Agricultural Economy: What Does the Future Hold?
What Does the Future Hold?

- Five potential trends for U.S. agriculture.
- The competitiveness of U.S. agriculture.
The “Great Recession” was the largest economic contraction since the 1930’s.
It was not the second “Great Depression.”
- 1929 to 1933: GDP fell 26%
- 2007 to 2009: GDP fell 3.7%
Will domestic or foreign consumption lead the recovery?

1) The Consumer is King.
A sluggish economic rebound is expected.

Real GDP Growth

Annual percent change

Source: Bureau of Economic Analysis  Federal Reserve Board of Governors
Unemployment rates have spiked.

Unemployment Rate
2007 Monthly Average

Source: Bureau of Labor Statistics
Unemployment rates have spiked.

Unemployment Rate
2008 Monthly Average

Source: Bureau of Labor Statistics
Unemployment rates have spiked.

Unemployment Rate
2009 Monthly Average

Source: Bureau of Labor Statistics
Will emerging countries lead the recovery?

GDP Growth

Annual percent change, constant dollars

Source: International Monetary Fund, January 2010
Can stronger global economies and a weaker dollar spur further improvements in the trade balance?
As incomes rise, how people purchase and prepare food changes.

Households Owning a Refrigerator

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<td>India</td>
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Households Owning a Microwave Oven

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Source: USDA, Euromonitor
2) U.S. Ag: High Hopes, Uncertain Profits.

- If we can get $4 corn with weak demand, what happens when demand rebounds?
Crop inventories remain low.

World Crop Inventories

Ending stocks to use ratio (percent)

Source: USDA
Traditionally, farm booms are driven by demand.
A decade of high crop profits?

Net Returns to Crop Production
(Gross Market Returns Less Variable or Cash Costs)

Dollars per acre (three-year moving average)

Source: USDA
Variable costs exclude costs for labor and management, depreciation, land, taxes, insurance, and farm overhead.
Volatility in commodity prices remains high.

U.S. Annual Farm Prices

Dollars per bushel

Source: USDA
3) **Changing Government Policies.**

- Financial markets and regulation
- Environmental policy
- Energy policy
- Health care policy
- Agricultural policy
- Rural development
- ????
What People Want in their Food?

A New Definition of Quality
- Safe
- Healthy
- Environmentally friendly

High Quality

People can have only 2 out of the 3 characteristics

Low Price/Cost

Convenience
What happened to biodiesel production in Jan. 2010? Do you want to base your profits on government policy?

U.S. Biodiesel Production

Source: Dept. of Energy
In the short run, deficit spending stimulates the economy. What about the long-term consequences?

U.S. Gross Federal Debt

Source: Congressional Budget Office
4) *Money may NOT be Cheap.*

- Due to the zero bound, the Fed Funds rate can only go up.
- Interest rate risk for banks and businesses.
- Do not forget about credit standards and collateral requirements.
The Federal Reserve will shrink its balance sheet.

Federal Reserve Balance Sheet: Assets

DECEMBER 2007
(833 BILLION DOLLARS)

- Traditional Security Holdings
- Long Term Treasury Purchases
- Lending to Financial Institutions
- Liquidity to Key Credit Markets
- Fed Agency Debt MBS Purchases

DECEMBER 2009
(2201 BILLION DOLLARS)

- $448.4
- $317.0
- $216.8
- $126.2
- $1,092.5

Source: Federal Reserve Board of Governors
Inflation expectations remain low.

U.S. Inflation Expectations

Source: Survey of Professional Forecasters
5) Another Wave of Consolidation.

- From 1997 to 2007, the number of farms ...
  - With less than 50 acres *increased* 15.9 percent
  - With 50 to 2000 acres *decreased* 9.5 percent
  - With 2000 acres or more *increased* 8.0 percent

- Further consolidation shaped by the following ...
  - Business closures (primarily livestock) open opportunities for survivors.
  - Higher fixed costs of production.
  - Regulatory costs also boost fixed costs.
  - With tighter standards, equity/collateral needs rise.

- Economies of scale and scope will tend to dominate.
The Competitiveness of Agriculture

- Technology: U.S. agriculture adopts technology
  - 1850: 85 hours of labor needed to produce 100 bushels of corn.
  - 2000’s: less than 2 hours of labor needed to produce 100 bushels of corn.
The Competitiveness of Agriculture

- Technology: U.S. agriculture adopts technology.
- Infrastructure: a focus on broadband and communication, but what about traditional infrastructure (roads, rail, and water)?
Railroad Capacity
2007

Source: Dept. of Transportation
Projected Railroad Capacity 2035 without improvements

Source: Dept. of Transportation
**What has Brazil been doing over the past decade?**

### Soybean Production Costs in U.S., Brazil and Argentina, 1998 (Dollars per bushel)

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<thead>
<tr>
<th></th>
<th>U.S. Heartland</th>
<th>Mato Grasso, Brazil</th>
<th>Argentina</th>
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<tbody>
<tr>
<td>Variable costs</td>
<td>$1.71</td>
<td>$3.17</td>
<td>$1.90</td>
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<tr>
<td>Fixed costs</td>
<td>$3.40</td>
<td>$0.72</td>
<td>$2.02</td>
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<tr>
<td>Total production costs</td>
<td>$5.11</td>
<td>$3.89</td>
<td>$3.92</td>
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<tr>
<td>Internal transportation and marketing</td>
<td>$0.43</td>
<td>$1.34</td>
<td>$0.81</td>
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<tr>
<td>Freight Cost</td>
<td>$0.38</td>
<td>$0.57</td>
<td>$0.49</td>
</tr>
<tr>
<td>Total costs</td>
<td>$5.92</td>
<td>$5.80</td>
<td>$5.22</td>
</tr>
</tbody>
</table>

Source: USDA
The Competitiveness of Agriculture

- Technology: U.S. agriculture adopts technology
- Infrastructure: a focus on broadband and communication, but what about traditional infrastructure (roads, rail, and water)?
- Capital: Despite current situation, U.S. capital markets are the envy of the world.
  - Who is the “safe haven” financial market?
  - Debt capital flows to rural America.
  - A better flow of equity capital to rural communities is needed.
The Competitiveness of Agriculture

- Technology: U.S. agriculture adopts technology.
- Infrastructure: a focus on broadband and communication, but what about traditional infrastructure (roads, rail, and water)?
- Capital: Despite current situation, U.S. capital markets are the envy of the world.
- Labor: a quantity of high-quality workers are needed.
  - What entices people to return to rural America and agriculture?
  - What skills lead to success?
Where Will Agriculture’s Next Generation of Leaders Emerge?

Age of U.S. Farmers

The average age of the U.S. farm operator in 2007
57 years old

Source: USDA, ERS
The Competitiveness of Agriculture

- Technology: U.S. agriculture adopts technology.
- Infrastructure: a focus on broadband and communication, but what about traditional infrastructure (roads, rail, and water)?
- Capital: Despite current situation, U.S. capital markets envy of the world.
- Labor: a quantity of high-quality workers are needed.
- Entrepreneurship: Necessity is the Mother of Invention.
How Does Knowing the Customer Affect What You Produce?

Japanese Watermelon

Cost:

Square Watermelon: $82

Regular Watermelon: $15 to $25

Source: BBC, 2001

Sold on a limited basis due to cost … the Consumer is King
Recovery opens new horizons for U.S. agriculture.

High hopes for prosperity are not certain in an environment of consolidation where money is not cheap, government action is high, and a fickle consumer is king.

U.S. agriculture can compete by tapping the pioneering spirit of our forefathers, where entrepreneurial investments in technology, infrastructure, capital, and labor are key.
Mark Your Calendars!

For Registration Information, Please E-mail

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