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Crop Insurance Performance in Nebraska in 2005

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Crop Insurance Performance in Nebraska in 2005

Unfortunately grain prices, particularly corn, have sagged this fall under the weight of a good harvest across most of the country. With the grain mostly harvested, let’s look at what has happened with crop insurance this year and how it complemented marketing opportunities.

The 2005 crop year was the second year Revenue Assurance or RA was available in Nebraska. In 2004, 31 percent of the insured acres in Nebraska were under the RA program. In 2005 this increased to 42 percent, almost entirely as a result of reduced Crop Revenue Coverage (CRC) acres. Together, the two programs accounted for about 79 percent of the insured acres in the state in both years. The standard Actual Production History (APH) or Multiple Peril Crop Insurance (MPCI) yield coverage programs accounted for 21 percent of the insured acres in both years, and the Group Risk Plan (GRP) and Group Risk Income Plan (GRIP) together accounted for less than 1 percent of the insured acres. The most popular coverage level is 70 percent, accounting for 36 percent of the insured acres, followed by 75 percent coverage with 32 percent of the insured acres. These coverage level percentages have remained remarkably consistent from year to year since the higher premium subsidy schedule came into effect for the 2001 crop.

2005 Revenue Insurance Prices

The price setting period, the month of October, for the harvest price for CRC insurance has just been completed. The official harvest prices have not been announced by RMA as this goes to press, but here are the harvest prices according to my calculations, along
with the spring planting prices:

<table>
<thead>
<tr>
<th></th>
<th>Corn*</th>
<th>Milo</th>
<th>Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planting Price</strong></td>
<td>$2.32</td>
<td>$2.15</td>
<td>$5.53</td>
</tr>
<tr>
<td><strong>Harvest Price</strong></td>
<td>$2.02</td>
<td>$1.87</td>
<td>$5.74</td>
</tr>
</tbody>
</table>

* The harvest price for Revenue Assurance or RA is the November average of the DEC CBOT contract rather than the October average of the DEC contract used for CRC. For soybeans, the October average of the NOV contract is used for both CRC and RA.

**CRC Trigger Yields for 2005**

| Irrigated Corn Situation: | |
| APH | 180 bu per acre |
| Coverage Level | 70 percent |
| Revenue guarantee = 180 x 70% x $2.32 = $292.32 per ac |

Since the price went down this year from spring to harvest, the revenue guarantee remained at $292.32 on this example.

Will this lower harvest price trigger an indemnity payment this year? Or, what is the trigger yield for an indemnity payment?

\[
\text{Trigger yield} = \frac{\$292.32}{\$2.02} = 144.7 \text{ bushels per acre}
\]

In this scenario, with a 180 bu APH and 70 percent coverage, there will be an indemnity payment if the yield is less than 144.7 bu/ac.

Another approach to calculate the trigger yield is to use the ratio of the spring and harvest prices: $2.32/2.02 = 114.8 or 115 percent.

\[
\text{Trigger yield} = \text{price ratio} \times \text{APH} \times \text{coverage level},
\text{or} \quad 1.148 \times 180 \times 70 \text{ percent} = 144.7 \text{ bu/ac}
\]

This formula can be used to calculate a trigger yield for any situation by inserting the specific APH and coverage level. For example, if the coverage level was 75 percent rather than 70 percent, the trigger yield would be: $1.148 \times 180 \times .75 = 155 \text{ bu}.$

**Revenue Insurance and Marketing in 2005**

2005 has been a good year to demonstrate how revenue insurance programs, either CRC or RA, can be used to complement the marketing plan. Using the same example as above, the 70 percent coverage level is equivalent to 126 bushels per acre.

Assume 115 bushels per acre (64 percent of expected yield) was forward contracted in March for $2.25 per bushel (DEC futures price was $2.40-$2.45 in March and cash forward bids were about $2.25).

**Results for a Low Yield Situation**

Assume a low yield of 100 bu/ac occurred and a premium of $.05 per bushel over cash price of $1.40 is required to buy the short bushels.

\[
\begin{align*}
\text{Revenue from forward contract} & = 115 \times \$2.25 = \$258.75 \\
\text{Less:} & = 15 \times \$1.45 = 21.75 \\
\text{Net} & = \$237.00 \\
\text{Revenue guarantee from insurance} & = \$292.32 \quad \text{Indemnity} = 90.32 \\
\text{Calculated revenue} & = 100 \times \$2.02 = 202.00 \\
\text{LDP estimated payment} & = 100 \times \$0.45 = 45.00 \\
\text{Net} & = \$372.32
\end{align*}
\]

**Results for an Average Yield Situation**

Assume non-contracted bushels are sold at harvest.

\[
\begin{align*}
\text{Revenue from forward contract} & = 115 \times \$2.25 = \$258.75 \\
\text{Cash sales at harvest} & = 65 \times \$1.40 = 91.00 \\
\text{LDP estimated payment} & = 180 \times \$0.45 = 81.00 \\
\text{Total} & = \$430.75
\end{align*}
\]

Without forward pricing and selling at harvest, the revenue would be approximately 180 x $1.90 = $342.00 including the LDP.

**Summary**

1. The revenue insurance, CRC in the example shown, provided the foundation to take advantage of the $2.25 price in March.
2. The price ratio of 115 percent or 1.15 can be used to calculate the trigger yield for CRC policies this year.

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