

# PolicyPennings by Daryll E. Ray & Harwood D. Schaffer

## To participate in Agricultural Risk Coverage or Price Loss Coverage, that is the question

Farming is a risky business. When farmers put the seed into the ground they never know what they will harvest. They face uncertainty with regard to the amount and timing of both rainfall and temperature as well as plant and insect diseases. They also do not know how much farmers everywhere else in the world will produce in a given season and year. They start planning a crop as much as 24 months before they will sell the last bushel, hundredweight, or bale. And at planting time, they don't know the price they will receive when the crop is harvested because the factors that create the price have yet to occur.

Farmers do not have to buy a lottery ticket or go to Las Vegas or any other casino to gamble; they do it every year when they put their seed into the ground.

In the midst of economic uncertainty, what farmers need most is a set of policies that provide them with some stability so they can plan ahead and make long-term investments in their operations with the expectation that they can enjoy the benefits of these outlays.

With that criterion in mind, we want to share a specific low-price case scenario for the key commodity policies contained in the 2014 Farm Bill: Price Loss Coverage (PLC) and Agricultural Risk Coverage using county level revenue (ARC-C). We also discuss the basic condition under which a farmer may want to consider participating in Agricultural Risk Coverage using individual farm level revenue (ARC-I). Our analysis does not include any crop insurance payments paid on the crop. Neither does it take into account any Supplemental Coverage Option (SCO) payments, which are only available for PLC.

PLC provides payments equal to the reference price (called target price in previous legislation) less the effective price (the higher of the national season average price paid to farmers or the loan rate) times the farm's program payment yield per planted acre times 85 percent of the base acres. Using corn as an example the reference price is \$3.70 per bushel. If the effective price is \$3.70 or higher then no payment would be made under PLC.

Now let's look at a scenario where the effective corn price is \$3.00 for a farm with a program payment yield of 200 bushels per base acre. In that case, under PLC, the farmer would receive \$.70 ( $\$3.70 - \$3.00$ ) times 200 bushels per acre for a total of \$140 per acre for 85 percent of the corn base acreage or \$119 per base acre.

For ARC, payments are issued when the actual county crop revenue of a covered commodity is less than the commodity's ARC county guarantee. The

ARC county guarantee equals 86 percent of the ARC county benchmark revenue, which is computed by multiplying the previous five-year average national farm price, excluding the years with the highest and lowest price (the ARC guarantee price), times the five-year average county yield per planted acre, excluding the years with the highest and lowest yield (the ARC county guarantee yield). The payment per base acre is equal to 85 percent times the difference between the ARC county guarantee and the actual county crop revenue for the covered commodity. Payments may not exceed 10 percent of the ARC county benchmark revenue.

The current estimate of the previous 5-year Olympic average price is \$5.28. For comparison with the PLC example, let's assume that the county yield is 200 bushels of corn per planted acre. In that case the ARC county benchmark revenue is \$1056 per acre, the ARC county guarantee is 86 percent of that (\$908.16) and the payment limit is \$105.60.

Looking at the same \$3.00 per bushel we examined for the PLC, the revenue per acre for a 200 bushel per base acre county yield would be \$600. Subtracting the \$600 actual county revenue from the ARC guarantee of \$908.16 leaves \$308.16 which is then multiplied by 85 percent of base acres to yield a potential payment of \$261.93 per base acre. But because of the payment limit, the farmer receives \$105.60 per base acre under ARC compared to \$119 under PLC.

One of the mechanisms put into the ARC calculation is that when the price drops below the reference price, the reference price is plugged in place of the actual price for that year. If the price stays at or below the \$3.70 level for four years then the price standard used to calculate benefits are the same for ARC and PLC (\$3.70).

So how does the ARC compare to the PLC in the fifth year of \$3 corn? In that case the ARC county benchmark revenue is \$3.70 times 200 or \$740 and the payment limit is \$74. The ARC guarantee is 86 percent of the \$740 or \$636.40. The per-acre payment equals the ARC guarantee of \$636.40 minus the actual county revenue for corn of \$600 or \$36.40 which is then multiplied times 85 percent of the base acres for an effective payment of \$30.94 per base acre. In that fifth year the farmer who elected to take the PLC is still receiving \$119 per acre.

With regard to the ARC-I program, a farmer whose crop yields exceed 130 percent of the county yields may want to consider signing up for the individual

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ARC. It must be noted that the farm for individual ARC purposes is the sum of the producer's interest in ALL (emphasis added) ARC farms in the state. Clearly the number of farmers for whom the ARC-I will work out to be better than the ARC-C/PLC is limited.

Now, in choosing between PLC and ARC-C, it is a matter of whether the farmer is seeking to maximize potential revenue or minimize potential risk. That calculation has changed radically over the last several months as prices have fallen significantly. Ironically, forcing farmers to choose between PLC and ARC for a period of five years adds an element of risk in the situation in which what farmers need is to reduce their risk.

In addition, the lottery effect of having potentially high ARC-C payments when prices are high, but make a one-year drop, may undermine the credibility of the program in the eyes of the general public. At least high PLC payments are accompanied by prices that are below the cost of production.

Daryll E. Ray holds the Blasingame Chair of Excellence in Agricultural Policy, Institute of Agriculture, University of Tennessee, and is the Director of UT's Agricultural Policy Analysis Center (APAC). Harwood D. Schaffer is a Research Assistant Professor at APAC. (865) 974-7407; Fax: (865) 974-7298; [dray@utk.edu](mailto:dray@utk.edu) and [hdschaffer@utk.edu](mailto:hdschaffer@utk.edu); <http://www.agpolicy.org>.