The China Puzzle – The Technology Imperative
USDA Agricultural Outlook Forum – 2014 February 20
Dennis L. Erpelding
Globally demand up: Record beef, pork, broiler and dairy product dollar trade each year from 2010-2013

Source: USDA/FAS
Global Food Security Opportunity

- 20% world’s population
- 10% world’s arable land
- 7% world’s fresh water
- #2 economy

- 4% world’s population
- 12% world’s arable land
- 21% world’s fresh water
- #1 economy

Source: FAO and OECD
Supporting China’s 12th 5 Year Plan

• Increasing food security and farm income
• Modernizing rural agriculture

• Globally engaging
• 100s millions moving to the middle class
• Plant to animal protein
  – Milk
  – Meat
2014 – China’s No. 1 Document: Agriculture

- Improving the national food security system
- Strictly observing red line for arable land and constantly raising country's agricultural production capacity
- Make good use of international markets for agricultural products as a complement to domestic supply
Chinese Self-Sufficiency: Food

Crop Year:
- 90/91
- 93/94
- 96/97
- 99/00
- 02/03
- 05/06
- 08/09
- 11/12

Percentages:
- 0%
- 20%
- 40%
- 60%
- 80%
- 100%
- 120%
- 140%

Graph lines representing:
- Corn
- Pork
- Broilers
- Rice
- Wheat
- Beef
- DW Milk Powder
- NFD Milk Powder
- Soybeans

Source: USDA/FAS

Global AgriTrends
U.S. Agricultural Imports from China

Average Annual Growth: +16%

Source: USDA/FAS
Today’s 3 Food Security Realities

**GROWING MIDDLE CLASS**

- **3 BILLION** Join the middle class
- Today: 7B
- Fastest growth to occur between now and 2020
- 2050: 9B

Source: FAO, OECD

**INCREASING DEMAND FOR MEAT, MILK & EGGS**

- We will need **60%** More animal-sourced foods

Source: FAO

**FEEDING MORE WITH LESS**

- By overusing our resources, it takes **1.5** Years for the earth to regenerate annual consumption

Source: WWF

An Urgent Window of Time
Technology - The Benefits of Innovation

U.S. agricultural inputs were steady while total factor productivity expanded from 1948-2009.

Indices, 1948=1

- Output
- Input
- Total factor productivity


60 years • 250% output • Same input
China and the United States

- Collaboration in science and technology
- Promote bilateral trade
- Deepen agricultural cooperation

Chinese Vice President Xi Jinping said in Des Moines Thursday that China and the United States should enhance collaboration in science and technology, promote bilateral trade and strengthen information exchanges so as to further deepen agricultural cooperation.
NOTE TO THE READERS
The outlook presented in this publication consist of a set of market and sector income prospects elaborated on the basis of specific assumptions regarding macroeconomic conditions, the agricultural and trade policy environment, weather conditions and international market developments. They are not intended to constitute a forecast of what the future will be, but instead a description of what may happen under a specific set of assumptions and circumstances, which at the time of projections were judged plausible. ...
Beef Meat: Net Importers

Graph 3.5  Beef meat market developments (mio t), 2000-2020

- EU-15
- EU-25
- EU-27

- Production
- Consumption
- Ending stocks
- Imports
- Exports

Years: 2000-2020
The Innovative Path: It Is Possible!

Producing more milk to meet increased demand

Examples:
• Genetics
• Nutrition
• Feed optimization
• Health management
• Vaccines
• Disease control
• Fresh, clean water
• Improved housing

Dr. Roger Cady. Elanco Animal Health. 2013
Pig Slaughter / Beginning Sow Stocks

net of pig imports/exports

Source: USDA/FAS
Pork Self-Sufficiency

Source: USDA/FAS, carc wt equiv.
The World’s Trusted Choice for Food and Agriculture Products

“Setting the benchmark for global food security, reliability, quality, value and safety.”
Common Interests To Achieve Global Food Security
Never Politicize

Collaboration To Ensure Consumer Confidence
Pathogens Diseases Residues

Human

Safety

Food

Animal
The Codex Alimentarius Commission, established by FAO and WHO in 1963 develops harmonised international food standards, guidelines and codes of practice to protect the health of the consumers and ensure fair trade practices in the food trade. The Commission also promotes coordination of all food standards work undertaken by international governmental and non-governmental organizations. For more information see here.
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- Global food security is possible
- Innovation will be essential to meet food need
- China and U.S. can be the global leaders
- Collaboration on technology adoption
- Complementary market access
- International standards establishment and recognition
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