



## Coverage Level Choices for Revenue Protection in 2014

Gary Schnitkey

Department of Agricultural and Consumer Economics  
University of Illinois

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Over time, farmers have increased coverage levels on crop insurance. In 2014, projected prices will be lower than in recent years, causing some to question whether crop insurance should be purchased at high coverage levels. Perhaps the trend of increasing coverage levels will not continue into 2014. However, lowering coverage levels will expose farmers to the potential of larger losses. This suggests that lowering coverage levels is a questionable strategy with considerable risks.

### Coverage level choices over time

Figure 1 shows the percent of acres insured with farm-level revenue products at 75%, 80%, and 85% coverage levels. From 2011 onwards, farm-level revenue products are Revenue Protection (RP) and RP with the harvest price exclusion. Before 2011, the farm-level revenue products were Crop Revenue Coverage (CRC), Revenue Assurance (RA), and Income Protection (IP).

In 1997, the first year when farm-level revenue products were available, 1% of the Illinois corn acres were insured using revenue products at 75% coverage levels (see Figure 1). The 80% and 85% coverage levels were not available. As can be seen in Figure 1, use of these higher coverage levels increased through time. By 2008, 38% of corn acres were insured using 75% and higher coverage level; with 16% at the acres insured at the 75% coverage level, 14% at the 80% coverage level, and 8% at the 85% coverage level.

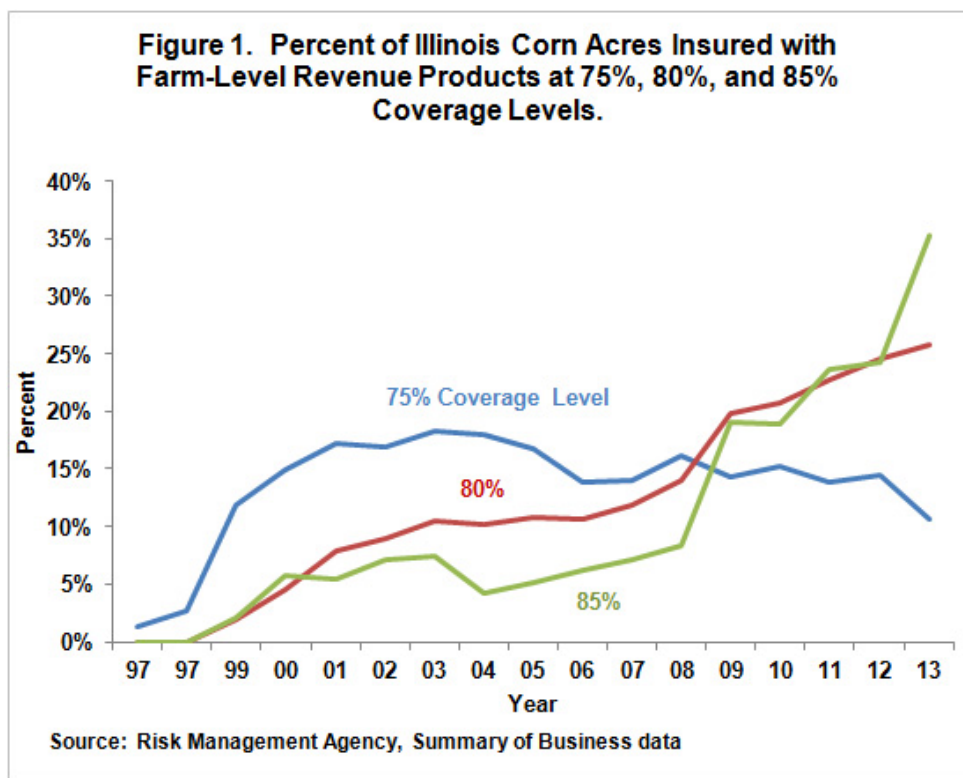
Since 2008, use of higher coverage levels has increased dramatically. Illinois corn acres insured using 75% and higher coverage levels were 53% of planted acres in 2009, 55% in 2010, 60% in 2011, 63% in 2012, and 72% in 2013. Prior to 2008, more acres were insured using the 75% coverage level than the 80% and 85% coverage levels. In 2009, the 80% and 85% coverage levels exceeded that of the 75% coverage level for the first time. Since 2009, use of 80% and 85% coverage levels have increased and have never been below use of 75% coverage level. In 2013, 35% of corn acres were insured using an 85% coverage level farm-level product, 26% an 80% coverage level, and 11% at a 75% coverage level.

Various factors have contributed to increasing coverage levels. Projected prices were relatively high, allowing for high guarantees that often exceed production costs. In recent years, costs increased, thereby

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increasing risks. Also spurring growth was the introduction of higher subsidies for enterprise units in 2009. These higher subsidies resulted in increased use of enterprise units at high coverage levels.



#### Guarantees for 2014

Production and land costs are still at high levels in 2014. However, projected prices likely will be much lower than in recent years. Current prices on December 2014 futures contract suggest a projected price near \$4.60 per bushel. This \$4.60 price is much lower than the \$6.01 price in 2011, \$5.68 price in 2012, and \$5.65 price in 2013. A lower projected price then will lead to lower guarantees.

To illustrate, RP premiums and guarantees are shown in Table 1 for a farm with a Trend Adjusted (TA) yield of 190 bushels per acre and a \$4.60 projected price. Premiums are for a 200 acre enterprise unit in Macon County. As can be seen, farmer premiums range from \$.39 per acre for a 50% coverage level to a \$16.17 per acre for an 85% coverage level. Premiums approximately double for each 5% increase in coverage level above 75%. The 75% coverage level premium is \$3.83. The 80% coverage level has a \$7.86 premium, 2.05 times higher than the 75% premium. The 85% coverage level has a \$16.17 premium, 2.06 times higher than the 80% coverage level.

After the projected price is announced, the minimum guarantee for RP products can be calculated. The guarantee will be higher if the harvest price is above the projected price. The following guarantees are calculated using a \$4.60 estimated projected price. At an 85% coverage level, the minimum guarantee is \$743 per acre (.85 coverage level x \$4.60 projected price x 190 bushel guarantee yield). An insurance payment will occur when harvest revenue (actual yield x harvest price) is below the guarantee.

In some respects, the RP guarantee overstates the revenue protection available to farmers. Prices used by revenue products are based on futures prices, and futures prices typically are higher than cash prices. In addition, the RP guarantee does not include higher premiums associated with higher coverage levels. To account for basis and premiums, a minimum cash guarantee is calculated. For the 85% coverage level, the minimum cash guarantee equals \$678 per acre:

.85 coverage level x (\$4.60 projected price - .30 basis) x 190 TA yield - \$16.17 farmer-paid premium

The 2014 minimum guarantee of \$678 per acre is below the 2013 level when a \$5.65 projected price was in place. Using the \$5.65 projected price, the cash guarantee is \$848 per acre, \$170 per acre higher than the 2013 guarantee.

**Table 1. Crop Insurance Premiums and Guarantees for Revenue Protection (RP) at a \$4.60 Projected Price and a 190 Bushel Per Acre Guarantee Yield, Corn.**

Coverage Level	Farmer-Paid Premium <sup>1</sup>	RP Minimum Guarantee <sup>2</sup>	Minimum Cash Guarantee <sup>3</sup>
	\$ per acre		
50%	0.39	437	408
55%	0.58	481	449
60%	0.93	524	489
65%	1.34	568	530
70%	2.00	612	570
75%	3.83	656	609
80%	7.86	699	646
85%	16.17	743	678

<sup>1</sup> Based on enterprise units (200 acres) for Macon County, \$4.60 projected price, 190 bushel Trend Adjusted yield, 179 bushel APH yield.

<sup>2</sup> Equals coverage level x projected price (\$4.60) x 190 Trend Adjusted yield.

<sup>3</sup> Equals coverage level x (projected price (\$4.60) + basis (-\$.30)) x 190 TA yield - farmer-paid premium.

### Guarantees in relation to costs

The \$678 minimum cash guarantee at an 85% coverage level is well below the total costs of production. The 2014 Illinois Crop Budgets put non-land costs without insurance premium at \$515 per acre (see here). Average cash rents will be around \$300 per acre (see here). Given average cash rents, total costs are \$815 per acre (\$515 non-land costs + \$300 cash rent). Given these costs, farmers would face \$137 of losses (\$815 total costs - \$678 cash guarantee) before crop insurance payments occur at the minimum guarantee. Unless the harvest price exceeds the projected price, farmers will face losses when crop insurance payments occur.

Will farmers lower coverage level? Lowering coverage levels will expose farmers to more downside revenue risk. An 85% coverage level has a \$678 minimum cash guarantee compared to a \$646 minimum guarantee at an 80% coverage level. Moving from an 85% to 80% coverage level exposes farmers to an additional \$32 per acre of losses (\$678 cash guarantee at 85% coverage level - \$646 at an 80% coverage level). Slightly larger increases occur at lower coverage levels: \$37 from 80% to 75%, \$39 from 75% to 70%, and \$40 from 70% to 65%.

It is likely that maintaining high coverage levels is a prudent financial move, particularly for farmers with high levels of cash rent or high debt-to-asset positions. Crop insurance premiums are federally subsidized, causing crop insurance to be an efficient way of providing downside revenue protection.

## References

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*Also available at:*

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