APAC Agricultural Policy Analysis Center
The University of Tennessee

PolicyPennings by Daryll E. Ray & Harwood D. Schaffer

Insurance is good but not suited for all types of risk

While our criticism of revenue insurance has made us unpopular in some circles, we are not universally against all forms of crop insurance. In fact in some situations, crop insurance is preferable to alternative programs and the case that comes to mind first is crop yield insurance.

Now, why would we single out crop yield insurance and balk at crop revenue insurance? The answer to that comes from first looking at the nature of the risk for which insurance is well suited.

Insurance is best suited to cover calculable random risks like the 1 in 320 homes in the US that report a fire each year. With that knowledge the insurance company can set a premium rate that covers the risk, the cost of underwriting and servicing the policies, an amount that needs to go into a reserve in case more than the usual number of fires occurs in a given year, and profit for the company. The insurance industry does not know which house will catch fire but they do know the odds and are willing to insure all the houses.

On the other hand, insurance is ill-suited to cover systemic risks. Systemic risk in the case of house insurance would be "acts of war" or other devastating events that affect not 1 in 320 homes but all (or a large share of) homes simultaneously.

In addition to systemic risk, insurance companies have to guard against what is called moral hazard. A moral hazard with insurance involves being able to increase one's odds of collecting on an insurance policy. With fire insurance, the most common moral hazard is arson. Setting a fire to one's home increases the odds to 100 percent, which is why fire inspectors are always on the lookout for suspicious fires; insurance does not pay in the case of arson.

Looking at crop revenue insurance the risk is twofold: price and yield. The first of those is systemic. When the price for one farmer is down, the price is down for all farmers; it's equivalent to all houses being severely damaged at once. Worse yet, the prices can stay down for an extended period of time; this possible repeat characteristic is another condition for which insurance is ill-suited. As a result, without a subsidy, farmers have traditionally been unwilling to pay the premium that would be required for the price component of revenue insurance.

Yield is much closer to being a random risk. For any give geographic area, insurance companies call pull up the records and calculate the risk of a yield robbing weather event and set an appropriate premium. At the same time there is a systemic element as well. There are times like 2012 when the weather event is widespread and a large percentage of policyholders need to make a claim. As a result, even to offer yield insurance that is beyond hail insurance would require some level of subsidy before farmers would be willing to purchase it.

From a policy perspective, the attraction of subsidizing yield insurance is that it covers localized weather events that do not affect farmers in a large region of the country. In the absence of yield insurance, these farmers would get hit hard. The only time farmers could get aid was when the weather problem was widespread and Congress passed an ad hoc disaster package. With subsidized yield insurance is does not take an act of Congress to get aid to farmers who need it. And taxpayers' would provide no aid to farmers with no-to-little, weather-related shortfall of yields, but happen to live in a certain geographical area or grow, or once grew, a certain commodity or commodities.

However, yield insurance can also run the risk of introducing moral hazard. That can occur when the yield and the risk of yield loss being insured is not highly correlated to the yield and risk for a given field. Using county averages, for instance, can encourage farmers to plant individual fields that have a poor production history relative to the rest of the county.

We remember the time when most farmers did not purchase crop insurance and were incensed when they were required to purchase it as a condition for receiving disaster aid. It was only with highly subsidized revenue insurance that farmers willingly sought out their crop insurance agent.

Given the inability of revenue insurance to serve as an effective risk management tool during extended periods of low prices, it may be time to take the subsidy off of the price portion of revenue insurance and leave it on only for yield. Our guess? No one would buy revenue insurance under those conditions and that leaves us with yield insurance, which makes more sense than leaving the fate of distressed farmers up to whether or not Congress is going to pass an ad hoc disaster package.

The more prosperous the times are, the more price protection revenue insurance offers. This characteristic is not a compelling reason for taxpayers to pay most of its premium, serve as its underwriter for insurance-losses and to foot much of bill for agent fees and administrative costs. Farmers and taxpayers deserve better.

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