

# ACRE for Landowners

## Summary

- The higher price component in Average Crop Revenue Election (ACRE) revenue guarantee greatly improves income protection over Counter Cyclical Payment (CCP), even with a 25 percent limit on payment level and reductions in DP and Loan Rate.
- Yield variations alone may be sufficient to trigger ACRE payment, unlike CCP.
- The price must decline 10 percent before an ACRE payment could be made, all things being equal; however, the price would have to decline 44 percent before a CCP payment could be made.
- Favorable income protection may not be realized if individual yield has little correlation with state yield.



## Introduction

As producers consider whether to enroll in the Average Crop Revenue Election (ACRE) program for 2009, they must do so for the remainder of the 2008 farm bill and must include all eligible crops produced on the farm operation with the same farm number. A tenant operator must obtain the agreement of his landowner-lessor to enroll. This analysis considers the alternatives of ACRE and the traditional Counter Cyclical Payment (CCP) program and its effects on landowners.

Returns to landowners on leased land are determined by the net earnings of their land. Under a share rent lease, net returns are the share of crop sales and government payments less the crop expenses, insurance and real estate taxes as specified by the lease. Under a cash rent lease, landowner net returns are the cash rent less expenses for real estate taxes for the land and property he furnishes and insurance on that property.

ACRE differs from the CCP program; it is designed to fill variations in farm income. ACRE may provide more income protection than CCP by using a more recent two-year average of national average farm prices, a five-year Olympic average of state crop yields per planted acre and with ACRE payments made on a portion of planted acres, rather than on fixed base acres. In this analysis, which is described in more detail in the last section, the ACRE program is contrasted with the CCP program to examine the effect on landowner returns using an Iowa corn production example.

Using the Iowa corn example discussed later, the ACRE Iowa state benchmark revenue is \$701, based on a two-year average farm price of \$4.20 per bushel<sup>1</sup> and a state yield of 167 bushels per planted acre. The revenue guaranteed is 90 percent of the benchmark, \$631 and the

<sup>1</sup> Based on April 2009 WASDE average corn price for 2007 and average projected price for 2009.

maximum payment is limited to 25 percent of the guarantee, \$157 per planted acre. In contrast, the CCP payment is based on \$2.35 effective price and a payment yield, an average of 120 bushels, for a maximum payment of \$49 per base acre. A producer electing ACRE will receive a 20 percent direct payment (DP) reduction and 30 percent loan rate reduction.

The analysis compares landowner ACRE and CCP program returns for both share and cash rent agreements under a base 2009 Expected Payout per Planted Acre and three alternatives. Alternative 1 assumes a yield reduction of 15 percent, which Iowa has experienced or exceeded five times in 38 years from 1970 to 2008. Alternative 2 assumes a 45 percent reduction in price, a level that will trigger a CCP payment. Alternative 3 assumes a 57 percent reduction in price, a level that will trigger an LDP in addition to a CCP.





## Landowner Returns

The effect on landowner returns is shown in Table 1. A share rental agreement is assumed to be a 50 percent division of crop receipts and cash expenses with the landowner paying taxes and insurance on the leased property, estimated to be \$7.69 per acre in 2009<sup>2</sup>. There is a direct landowner transmission of the rise and fall of revenue through the share of cash receipts of the crop produced. Landowner returns are slightly better for the traditional program, where there is no reduction in direct payments in the base 2009 Expected Payout, but as revenues fall, albeit by increasing dramatic degrees of 15 percent, 45 percent and 57 percent, the ACRE program shows its advantage in supporting revenue to both tenant and landowner. No determination is made to illustrate at what incremental decline in income ACRE returns exceed CCP returns.

<sup>2</sup> Based on USDA/ERS production costs and returns estimates and cost-of-production forecasts for 2009 and 2010.

Cash rent landowner returns are very straightforward: the \$170 per acre rate<sup>3</sup>, less \$7.69 for taxes and insurance. The landowner receives a net return of \$162, regardless of the level of revenue earned by the tenant, who bears all the market and yield risk. The potential benefit of ACRE to the landowner may be seen in Net Returns for the Operator. Again, except for the base 2009 Expected Payout, operator ACRE net returns are superior to CCP net returns, by \$25, \$122 and \$17 for Alternatives 1, 2 and 3, respectively. This suggests that the operator would be less likely to seek a reduction, or seek only a smaller reduction, in the cash lease rate as prices decline from peak levels. Tenant operators might feel confident to bid somewhat higher rates with the comfort that ACRE might protect them as prices decline from peak levels.

Individual crop yields may vary independently from state yields crop, however, and may result in an inadequate ACRE payment when the producer has suffered a crop loss. State yields may also rise sufficiently to reduce the payment that a reduction in price would otherwise cause.

<sup>3</sup> Based on NASS surveys for 2008 and assumed to continue in 2009.

**Table 1: Operator Net Returns Share & Cash Rent, Traditional CCP Program vs. ACRE**

### Share Rent

|              | Cash Receipts | Gov't pmt |      | Cash Expenses | Net Returns |      |           |      |            |
|--------------|---------------|-----------|------|---------------|-------------|------|-----------|------|------------|
|              |               | CCP       | ACRE |               | Operator    |      | Landowner |      |            |
|              |               |           |      |               | CCP         | ACRE | CCP       | ACRE | Difference |
| <b>Base</b>  | 353           | 14        | 11   | 176           | 191         | 188  | 210       | 207  | -3         |
| <b>Alt 1</b> | 300           | 14        | 26   | 176           | 138         | 150  | 157       | 169  | 12         |
| <b>Alt 2</b> | 194           | 16        | 77   | 176           | 34          | 95   | 53        | 114  | 61         |
| <b>Alt 3</b> | 151           | 68        | 77   | 176           | 44          | 52   | 62        | 71   | 9          |

### Cash Rent

|              | Cash Rent | Cash Receipts | Gov't pmt |      | Cash Expenses | Net Returns |      |           |      |
|--------------|-----------|---------------|-----------|------|---------------|-------------|------|-----------|------|
|              |           |               | CCP       | ACRE |               | Operator    |      | Landowner |      |
|              |           |               |           |      |               | CCP         | ACRE | CCP       | ACRE |
| <b>Base</b>  | 170       | 706           | 28        | 22   | 325           | 238         | 233  | 162       | 162  |
| <b>Alt 1</b> | 170       | 600           | 28        | 51   | 325           | 133         | 156  | 162       | 162  |
| <b>Alt 2</b> | 170       | 388           | 32        | 154  | 325           | -75         | 47   | 162       | 162  |
| <b>Alt 3</b> | 170       | 303           | 136       | 154  | 325           | -56         | -39  | 162       | 162  |

NOTE: Table may not add because of rounding.

# Analysis: ACRE-Traditional Counter Cyclical Program Comparison

Factors other than lease arrangements also affect landowner net returns, such as soil productivity, commodity prices and government support programs, as well as the management skill of the tenant operator. This analysis examines the effect of the ACRE program on the net earnings of Iowa farmland planted to corn, relative to the traditional CCP program. Soil productivity, commodity market outlook and management skill are held constant to examine the effect of the selection of farm programs available in 2009 and of alternative yield and price outcomes. This analysis, shown in Table 2, assumes a familiarity with both ACRE and CCP programs and provides sufficient details for the analysis. Further, it is also assumed that farm yield and state yield have the same variations, that the individual farm has a qualifying loss (below the farm's benchmark revenue) and that base acres equal planted acres.

As stated in the Introduction, in this analysis, the revenue guarantee is 90 percent of the state benchmark revenue. If the 90 percent guarantee is applied to the \$4.20 per bushel price component, equal to \$3.78, a comparison can be made to the \$2.35 corn effective price, the level at which market price protection begins after subtracting the corn direct payment rate, \$0.28, from the corn target price, \$2.63. The ACRE guarantee is calculated every year, based on the recent data added by the previous crop year, but is limited to a 10 percent increase or decrease from the prior year. Consequently, the lowest the price component, multiplied, by the 90 percent guarantee level, could decline by the last year of the 2008 Farm Bill, 2012, is \$2.76, \$0.41 greater than the effective price for calculating the counter cyclical payment rate.

In the base **2009 Expected Payout per Planted Acre**, the revenue components are totaled. The direct payment is reduced 20 percent for the ACRE participant, \$6 per acre at 85 percent per base acre. Crop receipts per acre are the same, \$706, assuming a 168.1 bushel

yield per planted acre, the simple 2004-2008 average of planted yields, and a \$4.20 2009 season average market price. No ACRE, CCP or LDP payments are made. Total ACRE revenues net of cash production expenses are \$403 per acre, \$6 less than those using the CCP program.

In **Alternative 1**, a 15 percent reduction in both farm and state yield per planted acre, to 142.9 and 142 bushels, respectively, is assumed. Crop receipts per acre decline \$106 in both programs, to \$600; state revenue is \$31 below the guarantee resulting in a payment on 83.3 percent of planted acres, or \$29. The revenues net of cash production expenses under Alternative 1 is \$326 for ACRE participants compared with \$303 for CCP participants, who receive no CCP payment. The 15 percent yield loss is also not enough to trigger a crop insurance indemnity for all but the very highest levels of coverage.

In **Alternative 2**, an assumed 45 percent reduction in the season average corn price is considered; it results in a \$2.31 price, sufficient to trigger a CCP payment of \$0.04 per bushel, or \$4 per base acre. In contrast, the ACRE state revenue falls \$245 below the guarantee, but is limited to a maximum \$158 payment, which adds \$131 to revenue per acre when paid on 83.3 percent of planted acres. The resulting revenues net of cash production expenses are \$217 for ACRE participants vs. \$95 for CCP participants.

**Alternative 3** illustrates the effect of a 57 percent decline in price to \$1.80, a level where those who have not elected ACRE can expect to receive LDPs, here assumed to occur at an average of \$0.25 below the season average farm price. The decline in crop receipts to \$303 plus the maximum ACRE payment results in a \$131 revenue net of cash production expenses, a \$17 advantage over CCP participants, in spite of a maximum \$41 CCP and an average \$67 LDP per planted acre.



**Table 2: Iowa Corn: Traditional vs. ACRE**

|                                  | <b>Traditional</b>      | <b>ACRE</b>                                    | <b>Difference</b> |
|----------------------------------|-------------------------|--|-------------------|
| Program Status                   | Base                    | Optional                                       |                   |
| Program loss requirement         | None                    | Farm Revenue Loss                              |                   |
| Payment Basis                    | National Price          | State Revenue                                  |                   |
| Payment Acreage                  | 85% Base                | 83.3% Planted Acreage (85% 2012)               |                   |
| Direct Payment, \$/A             | 27.63                   | 22.11  | -5.53             |
| Maximum payment \$/Acre          | 48.80                   | 157.82   | 109.02            |
| <b>Payment Components</b>        |                         |  |                   |
| Price (Target) April '09*        | 2.63                    | 2-yr Moving Avg (4.20) x 90%=3.78              |                   |
| Yield                            | Farm CCP Pmt Yield/HA   | State 5-yr Olympic Avg Yield/Planted A = 166.1 |                   |
| Producer Protection for 2009     | Effective Price, \$/bu. | Revenue Guarantee, \$/Planted Acre             |                   |
|                                  | 2.35                    | 631.26   |                   |
| Cash production expenses, \$/A** | 325.20                  | 325.20   |                   |

| <b>2009 Expected Payout per Planted Acre</b>      |                    |             |                   |
|---|--------------------|-------------|-------------------|
|   | <b>Traditional</b> | <b>ACRE</b> | <b>Difference</b> |
| Price projection, May '09***                      | 4.20               | 4.20        |                   |
| Cash Receipts \$/A                                | 706.02             | 706.02      |                   |
| CCP/ACRE Payment, \$/A                            | 0.00               | 0.00        |                   |
| Total Gross Revenue                               | 733.65             | 728.13      | -5.53             |
| Revenue Net of Cash Expenses                      | 408.45             | 402.93      | -5.53             |
| <b>Alternative 1: Yield declines 15%, 142 bu.</b> |                    |             |                   |
| Yield declines 15%, 142 bu.                       |                    |             |                   |
| Cash Receipts \$/A                                | 600.12             | 600.12      |                   |
| CCP/ACRE Payment, \$/A                            | 0.00               | 29.21       | 29.21             |
| Total Gross Revenue                               | 627.75             | 651.44      | 23.69             |
| Revenue Net of Cash Expenses                      | 302.55             | 326.24      | 23.69             |
| <b>Alternative 2: Price declines 45%, \$2.31</b>  |                    |             |                   |
| Price declines 45%, \$2.31                        | 2.31               | 2.31        |                   |
| Cash Receipts \$/A                                | 388.31             | 388.31      |                   |
| CCP/ACRE Payment, \$/A                            | 4.15               | 131.46      | 127.31            |
| Total Gross Revenue                               | 420.09             | 541.88      | 121.79            |
| Revenue Net of Cash Expenses                      | 94.89              | 216.68      | 121.79            |
| <b>Alternative 3, Price declines 57%, \$1.80</b>  |                    |             |                   |
| Price declines 57%, \$1.80                        | 1.80               | 1.80        |                   |
| Cash Receipts \$/A                                | 302.58             | 302.58      |                   |
| CCP/ACRE Payment, \$/Pmt A                        | 41.48              | 131.46      | 89.98             |
| LDP   | 67.24              | 0.00        | -67.24            |
| Total Gross Revenue                               | 438.93             | 456.15      | 17.21             |
| Revenue Net of Cash Expenses                      | 113.73             | 130.95m     | 17.21             |

\*April 2009 WASDE, avg. price for 2007, projected avg. price for 2008

\*\*Cash Production costs based on ERS 2009 projections

\*\*\*Based on May 9 settle Dec 2010 Corn futures contract CBOT