



Premiums on Trend-Adjusted APH Endorsements

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The Trend-Adjusted Actual Production History (TA-APH) allows farmers to increase yields used in calculating guarantees for plans within the COMBO product. For the same guarantee level, farmer-paid premiums will almost always be the same or lower using the TA-APH yield endorsement than without the endorsement. This occurs because of differences in subsidy levels across coverage levels.

Example

Premiums with and without the TA-APH yield endorsement are illustrated for a McDonough County farm having an APH yield of 180 bushels. In this example, the TA-APH yield is 192 bushels. The TA-APH yield is higher than the APH because each historical yield is adjusted for a trend increase (see [here](#) for more information). The trend increase for McDonough County is 2.22 bushels. For each year's yield, the 2.22 trend increase times the number of years from 2012 is added to the actual yield to arrive at a trend-adjusted yield used in calculating the TA-APH yield.

Table 1 shows Revenue Protection (RP) premiums with and without the TA-APH yield endorsement. For each coverage level, three items are shown:

1. Bushel trigger. The bushel trigger is the APH or TA-APH yield times the coverage level. For an 80% coverage level, the bushel trigger without the TA-APH endorsement is 144.0 bushels (180 bushels x .80) and with the TA-APH yield is 153.6 bushels (192 bushel TA-APH yield x .80). For RP, payments will occur when actual yield falls below the bushel trigger.
2. Minimum revenue guarantee. The minimum revenue guarantee equals the APH or TA-APH yield times the projected price (\$6.01 in the example) times the coverage level. Insurance payments will occur when revenue fall below the revenue guarantee. For RP, the revenue guarantee may increase if the harvest price is above the projected price. For the 80% coverage level, the minimum revenue guarantee without the TA-APH is \$865 per acre (180 APH yield x \$6.01 projected price x .80) and with the TA-APH yield is \$923 per acre (192 bushel TA-APH yield x \$6.01 projected price x .80).
3. Farmer-paid premium. This is the cost of the premium to the farmer. At the 80% coverage level, the farmer paid premium is \$15.73 per acre without the TA-APH and \$22.31 with the TA-APH endorsement.

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Table 1. Revenue Protection Premiums for Corn in McDonough County, Illinois, 2012.¹

Coverage Level	Without TA-APH (180 APH)			With TA-APH (192 TA-APH)		
	Bushel Trigger	Revenue Guarantee	Farmer-Paid Premium	Bushel Trigger	Revenue Guarantee	Farmer-Paid Premium
	Bu/acre	\$/acre	\$/acre	Bu/acre	\$/acre	\$/acre
50%	90.0	541	1.05	96.0	577	1.41
55%	99.0	595	1.69	105.6	635	2.27
60%	108.0	649	2.45	115.2	692	3.24
65%	117.0	703	3.47	124.8	750	4.68
70%	126.0	757	5.00	134.4	808	6.95
75%	135.0	811	8.03	144.0	865	11.31
80%	144.0	865	15.73	153.6	923	21.23
85%	153.0	920	31.06	163.2	981	41.59

¹ For a 350 acre enterprise unit using a 180 bu. APH, 192 TA-APH, a \$6.01 projected price, and a .29 volatility

Same Guarantee

In Table 1, note that the 80% coverage level without the TA has exactly the same bushel trigger and minimum revenue guarantee as the 75% coverage level with the TA-APH endorsement. In both cases, the bushel trigger is 144.0 bushels and the minimum guarantee is \$865 per acre. The 80% coverage level without the TA-APH endorsement and the 75% coverage level with the TA-APH yield endorsement provide the same coverage. While the policies provide the same coverage, farmer-paid premiums differ. The 80% without TA-APH endorsement has a \$15.73 per acre premium compared to an \$11.31 per acre premium for the 75% coverage level with the TA-APH endorsement.

Premium differences result from differences in risk subsidies across coverage levels. Both of the 80% non-TA-APH and the 75% TA-APH endorsement have the same total premium of \$49.16 per acre. For enterprise units, the subsidy levels are:

- 80% for coverage levels of 70% and below,
- 77% for the 75% coverage level,
- 68% for the 80% coverage level, and
- 53% for the 85% coverage level.

The non TA-APH endorsement at an 80% coverage level uses a 68% subsidy level, resulting in a farmer-paid premium of:

$$\$15.73 - \$49.16 \times (1 - .68 \text{ subsidy rate})$$

The TA-APH yield endorsement uses the 75% coverage level subsidy of 77% resulting in a subsidy of

$$\$11.31 = \$46.16 \times (1 - .77 \text{ subsidy rate})$$

Lower premiums will result for the same guarantee when use of the TA-APH results in coverage level with higher subsidy levels. When coverage levels are 70% and below, there are no differences in subsidy rates for enterprise units, and no difference in premiums for the same guarantee level.

Premium quoting procedures are complex and in some instances total premiums between the non-TA and TA-APH endorsement differ slightly from one another. RMA caps movements of premium from one year to the next, causing non-TA and TA premiums to vary from one another. We have not found

instances in Illinois where farmer-paid premiums for TA endorsement are higher than for the non-TA-APH product at a similar coverage level.

Summary

The TA-APH yield endorsement causes the yield used in guarantees to more closely match expected yield. This aids in risk management. It also causes subsidy levels to be more equitably matched across crop with high trends (i.e., corn) and other crop with lower trends. Corn farmers would have to take higher coverage levels to have the same protection relative to expected production compared to lower trending crops, resulting in a lower subsidy level.