Average Crop Revenue Election (ACRE) Program

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A new, optional program in the 2008 Farm Bill is the Average Crop Revenue Election (ACRE) program. This program is a revenue counter-cyclical program that is designed to provide support to producers when crop revenue falls below the established revenue guarantee. Established as a program to replace the price counter-cyclical program, which only provides support when prices fall, ACRE is a new concept for commodity programs that offers the opportunity to provide support when yields are reduced as well. Sign-up for ACRE will begin with the 2009 crops and will be offered each year through 2012. However, producers who choose to enroll in ACRE must stay in the program for the remainder of the farm bill. In addition, if a producer chooses to enroll in ACRE, he must enroll all crops on that farm, even though payments will be based on individual crops.

ACRE Mechanics

Although the overall mechanics of ACRE are more involved, it is basically designed as a state-level revenue counter-cyclical program that makes payments when actual state revenue is less than the state revenue guarantee. Payments will equal the difference between the state revenue guarantee and actual state revenue, but an individual farm cannot collect payments unless the actual farm revenue falls below the producer's benchmark farm revenue. State and farm level ACRE formulas are shown below.

(1) *Benchmark State Yield = 5-Year Olympic Average State Yield per Planted Acre*[1]

(2) *Benchmark Price = 2-Year National Average Market Year Price*

(3) *State Revenue Guarantee = (90% * Benchmark State Yield * Benchmark Price)*

(4) *Actual State Revenue = Actual State Yield per Planted Acre * Natl. Avg. Price*

(5) *Benchmark Farm Yield = 5-Year Olympic Average Farm Yield per Planted Acre*

(6) *Benchmark Farm Revenue = (Benchmark Farm Yield * Benchmark Price) + Crop Insurance Premiums Paid*

(7) *Actual Farm Revenue = Actual Farm Yield per Planted Acre * Natl. Avg. Price*

(8) *ACRE Payment = The lesser of (State Revenue Guarantee – Actual State Revenue) or (25% * State Revenue Guarantee) * (Benchmark Farm Yield/Benchmark State Yield)*

[1] ACRE yields will equal state production divided by NASS harvested acres plus FSA failed acres and will be used in lieu of NASS planted acres.

In calculating the *Benchmark State Yield*, the 5-year Olympic average yield would equal the average National Agricultural Statistics Service (NASS) yield per planted acre (see Footnote 1) for the most recent 5 crop years, excluding the highest and lowest yields. Thus, for the 2009 crop, the *Benchmark State Yield* would be based on the 2004-2008 crop years.

According to the language of the 2008 Farm Bill, the *Benchmark Price* is calculated as the "simple average of the national average market price received by producers of the covered commodity or peanuts for the most recent 2 crop years, as determined by the Secretary." Thus, for the 2009 crop, the most recent 2 crop years would be 2007 and 2008.

The legislation provides many other guidelines to dictate how ACRE payments will be calculated on an annual basis. For instance, the state revenue guarantee cannot increase or decrease more than 10% from one year to the next. This feature will protect producers if commodity prices would decline rapidly, as the revenue guarantees would not fall as fast as the crop prices. However, in years when crop prices increase rapidly, revenue guarantees will lag behind market prices.

Another important feature of ACRE is that payments will be based on planted acres, not historical base acres—unless planted acres are greater than base acres. If total planted acres on a farm are greater than total base acres, ACRE payments will be limited to base acres, and the producer will have the option to choose which planted acres to enroll in ACRE. Like direct payments, ACRE payments will be paid on 83.3% of total base acres for 2009-2011 and 85% of total base acres in 2012.

Although ACRE offers the opportunity to provide support to producers beyond when prices fall, it is not without cost. In addition to replacing the price counter-cyclical program, another provision of ACRE would require producers who enroll in the program to give up 20% of their direct payment and reduce marketing loan rates by 30%. Therefore, producers will have to determine whether ACRE will provide more support over the life of the 2008 Farm Bill than the support they will give up in terms of potential counter-cyclical payments, reduced direct payments and lower marketing loan rates. Table 1 shows the average reduction in direct payments for the primary program crops grown in Kansas. By enrolling in ACRE, the majority of producers in Kansas would likely give up approximately $2 to $6 per acre for the primary program crops.

Table 1. Average Direct Payments for Primary Kansas Crops.

	Wheat	Corn	Sorghum	Soybeans
Payment Yield (bu/ac)	34.1	102.1	54.4	22.1
Payment Rate ($/bu)	0.52	0.28	0.35	0.44
Direct Payment ($/ac)	17.73	28.59	19.04	9.72
ACRE Reduction ($/ac)	3.55	5.72	3.81	1.94

In addition, because actual revenue is calculated using market-year average prices, payments will not be made until October 1, or as soon as practicable after the applicable marketing year (one year after harvest). The delay in payments could cause some cash flow problems that may lead producers to require higher ACRE payments in order to accept lower direct payments and marketing loan rates. Because of the tradeoffs between ACRE and the traditional commodity programs, the decision to sign up may not be straightforward. As a result, considerable thought and analysis should be given before deciding whether or not to sign up for ACRE.

ACRE Enrollment Decision

Numerous factors will come into play in the ACRE enrollment decision-making process. Because producers must remain enrolled in ACRE once they sign-up, it will be necessary to estimate crop prices and yields over the next four years in order to determine whether or not they should enroll. While estimating long-term prices and yields is difficult, it will be even more difficult given the complicated design of ACRE. For example, due to the requirement that both the state and farm suffer revenue losses in order to collect payments, producers will have to estimate national prices for 2009-2012 and state and farm-level yields for the same time period. While predicting yields years in the future would be expected to be problematic given the inherent variability of production, prices will also be difficult to predict over the next four years. As prices have climbed well above historical averages, variability has increased as well. This has several implications.

First, historical relationships between price and yield may have little relevance to price and yield estimates in the near future. For example, current and future wheat prices are currently significantly higher than historical prices although recent yields and future trend yields do not differ greatly. Of course, U.S. yields are only one component of the world supply equation. Nevertheless, current supply and demand fundamentals potentially reflect a structural change for many farm commodities, thus making future projections more complicated.

Second, current historically high prices for most commodities will likely result in relatively high ACRE revenue guarantees. High revenue guarantees increase the odds that payments will be made under ACRE. This is especially the case if prices should decline significantly. Because the revenue guarantee cannot increase or decrease more than 10% from year to year, a large drop in commodity prices could result in large ACRE payments. Tables 2 and 3 demonstrate a scenario that could occur over the course of the 2008 Farm Bill. Table 2 shows prices and yields for wheat from 2004-2012. Prices are market year average prices for the U.S. and include actual NASS prices for 2004-2007 and forecasted prices for 2008-2012. The 2008 forecasted price is the midpoint price from the April 2009 World Agricultural Supply and Demand Estimate (WASDE) report, while the 2009-2012 prices were acquired from the March 2009 Baseline report from the Food and Agricultural Policy Research Institute (FAPRI). The 2004-2008 yields for Kansas are from FSA, while the 2009-2012 are based on trend line NASS yields. The exception is 2011, which is an example yield used to illustrate how ACRE may perform under low yield scenarios.

Table 2. Actual and Projected Market Year Average Wheat Prices and Yields, 2004-12.

Year	U.S. MYA Wheat Price* ($/bu)	Kansas Wheat Yield** (bu/planted acre)
2004	3.40	34.2
2005	3.42	39.9
2006	4.26	31.8
2007	6.48	32.6
2008	6.85	39.2
2009	5.30	38.3
2010	5.33	38.4
2011	5.42	***32.0***
2012	5.50	38.8

* 2004-07 prices are from USDA/NASS. The 2008 price is the midpoint price project from the April 2009 WASDE Report. 2009-2012 prices are from FAPRI March 2009 Baseline Projections.

**2004-08 yields are from USDA/FSA. 2009-10 and 2012 yields are trend line estimated yields. The 2011 yield is an example yield used to illustrate how ACRE may perform under low yield scenarios.

Table 3. Projected ACRE Payments for Example Wheat Scenario in Kansas.

Year	Benchmark State Yield (bu/plt ac)*	Benchmark Price ($/bu)	State Rev. Guarantee ($/plt ac)	Actual State Revenue ($/plt ac)	ACRE Payment ($/plt ac)
2009	35.3	6.67	211.95	202.77	9.18
2010	36.7	6.08	200.58	204.81	0.00
2011	36.4	5.32	180.52	173.44	7.08
2012	36.4	5.38	176.22	213.18	0.00
Average	--	--	--	--	4.07

* ACRE yields will equal state production divided by NASS harvested acres plus FSA failed acres and will be used in lieu of NASS planted acres.

Table 3 shows the estimated ACRE payments for the example wheat scenario in Kansas for 2009-2012. Based on the price and yield projections, ACRE would make payments of $9.18 in 2009 and $7.08 in 2011. (However, payments would only be made on those farms that had losses as well.) As the scenario plays out over time, the benchmark state yield initially increases, then decreases slightly in 2011 and 2012. Due to declining prices, the state revenue guarantee drops from $212/planted acre in 2009 to $176/planted acre in 2012. Because the state revenue guarantee is limited to an increase or decreases of 10% from year to year, the 2011 guarantee is capped at $181/planted acre.

The preceding example is just one of countless scenarios that could occur over the course of the 2008 Farm Bill. However, it illustrates how ACRE could potentially benefit producers. Without question, because of the increased variability of income, government program decisions will become increasingly important. Naturally, if the ACRE enrollment decision is important, one would wonder if there are any rules of thumb that producers could follow in that decision making process. After analyzing ACRE, very few rules of thumb come to light. In the absence of more specific rules of thumb, following

are some questions for producers to consider when making an enrollment decision with ACRE.

- Will ACRE payments (with reduced direct payments and lower loan rates) on average be greater than current commodity program payments?
- Even if ACRE payments are not greater than current commodity program payments, will it provide more risk management protection?
- What is the price-yield correlation between state yields and national prices?
- What is the correlation between state yields and farm yields?
- How does ACRE compare with each crop in the crop mix? Does it work better for some crops than others?
- How complementary is ACRE with crop insurance and disaster assistance?

Additional information on the ACRE program and other 2008 Farm Bill programs is available at www.agmanager.info.