Comparison of Crop Insurance Products

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February 26, 2015

Crop insurance can be an effective tool to mitigate downside risk on crop farms. As with last year's crops, in 2015 there are several crop insurance products to choose from in Indiana. The two major categories of policies insure against production losses and revenue losses, respectively. Policies falling under each of these categories are briefly discussed below.

Policies specifically designed to protect against production losses include yield protection (YP) and the area yield protection plan (AYP). YP insures against production losses based on individual farm yields. Coverage levels range from 50 to 85 percent of actual production history. AYP insures against production losses based on county yields. Coverage levels range from 70 to 90 percent.

Possible revenue policies include risk protection with harvest price exclusion (RP-HPE), risk protection (RP), and the area revenue protection plan (ARP). The RP-HPE and RP policies insure against revenue loss due to decrease in price, low yield, or combination of these two factors, and are based on individual farm revenue. Coverage levels for these two products range from 50 to 85 percent. The revenue protection guarantee for the RP-HPE policy is determined using the actual production history (APH) yield, the coverage level, and projected price (for corn this projected price is based on the settlement prices for the December future contracts during February). The revenue protection guarantee for the RP policy is determined using the actual production history (APH) yield, the coverage level, and the greater of projected price or harvest price (for corn the harvest price is based on the settlement prices for the December futures

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contract during October). Thus, the primary difference between the RP-HPE and the RP policies is the use of projected price in the RP-HPE policy and the greater of projected price or harvest price in the RP policy when computing the revenue guarantee. The ARP policy insures against county-wide revenue loss and is based on area revenue. Coverage levels for this product range from 70 to 90 percent.

Three factors are typically considered when choosing between crop insurance products: cost of the insurance product, likelihood of yield and revenue losses, and risk aversion. Though the relative cost of the insurance products does vary across counties, yield policies tend to be cheaper than revenue policies. Of course, the revenue policies, particularly the RP policy which is a commonly selected policy in the Midwest, offers more revenue protection. When comparing revenue policies, RP-HPE policies tend to be cheaper than the RP policy, but provide less downside protection. The relationship between RP and ARP premiums depends on where the farm is located and the ARP protection level chosen.

The likelihood of another drought or a major decline in price is difficult to predict. However, based on historical data and recent USDA price projections, it seems more likely that we could experience declining prices with trend yields than another drought. This suggests that it is imperative to closely examine the revenue policies.

A farm operator's aversion to risk is also a factor when choosing insurance products. A farmer with less tolerance for risk is more likely to choose a product with a higher coverage level, even though these products are more expensive.

In summary, this paper provided a brief discussion of the crop insurance products available in 2015. A companion paper provides an illustration of potential insurance payments for various yield and price scenarios (this paper can be found on the web site for Center for Commercial Agriculture; www.agecon.purdue.edu/commercialag).