td>Agricultural land*</td>
<td>10</td>
</tr>
</tbody>
</table>

*Based on United Nations Food and Agriculture Organization data.
Source: USDA, Economic Research Service calculations using USDA data except where noted.
China is Changing

Relentless urbanization

- 15 to 20 million people moving to cities every year
  - 2011: 160 cities 1 M+ (35 in Europe)
  - 2025: 219 cities 1 M+; 24 > 5 M
  - 2030: 1 BILLION in cities

By 2010, more premium consumers than all of Europe

- 1 BILLION mobile phones, 513 MILLION internet users, 250 M microbloggers
- Largest Grocery market in the world
- A new KFC opens every 13 hours!
Yum China: 4,000 restaurants in 700 cities
Sam Su and “Future-Back” Thinking

Distribution system second only to Chinese army…
• …allowing Yum to serve cities that McDonald’s may not reach for 10 years
China sales surpassed US in Q3 2010
• Profit margin 21% +

Groundwork in place for 20,000 restaurants
Challenges: From Quantity to Quality

- Food Security
- Food Safety
- Fragmentation
- Cold Chain
- Environment
- Labor
China

- Food policy
  - Produce? Import?
- 60% of global soybean exports go to China
- Largest corn imports in 15 years
- FDI $12 B in Brazil in 2011 ($82 M in 2008)
  - Also Africa, Australia, New Zealand…. 
The China Factor: Three Questions

- What will China eat?
- How will China feed China?
- What role will China play in the global food system?

“When I go back to the US, it’s like a movie playing in slow motion.”