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Making an ACRE Decision for 2009

Bradley Lubben
University of Nebraska-Lincoln

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CORNHUSKER ECONOMICS

University of Nebraska–Lincoln Extension

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Institute of Agriculture & Natural Resources
Department of Agricultural Economics
http://www.agecon.unl.edu/Cornhuskereconomics.html

Making an ACRE Decision for 2009

Market Report	Yr Ago	4 Wks Ago	7/24/0
Livestock and Products, Weekly Average			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight	$95.21	$80.92	$83.48
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.	126.76	117.00	*
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	116.13	101.60	104.65
Choice Boxed Beef, 600-750 lb. Carcass	163.11	139.71	141.45
Western Corn Belt Base Hog Price Carcass, Negotiated	80.00	57.28	57.51
Feeder Pigs, National Direct 50 lbs, FOB	46.00	35.27	29.03
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean	84.81	54.85	65.59
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct	111.75	106.00	103.25
National Carcass Lamb Cutout, FOB	285.72	261.28	256.79
Crops, Daily Spot Prices			
Wheat, No. 1, H.W. Imperial, bu.	7.34	5.10	4.49
Corn, No. 2, Yellow Omaha, bu.	5.33	3.62	2.96
Soybeans, No. 1, Yellow Omaha, bu.	13.80	11.76	10.13
Grain Sorghum, No. 2, Yellow Dorchester, cwt.	8.64	5.86	5.02
Oats, No. 2, Heavy Minneapolis, MN , bu.	*	2.12	2.07
Feed			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.	190.00	*	*
Alfalfa, Large Rounds, Good Platte Valley, ton.	77.50	*	*
Grass Hay, Large Rounds, Premium Nebraska, ton.	85.00	*	*
Dried Distillers Grains, 10% Moisture, Nebraska Average.	176.00	117.50	80.00
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.	62.75	44.75	37.00

***No Market**

The initial sign-up period for 2009 farm commodity programs and the choice between the new ACRE (Average Crop Revenue Election) program and the existing DCP (Direct and Counter-Cyclical Payment) program is quickly winding down. But as the current August 14 deadline approaches, producers know more and more about the potential safety net provided under the ACRE program, and have a better opportunity to analyze the economics of choosing ACRE versus the DCP program before visiting their USDA Farm Service Agency (FSA) office.

The first piece of information impacting the economics of the ACRE program is the yield. USDA published the historical yield data that makes up the five-year Olympic average yield for each crop in March (shown in second column of Table 1 on next page). Since then, the 2009 wheat harvest has come and gone and Nebraska producers know the USDA estimated wheat yield is 48 bushels per harvested acre. And, just before the August 14 deadline arrives, USDA will publish its first objective yield estimates of the major 2009 fall crops as well, providing insight into the potential for ACRE payments for the 2009 crop year.

The second part of the ACRE guarantee is the marketing year price. The two-year average price that makes up the guarantee for 2009 is based on the 2007 and 2008 crop's marketing years (shown in third column of Table 1). For wheat, the 2008 marketing year finished in May 2009, and the final average price for the year was established to allow calculation of the two-year average at $6.63 per bushel. For the major fall crops, the marketing year finishes at the end of August. As a result, the two-year average price is, for now, just an estimate based on where the 2008 crop year price is expected to finish. Although, with just a month left the estimate is very confident, with the two-year average for corn pegged at $4.13, soybeans at $10.05 and grain sorghum at $3.64 per bushel.

Multiplying the five-year Olympic average yield times the two-year average price times 90 percent, gives the ACRE state guarantee. The figures in the last column of Table 1 provide the calculated guarantee for the major crops in Nebraska and are con-

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Table 1. ACRE State Guarantees for Nebraska for 2009

Crop	5-Year Olympic Average Yield (2004-2008)	2-Year Average Price (2007/08 - 2008/09)	ACRE State Guarantee (Yield * Price * 90%)
Corn-Irrigated	185	$4.13*	$686.81
Corn-Non-Irrigated	121	$4.13*	$449.21
Soybeans-Irrigated	56.5	$10.05*	$511.04
Soybeans-Non-Irrigated	41	$10.05*	$370.85
Sorghum	85	$3.64*	$278.46
Wheat	39	$6.63**	$232.71

* Average price estimated based on current USDA projections for 2008 crop marketing year average price (marketing year runs September 2008-August 2009 for corn, soybeans, and sorghum).
** Average price established based on final determination of 2008 crop marketing year average price (marketing year runs June 2008-May 2009 for wheat).

firmed for wheat, but are estimated for fall crops, contingent on the final price determination.

As producers have been analyzing the choice between ACRE and DCP this summer, the first question has been one of whether ACRE is expected to pay more or less than DCP over the life of the farm bill. What will government payments be under the existing DCP program from potential Counter-Cyclical Payments, Direct Payments and Marketing Loan Program benefits? And, what will government payments be under the new ACRE program, including ACRE payments, Direct Payments at a 20 percent-reduced rate, and Marketing Loan Benefits based on a 30 percent-reduced loan rate? The decision largely comes down to expectations and demands that the producer make some prediction about yields and prices over the 2009-2012 period of the current farm program.

While the decision is a complex one for the next four years, it actually can be reduced for now to a decision of whether ACRE or DCP is best for 2009. If ACRE is best for 2009 and for the life of the farm program through 2012, then the choice for producers is ACRE. But, if DCP is best for 2009, then the choice is DCP for now and the decision between ACRE and DCP can be deferred to next Spring. In choosing between DCP and ACRE for 2009, we have the advantage of improved confidence in our analysis of potential payments, with yield and price expectations based on current growing conditions and market signals (and in the case of wheat, harvest-time yield estimates).

Figures 1 through 6 provide simple graphs of yield and price combinations that would trigger ACRE payments in Nebraska based on the projected guarantees from Table 1. In looking at the graphs, plugging in yield information or expectations at the state level produces the price level necessary to trigger an ACRE payment. Given that the benefits from ACRE below that price level can quickly grow much higher than the "costs" of choosing ACRE (in terms of the 20 percent Direct Payment penalty), the graphs provide a fairly simple method to illustrate the impact of price and yield expectations on the preference for ACRE or DCP.

For irrigated corn (Figure 1), achieving a 2009 yield equal to the five-year Olympic average state yield of 185 bushels/acre would imply a $3.71 marketing year average price/bushel to trigger ACRE payments. A 30-year trend analysis of Nebraska yield data from NASS (USDA National Agricultural Statistics Service) would imply a yield for 2009 of 186.4 bushels/acre and result in an ACRE trigger price of $3.68/bushel. With generally favorable growing conditions to date in Nebraska, many are expecting above average yields, although irrigated corn yields in Nebraska have not tended to vary substantially from one year to the next. In fact, over the past 30 years, trend-adjusted irrigated corn yields in Nebraska have exceeded the equivalent of 190 bushels/acre only five times. If one analyzes 190 bushels/acre as a potential irrigated corn yield this year, the ACRE guarantee would kick in at $3.61.

Current USDA projections as of early July put the 2009 crop marketing year average price forecast around $3.75, meaning the ACRE guarantee is just out of the money (in option terms) at average or above-average yields. But, many who are predicting above-average yields are also concerned that the current USDA price estimate for the 2009 crop is too high. The futures market has responded accordingly and a futures-based price forecasting model developed at USDA (available at *www.ers.usda.gov/Data/PriceForecast/*) implies a marketing year average price in the low $3 range at present, meaning ACRE participants could be in line for substantial payments this year).

Non-irrigated corn is in a similar situation, although the yield variability is much greater. In Figure 2, the five-year Olympic average state yield of 121 bushels/acre in Nebraska would imply an ACRE trigger price of $3.71/bushel. The 30-year trend yield is actually lower at 116 bushels/acre, resulting in a $3.87 ACRE trigger price, already in the money at the current USDA price forecast. As with irrigated corn, current yield expectations may be well above average. Non-irrigated corn in Nebraska has exceeded 135 bushels/acre in trend-adjusted terms six times in the last 30 years. A 135 bushel/acre estimate would imply a $3.33 ACRE trigger price, substantially below current USDA forecasts, but still above current futures-based price projections. As a result, non-irrigated corn producers in Nebraska might also be in line for ACRE payments this year, unless yields exceed even current expectations.

For soybeans (Figures 3 and 4), the situation is similar to corn. If 2009 state yields in Nebraska are equal to the five-year Olympic average of 56.5 bushels/acre in irrigated production or 41 bushels/acre in non-irrigated production, ACRE payments would trigger at a price of $9.05/bushel. Trend yield forecasts for

2009 of 57.2 bushels/acre irrigated and 40.7 bushels/acre non-irrigated would result in ACRE trigger prices of $8.93/bushel and $9.11/bushel, respectively. In all cases, the implied ACRE trigger prices are below the current USDA projection for the 2009 crop of $9.30/bushel, but are above current futures-based price projections in the mid- to upper-$8 range. Only if yields exceed average expectations, do expected ACRE payments disappear. A 60-bushel irrigated yield (achieved three times in 30 years in trend-adjusted terms), would imply an ACRE trigger price of $8.52, just below current futures-based price expectations. A 45-bushel non-irrigated yield (achieved five times in 30 years in trend-adjusted terms) would imply an ACRE trigger price of $8.24, farther below current futures-based price expectations.

For sorghum (Figure 5), the situation is similar, but less certain. State yields at the five-year Olympic average of 85 bushels/acre would give a $3.28 ACRE trigger price, while the trend yield projection is slightly lower at 82.9 bushels/acre, resulting in an ACRE price trigger of $3.36. Similar to corn, if current yield expectations come in above average, the ACRE trigger price will fall. A yield of 100 bushels/acre or better in trend-adjusted terms has occurred just five times in the past 30 years. If repeated again in 2009, the ACRE trigger price would fall to $2.78. Whether the price will meet this trigger is also a challenge. Using the futures-based price forecast for corn in the low-three dollar range, and a historical sorghum-corn price ratio of about 0.9, the current price expectation for the 2009 crop would be very near the ACRE trigger price. But, the sorghum-corn price ratio has been less predictable over the past ten years, making this analysis less confident as well.

Finally, wheat (Figure 6) is in a different situation than the three major fall crops in Nebraska. We already know the 2009 yield has come in far above average. While the five-year Olympic average yield on which the 2009 ACRE guarantee was calculated was 39 bushels/acre, NASS is currently projecting a Nebraska yield of 48 bushels/harvested acre, which would tie a record set in 1999. For purposes of the ACRE program, the number will be adjusted downward slightly when FSA adjustes the yield per harvested acre into the yield per planted acre (including planted acres that failed and were not harvested), but it will likely still be close at about 47 bushels/acre or better, based on historical adjustments. At 48 bushels/acre, the ACRE trigger price is $4.85/bushel; at 47 bushels/acre, it is $4.95. In both cases, the trigger point is substantially below the current USDA forecast for the 2009 crop marketing year of $5.30/bushel, implying no ACRE payments for wheat unless the price drops substantially for the marketing year. Historically, nearly half the crop is marketed within the first three months of the marketing year (June-August), and at current price levels it would take a substantial price drop to pull the marketing year average down to ACRE trigger levels.

For producers, this analysis of price and yield trigger points for ACRE payments should help clarify the complex decision between ACRE and DCP for 2009. Corn, soybean and sorghum price expectations have fallen to the point where ACRE payments may be expected in 2009, unless yields far exceed average projections. Wheat prices have fallen as well, but a state wheat yield in 2009 that tied a record and exceeds the average by more than 20 percent means a revenue forecast that beats the ACRE guarantee, unless prices fall much further. For a farm (each FSA farm number individually) with all wheat or predominantly wheat, the decision between ACRE and DCP looks very simple in 2009, as an expected ACRE payment of $0 will not cover the 20 percent penalty in the Direct Payment. For farms with predominantly fall crops, the chances of an ACRE payment look much bigger and lend more favor to choosing ACRE. Remember that once chosen on a farm, the producer must stick with ACRE on that farm through 2012, so the analysis to support an ACRE decision must consider not just the benefits and costs in 2009, but the potential benefits from 2009-2012, and the costs of giving up 20 percent of the Direct Payment for all four years from 2009-2012.

Finally, there are some additional caveats to the ACRE analysis that cannot be overlooked in the simplified analysis above. First, to receive an ACRE payment the farm must trigger a revenue loss below its benchmark, in addition to the state having a revenue loss below the guarantee discussed above. It appears the likelihood that a farm will not trigger when the state does may be very small. To start, the farm's benchmark is based on 100 percent of yield times price, instead of 90 percent. Then, the farm benchmark adds in the farmer-paid crop insurance premium. For those with coverage, that adds approximately two to five percent of the expected crop revenue to the benchmark. Thus, a farm would need to have yields that are an additional ten to fifteen percent above the relative yield expectations at the state level to not trigger ACRE payments when the state triggers ACRE payments. For example, if the state is at average yields and ACRE payments are triggered because of a ten percent price drop, then the farm would need to have yields about ten to fifteen percent above the farm average to not trigger ACRE payments. If the state has ten percent above average yields and ACRE payments trigger because prices have dropped around 20 percent, then the farm would need to have yields that are approximately twenty to twenty-five percent above average to not trigger payments. Of course, it is also possible that the farm has a revenue loss when the state does not, and there are no ACRE payments to help offset the lost revenue. This simply implies that ACRE is not a replacement for sound crop insurance and risk management decisions that help to address farm-level price, yield and revenue risk.

A second caveat to note is that the payment limit under ACRE could be much more constraining than the payment limit has been under the existing DCP. Under DCP, the payment limits have been $40,000 for Direct Payments and $65,000 for Counter-Cyclical Payments per person. Under ACRE, the payment limit for Direct Payments is $40,000 minus the amount of Direct Payments given up to choose ACRE (20 percent of actual Direct Payments, or effectively $32,000 at the limit). This amount is then added to the $65,000 limit on ACRE payments (up to $73,000 if Direct Payments were at the limit). But the potential ACRE payments could far exceed $100 per acre if

revenue calculations were to drop substantially, meaning ACRE payments could be capped at a much smaller farm size than Counter-Cyclical Payments would be. This doesn't change the economics of ACRE versus DCP as the total cap on payments effectively ends up the same under both, and ACRE payments grow large enough to reach the cap long before DCP payments would, but in the extreme case that prices fall far enough (well below marketing loan rates) the caps and the impact on loan rates under ACRE could be significant.

Whether producers are analyzing this complicated decision between ACRE and DCP in 2009, or choose DCP now and re-examine the ACRE vs. DCP decision in 2010, they will want to look at the information and use the decision analysis tools available from UNL or USDA. The UNL Farm Bill website at *farmbill.unl.edu* provides an easy link to several publications, presentations, resources and decision tools that will help with the complex farm program decisions. The USDA-FSA website at *www.fsa.usda.gov* provides specific information and publications regarding ACRE, DCP, and other programs, including details on yields and prices used in the program calculations and information on proving or substituting yield information for the farm benchmark. Look at both for further information and insight as the sign-up and implementation process continues.

Bradley D. Lubben, (402) 472-2235
Assistant Professor and Extension Public Policy Specialist
Department of Agricultural Economics
University of Nebraska-Lincoln
blubben2@unl.edu

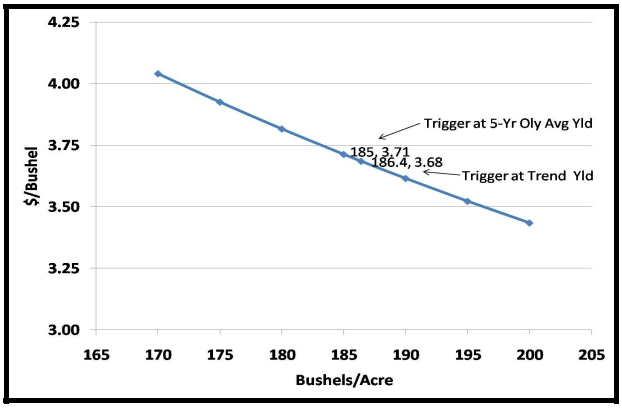

Figure 1. 2009 Nebraska ACRE Trigger Points for Irrigated Corn

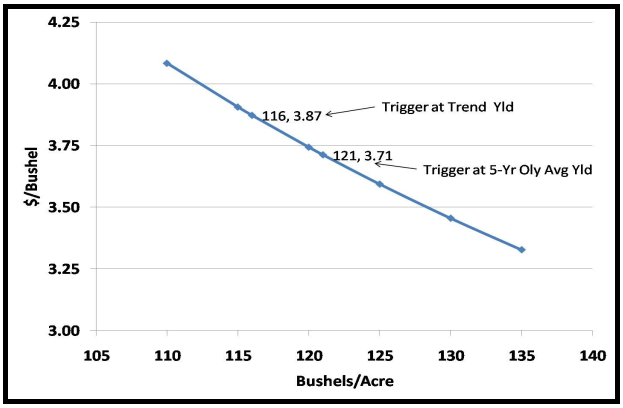

Figure 2. 2009 Nebraska ACRE Trigger Points for Non-Irrigated Corn

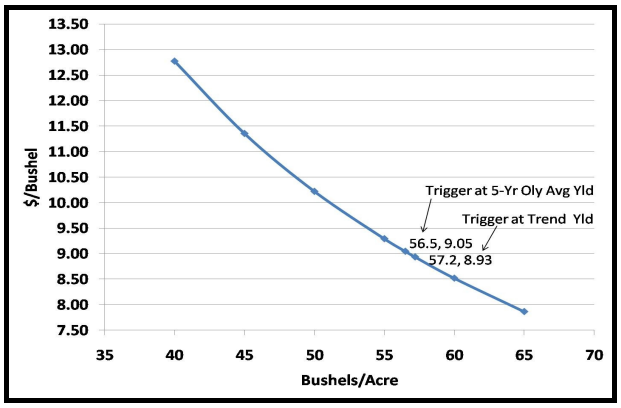

Figure 3. 2009 Nebraska ACRE Trigger Points for Irrigated Soybeans

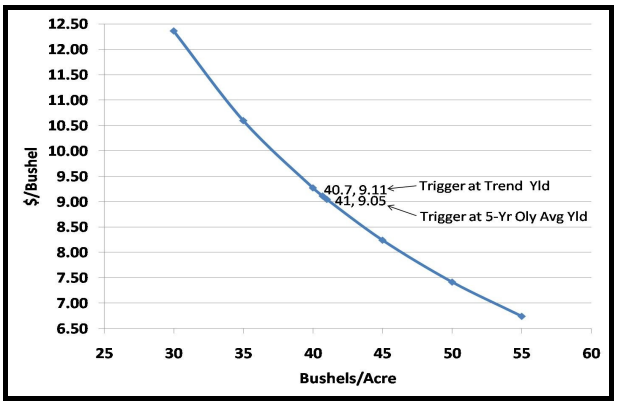

Figure 4. 2009 Nebraska ACRE Trigger Points for Non-Irrigated Soybeans

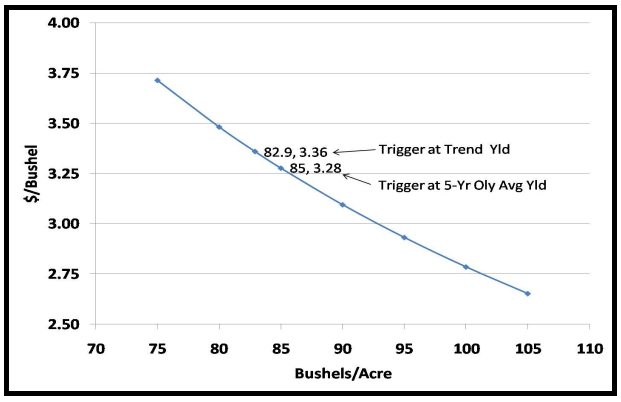

Figure 5. 2009 Nebraska ACRE Trigger Points for Sorghum

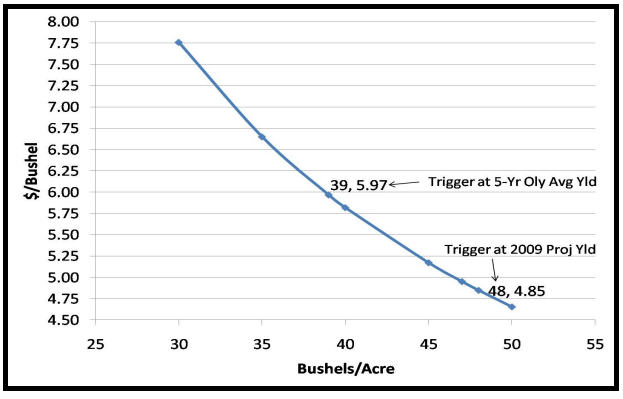

Figure 6. 2009 Nebraska ACRE Trigger Points for Wheat