USDA Agricultural Outlook Forum 2007

AN EXAMINATION OF FARM INCOME AND FACTORS FOR PLAINS AGRICULTURE

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Agricultural Policy Specialist, Kansas State University

Presented: Thursday, March 1, 2007
Certain Uncertainty

• Things we can track
  – Production Trends
  – Energy Prices
  – General Input Prices
  – Crop Prices
  – Livestock Markets
  – Land Values

• Things we guesstimate
  – Production for crops, livestock
  – Energy Prices
  – General Input Prices
  – Crop Prices
  – Livestock Markets
  – Land Values
Big Factors

• **PLAINS** Agriculture
  – A moving target: Blowing like the dry wind
  – A chilling reality: Freezing like an ice storm
  – A burning issue: Heating like a wild fire
  – Cows and Crops

• Energy Prices
  – Escalators
  – Moving Walkways
Big Factors (continued)

• Crop Prices
  – The Good, The Bad, The Ugly
• Livestock Prices
• Land Values
  – Could agriculture once again drive land values up?
• Future Ag Policy
  – Disasters happen in the Plains. What will be available?
### Price change from previous year, %

<table>
<thead>
<tr>
<th>Month-Yr</th>
<th>Anhydrous Ammonia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep-06</td>
<td>-19.8%</td>
</tr>
<tr>
<td>Oct-06</td>
<td>-26.0%</td>
</tr>
<tr>
<td>Nov-06</td>
<td>-26.1%</td>
</tr>
<tr>
<td>Dec-06</td>
<td>-23.2%</td>
</tr>
<tr>
<td>Jan-07</td>
<td>-17.3%</td>
</tr>
<tr>
<td>Feb-07</td>
<td>-6.9%</td>
</tr>
<tr>
<td>Mar-07</td>
<td>-3.4%</td>
</tr>
<tr>
<td>Apr-07</td>
<td>-3.7%</td>
</tr>
<tr>
<td>May-07</td>
<td>-1.5%</td>
</tr>
<tr>
<td>Jun-07</td>
<td>0.6%</td>
</tr>
<tr>
<td>Jul-07</td>
<td>8.6%</td>
</tr>
<tr>
<td>Aug-07</td>
<td>10.5%</td>
</tr>
<tr>
<td>Sep-07</td>
<td>7.9%</td>
</tr>
<tr>
<td>Oct-07</td>
<td>11.2%</td>
</tr>
<tr>
<td>Nov-07</td>
<td>11.8%</td>
</tr>
<tr>
<td>Dec-07</td>
<td>12.9%</td>
</tr>
</tbody>
</table>

Source: Dr. Kevin Dhuyvetter, Department of Agricultural Economics, KSU
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### Table 1. Natural Gas and Anhydrous Ammonia (NH3) Prices

<table>
<thead>
<tr>
<th>Year</th>
<th>Natural gas /1 $/MMbtu</th>
<th>Year-to-year change percent</th>
<th>NH3 /2 $/ton</th>
<th>Year-to-year change percent</th>
<th>Natural gas /3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$3.89</td>
<td>-----</td>
<td>$223</td>
<td>-----</td>
<td>$2.82</td>
</tr>
<tr>
<td>2001</td>
<td>$3.85</td>
<td>($0.04)</td>
<td>$356</td>
<td>$133</td>
<td>59.7%</td>
</tr>
<tr>
<td>2002</td>
<td>$3.25</td>
<td>($0.60)</td>
<td>$232</td>
<td>($124)</td>
<td>-34.8%</td>
</tr>
<tr>
<td>2003</td>
<td>$5.40</td>
<td>$2.15</td>
<td>$320</td>
<td>$88</td>
<td>38.1%</td>
</tr>
<tr>
<td>2004</td>
<td>$5.81</td>
<td>$0.41</td>
<td>$358</td>
<td>$38</td>
<td>11.7%</td>
</tr>
<tr>
<td>2005</td>
<td>$8.09</td>
<td>$2.28</td>
<td>$391</td>
<td>$33</td>
<td>9.1%</td>
</tr>
<tr>
<td>2006</td>
<td>$6.48</td>
<td>($1.60)</td>
<td>$490</td>
<td>$99</td>
<td>25.5%</td>
</tr>
<tr>
<td>2007 (F)</td>
<td>$8.22</td>
<td>$1.73</td>
<td>$420</td>
<td>($70)</td>
<td>-14.2%</td>
</tr>
</tbody>
</table>

/1 Mar-Sep average of NYMEX futures  
/2 Oct-May average (Oct-Dec of previous year)  
/3 Natural gas prices that coincide with NH3 prices, i.e., Sep-Apr average (Sep-Dec of previous year)  
F = forecast

Source: Dr. Kevin Dhuyvetter, Department of Agricultural Economics, KSU
Table 2. Crude Oil and Off-road Diesel Fuel Prices

<table>
<thead>
<tr>
<th>Year</th>
<th>Crude oil /1</th>
<th>Year-to-year change percent</th>
<th>Diesel fuel /2</th>
<th>Year-to-year change percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>$30.70</td>
<td>-----</td>
<td>$1.09</td>
<td>-----</td>
</tr>
<tr>
<td>2001</td>
<td>$26.98</td>
<td>($3.72) -12.1%</td>
<td>$1.09</td>
<td>$0.01 0.6%</td>
</tr>
<tr>
<td>2002</td>
<td>$27.05</td>
<td>$0.07 0.3%</td>
<td>$0.94</td>
<td>($0.15) -14.1%</td>
</tr>
<tr>
<td>2003</td>
<td>$30.53</td>
<td>$3.49 12.9%</td>
<td>$1.05</td>
<td>$0.11 12.1%</td>
</tr>
<tr>
<td>2004</td>
<td>$41.85</td>
<td>$11.31 37.1%</td>
<td>$1.37</td>
<td>$0.32 30.0%</td>
</tr>
<tr>
<td>2005</td>
<td>$58.00</td>
<td>$16.15 38.6%</td>
<td>$2.04</td>
<td>$0.67 48.5%</td>
</tr>
<tr>
<td>2006</td>
<td>$68.07</td>
<td>$10.07 17.4%</td>
<td>$2.41</td>
<td>$0.38 18.6%</td>
</tr>
<tr>
<td>2007 (F)</td>
<td>$68.48</td>
<td>$0.41 0.6%</td>
<td>$2.29</td>
<td>($0.12) -5.2%</td>
</tr>
</tbody>
</table>

/1 Mar-Oct average of NYMEX futures
/2 Mar-Oct average
F = forecast

Source: Dr. Kevin Dhuyvetter, Department of Agricultural Economics, KSU
U.S. Ethanol Production

Source: Renewable Fuels Association & K-State Research & Extension
Ethanol Production Capacity

- 2006: 5.1 Billion Gallons Annually
- By the end of 2008: 8.9 Billion Gallons
- The Energy Policy Act of 2005 as a Floor – Not a Ceiling

- Cellulosic Ethanol on the way: 125 MGPY
  – ½ the Requirement for Cellulosic in the EPACT 2005
“Biofuels are real, and it’s also a way to address climate change.
“In 2006 and 2007 as well, we are seeing a Perfect Storm for Bio-Fuels.”

--Brent Erickson, Executive Vice President of BIO’s Industrial & Environmental Section
Source: CBOT
Source: CBOT
Technology

• Conversion of biofuels feedstock
  – The Growth of Corn
  – The Transition to Wheat
  – The Utilization of Cellulosic

• Marketability of “farmaceuticals”
Mid-Month Futures Based Price Forecasts
Kansas Slaughter Steers

Source: CME & K-State Research & Extension
Forecasts = 2/9/07 Futures Price + Basis Estimates
2006 Farm Real Estate Value by State

Dollars per Acre & Percent Change from 2005

US

Dollars/Acre 1,900
Percent change from 2005 +19.2

USDA-NASS; August 2006
Farmland Values

• Purchase Prices  

• Cash Rents  (generally)  

• Recent trends are pressuring cash rental rates up.  
  – How High?  
  – Availability?  

• If you could find the ground and lock it in, there is an opportunity to “start up”
Farm Income Across the Plains

• Bullish if expectations are for excess crops
• Bearish, in the near term, if net buyer for crops
• Long-Term Questions:
  – Feed v. Fuel
  – Productivity Levels
  – Market Implications
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www.agserve.com

www.agmanager.info

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