



Interaction between Crop Insurance and Price Support Programs

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Background

A key issue framing the 2012 Farm Bill debate is the interaction among farm safety net programs. Attention has focused mostly on the interaction between crop insurance and the shallow loss programs, such as ACRE in the 2008 Farm Bill, ARC in the 2012 Senate Farm Bill, and RLC in the 2012 House Agriculture Committee Farm Bill. In contrast, this article examines the interaction between insurance and the counter-cyclical and marketing loan price support programs.

Counter-cyclical and marketing loan programs

make payments when the price of a crop drops below the program's benchmark price. The benchmarks are set by Congress, and are called the target price for the counter-cyclical program and the loan rate for the marketing loan program. Counter-cyclical payments are based on historical acres and yields while marketing loans are available for all current production. The target price is higher than the loan rate, but counter-cyclical payments are not received for prices lower than the marketing loan rate. In essence, the two programs work together to provide a floor on price that approximately equals the target price. There are no fees or charges associated with the programs, although enrolled farms must meet conservation compliance and payment limits exist for the counter-cyclical program.

Interaction with Crop Insurance

The marketing loan and counter-cyclical programs provide protection against low prices, but not low yields. In contrast, yield insurance provides protection against low yields, but not low prices. Thus, the price support programs and yield insurance complement one another in that they cover different components of revenue. Moreover, protection against low revenue can be created by combining the price support programs and yield insurance.

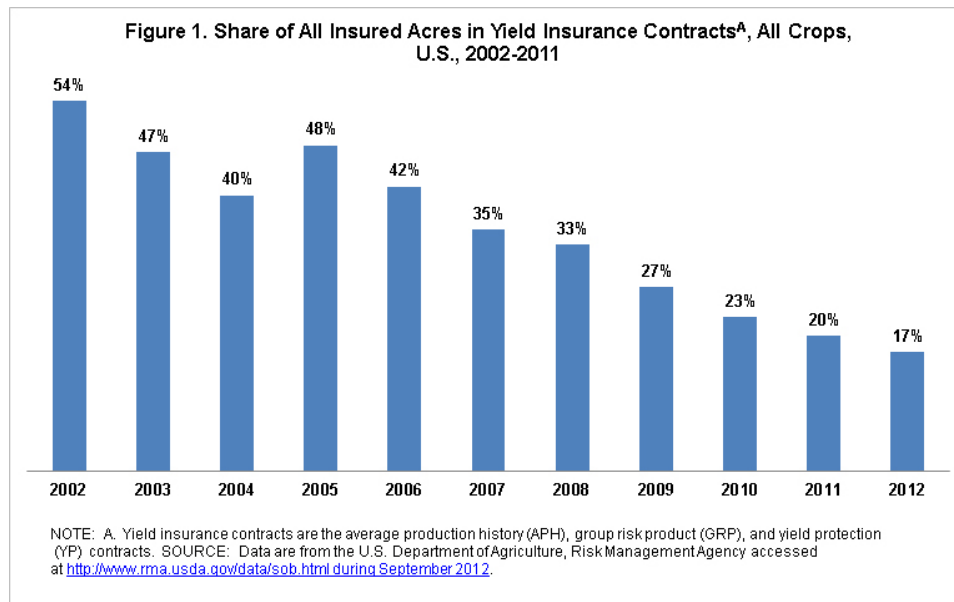
The amount of revenue protected by combining price support programs and yield insurance is a complex calculation. It depends upon the crop's target price, the price used for yield insurance, the farm's counter-cyclical and insurance yields, and the relationship between planted and base acres, among many factors. Because of this complex calculation, revenue protection is likely to be less effective when combining price support programs and crop insurance than when buying a revenue insurance contract. Nevertheless,

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because the price support programs have little cost associated with them, combining them with yield insurance will be cheaper and potentially cost effective revenue protection, especially when market price is near or below the target price.

As market price increases above the target price, the revenue protection offered by combining fixed price support programs and crop insurance declines relative to market revenue. Thus, even though revenue insurance comes with a higher premium cost than yield insurance, the higher revenue protection offered by revenue insurance as market prices increase above the target price creates an incentive to switch to revenue insurance from yield insurance.

Consistent with this observation, the share of acres insured using yield insurance (APH, GRP, and YP) has declined from 54% in 2002, the initial year for the counter-cyclical program, to 17% in 2012 (see Figure 1). During this period, market prices rose above, then stayed above the target prices.



A correlation coefficient was calculated between the share of acres enrolled in yield insurance and the ratio of the insurance plant price to target price for corn, upland cotton, soybeans, and wheat over the 2002-2011 crop years. The correlation is -0.65 and is statistically significant. The negative sign implies that, the higher market price is relative to the target price, the smaller is the share of insured acres enrolled in yield insurance. Correlation coefficients range from -1 to +1. The closer a correlation is to these so-called perfect correlations, the more the two variables move together. The insurance plant price used for wheat was for the Chicago futures market or soft red winter wheat.

Summary Observations

Many factors are likely involved in the shift from yield insurance to revenue insurance since 2002. For example, insurance premium subsidies have increased. Nevertheless, it is likely that the increase in market price relative to target price is a factor in this shift.

Thus, it is important to consider and analyze the interactions between crop insurance and the increased target prices contained in the House Agriculture Committee Farm Bill. Table 1 contains the current target prices and the target prices proposed in the House Bill. The proposed target prices range from a -4% decrease for upland cotton and 8% increase for peanuts to a 50% increase for sorghum and an 88% increase for barley. The increases bring the target prices closer to current market prices. To illustrate, the proposed House bill target prices are 5% higher for peanuts, 2% lower for rice, 3% lower for barley, and 4% lower for upland cotton than the Olympic average price for the 2008 through 2012 crop years (see Table 1). Although the increase in target price is sizable for corn and soybeans, the proposed target prices are 25% lower for soybeans and 28% lower for corn than the 2008-2012 Olympic average prices.

Table 1. Comparison of Current and House Agriculture Committee Farm Bill Target Prices and Recent Average Market Prices, U.S., September 27, 2012

Crop	Unit	Current Target Price	House Committee Target Price ^A	Olympic Average Price 2008-12 ^B
Barley	Bushel	\$2.63	\$4.95	\$5.13
Corn	Bushel	\$2.63	\$3.70	\$5.16
Cotton, Upland	Pound	\$0.71	\$0.6861 ^C	\$0.71
Oats	Bushel	\$1.79	\$2.40	\$3.05
Peanuts	Pound	\$0.25	\$0.27	\$0.26
Rice	Hundredweight	\$10.50	\$14.00	\$14.30
Sorghum	Bushel	\$2.63	\$3.95	\$4.78
Soybean	Bushel	\$6.00	\$8.40	\$11.24
Wheat	Bushel	\$4.17	\$5.50	\$6.57

NOTES: (A) Program is the Price Loss Coverage (PLC). (B) This calculation uses the midpoint of the price range in the September *World Agricultural Supply and Demand Estimates* for the 2012 crop year price for all crops except peanuts. For peanuts, no information is available for the 2012 crop year price. It is assumed to be the high price and thus excluded in the calculation. (C) This price is the minimum price in the upland cotton STAX program.

At least two interactions between crop insurance and the proposed higher target prices are important to consider. First, if market price for a crop declines below the target price, some, maybe many, farms will likely shift from revenue insurance to yield insurance for the crop. In regard to this observation, revenue insurance does not currently exist for oats and peanuts, although development of a revenue insurance product for peanuts is required in both the Senate and House Agriculture Committee Farm Bills.

Second, if market prices decline below the increased target prices, then farms can potentially receive payments from crop insurance as price declines between planting and harvest and from the price counter-cyclical program as price also declines below the target price. One way to eliminate this double payment is to incorporate insurance prices into the determination of counter-cyclical payments.

In conclusion, the formation of good policy rests upon assessing as many potential interactions among policy programs as possible in order to reduce the likelihood of unforeseen impacts upon both farms and the cost of farm programs.

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