The New Price Plateau

Scott Irwin
Monthly Farm Price of Corn in Illinois, January 1947 - June 2011*

Price ($/bu.)

Month/Year

Source: NASS/USDA

*June: mid-month

PURDUE UNIVERSITY | Center for Commercial Agriculture
The New Era of Corn, Soybean, and Wheat Prices

Darrel Good and Scott Irwin

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MOBR 08-04

“Prices have changed so much for what we sell and buy that it is almost impossible to feel confident in the decisions you make.”

-- Agriculture Online, July 5, 2008
A New Era in Crop Prices?

In a 2008 report and a 2009 article we addressed the following basic question: Are higher crop prices here to stay? We argued that unfolding evidence suggested that corn, soybean, and wheat prices were indeed likely establishing a higher (nominal) average than previously experienced. Some disagree with this conclusion. We revisit the evidence here to see if the data continues to support our original conclusion.
Why A New Plateau?

• Biofuels demand is the main driver
  – Market component driven by price of crude oil
  – Policy component driven by mandates in US, Canada, EU, Brazil, and Argentina

• Decline in agricultural research and infrastructure investments in the previous two decades by both public and private sectors

• Emerging market economic growth and increased demand for improved diets
Monthly Farm Price of Corn in Illinois, January 1947 - June 2011*

Source: NASS/USDA

*June: mid-month
Monthly Farm Price of Corn in Illinois, January 1947 - June 2011 and Projected Future Average*

\[ 4.60 = (2.42) \times (2.42/1.28) \]

<table>
<thead>
<tr>
<th>Month/Year</th>
<th>Avg. (Jan-47 - Jan-54)</th>
<th>Avg. (Jan-61 - Jan-68)</th>
<th>Avg. (Jan-75 - Jan-82)</th>
<th>Avg. (Jan-89 - Jan-96)</th>
<th>Avg. (Jan-03 - Jan-10)</th>
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</thead>
<tbody>
<tr>
<td>Jan-47</td>
<td>$1.28</td>
<td>$2.42</td>
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<td>$2.42</td>
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<td>$2.42</td>
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</tbody>
</table>

Source: NASS/USDA

*June: mid-month
Monthly Farm Price of Corn in Illinois, January 1947 - June 2011 and Projected Future Range*

$4.60 = (2.42) \times (2.42/1.28)$

$6.70 \text{ (H)}$

$4.60 \text{ (A)}$

$3.00 \text{ (L)}$

Month/Year

Source: NASS/USDA

*H: High, A: Average, L: Low
Monthly Farm Price of Corn in Illinois, January 1947 - June 2011 and Projected Future Range*

\[ 4.60 = (2.42) \times (2.42/1.28) \]

Source: NASS/USDA

*H: High, A: Average, L: Low
Monthly Farm Price of Soybeans in Illinois, January 1947 - June 2011 and Projected Future Range*

$17.56 (H)

$10.58 (A)

$7.51 (L)

10.58 = (4.60)X(2.3)

Avg.=$6.15

Avg.=$2.63

Jan-47 Jan-54 Jan-61 Jan-68 Jan-75 Jan-82 Jan-89 Jan-96 Jan-03 Jan-10

Month/Year

Source: NASS/USDA

*H: High, A: Average, L: Low
Monthly Farm Price of Soybeans in Illinois, January 1947 - June 2011 and Projected Future Range*

10.58 = (4.60)X(2.3)

Price ($/bu.)

Source: NASS/USDA

*H: High, A: Average, L: Low
Monthly Farm Price of Wheat in Illinois, January 1947 - June 2011 and Projected Future Range*

\[ 5.80 = (4.60) \times (1.26) \]

*H: High, A: Average, L: Low

Source: NASS/USDA
Monthly Farm Price of Wheat in Illinois, January 1947 - March 2011 and Projected Future Range*

5.80 = (4.60)X(1.26)

Average monthly prices:
- Avg. = $1.77
- Avg. = $3.24
- Avg. = $5.53

$10.15 (H)
$5.80 (A)
$3.30 (L)

Source: NASS/USDA

*H: High, A: Average, L: Low
Real Monthly Farm Price of Corn in Illinois, January 1947 - June 2011* (June 2011=100)

Source: NASS/USDA  *June: mid-month
Monthly Farm Price of Hogs in Illinois, January 1947 - June 2011*

Source: NASS/USDA  
*June: mid-month
Monthly Farm Price of Steers and Heifers in Illinois, January 1960 - June 2011*

Price ($/cwt.)

Month/Year

Source: NASS/USDA

*June: mid-month
Monthly Farm Price of Milk in Illinois,
January 1960 - June 2011*

Avg.=$15.80

Source: NASS/USDA
*June: mid-month
Monthly Ratio of Farm Price of Hogs to Farm Price of Corn in Illinois, January 1947 - June 2011*

Source: NASS/USDA

*June: mid-month
Ratio of Monthly Farm Price of Steers and Heifers and Farm Price of Corn in Illinois, January 1960 - June 2011*

Average = 27.7

Source: NASS/USDA

*June: mid-month
Ratio of Monthly Farm Price of Milk to Farm Price of Corn in Illinois, January 1960 - June 2011

Source: NASS/USDA

*June: mid-month
<table>
<thead>
<tr>
<th>Previous Era Price Ratio with Corn*</th>
<th>Hogs</th>
<th>Cattle</th>
<th>Milk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Needed to Restore Ratio based on June 2011 Corn Price</td>
<td>$130/cwt.</td>
<td>$188/cwt.</td>
<td>$41/cwt.</td>
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</tbody>
</table>

*For both hogs and cattle, the previous era is January 1973 through September 2006. For milk, the previous period is January 1986 through September 2006.
Monthly Farm Price of Corn in Illinois, January 1947 - June 2011 and Projected Future Range*

Source: NASS/USDA
Projected Distribution of the Monthly Farm Price of Corn in Illinois during the New Era

- Frequency
- Price Interval

$4.17

$2.00 $2.75 $3.50 $4.25 $5.00 $5.75 $6.50 $7.25 $8.00 $8.75
Projected Distribution of the Monthly Farm Price of Corn in Illinois during the New Era

$4.17$ Price Interval
Projected Distribution of the Monthly Farm Price of Corn in Illinois during the New Era

- June 2011
- $4.17 Price Interval

- 16% of the price interval
- 12% of the price interval
- 14% of the price interval
- 8% of the price interval
- 10% of the price interval
- 18% of the price interval
Projected Distribution of the Monthly Farm Price of Soybeans in Illinois during the New Era

Frequency

$10.35 Price Interval
Projected Distribution of the Monthly Farm Price of Soybeans in Illinois during the New Era

$10.35$ Price Interval
Projected Distribution of the Monthly Farm Price of Soybeans in Illinois during the New Era

Frequency

$10.35$ Price Interval

June 2011

18%
Projected Distribution of the Monthly Farm Price of Wheat in Illinois during the New Era

$5.53$ Price Interval
Projected Distribution of the Monthly Farm Price of Wheat in Illinois during the New Era

<table>
<thead>
<tr>
<th>Price Interval</th>
<th>Frequency</th>
</tr>
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<tbody>
<tr>
<td>3.00</td>
<td>2%</td>
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<tr>
<td>4.00</td>
<td>4%</td>
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<tr>
<td>5.00</td>
<td>6%</td>
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<tr>
<td>6.00</td>
<td>12%</td>
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<tr>
<td>7.00</td>
<td>6%</td>
</tr>
<tr>
<td>8.00</td>
<td>2%</td>
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<tr>
<td>9.00</td>
<td>1%</td>
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$5.53$ Price Interval
Projected Distribution of the Monthly Farm Price of Wheat in Illinois during the New Era

$5.53$ Price Interval