PREVENTED PLANTING PAYMENTS VERSUS PLANTING SOYBEANS

Soybean planting has been delayed in many areas of the Midwest. Since final planting dates for corn have passed, farmers who have purchased the COMBO insurance policy are eligible to take prevented planting payments for corn. Soon all final planting dates for soybeans will have passed and all Midwestern farmers will be eligible for soybean prevented planting payments. In this post, returns from prevented planting payments are compared to planting soybeans. For corn, prevented planting payments almost always will be larger than expected returns from planting soybeans in late June. Prevented planting payments for soybeans are less than prevented planting payments for corn. Taking the prevented planting payments for soybeans will become more economically attractive if soybean plantings are further delayed.

The Current Situation

In most cases, planting soybeans will have higher expected returns than planting corn when the planting takes place in middle to late June. Therefore, the alternatives compared in this post are planting soybeans versus taking prevented planting payments.

A previous post here summarized the implications of taking corn prevented planting payments. Ramifications for taking soybean prevented planting payments are similar to those for corn. Some details include:

- Final planting dates across the Midwest range from June 10th in the upper Midwest and western Corn-belt to June 30th in southeastern Kansas and southwest Missouri (see Table 1).
- Once final planting dates have passed, farmers are eligible to take prevented planting payments on soybeans.
- Farmer can still plant soybeans. If they do, prevented planting payments will not be received and crop insurance guarantees will decrease 1 percent per day during the 25-day late planting period. After the late planting period is over, guarantees will be 60% of original guarantees.
- If prevented planting payments are taken, farmers cannot plant harvestable crops during the 25-day late planting period that begins on the final planting date.
- Farmers can plant a crop after the 25-day late planting period, but this will usually result in a 70% reduction in the prevented planting payment and the use of low yields in calculating future Actual Production History (APH) yields. In most cases, it will not be economical to plant another crop after the late planting period for soybeans.

Returns from taking prevented planting payments versus planting soybeans are examined for two cases. The first is when the farmer is eligible for a corn prevented planting payment. The second is when a soybean prevented planting payment is available. These situations will be examined for a specific farm situation described in the next section.

Farm Situation

The farm has purchased a COMBO crop insurance product (i.e., Yield Protection, Revenue Protection, and Revenue Protection with Harvest Price Exclusion) for both corn and soybeans at 80% coverage levels. The Trend Adjusted Actual Production History (TA-APH) yields are 170 bushels per acre for corn and 45 bushels per acre for soybeans. The standard prevented planting factor of .60 has been selected at crop insurance sign up.

Given the above crop insurance information, prevented planting payments for both corn and soybeans can be calculated. For corn, the prevented planting payments for corn is $461 per acre (170 bushel TA-APH yield x $5.65 projected price x 80% coverage level x .60 prevented payment factor). The prevented planting payment for soybeans is $278 per acre (see Table 1).
The above prevented planting payments do not consider costs associated with prevented planting. Most farmers will undertake weed control. Weed control costs used here are $15 per acre. In addition, crop insurance will have to be paid on acres in which prevented planting is taken. Crop insurance premiums are assumed to be $25 per acre for corn and $20 per acre for soybeans. Given these costs, the net prevented planting payment is $421 per acre for corn and $243 per acre for soybeans. Table 1 shows the calculation of net prevented planting payments.

The alternative to taking prevented planting payments is planting soybeans. Only costs that can be avoided by not planting soybeans are included in the analysis. Herein, direct costs of $160 per acre are used. Direct costs are included for fertilizer ($50 per acre), pesticides ($30 per acre), seed ($55 per acre), storage ($5 per acre), and crop insurance ($20 per acre). Machinery costs are included for field cultivating ($10 per acre), planting ($12 per acre), combining ($30 per acre), and trucking ($3). This gives a total of $55 per acre in machinery costs. Soybean costs then total $215 per acre ($160 direct costs + $55 machinery costs).
Corn Prevented Planting Payments versus Planting Soybeans

For those cases in which corn was originally going to be planted, farmers may be able to take prevented planting payments on corn. In these cases, the relevant comparison is between the return from taking a corn prevented planting payment and returns from planting soybeans.

For planting soybeans to have higher returns than prevented planting, soybean revenues must exceed the net prevented planting payment ($421 per acre, see above) plus soybean costs ($215 per acre, see above). In other words, soybean revenue must exceed $636 per acre ($421 prevented planting payment + $215 soybean costs). A number of yield and price combinations can result in revenue more than $636. Currently, harvest-time bids are at $12.70 per bushel for soybeans. At a $12.70 soybean price, soybean yields have to exceed 50 bushels per acre for planting soybeans to be more profitable than taking the soybean prevent planting payment (50 bushels per acre break-even equals $636 revenue / $12.70 soybean price). Lower soybean prices result in higher soybean yields to have higher returns than prevented planting.

While yields above 50 bushels per acre are possible, soybean yields lower than 50 bushels per acre are more likely. At this point in time, taking the prevented planting payment has higher returns than planting soybeans in most case. The returns in the above example change with different insurance coverages. Prevented planting is more favorable the higher the coverage level. Some farmers purchased higher prevented planting factors (.65 and .70) which will make prevented planting returns higher, thereby increasing the desirability of taking the prevented planting payment.

Soybean Prevented Planting Payments versus Planting Soybeans

In some cases, all corn acres have been planted, but soybean acres are not planted. After the final planting date, the relevant comparison is between the returns from taking a soybean prevented planting payment and returns from planting soybeans.

For planting soybeans to have higher returns than taking the prevented planting payment, soybean revenues must exceed the net prevented planting payment ($243 per acre, see above) plus soybean costs ($215 per acre, see above), for total revenue of $458 per acre ($243 prevented planting payment + $215 soybean costs). At a $12.70 soybean price, soybean yields would have to exceed 38 bushels per acre for planting soybeans to be more profitable than taking the soybean prevented planting payment.

Achieving 38 bushels per acre of soybeans may be possible, but lower yields are more likely. As planting is further delayed, expected yields decline, thereby increasing the desirability of taking the prevented planting payment.

### Table 1. Net Returns from Prevented Planting, Per Acre.

<table>
<thead>
<tr>
<th></th>
<th>Corn</th>
<th>Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA-APH yield</td>
<td>170</td>
<td>45</td>
</tr>
<tr>
<td>x Projected price</td>
<td>$5.65</td>
<td>$12.87</td>
</tr>
<tr>
<td>x coverage level</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>x Prevented planting factor</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Prevented Planting Payment</td>
<td>$461</td>
<td>$278</td>
</tr>
<tr>
<td>- weed control costs</td>
<td>$15</td>
<td>$15</td>
</tr>
<tr>
<td>- insurance payments</td>
<td>$25</td>
<td>$20</td>
</tr>
<tr>
<td>Net Prevented Planting Returns</td>
<td>$421</td>
<td>$243</td>
</tr>
</tbody>
</table>
Summary

The above example is for a particular situation. While the particulars vary across scenarios, the example illustrates the tradeoffs fairly common across a range of situations. Of course, farmers should look at their own case in particular. The prevented planting module in the Planting Decision Model will be useful in making these calculations. This spreadsheet can be downloaded from the FAST section of the farmdoc website. The direct link is here. Farmers need to consult with crop insurance agents on prevented planting. Crop insurance agents can aid in determining the number of acres on which prevented planting can be taken. There are also deadlines for signing up to take the prevented planting payment. Contacting a crop insurance agent sooner rather than later is advisable.

Submitted by: Gary Schnitkey, Department of Agricultural and Consumer Economics, University of Illinois