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Ag Decision Maker

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Trend-Adjusted Actual Production History (APH)

Many farmers feel that the 10-year average Actual Production History (APH) yields used to determine their multiple peril crop insurance guarantees do not accurately reflect their current yield potential, due to improved crop genetics and cultural practices that have been introduced in recent years. Moreover, farms with the maximum 10 years of yield history were penalized compared to farms with fewer years. A new feature called the Trend-Adjusted APH will address this concern, starting in the 2012 crop year.

Yield Trend Factors

Trend-Adjusted APH has been approved by the Federal Crop Insurance Corporation (FCIC) Board for both corn and soybeans in most of the Corn Belt, including all counties in Iowa. Basically, a trend adjustment factor is estimated for each crop and county. This factor is equal to the estimated annual increase in yield, and is based on county average yields determined by the National Agricultural Statistics Service (NASS) each year. The trend adjustment factors for corn and soybeans in each Iowa county are shown in Table 1 and Figure 1. Each yield reported in the individual insurance unit's APH history is adjusted upward by the trend adjustment factor, times the number of years that have passed since the yield was recorded.

The example shows an insurance unit with 10 years of yield history for corn and an average yield of 163 bushels per acre. Assume that the trend adjustment factor in the county where the unit is located is 2.0 bushels per acre per year. So, 2.0 bushels are added to each yield for every year since it was recorded. Adjustments range from 2.0 bushels for the immediate past year to 20.0 bushels for a yield that was recorded 10 years ago. The adjusted APH yield is now the average of the adjusted yields, 174 bushels per acre, instead of the unadjusted average of 163 bushels per acre. That is the yield that will be used to calculate the crop insurance guarantee for that unit in 2014.

Premiums

If the same percent guarantee is chosen, the dollar value of coverage will be increased and the premium paid by the farmer will be slightly higher. As an alternative, the producer can elect a lower percent guarantee for approximately the same dollars of coverage. The total premium would be the same as before, but the farmer's share of the premium would be smaller because the percent subsidy from the USDA is higher for lower percent guarantee levels.

Example 1. Trend-Adjusted Actual Production History Yield Example

Year	Reported Yield, bu./ac	Yield Adjustment, bu./ac	Adjusted Yield, bu./ac
2004	133	20	153
2005	145	18	163
2006	167	16	183
2007	122	14	136
2008	157	12	169
2009	165	10	175
2010	171	8	179
2011	193	6	199
2012	176	4	180
2013	197	2	199
Average	**163**		**174**

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Yield Cap

A maximum or cap will be applied to the trend-adjusted average yield. The cap is equal to the highest yield in the years of yield history for the unit, plus the annual trend adjustment. Thus, in the example above the highest yield is 197 bushels per acre (2013), so the cap would be equal to 197 bushels plus 2 bushels, or 199 bushels per acre. This is higher than the average trend-adjusted yield, so the cap is not applicable. The cap will most likely apply in cases where an insurance unit has had very stable or declining yields over time.

Missing Years

In some cases the land in the insurance unit may not have an actual yield for every year, either because the crop was not planted that year, or no production records were available. The unit must have an actual yield for at least one year out of the last four to be eligible for the yield trend adjustment. If actual yields are available for fewer than 4 years in the last 12, the annual trend adjustment factor is reduced. For 3 years of actual yields, yields are increased by only 75% of the trend factor; for 2 years of actual yields, yields are increased by 50% of the trend factor; and for one year of actual yields, yields are increased by 25% of the trend factor. So, if the yield adjustment factor for the county is 2.0, the actual adjustment would be 1.5 bushels when 3 years of actual yields are available, 1.0 bushels when 2 years of actual yields are available, and 0.5 bushels when one year of actual yields is available.

Not Available for CAT, or ARPI Products

The Trend-Adjusted APH is available for either yield protection or revenue protection policies, at all levels of guarantee except catastrophic (CAT) coverage (50% yield guarantee). Group policies, such as Area Risk Protection Insurance (ARPI) Products, have used trend adjusted county yields since they were introduced, and that procedure will not change. The Trend-Adjusted APH election must be made by the insured producer by the sales closing date each year, which is March 15 for soybeans and corn in Iowa.

Figure 1. Trend Adjustment Factors for APH Crop Insurance Yields in 2014, Bu./acre/year
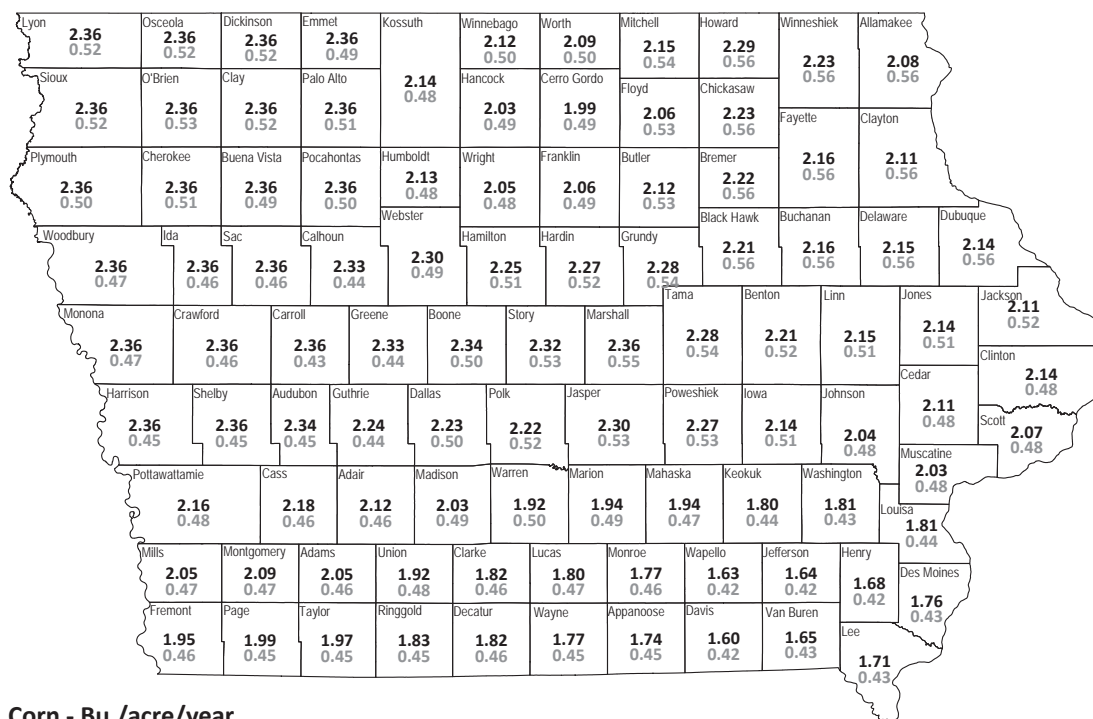
Corn - Bu./acre/year
Soybeans - Bu./acre/year

Table 1. Trend Adjustment Factors for APH Crop Insurance Yields in 2014, bu./acre/year

County	Corn	Soybean	County	Corn	Soybean	County	Corn	Soybean
Adair	2.12	0.46	Floyd	2.06	0.53	Monona	2.36	0.47
Adams	2.05	0.46	Franklin	2.06	0.49	Monroe	1.77	0.46
Allamakee	2.08	0.56	Fremont	1.95	0.46	Montgomery	2.09	0.47
Appanoose	1.74	0.45	Greene	2.33	0.44	Muscatine	2.03	0.48
Audubon	2.34	0.45	Grundy	2.28	0.54	O'Brien	2.36	0.53
Benton	2.21	0.52	Guthrie	2.24	0.44	Osceola	2.36	0.52
Black Hawk	2.21	0.56	Hamilton	2.25	0.51	Page	1.99	0.45
Boone	2.34	0.50	Hancock	2.03	0.49	Palo Alto	2.36	0.51
Bremer	2.22	0.56	Hardin	2.27	0.52	Plymouth	2.36	0.50
Buchanan	2.16	0.56	Harrison	2.36	0.45	Pocahontas	2.36	0.50
Buena Vista	2.36	0.49	Henry	1.68	0.42	Polk	2.22	0.52
Butler	2.12	0.53	Howard	2.29	0.56	Pottawattamie	2.16	0.48
Calhoun	2.33	0.44	Humboldt	2.13	0.48	Poweshiek	2.27	0.53
Carroll	2.36	0.43	Ida	2.36	0.46	Ringgold	1.83	0.45
Cass	2.18	0.46	Iowa	2.14	0.51	Sac	2.36	0.46
Cedar	2.11	0.48	Jackson	2.11	0.52	Scott	2.07	0.48
Cerro Gordo	1.99	0.49	Jasper	2.30	0.53	Shelby	2.36	0.45
Cherokee	2.36	0.51	Jefferson	1.64	0.42	Sioux	2.36	0.52
Chickasaw	2.23	0.56	Johnson	2.04	0.48	Story	2.32	0.53
Clarke	1.82	0.46	Jones	2.14	0.51	Tama	2.28	0.54
Clay	2.36	0.52	Keokuk	1.80	0.44	Taylor	1.97	0.45
Clayton	2.11	0.56	Kossuth	2.14	0.48	Union	1.92	0.48
Clinton	2.14	0.48	Lee	1.71	0.43	Van Buren	1.65	0.43
Crawford	2.36	0.46	Linn	2.15	0.51	Wapello	1.63	0.42
Dallas	2.23	0.50	Louisa	1.81	0.44	Warren	1.92	0.50
Davis	1.60	0.42	Lucas	1.80	0.47	Washington	1.81	0.43
Decatur	1.82	0.46	Lyon	2.36	0.52	Wayne	1.77	0.45
Delaware	2.15	0.56	Madison	2.03	0.49	Webster	2.30	0.49
Des Moines	1.76	0.43	Mahaska	1.94	0.47	Winnebago	2.12	0.50
Dickinson	2.36	0.52	Marion	1.94	0.49	Winneshiek	2.23	0.56
Dubuque	2.14	0.56	Marshall	2.36	0.55	Woodbury	2.36	0.47
Emmet	2.36	0.49	Mills	2.05	0.47	Worth	2.09	0.50
Fayette	2.16	0.56	Mitchell	2.15	0.54	Wright	2.05	0.48