Policies to Meet the Food Needs of a Growing World

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Louisville, Kentucky
GLOBAL FOOD PRODUCTION VS. PRICE

(production of grain, rice, major oilseeds, PO, FSHM vs. corn/soybean/wheat futures price index)

Source: USDA
world food flows
(grains, rice, oilseeds, meals, oils, feed equivalent of meat – net interregional in mmt)

exporters: more land than people

importers: more people than land

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More people, more income, bigger appetites

000 USD income per capita – 1997$
The Effects of Higher Disposable Income
Example - Chinese Meat Consumption grew 6-fold in 30 years

Meat consumption – 1981
(Pork, Broiler, Beef)

- USA 22%
- China 11%
- Rest of the World 67%

108 Mln Tons

Meat consumption – 2011
(Pork, Broiler, beef)

- USA 14%
- China 29%
- Rest of the World 57%

237 Mln Tons

Source: USDA
Biofuels Volumes – a Major Shift

• Grain to ethanol

Million Metric Tons

2001 2006 2011
0 20 40 60 80 100 120 140 160 180

~9% of world grain market

• Vegoil to biodiesel

Million Metric Tons

2001 2006 2011
0 4 8 12 16 20 24 28

~14% of world vegoil market
Populations are expanding where it is most difficult to grow food
Sustainability
Policy Opportunities and Challenges

- Honor Comparative Advantage
- Enable Open Markets
- Invest in Infrastructure
- Agricultural Productivity
- Harmonization of Standards
- Support Smallholder Farm/Property Rights
The world will always raise the most food the most economically if every farmer plants the right crop for the soil and climate, and then trades with others.
Comparative Advantage & Trade

Reactions to Volatility

Conflating Security with Sufficiency

Export Bans

Stockpiling & Hoarding

Policy Opportunities in GREEN
Policy Challenges in RED
Open Markets, Price Discovery, Risk Management

- Disrupted Market Signals
- Political, Fiscal & Monetary Risk Factors
- Regulatory Barriers
Transportation Goods to Market

- Port and River Dredging
- Locks and Dams
- Competitors’ Infrastructure
- Fiscal Constraints

National Institute for Animal Agriculture 2013
Key driver of production growth: yield increase

Genetic improvements and fertilizer intensification drive supply expansion thru yield -- acreage has not been a significant supply drive until recently

Index (1975=100)

Source: USDA
Biotechnology & Innovation

Asynchronous Approvals

Positive Test at Destination for Unapproved Events

Field Escapes

Commercialization before approval in major export markets creates unacceptable risk
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## Export vs. Domestic Market

$60+$ advantage/head on 7 products

<table>
<thead>
<tr>
<th>Product</th>
<th>Value in Export Market</th>
<th>$ Value/#</th>
<th>Lb/Hd</th>
<th>$/HD/Export</th>
<th>Value in Domestic Market</th>
<th>$ Value</th>
<th>#/hd</th>
<th>$/HD/US</th>
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<td>Korea</td>
<td>$3.00</td>
<td>10</td>
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<td>US/Canada</td>
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<td>20</td>
<td>$32.00</td>
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<td>$0.80</td>
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Harmonization

Inconsistency

Trade Frictions

Create Consumer Confusion

Delays
Property Rights
The Values Question

- Values vs. Technology
- Tin vs. Food
- Managing the Dichotomy
- Anonymity vs. “Story Food”
- Knowing Your Farmer and Agricultural Values
- Improve our Messaging—Who do we talk to?