Agricultural Trade: 
Factors affecting agricultural trade 
and 
Prospects for the future

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Introduction

• Why trade happens and is important
• Characteristics of trade
  – Size, growth & composition
  – Impact of trade on economy
• Factors affecting trade
• Trade institutions & trade agreements
• Changes in trade patterns: some illustrative history
• Analyzing trade
  – Conceptually thinking about effects of trade.
  – Economic models
• Prospects for future trade
• Careers associated with trade
Why Trade?

• Society is better off
  – Lower costs & more variety for consumers. Bigger market for efficient producers.
  – Lower market volatility

• Comparative advantage

• Linkages back to the economy
  – Employment & income
  – Foreign exchange earnings
U.S. benefits of ag trade

Exports:
• U.S. output rising faster than domestic demand
  – Foreign markets absorb products with limited U.S. demand growth
• Increased demand
  – boosts farm prices and farm income,
  – and lowers government expenditures on ag.

Imports:
– Increase variety of products
– restrains price increases
U.S. Agricultural Trade

In 2009:

- Exports $98.6 billion
- Imports $71.6 billion
- Net trade balance $27.0 billion

- **Exports** account for:
  - about a fifth of the volume of U.S. ag production

- **Imports** account for:
  - about a sixth of the volume of consumption

- **Trade surplus**:
  - Ag sector has a surplus; rest of economy has a deficit
U.S. Agricultural Trade

- Exports: 120 billion dollars
- Imports: 60 billion dollars
- Trade balance: 60 billion dollars

Source: USDA Agricultural Projections to 2019, February 2010
### Top U.S. agricultural trading partners
Calendar year 2009. Billion dollars

<table>
<thead>
<tr>
<th>Exports to</th>
<th>$ Bil</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Total</td>
<td>98.61</td>
</tr>
<tr>
<td>1 Canada</td>
<td>15.70</td>
</tr>
<tr>
<td>2 China</td>
<td>13.15</td>
</tr>
<tr>
<td>3 Mexico</td>
<td>12.95</td>
</tr>
<tr>
<td>4 Japan</td>
<td>11.12</td>
</tr>
<tr>
<td>5 European Union-27</td>
<td>7.46</td>
</tr>
<tr>
<td>6 South Korea</td>
<td>3.92</td>
</tr>
<tr>
<td>7 Taiwan</td>
<td>2.99</td>
</tr>
<tr>
<td>8 Hong Kong</td>
<td>2.05</td>
</tr>
<tr>
<td>9 Indonesia</td>
<td>1.80</td>
</tr>
<tr>
<td>10 Turkey</td>
<td>1.50</td>
</tr>
<tr>
<td>11 Russia</td>
<td>1.44</td>
</tr>
<tr>
<td>12 Egypt</td>
<td>1.35</td>
</tr>
<tr>
<td>13 Philippines</td>
<td>1.29</td>
</tr>
<tr>
<td>14 Thailand</td>
<td>1.05</td>
</tr>
<tr>
<td>15 Venezuela</td>
<td>0.96</td>
</tr>
</tbody>
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</tr>
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</tr>
<tr>
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</tr>
<tr>
<td>6 Australia</td>
<td>2.32</td>
</tr>
<tr>
<td>7 Chile</td>
<td>2.15</td>
</tr>
<tr>
<td>8 Indonesia</td>
<td>1.79</td>
</tr>
<tr>
<td>9 Colombia</td>
<td>1.77</td>
</tr>
<tr>
<td>10 New Zealand</td>
<td>1.61</td>
</tr>
<tr>
<td>11 Thailand</td>
<td>1.57</td>
</tr>
<tr>
<td>12 Guatemala</td>
<td>1.30</td>
</tr>
<tr>
<td>13 Malaysia</td>
<td>1.30</td>
</tr>
<tr>
<td>14 India</td>
<td>1.24</td>
</tr>
<tr>
<td>15 Costa Rica</td>
<td>1.09</td>
</tr>
</tbody>
</table>

Source: [http://www.ers.usda.gov/Briefing/AgTrade/](http://www.ers.usda.gov/Briefing/AgTrade/)
## Bulk, Intermediate, & Consumer-oriented ag products

### Bulk commodities:
- Grains & oilseeds
- Pulses & peanuts
- Cotton
- Tobacco
- Raw coffee & cocoa beans

### Intermediate products:
- Protein meals & vegetable oils
- Feeds & fodders
- Live animals, hides & skins
- Sugar & sweeteners
- Planting seeds

### Consumer-oriented

1. Final, ready-to-use products
- Meats
- Breakfast cereals
- Snack foods
- Dairy products, cheeses
- Fresh fruit & vegetable
- Processed fruit & vegetables
- Fruit juices
- Tree nuts
- Wine & beer
- Nursery products
- Cut flowers
- Pet foods

Source: USDA/FAS: BICO data from GATS Database
U.S. Agricultural Exports

$ Billion


Bulk commodities

Consumer oriented

Intermediate products

Source: USDA/FAS: BICO data from GATS Database
Ag exports as a share of production (Bulk commodities; 2008/09)

Exports as % of production (volume basis)

- 15 Corn
- 30 Sorghum
- 41 Wheat
- 43 Soybeans
- 46 Rice
- 103 Cotton
Ag trade as shares of production and consumption (2008)

<table>
<thead>
<tr>
<th>Imports (% of consumption)</th>
<th>Exports (% of production)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 Total U.S. ag</td>
<td>12 Total U.S. ag</td>
</tr>
<tr>
<td>4 Animal products</td>
<td>8 Animal products</td>
</tr>
<tr>
<td>27 Crops &amp; products</td>
<td>14 Crops &amp; products</td>
</tr>
<tr>
<td>53 Lamb</td>
<td>20 Pork</td>
</tr>
<tr>
<td>93 Fish (fresh &amp; frozen)</td>
<td>18 Poultry meat</td>
</tr>
<tr>
<td>45 Fresh fruit</td>
<td>63 Almonds</td>
</tr>
<tr>
<td>53 Grapes</td>
<td>24 Fresh fruit</td>
</tr>
<tr>
<td>82 Apple juice</td>
<td>45 Raisins</td>
</tr>
<tr>
<td>44 Tomatoes</td>
<td>22 Processed vegetables</td>
</tr>
<tr>
<td>31 Wine</td>
<td>19 Wine</td>
</tr>
<tr>
<td>90 Spices</td>
<td>932 Tropical products</td>
</tr>
</tbody>
</table>
Impact of ag exports on the economy (2008)

Economic activity:
• $115 bil. in U.S. ag exports
• $157 bil. in additional economic activity
• $272 bil. of total economic output

Employment:
• 920,000 total full-time civilian jobs
• 608,000 in nonfarm sectors
Economic activity generated by ag exports

In 2008, $115 billion in ag exports generated $272 billion of economic activity in the U.S. economy.

- On Farms ($76.5 billion; 28%)
- Food processing ($57.5 billion; 21%)
- Other services ($70.6 billion; 26%)
- Trade & transportation ($38.7 billion; 14%)
- Other manufacturing ($29.3 billion; 11%)
Jobs created by ag exports

In 2008, $115 billion in ag exports generated 920,000 jobs in the U.S. economy.

- On Farms (312,000; 34%)
- Food processing (110,000; 12%)
- Trade & transportation (197,000; 21%)
- Other manufacturing (65,000; 7%)
- Other services (237,000; 26%)
Factors Affecting Ag Trade

• Comparative advantage (resources, technology)
• Macro economy (population growth, econ growth, exchange rates)
• Policies (market access, export enhancement, domestic support, non-tariff barriers)
• Trade distortions (measurement).
GDP resumes growth in 2010-2012

Source: ERS International Macroeconomic Data Set, 2009, and 2010 Baseline
World imports drop in response to the global recession, and then rebound.

Source: Global Trade Atlas
Value of U.S. dollar continues to decline

Index values, 2005=100


1/ Real U.S. agricultural trade-weighted dollar exchange rate, using U.S. agricultural export weights, based on 192 countries.

U.S. share of world ag exports and imports

Source: FAOSTAT/Trade
U.S. share of world ag exports and imports, and value of the dollar

Source: FAOSTAT/Trade
U.S. crude oil prices

International trade institutions and history

- Trade organizations: GATT, WTO
- Trade agreements
  - Multilateral (Uruguay & Doha Rounds)
  - Bilateral
  - Regional
  - Current agreements awaiting approval:
    - Panama, Colombia, S. Korea
  - Current negotiations:
    - Thailand, New Zealand, Indonesia, Kenya, Malaysia, Taiwan, Ecuador, UAE, Kuwait.
Examples of significant shifts in trade patterns
World poultry trade

Meat exports 1/

Million metric tons

- Poultry
- Beef and veal
- Pork

USDA, Economic Research Service.

1/ Major exporters.
Poultry imports: Growth & composition changes

Poultry imports 1/

Million metric tons

1/ Selected importers.
2/ Excludes intra-EU trade.

USDA, Economic Research Service.
Rise in pork consumption & imports

Pork imports 1/
Million metric tons

USDA, Economic Research Service.
World Soy trade

Global trade: Wheat, coarse grains, and soybeans and soybean products

Million metric tons


Soybeans and soybean products 1/
Wheat
Coarse grains

1/ Soybeans and soybean meal in soybean-equivalent units.

USDA, Economic Research Service.
Global soybean imports

Million metric tons

- China & Hong Kong
- N. Africa & Middle East
- Latin America
- East Asia
- EU

1/ Includes Mexico.  2/ Excludes intra-EU trade.

USDA, Economic Research Service.
Global soybean exports

Million metric tons

USDA, Economic Research Service.
Argentina soybean meal exports

Global soybean meal exports

<table>
<thead>
<tr>
<th>Year</th>
<th>Million metric tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>30</td>
</tr>
<tr>
<td>1995</td>
<td>40</td>
</tr>
<tr>
<td>2000</td>
<td>50</td>
</tr>
<tr>
<td>2005</td>
<td>60</td>
</tr>
<tr>
<td>2010</td>
<td>70</td>
</tr>
<tr>
<td>2015</td>
<td>80</td>
</tr>
<tr>
<td>2019</td>
<td>90</td>
</tr>
</tbody>
</table>

Argentina soybean oil exports

Global soybean oil exports

Million metric tons

1/ Excludes intra-EU trade.

USDA, Economic Research Service.
Global rice imports

Million metric tons


Other
Other Asia
Philippines
N. Africa & M. East
Sub-Saharan Africa
EU, FSU, & OE 1/
Latin America 2/

1/ European Union, former Soviet Union, and other Europe. 2/ Includes Mexico.

USDA, Economic Research Service.
Global wheat exports

Million metric tons

1/ Former Soviet Union and other Europe; prior to 1999, includes Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia, and Slovenia.
2/ Excludes intra-EU trade.

Shift in Cotton importers

Global cotton imports

Million bales

1/ Includes Mexico. 2/ Malaysia, Indonesia, Philippines, Thailand, and Vietnam. 3/ Bangladesh, India, and Pakistan. 4/ European Union, former Soviet Union, and other Europe.

Global cotton exports

Million bales

USDA, Economic Research Service.
### Trade-related policy responses to rising prices by selected countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Exports</th>
<th></th>
<th>Imports</th>
<th>Other policies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raised export taxes</td>
<td>Export volume restrictions</td>
<td>Export bans</td>
<td>Reduced import tariffs</td>
</tr>
<tr>
<td>Argentina</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cambodia</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Export policies:**
- Argentina x x
- Cambodia x
- Egypt x
- Kazakhstan x
- Russia x
- Ukraine x
- Vietnam x x

**Import policies:**
- Bangladesh x x x x
- EU x
- Mexico x
- Morocco x
- Mongolia x
- Philippines x
- Thailand x
Analyzing Trade

• Interactions between domestic markets and trade

• Models
  – Analysis of supply and demand, by country and commodity
  – Trade flows from surplus to deficit countries
  – Balance global supply & demand

• Winners and losers
Prospects for Future Trade

Demand issues:
• Rising demand in developing countries
  – Population & per capita incomes
• Biofuels (new non-traditional demand)
• SE Asia (declining per capita rice cons.)
• China & India (resource shortages)

Supply issues:
• FSU (emerging exporter)
• S.Am. (increasing exports)
• Environmental concerns
• Climate Change
• Changes in comparative advantages??
U.S. agricultural trade: History and projections to 2019

Billion dollars

Source: USDA Agricultural Projections to 2019, February 2010
U.S. agricultural trade: History and projections to 2019

Source: USDA Agricultural Projections to 2019, February 2010
U.S. agricultural trade:
History and projections to 2019

USDA projections made in 2000 for the coming decade, compared to what actually happened.

Source: USDA Agricultural Projections to 2019, February 2010
Conclusions

- Trade benefits the world by:
  - matching global demand with global supply
  - enabling each trader to exploit their own comparative advantage
Conclusions

- U.S. agricultural exports benefit U.S. economy
  - Farm prices and income
  - Government expenditures on farm support
  - Farm and off-farm employment
  - Business activity in processing, manufacturing, trade & transportation, and other services

- World markets for agricultural products are changing
  - Product composition
  - Shifts in major markets

- Global trade fell in 2009, but long-term prospects are good

- Sustained U.S. competitiveness relies on:
  - Continued productivity growth
  - Further progress in marketing efficiency

- Policies which facilitate or do not impede responding to new market opportunities are important.
Careers associated with trade

- U.S. Government
- Multinational organizations
- Trade associations
- Consulting companies
- Other private sector firms
- Non-governmental organizations
Careers

**Preparation:**
- Economics --- PLUS
- Math, statistics & other quantitative methods
- International studies or foreign experience
- Communication skills
USDA Agricultural Projections to 2019
available at:
http://www.ers.usda.gov/Briefing/Baseline/

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