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Shifting From a Price Safety Net to a Revenue Safety Net

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In late July, the U.S. House of Representatives passed the *Farm, Nutrition, and Bioenergy Act of 2007*, or the "2007 Farm Bill," to reauthorize farm, food, and other agricultural programs for 2008 through 2012. This culminated more than two months of discussion in the House Agriculture Committee and subcommittees and reflected much of the policy direction championed by committee chair Collin Peterson of Minnesota.

In the Senate, the agricultural committee under Chairman Tom Harkin of Iowa has yet to begin formal consideration of the 2007 Farm Bill. However, given some comments from Senator Harkin, there are some elements of the House-passed version that could show up in an eventual compromise that would mean changes in the basic mechanics of farm commodity programs.

One of the potential changes is a shift from a federal farm income safety net based on price to one that is in part based on revenue. Specifically, the House has proposed a revenue-based counter-cyclical payment (revenue CCP) as an alternative to the current price-based CCP. The revenue-based program would add yield to the safety net calculation and would make a payment to participating producers when the combination of national average yield and national average price produced a revenue calculation that fell below a target established in the legislation. The target for each program crop was set at the product of the five-year Olympic-average national yield times the adjusted target price as used for the existing price CCP (and as amended in the proposed language). Any shortfall below this target for each crop would be paid out on participating base acres for the respective crop, after adjusting for differences in farm versus national average CCP yield levels and accounting for payment on only 85 percent of base acres as with the existing direct and CCP programs.

This revenue CCP would be offered as an optional alternative to the current price CCP. Thus, in the same manner as the 2002 Farm Bill sign-up process, producers would have to make a one-time decision as to whether to sign-up for the revenue- or price-based program. The decision and the program would not affect the direct payment or the marketing loan part of the federal farm income safety net. The direct payment program would remain unchanged and the marketing loan would stay intact, with a few adjustments in loan rates from the current program. The marketing loan would continue to provide price protection below the loan rate and would be the lower bound on the price factor used in the revenue CCP, the same as currently exists for the price CCP.

Building part of the farm income safety net on a revenue CCP instead of a price CCP looks appealing to producers because revenue more directly affects the bottom line for producers than price. It also looks appealing to policymakers concerned about budget costs because the variability of revenue should be less than the variability of price alone since price and yield are negatively correlated at the national level. As a result, the total payments may be reduced while maintaining the safety net assistance in years of most concern.

However, there are also many questions about how a revenue program will work that will test how attractive the new policy direction looks to producers. The first is the level of protection actually provided by the safety net. With current higher price levels and forecasts for continued strength in most farm program commodities, the price and revenue CCP would both kick in at levels substantially below current expectations. At a proposed target revenue of $344.12 per acre for corn, the revenue CCP safety net would be only about 69 percent of the current expected revenue, using baseline projections for 2008 of $3.22 per bushel and 155.1 bushels per acre. By comparison, the price CCP would continue to kick in at $2.35, which is 73 percent of the same $3.22 price expectation.

The numbers suggest that there is less chance of payments under the revenue CCP than under the price CCP. Table 1 compares how the price and revenue CCP programs would have performed over the last thirty years based on actual market prices and trend-adjusted yields. For all four crops considered, the price CCP triggered payments more often, but sorghum was the only crop in which the average price CCP payment was significantly larger than the revenue CCP payment. Corn was the only crop that had larger average revenue CCP payments. The revenue CCP triggered payments less frequently, but payments were often larger than price CCP payments when they were triggered.

Table 1. Comparison of Price and Revenue CCP Options for U.S. Crops Based on Trend-Adjusted Yields and Market Prices (1977-2006).

Comparison Measure	Wheat	Corn	Soybeans	Sorghum
PCCP Avg Payment ($/ac)	$10.05	$12.80	$4.25	$5.76
PCCP Frequency of Payment	73.3%	50.0%	33.3%	53.3%
PCCP Avg Paid Payment ($/ac)	$13.71	$25.61	$12.75	$10.80
RCCP Avg Payment ($/ac)	$9.63	$14.43	$3.88	$1.96
RCCP Frequency of Payment	70.0%	46.7%	30.0%	23.3%
RCCP Avg Paid Payment ($/ac)	$13.76	$30.91	$12.93	$8.41

In the end, which CCP alternative would be most attractive to producers is not immediately clear. As proposed, the revenue CCP would not kick in as quickly as the price CCP, but it would make larger payments once it does kick in. And, the revenue CCP would pay for revenue losses due to price and yield, covering a greater degree of risk than the price CCP. However, neither program seems likely to make large payments on the major Midwestern program crops if the current market outlook remains for the life of the farm bill. In addition, while the revenue CCP potentially offers a better design for risk management protection, calculating it at the national level takes out only some of the systemic risk in production and marketing and not the idiosyncratic, or distinct, individual, risk.

An alternative revenue CCP proposal introduced in the Senate by Dick Durbin of Illinois and Sherrod Brown of Ohio may serve as a marker in the Senate farm bill discussions to replace both the current price CCP and also the current marketing loan program. This alternative would establish a moving revenue target based on 90 percent of the trend yield at the state level multiplied by a three-year moving average national price. After actual state yields and national prices are determined, any shortfall below the revenue target would be covered by the revenue CCP. The actual revenue CCP paid to a farm would equal 90 percent of the shortfall multiplied by the quotient of the farm's actual production history divided by the state expected trend yield to adjust for productivity (and expected revenue) differences between farms.

This proposal also leaves several questions to the interpretation. The use of a state-level revenue target is potentially much more appealing than a national-level revenue target because of the likely higher correlation of farm yields to state yields instead of national yields. But, the potential performance of the program is still very much related to the factors used in the calculations. The expected yield for each year is based on the trend yield curve estimated from 1980 to 2006. For some crops in some states, the trend yield over that time period has not trended upward very much. Whether it is due to multi-year weather problems bringing down yields at the end of the period or whether it reflects changing production patterns and cropping systems that have changed the average productivity of land devoted to each crop, it affects how high the safety net is and how much of a risk management tool it provides.

The three-year moving average price also means the safety net gradually tracks the market. Thus, it is designed more as a risk management tool than as an income support tool as passed in the House. Even with the moving average and a limit on changes from year to year, a multi-year swing in prices, either higher or lower, could substantially change the level of the safety net relative to long-run expectations. That could make the program relatively expensive if market prices drop from their current levels in the next few years. Conversely, it could make the safety net less effective if producers face a multi-year trough in price levels, such as occurred in the 1998-2001 period.

One other issue with a revenue-based safety net is its relation to crop insurance coverage. The House-passed version does not address any linkage with crop insurance, although a national-level revenue safety net does appear to be a very weak substitute for crop insurance. The Durbin-Brown bill in the Senate proposes a state-level trigger that would be a better substitute for farm- or county-level crop insurance products currently on the market. As such, it is formally linked with crop insurance, such that any payments received under the revenue-based CCP would reduce any payments received on crop insurance for the crop on the farm. The goal here is not to eliminate the role of crop insurance, but to pass part of the systemic risk covered by crop insurance to the revenue-based CCP. If effective, the resulting crop insurance policy should be better able to isolate and cover just the idiosyncratic risk on the farm and as a result, be a cheaper, more affordable product that may also be more actuarially sound.

The final product of deliberations on the 2007 Farm Bill are far from complete. In fact, at this stage of the process, it is not entirely clear whether the new farm bill will be finished in time to call it the 2007 Farm Bill. But, it does appear that some new policy alternatives will work into any eventual product, including a gradual shift to revenue-based support. While the concept is appealing from a risk management perspective, there will be numerous issues in terms of how the program is defined and implemented. The level of aggregation (e.g. state versus national) and the level of protection relative to expectations impacts the effectiveness of the program as a risk management tool for producers. The moving average safety net implies more risk protection and less income support than with the fixed safety net. The level of integration of the revenue-based CCP with the existing safety net, including both marketing loans and insurance programs, is critical if the overall safety net is to provide an effective risk management package for producers.