AGRICULTURAL OUTLOOK: Ethanol, Food Prices & More

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Omaha Branch

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The views expressed are those of the author and do not necessarily reflect the positions of Federal Reserve Bank of Kansas City or the Federal Reserve System.
The Agricultural Outlook

• Today’s Outline:
  – Record Crop Prices do not Lift all Boats
  – Ethanol: Is the Party Over?
  – Food prices: Who’s to Blame?
  – A 1970s Déjà vu?
  – Long-run challenges
The Farm Economy is Booming

U.S. Net Farm Income

Billion dollars

Source: USDA

Photos courtesy of USDA
Crop Prices Are Surging With Strong Demand And Shorter Global Supplies

U.S. Crop Prices

Dollars per bushel

Source: Wall Street Journal
Tough Times in the Cattle Industry

U.S. Livestock Prices and Breakeven Costs

Dollars per hundredweight

Breakeven Costs
Cattle Price
Hog Price

Source: USDA and Iowa State University
Rising Incomes Fuel Farm Capital Spending

Farm Income and Capital Spending
(Tenth Federal Reserve District)

Source: Federal Reserve Bank of Kansas City
Land Value Growth Has Surged In The Great Plains

Non-Irrigated Land Values

(Tenth Federal Reserve District)

Source: Federal Reserve Bank of Kansas City
Note: the Tenth Federal Reserve District covers the states of Nebraska, Kansas, Oklahoma, Wyoming, Colorado, western Missouri, and Northern New Mexico.
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A 15 Billion Gallon Wall?

U.S. Ethanol Production, Mandates, and Corn Use

Source: USDA and Renewable Fuels Association

Photos courtesy of USDA
Ethanol: Is The Party Over?

Ethanol and Corn Prices

- Ethanol Price (Left Scale)
- Corn Price (Right Scale)
- Ethanol/Corn Price Spread (Left Scale)

Spread is equal to ethanol price – (corn price/2.7 gallons per bushel)
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Food Prices Have Surged.

Consumer Price Inflation

Annual percent change

Source: Bureau of Labor Statistics
Price Components of U.S. Retail Foods (2005)

- Labor: 38.5%
- Farm value: 19.5%
- Transportation: 4.0%
- Energy: 3.5%
- Packaging: 8.0%
- Profits: 4.5%
- Rent: 4.5%
- Advertising: 4.0%
- Depreciation: 3.5%
- Taxes: 3.5%
- Interest: 2.5%
- Repairs: 1.5%
- Other costs: 2.5%

Source: USDA
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World Grain Inventories Have Fallen to Record Lows.

World Grain Stocks to Use Ratio

Percent of annual use

Source: USDA
U.S. Real Agricultural Exports Have Surged . . .

Source: USDA
With Stronger World Incomes . . .

World GDP Growth

Percent change

Source: International Monetary Fund
And a Weak Dollar.

Value of U.S. Dollar

Index

Jan-70 Jan-75 Jan-80 Jan-85 Jan-90 Jan-95 Jan-00 Jan-05

Source: Federal Reserve Board of Governors
Are These Gains Rational?

Returns to Wheat Production

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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<tbody>
<tr>
<td><strong>Total Costs per acre (excluding land)</strong></td>
<td>$179</td>
<td>$186</td>
<td>$192</td>
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<td><strong>Total Revenue per acre</strong></td>
<td>$216</td>
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<td><strong>Price (dollars per bushel)</strong></td>
<td>6.55</td>
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<td><strong>Yield (bushel per acre)</strong></td>
<td>33</td>
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<td>33</td>
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<td><strong>Returns to Land (dollars per acre)</strong></td>
<td>$37</td>
<td>$57</td>
<td>$89</td>
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Calculations based on USDA data and futures prices

**Capitalized value at 5.5% cap rate**

$675  $1028  $1627
### Are These Gains Rational?

#### Returns to Wheat Production (2009 Scenarios)

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  – Long-run challenges: Water and People
Water Wars: A Thing of the Future?
Where Will Agriculture’s Next Generation of Leaders Emerge?

U.S. Age Demographics

Source: USDA, ERS
Conclusions

• Rising Crop Prices
  – Good for Farmers
  – Bad for Livestock

• A Shake-Out in the Ethanol Industry
  – Energy, Ethanol, Exports will Drive Food Prices Higher in 2008

• A 1970’s Déjà vu?

• Water and Demographics are Two of the Biggest Challenges for Agriculture