World trade in Grains and Oilseeds: Milestones for 2010

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Topics to Be Discussed

- Global Economic Prospects
- U.S. Ethanol Trends & Effects on Feed Supply
- Key Players in World Grain & Feed Trade
- Emerging Developments in China’s Grain
- The Future: Potential Areas for Supply-Expansion
  - South America
  - Former Soviet Republics
World Economy: Key to Export Demand & Feed Prices

Real Gross Domestic Product (GDP) History and OECD Projections to 2010

Source: OECD Economic Outlook 84 database.
### U.S. Economic Recessions I

<table>
<thead>
<tr>
<th>Starting Date</th>
<th>Months Duration</th>
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<tbody>
<tr>
<td>March 1937 II</td>
<td>13</td>
</tr>
<tr>
<td>Feb. 1945 I</td>
<td>8</td>
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<tr>
<td>Nov. 1948(IV)</td>
<td>11</td>
</tr>
<tr>
<td>July 1953(II)</td>
<td>10</td>
</tr>
<tr>
<td>Aug. 1957(III)</td>
<td>8</td>
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<tr>
<td>April 1960(II)</td>
<td>10</td>
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<tr>
<td>Dec. 1969(IV)</td>
<td>11</td>
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<tr>
<td>Nov. 1973(IV)</td>
<td>16</td>
</tr>
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<td>Jan. 1980(I)</td>
<td>6</td>
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<td>July 1981(III)</td>
<td>16</td>
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<td>July 1990(III)</td>
<td>8</td>
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<tr>
<td>March 2001(I)</td>
<td>8</td>
</tr>
<tr>
<td>Dec. 2007 IV</td>
<td>?</td>
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</table>

**Post-WW II Extremes:**
16 months with oil shocks + tax & monetary stimulus

**Avg. Duration, Post WWII:** 10.2 Months

**Extremes:** 43 months, Aug. 1929 – March 1933
- April 1865, 32 months
- Oct. 1873, 65 months
- Mar. 1882, 38 months

Source of data: St. Louis Federal Reserve Bank
Will World Economy Recover in 2010?

World Bank Real GDP Projections
December 1, 2008

[Graph showing annual percent change in GDP from 2006 to 2010 for different regions and categories, including Non-OECD Hi Inc., China, Latin America, Mid-East. N. Afr., S. Asia, and Developing, exc. India, China.]
U.S. General Econ. Outlook

What Kind of Recovery?

- V – looking less likely
- W – temporary recovery
- U – gradual recovery
- L – extended period of stagnation (with inflation) : can’t be ruled out with higher taxes & cap & trade
Expect Higher Inflation in 12 to 24 months + Weaker U.S. $
U.S. General Econ. Outlook

3 Highly Likely Developments

- Trend toward weaker $ 
- Increasing inflation, esp. in 2-3 years 
- Higher interest rates – in 2-3 years, possibly sooner 

Driving forces: huge budget deficits and “cap & trade”
World Feed Trade Outlook

• 10 to 18 months of slow world growth
  – then inflation risk, weaker U.S. $
  – Increased price volatility
  – slower growth in S. American Grain production

• Adequate grain supplies through late ’09, then gradual export supply tightening
  Adequate protein meal supplies through late 2010, then tightening

• 5 Keys to global feed trade: (1) U.S. biofuels, (2) U.S crop yields, (3) China, (4) FSU, (5) South America

• Global warming: is it real?

• Will reason prevail in policies?
  – impact of GHG emissions controls on economy, grain and animal production and trade?
July 2010: $61.65, brings corn near $4.80/bu.
Figure 3. Mil. Tons Global Coarse Grain Exports & U.S. Corn Use for Fuel Ethanol

- Corn for Ethanol With Plants Under Construction
- Global Coarse Grain Exports
- Net U.S. Corn Use for Ethanol After DDGS Credit
- USDA 2008-09

With Govt. Mandates

Mil. Metric Tons

U.S. Corn Yield & Alternative Long-Term Trends to 2010

- Historical yield
- Trend, 1960-2007
- Trend, 1995-2007

Wisner’s Choice 1990-'07

Accelerated Yield Trend Ahead?
Current U.S. Ethanol Situation

- 2nd. Largest firm in bankruptcy
- 5-8 more in bankruptcy
- 24-28 formerly operating plants idled
- Several completed or nearly complete plants delay opening
- Returns: near break-even
- Severe loss in asset values
- Govt. Mandates support corn processing demand near current level -- “blending wall” issue
- Idle operating capacity: 13.5-15.0 mil. tons corn
- Idle plants =14%-18% of capacity
GHG Emissions Also a Big Issue

2007 U.S. Energy Act Biofuels Mandates

One gallon = 3.87 liters
Current U.S. Ethanol Markets: E-10 & E-85

The Blending Wall: Ethanol Mandates in Billion Gallons Beyond the E-10 Market
Biofuels: Problems with Greenhouse Gas Standards

Figure 1. CO₂ Emissions, Selected Biofuels as % Deviation from Proposed California Emissions Standards
How much recovery in oil price & how soon?

Figure 6. Annual U.S. Gasoline Consumption Since 1945 & Inflation-Adjusted Crude Oil Prices

(Crude oil prices are in 1982-1984 dollars)
41 Countries Encourage Biofuels

Ethanol, demand growth & food inflation shifting China from to corn exporter to importer?
Temporary larger wheat feeding reduces coarse grain demand

Global Corn & Other Coarse Grain Exports & Wheat Feeding

- **Other Coarse Grain Exports**
- **Wheat Feeding**
- **Corn Exports**

Mil. Bu. Corn Equiv.

World Wheat & Coarse Grain Area: Another 1996?

- **Coarse Grains**
- **Wheat**

- **Data Range:** 1978/79 to 2008-09
- **Key Year:** 1996-97

- **Axes:**
  - Y-axis: Mil. Hectares
  - X-axis: Years

- **Graph Details:**
  - Coarse Grains trend shows a decline around 1996-97.
  - Wheat trend indicates a low point in 1996-97.

- **Analysis:**
  - The data suggests a potential for another downturn in crop production similar to the 1996-97 period.
U.S. Ethanol & Yield Trend Have Big Implications for Corn Exports
Sorghum Also is an Ethanol Feedstock
World Barley Exports by Source, 2007-08

- EU
- Ukraine
- Australia
- Canada
- Russia
- U.S.
- Others
U.S., Foreign, and World Coarse Grain Exports

Data Source: USDA 3/12/09

- U.S. Exports
- World Exports
- Non-U.S.
China's Net Corn Exports, Marketing Years & USDA Projection for 2008-09

2/10/09

Bars above zero are exports, below indicate net imports.
Corn Yield to Affect China Export Availability
Normal Yield: about 68-70% of U.S.

China Corn Area and Yield, Metric Tons Per Hectare
Southern Hemisphere Corn Exports

'08-09 down 5.5 mil. Metr. Tons or 217 mil. Bu. vs/'07-'08

Argentina

000 Metric Tons


BRAZIL
S. AFRCIA
Net Grain Exports, Former Soviet Union, 1961-2008

Source of data: USDA, FAS, PSD & WAOB Projections
World Soybean Exports - 2007-08

- U.S.
- Brazil
- Argentina
- Paraguay
- Canada
- Other
<table>
<thead>
<tr>
<th>Country</th>
<th>Mil. Ton</th>
<th>Chg. Vs. last yr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina SB</td>
<td></td>
<td>-3.2</td>
</tr>
<tr>
<td>Brazil SB</td>
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<td>-4.0</td>
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<tr>
<td>Paraguay SB</td>
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<td>-0.8</td>
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<tr>
<td>Total SB change</td>
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<td>-8.0</td>
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### S. America Crop Prospects

#### 5/12/09 USDA

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<thead>
<tr>
<th>Country</th>
<th>Mil. ton</th>
<th>Chg. Vs. last yr.</th>
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</thead>
<tbody>
<tr>
<td>Argentina corn</td>
<td>-9.0</td>
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</tr>
<tr>
<td>Argentina SB</td>
<td>-12.2</td>
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<tr>
<td>Brazil corn</td>
<td>-8.1</td>
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<tr>
<td>Brazil SB</td>
<td>-4.0</td>
<td></td>
</tr>
<tr>
<td>Paraguay SB</td>
<td>-3.1</td>
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</tr>
</tbody>
</table>

- **Total corn change**: -17.1
- **Total SB change**: -19.4
Major Protein Meal Importers, 2007-08

- S. Korea
- Vietnam
- Indonesia
- Thailand
- Japan
- United States

Others
EU
Major Protein Meal Consumers, 2007-08

- China
- EU
- Others
- U.S.
- Brazil
- India
- Japan
- Mexico
- S. Korea
- Indonesia
China Soybean Meal Use

Slower growth in the Future?

Mil. Metric Tons

Marketing Years Beginning
Newly Cleared Land In Brazil
Planted to Upland Rice
Potential area to be cleared for crops

West Central Argentina, 2007
Four Key Areas to Influence Future Feed Exports

• **U.S. -- Biofuels Policies & Crop Yields**
  – Less restrictive GHG regulations?

• **China**
  – Will its SBM growth slow?
  – Will it be a corn importer?

• **South America** – can it continue to expand?

• **Former Soviet Republics** – political stability?
Biofuels & Feed Trade

Key Issues for the Near-Future

• Antibiotic residues in DDGS—Are they a problem?
• Will the U.S. allow intermediate ethanol fuel blends?
• Measurement of GHG emissions for biofuels
• Ethanol mandates for Australia, other countries
• Future of world economy & U.S. dollar
The Future

- *Grain & oilseeds will be energy crops*
- Cellulose crops will compete with other ag production
- Global supplies will tighten some, next 2 to 3 years as economy recovers
- China may be modest corn importer
- Non-U.S. feedstuff sources will gradually expand supplies
- U.S. will see significant crop yield increases, helping to supply biofuels growth
- Prices will be volatile
Thanks!

Questions?

Web Sites

http://www.econ.iastate.edu/faculty/wisner/

http://www.agmrc.org/renewable_energy/agmrc_renewable_energy_newsletter.cfm