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2012 Revenue Guarantees Compared to Costs

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Revenue guarantees available from 2012 COMBO plans are compared to costs given that farmland is cash rented. For corn, Revenue Protection (RP) or RP with the harvest price exclusion (RPwExcl) policies at 80% or higher coverage levels will have guarantees that exceed costs given that cash rents are close to average. At higher cash rent levels, guarantees will not be above costs for corn. For soybeans, revenue guarantees will not exceed costs even at ?average? cash rent levels.

Corn Guarantees

Guarantees calculations for corn are shown in Table 1. These calculations begin with the calculation of the guarantees offered by RP and RPwExcl at different coverage levels. These guarantees are then stated on an effective basis, taking into consideration the fact that insurance guarantees are calculated using futures prices rather than cash prices. Also an adjustment is made for the insurance premium.

Table 1 shows guarantees for a central Illinois farm having high productivity farmland. This farm has a 185 bushel Trend-Adjusted Actual Production History (TA-APH) yield. The 2012 projected price for corn is $5.68 per bushel. The insurance guarantee for an 85% coverage level is $893 per acre (see Table 1):

$893 = $5.68 projected price x 185 TA-APH yield x 85% coverage level.

For RP, the guarantee could go higher if the harvest price is above the projected price. Table 1 shows calculations of insurance guarantees from a 50% coverage level up to an 85% level. Guarantees ranges from $525 per acre at a 50% coverage level to an $893 per acre guarantee at an 85% coverage level.

Table 1. Insurance Guarantees for Corn in 2012 Based on a 185 Bushel TA-APH Yield and a $5.68 Projected Price.

Coverage Level	Insurance Guarantee[1]	Cash Guarantee[2]	Insurance Premium[3]	Cash Guarantee Less Premium[4]
	$ per acre			
50%	525	498	0.54	497
55%	578	547	0.78	546
60%	630	597	1.15	596
65%	683	647	1.76	645
70%	736	697	2.73	694
75%	788	746	4.80	741
80%	841	796	10.48	786
85%	893	846	21.32	825

[1] Equals $5.68 projected price x 185 TA-APH yield x coverage level. For RP, this is a minimum guarantee and will increase if harvest price is greater than projected price.

[2] Equals ($5.68 projected price - $.30 basis) x 185 TA-APH yield x coverage level.

[3] RP premium for 2012 based on 400 acre enterprise unit in McLean County.

[4] Cash guarantee minus premium.

Insurance guarantees are stated in terms of futures prices, as both the projected and harvest prices are averages of settlement prices on Chicago Mercantile Exchange futures contracts. Cash prices generally are less than futures prices. Basis has averaged $.30 per bushel over time. To reflect basis, a cash guarantee is calculated. Rather than the projected price, the cash guarantee uses a cash price equal to $5.38, which is $.30 less than the $5.68 projected price. At an 85% coverage level, the cash guarantee is $874 per acre:

$846 = $5.38 cash price x 185 TA-APH yield x 85% coverage level.

Table 1 shows calculations from a 50% coverage level up to 85% coverage level. Cash guarantees range from $498 per acre at a 50% coverage level up to $846 per acre at an 85% coverage level.

Cash guarantee less the insurance premium gives the effective guarantee offered by crop insurance. In Table 1, insurance premiums are for a 400 acre enterprise unit where the unit is located in McLean County. Cash guarantee less premium is $497 for a 50% coverage level, $546 for a 55% coverage level, $596 for a 60% coverage level, $645 for a 65% coverage level, $694 for a 70% coverage level, $741 per acre for a 75% coverage level, $786 per acre for an 80% coverage level, and $825 for an 85% coverage level.

Give $520 non-land costs and $280 cash rent, total costs are $800 per acre. The guarantee at the 85% coverage levels is $825 per acre and exceeds $800 (see Table 1). At a $280 per acre cash rent, revenue guarantees will cover costs for 85% coverage levels.

Given $520 non-land cost, the 85% coverage level will have a guarantee above all costs when cash rent is below $305 per acre ($825 cash guarantee less premium – $520 non-land costs). Some farms will have cash rents above $305 per acre. These farms will not have insurance guarantees that exceed returns.

Soybean Guarantees

Soybean guarantees are calculated in Table 2. The farm has a 55 TA-APH yield and the projected price is $12.55 per bushel. A $.30 basis is used to calculate a cash price. Cash guarantees less premium are $337 per acre for a 50% coverage level, $370 for a 55% coverage level, $403 per acre for a 60% coverage level, $436 for a 65% coverage level, $470 per acre for a 70% coverage level, $501 per acre for a 75% coverage level, $532 per acre for an 80% coverage level, and $558 per acre for an 85% coverage level.

Table 2. Insurance Guarantees for Soybeans in 2012 Based on a 55 Bushel TA-APH Yield and a $12.55 Projected Price.

Coverage Level	Insurance Guarantee[1]	Cash Guarantee[2]	Insurance Premium[3]	Cash Guarantee Less Premium[4]
		$ per acre		
50%	345	337	0.48	337
55%	380	371	0.68	370
60%	414	404	1.03	403
65%	449	438	1.54	436
70%	483	472	2.23	470
75%	518	505	3.64	501
80%	552	539	7.48	532
85%	587	573	15.09	558

[1] Equals $12.55 projected price x 55 TA-APH yield x coverage level. For RP, this is a minimum guarantee and will increase if harvest price is greater than projected price.

[2] Equals ($12.55 projected price - $.30 basis) x 55 TA-APH yield x coverage level.

[3] RP premium for 2012 based on 400 acre enterprise unit in McLean County.

[4] Cash guarantee minus premium.

Non-land costs for soybeans are estimated at $300 per acre. Given $300 per acre of non-land costs, an 85% coverage level will have a guarantee above all costs when cash rent is below $258 per acre ($558 guarantee – $300 cash rent). Many farms will have cash rents that are above $258 per acre. The average cash rent of $280 per acre is above the break-even $258 level.

Summary

Crop insurance will provide protection against downside risks. For average cash rents, corn policies likely will cover all costs when 85% coverage levels are chosen. Farms with cash rents significantly above average will not be able to cover all costs. Soybean polices will not cover all costs.

Calculations above are based on high-productivity farmland. In many cases, results will be similar for lower productivity farmland: corn policies will cover all costs and soybean policies will not cover all costs given that rents are near average. As productivity is lowered, APH yields will decline as will cash rents. Declining APH yields and rents tend to offset each other.

In the above examples, land costs are represented for cash rent situations. Risks will be less for share rent arrangements as land costs vary with revenues. Risks will also be less for farms with high percentages of owned farmland, particularly if land debt is at moderate or low levels. These farms likely will be able to insure that revenue is above costs at lower insurance guarantee levels.

The farmdoc Crop Insurance section with online *iFarm* tools, downloadable Excel-based *FAST* tools and recent publications is available at: http://farmdoc.illinois.edu/cropins/index.asp