



## Weekly Farm Economics: Crop Insurance in 2012

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Crop insurance could make large payments in 2012 as low yields become increasingly likely as a result of hot, dry growing conditions. Roughly 60% of the corn acres and 50% of soybean acres in Illinois is insured at high coverage levels with revenue products containing guarantee increase provisions. These acres likely will receive large payments if drought conditions continue. After describing crop insurance use in Illinois, potential insurance payments are illustrated.

### Crop Insurance Use in Illinois

Information on 2012 crop insurance purchases is not yet available. However, purchases in 2011 serve as a good guide for 2012 purchases. Following recent trends, acres insured and coverage levels in 2012 likely increased slightly from 2011 levels.

In 2012, 78 percent of the corn acres in Illinois were insured. Of the acres planted, 59 percent were insured with Revenue Protection (RP) and 7 percent were insured with Group Risk Income Plan with the harvest price option (GRIP-HR). These two products accounted for most of the acres insured in Illinois. Both of these products have a guarantee increase provision which causes the guarantee to increase if the harvest price is above the projected price set in the spring, an increasingly likely event if drought causes lower yields which then lead to lower corn supply and higher prices.

When taking RP, most farms used high coverage levels. RP at a 75, 80, and 85 percent coverage level was used to insure 11 percent, 21 percent, and 21 percent of planted acres, respectively. Similarly, most acres insured with GRIP-HR were at a high coverage level. GRIP-HR at the 90% coverage level was used to insure 7 percent of planted acres, while lower coverage levels were used on a minimal number of acres.

These use statistics point to a bimodal distribution of insurance coverage in Illinois. On the one hand, 60% of planted acres were insured with RP at a high coverage level or GRIP-HR at the 90% coverage level. These policies could make large payments if drought conditions lower yields. On the other hand, 40% of the acres were not insured or were insured with products that likely will not make large payments if drought lowers yields.

A similar bipolar distribution exists for soybeans. On the one hand, 51 percent of soybeans were insured

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with a RP at a 75% or higher coverage levels or GRIP-HR at the 90% coverage level. On the other hand, 49 percent of the acres were not insured or where insured with a product not likely to make large payments in a drought year.

## Insurance Payments

The potential for larger insurance payments from RP is illustrated in Table 1, which shows RP payments for an 80 percent coverage level. The policy in Table 1 has a 185 bushel Trend-Adjusted Actual Production History (TA-APH) yield. The projected price for 2012 of \$5.68 is used in the calculations. Payments are estimated using the “What-If” sheet in the 2012 Crop Insurance Decision Tool, a Microsoft Excel spreadsheet available for download in the [FAST section of farmdoc](#).

**Table 1. Per Acre Insurance Payments for a Revenue Protection Policy at an 80% Coverage Level with a 185 Bushel Trend-Adjusted Actual Production History Yield and a \$5.68 Projected Price.**

Harvest Yield	Harvest Price													
	3.80	4.10	4.40	4.70	5.00	5.30	5.60	5.90	6.20	6.50	6.80	7.10	7.40	7.70
85	518	492	467	441	418	390	365	372	391	410	428	447	466	485
95	480	451	423	394	366	337	309	313	329	345	360	376	392	408
105	442	410	379	347	316	284	253	254	267	280	292	305	318	331
115	404	369	335	300	266	231	197	195	205	215	224	234	244	254
125	366	328	291	253	216	178	141	136	143	150	156	163	170	177
135	328	287	247	206	166	125	85	77	81	85	88	92	96	100
145	290	246	203	159	116	72	29	18	19	20	20	21	22	23
155	252	205	159	112	66	19								
165	214	164	115	65	16									
175	176	123	71	18										
185	138	82	27											
195	100	41												
205	62	0												
215	24													

Source: Table generated using 2012 Crop Insurance Decision Tool available for download in the FAST section of farmdoc (www.farmdoc.illinois.edu).

Given drought conditions, harvest price likely will be above the projected price. In the first week of July, prices on the December 2012 Chicago Mercantile Exchange contract – the contract used to determine the harvest price – are in the mid \$6.00 per bushel range, above the \$5.68 projected price. For the situation depicted in Table 1, insurance payments at a \$6.50 harvest price would be \$20 per acre for a 145 bushels per acre harvest yield, \$150 per acre for 125 bushels per acre yield, and \$280 per acre for 105 bushels per acre yield.

In Table 1, boxes are placed around two payments representing the drought years of 1983 and 1988. For these years, the percent deviation in actual yield from trend-line yield in Illinois and the percent change in harvest price from project price were calculated and applied to 2012 conditions. If a year similar to 1983 occurs in 2012, yield would be 125 bushels per acre and projected price would be \$6.80 per bushel. This would result in a \$156 per acre insurance payment for the situation illustrated in Table 1. If a year similar to 1988 occurs in 2012, yield would be 105 bushels per acre and harvest price would be \$7.40 per bushel, resulting in a \$318 per acre insurance payment.

## Summary

Farms that have purchased RP and GRIP-HR products at high coverage levels could receive large crop insurance payments in 2012, thereby offsetting crop revenue losses from lower yields. These farms may not have as low as incomes as might be expected from a yield decline, partially because of insurance payments and also because prices may increase if yields are low, as illustrated [here](#).

Farms that do not have crop insurance at high coverage levels are more at risk for low incomes. However, price increases may offset some of potential decreases in yields. This offset assumes that not much of the 2012 crop has been already priced at what could turn out to be lower prices than during the fall of 2012. As a result, farms that did not purchase crop insurance and have hedged a great deal of the 2012 crop are particularly at risk for lower incomes in 2012.