

Department of Agricultural Economics

The ACRE Program for Corn and Soybeans

Agricultural Economics Extension Series—2009-10

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July 31, 2009

Sign-up for the 2008 Farm Bill was extended from June 1, 2009 to August 14, 2009. The additional two and half months to decide whether to enroll in the new Average Crop Revenue Election (ACRE) program or stick with the Counter-cyclical program has turned into a very good opportunity to re-analyze the ACRE program. Since the middle of June we have watched corn and soybean futures fall dramatically. December corn futures have fallen from around \$4.60 to about \$3.60 and November soybean futures have fallen from around \$11.00 to about \$9.60. Additionally, yield prospects have increased due to favorable weather conditions. With this information in hand, will signing up for the ACRE program pay? The answer depends upon your idea of what will happen to both national prices from the beginning of the corn and soybean crop year (Sep 1, 2009) to the beginning of the next crop year (September 1, 2010) and yields to the currently grown crop. The following discussion will analyze potential ACRE payments based upon the information we know now keeping in mind that six weeks ago ACRE didn't look as favorable as it does now and who knows where we will be in another six weeks. For a discussion and review of how the ACRE program works I recommend going to the University of Kentucky, Agricultural Economics Grains Extension website found at: <http://www.ca.uky.edu/agecon/index.php?p=110> and reading the article titled "Average Crop Revenue Election (ACRE) Program with an Example"

With potentially good yields at both the farm and state level coupled with a decreasing national prices; the possibility of an ACRE payment for corn, soybeans, and wheat has increased. However, many things can still happen in the upcoming crop year that will either increase or take away any potential ACRE payments.

Signing up for ACRE is a two step process. First, you must elect the ACRE program then you must enroll. If you are considering enrolling in ACRE I recommend electing ACRE immediately and wait to sign up after the USDA releases their first corn and soybean yield estimates on Aug 12, 2009. This will be valuable information of where prices may be headed over the next crop year.

To assist in making the decision of whether or not to enroll in the optional ACRE program I will run through some different scenarios using current yield and price information using the University of Kentucky's ACRE calculator. The University of Kentucky ACRE calculator can be found at: <http://www.ca.uky.edu/agecon/index.php?p=110>. Preliminary ACRE program guarantee for corn in Kentucky is \$512.95/Acre and \$361.8/ Acre for soybeans. These values can be found in table 7, State ACRE Guarantee's in the UK ACRE calculator. ACRE is using a national price of \$4.13 for corn and \$10.05 for soybeans, table 5. ACRE yields for Kentucky are 138 for corn and 40 for soybeans, table 6. To get the state guarantee don't forget to multiply revenue (national price * Kentucky average yield) by .9.

The following scenarios highlight how the ACRE program may pay for corn and soybeans given current information. We will use scenario 1 as the base line using good yields in Kentucky at both the farm and state level and national prices based upon futures contracts. Subsequent scenarios show how ACRE payments adjust with different yields and/or national prices.

Scenario 1. With potentially good yields in Kentucky I use a base line of 10 percent above average yields for Kentucky and a hypothetical farm. Kentucky average corn yield for 2009/2010 goes from an average of 138 to 151.8 and the farm yield goes from 145.83 to 159.5. For national price I am going to use the average of all futures contracts between September 2009 and September 2010 less .25 cents for corn basis which comes out to \$3.35 on July 31, 2009. This combination of yields and prices results in an ACRE payment of \$4.67 per base acre. Following the same logic for soybeans average Kentucky yield would be 44.0, farm yield would be 49.67 and price, using a .35 under basis, would be \$9.55. This combination of yields and prices results in no soybean ACRE payment. This scenario highlights that with good yields a large drop in national prices from guarantee levels can trigger ACRE payments for corn but the price drop in soybeans was not enough to trigger an ACRE payment.

Scenario 2. Reduce 2009/2010 marketing year national price by 3 percent from scenario 1 while keeping yields the same. The new corn and soybean national prices are \$3.25 and \$8.92 per bushel, respectively. Potential ACRE payments would be \$20.71 per acre for corn and again no soybean payment. This scenario highlights how ACRE payments increase for corn when national prices drop further from guaranteed levels. However, the drop in national prices was not enough to trigger a soybean ACRE payment.

Scenario 3. Increase farm yields by 5 percent more than in scenario 1 while keeping Kentucky state yields and national prices the same from scenario 1. In this scenario farm yields increase by 15 percent over average while the state experiences a 10 percent yield increase. Since only farm yields change the state ACRE payment would be identical to scenario 1. Does the farm qualify for the potential ACRE payment when farm yields are 15 percent higher than average? For corn, yes it still does. The corn ACRE payment is \$4.67, the same amount in scenario 1. This scenario highlights how corn ACRE payments are not affected when farm yields are fifteen percent higher than average. Increasing corn farm level yields by another 10 percent to 20 percent above average disqualifies the farm from the ACRE payment. Again, no soybean ACRE payments were available at either the state or farm level.

Scenario 4. Yields stay the same as in scenario 1 but national price drops to where there is a one cent counter-cyclical payment. For a one cent counter-cyclical payment national price would have to drop one penny below \$2.35 (\$2.63-\$0.28) for corn and 5.36 (\$5.8-\$0.44) for soybeans. ACRE payments would be \$135.52 per base acre for corn and \$101.68 per base acre for soybeans. These ACRE payments represent the maximum a producer can receive given their farm productivity index. Maximum payments were hit well before counter-cyclical trigger prices. This scenario highlights the benefits of guaranteeing revenue based upon recent price and yield information versus fixed prices found in the counter-cyclical program.

Scenario 5. Yields stay the same in scenario 1 but national price rises 10 percent above guarantees. With good yields and prices at both farm and state levels no ACRE payment exists for either corn or soybeans. This scenario highlights how above average revenue at the state and farm level does not trigger an ACRE payment.

Table 1, Potential Corn ACRE Payoffs Under Different Scenarios.

	Scenario 1 (Base Line)	Scenario2	Scenario 3	Scenario 4	Scenario 5
Kentucky average yields	10 percent greater than average	Same as Scenario 1	Same as Scenario 1	Same as Scenario 1	Same as Scenario 1
National Price	Average of deferred Futures contracts	97 percent of price in Scenario 1	Same as Scenario 1	One penny counter-cyclical payment	10 percent higher than scenario 1
Farm average yields	10 percent greater than average	Same as Scenario 1	5 percent more than scenario 1	Same as Scenario 1	Same as Scenario 1
Is there an ACRE payment at the state level?	Yes	Yes	Yes	Yes	No
Has the farm qualified for an ACRE payment?	Yes	Yes	Yes	Yes	No
Predicted ACRE payment, \$ per acre	\$4.67	\$20.71	\$20.71	\$135.52	\$0.00

Table 2, Potential Soybean ACRE Payoffs Under Different Scenarios.

	Scenario 1 (Base Line)	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Kentucky average yields	10 percent greater than average	Same as Scenario 1	Same as Scenario 1	Same as Scenario 1	Same as Scenario 1
National Price	Average of deferred Futures contracts	97 percent of price in Scenario 1	Same as Scenario 1	One penny counter-cyclical payment	10 percent higher than scenario 1
Farm average yields	10 percent greater than average	Same as Scenario 1	5 percent more than scenario 1	Same as Scenario 1	Same as Scenario 1
Is there an ACRE payment at the state level?	No	No	No	Yes	No
Has the farm qualified for an ACRE payment?	No	No	No	Yes	No
ACRE payment, \$ per acre	\$0.00	\$0.00	\$0.00	\$101.68	\$0.00

Wheat harvest has ended and FSA has released the final Kentucky revenue guarantee, coming in at \$381.29 per acre (63.9bu/Acre * \$6.63/bu *.9). To determine potential per acre ACRE payments enter expected 2009/2010 national prices, Kentucky average yields and your own farm yields into the UK ACRE calculator. The chances of a wheat ACRE payment are high given below average yields in Kentucky combined with the recent decline in wheat price.

Summary. Using five different scenarios and current yield forecasts and price information we can predict potential ACRE payments for corn (table 1) and soybeans (table 2). An ACRE payment was paid in four out of the five corn scenarios and only one soybean scenario. If prices continue to drop from current levels chances of a corn and/or soybean ACRE payment increases. Using a 10 percent better than average Kentucky state corn yield, national average corn prices needs to drop below \$3.35 for a good chance of an ACRE payment in 2009/2010. For soybeans, using a 10 percent better than average Kentucky state yield, the national average soybean price needs to drop below \$8.20 for a good chance of an ACRE payment in 2009/2010. However, as Kentucky corn and soybean yield prospects increase, national prices will have to drop further from \$3.35 for corn and \$8.20 for soybeans to trigger ACRE payments. Results suggest there is a better chance of a corn ACRE payment than a soybean ACRE payment given current information for 2009/2010.

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