Risk Implications of Commodity Programs in the 2012 Farm Bill

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The 2012 Farm Bill currently is being debated, with some prospects that it will be passed this year. Much debate centers on the commodity title and how to reconfigure direct payments, the counter-cyclical price and revenue programs (e.g., target price and ACRE programs), and the standing disaster assistance programs (e.g., SURE). Predicting what form these programs will take is difficult. At this point, however, it appears that direct payments will not be included and overall budget outlays authorized in the 2012 Farm Bill will be less than in previous Farm Bills. What likely will result is a counter-cyclical revenue program somewhat similar to the current ACRE program. An ACRE-like program will have risk implications. The risk implications are discussed in this post assuming that providing a safety net is a goal of the 2012 Farm Bill.

Crop Insurance Provides Within Year Revenue Protection

To avoid duplicate coverage, considerations should be given to risk protection offered by crop insurance. Crop insurance is a major program providing within year revenue protection. According to the Summary of Business produced by the Risk Management Agency, 265 million acres were insured in 2011. The 265 million acres represents 83 percent of the 319 million acres planted in principal crops reported by NASS for 2011. Farmers tend to buy revenue products where those revenue products are available. For example, revenue products were purchased on 93 percent of the corn acres insured in 2011.

Because crop insurance is widely used, commodity programs within Farm Bill have much less of a role in providing disaster assistance for within year price or yield declines. For example, if a drought similar to that of 1988 occurred in 2012, crop insurance would provide protection on most acres grown in the United States. Thus, crop insurance covers large, within year yield or price losses, reducing the need for covering these losses within the commodity program.

Across Year and Multi Year Revenue Declines Not Protected by Crop Insurance

Crop insurance will not provide protection against revenue declines that occur across years, of which price declines are a prime example. To illustrate, take a corn revenue policy that has a 180 bushel Trend-Adjusted Actual Production History (TA-APH) and the 2012 projected price of $5.68. A choice of the highest coverage level of 85% results in a guarantee of $869. If the farmer gets the same 180 bushel yield in 2012 as the TA-APH yield, the price can decline to $4.83 without the farm receiving an insurance

payment ($4.83 = $869 guarantee / 180 bushel yield). Given a decline of the harvest price to $4.83, the projected price for 2013 likely would be near $4.83. If $4.83 is the 2013 projected price and the 2013 yield equals the 2013 TA-APH yield, the harvest price could fall to $4.11 without the farmer receiving a crop insurance payment. A price decrease to a $4.11 harvest price in 2013 is not unrealistic.

Two years of trend line or above yields could result in price scenario similar to that given above.

Multiple years of relatively low prices have occurred in the past. To illustrate, Figure 1 shows price histories for corn, soybeans, wheat, cotton, and rice; five crops that receive commodity program payments. Each year's price is stated as the current year price divided by the average of the five previous prices. A ratio below one indicates that that year's price is below the previous five-year average. As can be seen in Figure 1, all five commodities had two periods where price ratios where below one: 1) in the mid-1980s and 2) in the late 1990s and early 2000s. Both of these periods were times of financial stress in agriculture.

Figure 1. Current Price Divided by Five-Year Average, National Season Average Prices.
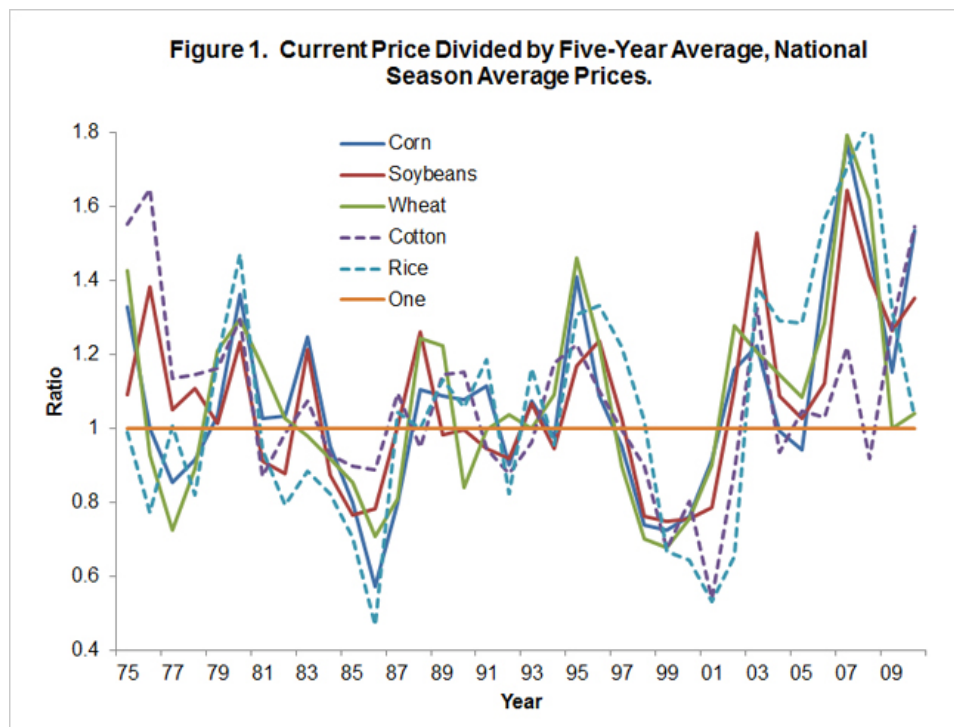
Lost revenue due to low prices during the mid-1980s and late 1990s would not have been covered by crop insurance, because projected prices would have adjusted downward. Not covering these losses suggests a role for Farm Bill commodity programs. Farm Bill commodity programs can cover revenue declines of a multi-year nature due to declining prices or other factors. These have been labeled "shallow losses" because they occur before crop insurance pays, but these shallow losses are what have caused financial stress in the agricultural sector in the past.

One design of a commodity program that provides multi-year protection is to have the guarantee based on historical revenue. Many of the current program proposals base their guarantees on multi-year revenue. The Aggregate Risk and Revenue Program (ARRM) sponsored by Senators Brown, Thune, Durbin, and Lugar uses a five-year Olympic average of revenue where revenue equals harvest price times Crop Reporting District (CRD) yields. The Ag Risk Coverage (ARC) program that was put forward to the Super Committee based its guarantee on an Olympic average of revenue, where revenue is based on the national season average price and farm yield. The Revenue Loss Assistance Program (RLAP) proposed by Senators Conrad, Baucus, and Hoeven bases its guarantee on the Olympic average of five-years of national season average price times a farm's historical yield.

Yields to Use in Revenue Guarantee

Debate centers on what yields to use in the guarantee. The choice is between farm yields and more aggregate acreage, such as county and CRD yields. To keep programs at similar costs, a program that uses farm yields will have lower coverage levels than a program that uses county of CRD yields, all else being equal. For example, ARRM which uses CRD yields has a 90% coverage level. ARC which uses farm yields has an 87% guarantee and RLAP which uses farm yields has an 88% coverage level. Lower coverage levels for farm levels are needed because farm yields are more variable than county or CRD yields.

Commodity programs with farm yields will have a portion of their payments devoted to farm specific yield losses, hence the need for lower coverage levels. Commodity programs with county or CRD yields will tend to pay when there are widespread revenue losses due to lower yields or price declines. Commodity programs using county of CRD yields will pay less often than commodity programs that are based on farm yields; however, commodity program based on county and CRD yields will tend to make larger payments in years in which payments are made. County and CRD yield based programs would make larger payments in the mid-1980 and late 1990s than farm yield based programs.

Summary

Commodity based programs can provide protection in cases in which revenue declines across several years, a situation that is not covered by crop insurance. Guarantees based on historical revenue will cover these losses. Yields used in guarantees will impact risks covered. Use of farm yields in guarantees will cause the program to cover more farm-specific revenue shortfalls, some of which will not be multi-year in nature. Use of county or CRD yields in guarantees will cause the program to cover more widespread events, such as multi-year price declines.