

# Proven Yields and Insurance Units for Crop Insurance

The first step in developing a crop risk management program for a farm is to establish the proven yield and unit structure. The actual production history yield (APH) is used to set the guarantees under all of the Federal Crop Insurance Corporation (FCIC) backed insurance plans except for the Area Risk Protection Insurance (ARPI) Products. True risk protection must be based on the farm's production potential. Providing historical yield records is the most realistic method of estimating it.

## Actual Production History

Proving an APH yield requires records for a minimum of four years and a maximum of ten years for each insurance unit. Information used to prove crop yields includes sale receipts, farm or commercial storage records, and feed consumption records. The records must be for continuous years, starting with the most recent year and continuing back in time. Once a missing year is reached, no history prior to that date may be used. For example, if a producer has nine years of production records spanning a ten-year period, only the years after the missing one are counted, i.e., if 1 year of data, from 6 years ago, is missing, only the most recent 5 years of records

are used. It is not allowed to drop a yield from one year because of poor production in that year. An exception can be made if the crop being insured was not planted in a certain year. In that case, a zero acreage report is submitted and continuous records are maintained even without data for that year. This is important for growers who rotate crops and those who have summer fallow acres that are normally not planted to the same crop continuously.

## Transition Yields

If at least four successive years of records are not available, a transition or T yield for each missing year must be substituted. Each county has a different T yield. It is based on the 10-year historical county average yield. Growers with no records are assigned 65 percent of the T yield as their APH yield (see Example 1). Growers with a record for one year receive 80 percent of the T yield for the other three years. With two records, they receive 90 percent of the T yield, and with three records, they receive 100 percent of the T yield for the one remaining year needed to calculate the APH. Once each year has been assigned a yield, the APH is just a simple average of the four yields.

### Example 1. Calculating an APH yield

This is how the APH yield would be calculated for a farm in a county with a transitional T yield of 160 bushels of corn.

	No records	1 Year of records	2 Years of records	3 Years of records	4 Years of records
<b>Year 1</b>	160 bushels x 65% = 104 bushels	208 bushels	208 bushels	208 bushels	208 bushels
<b>Year 2</b>	160 bushels x 65% = 104 bushels	160 bushels x 80% = 128 bushels	157 bushels	157 bushels	157 bushels
<b>Year 3</b>	160 bushels x 65% = 104 bushels	160 bushels x 80% = 128 bushels	160 bushels x 90% = 144 bushels	138 bushels	138 bushels
<b>Year 4</b>	160 bushels x 65% = 104 bushels	160 bushels x 80% = 128 bushels	160 bushels x 90% = 144 bushels	160 bushels x 100% = 160 bushels	177 bushels
<b>APH yield</b>	104 bushels	148 bushels	163 bushels	166 bushels	170 bushels

If only a few years of yield records exist, the APH yield may be considerably below the actual expected yield because of the reduced T yields. In that case, buying an ARPI Product may be a good strategy, since ARPI Product guarantees are based on county yields rather than individual farm yields. This could provide a higher level of protection while the farm builds records to establish a realistic APH yield.

A new farmer or one who has never planted the crop to be insured will receive 100 percent of the T yield for the APH. If the crop continues to be planted for four years, the T yields will be replaced with the actual production each year. New producers who have previously been closely associated with farming a particular unit, such as children taking over a family farm, can use the previous operator's records to establish an APH yield.

Once four years or more of production history are available, the APH is the simple average of all of the yearly reported yields. The four years of history will eventually build to ten years. After ten years of history are reached, the APH becomes a moving ten-year average yield. As each new year of production history is added, the oldest record is dropped out of the calculation.

### **Cup and Floor**

When a new yield record is added to the APH history, the APH has a cup of 10 percent, that is, the proven yield is not allowed to decline by more than 10 percent in one year.

The APH also has a floor equal to 70 percent of the T yield for growers with only a one-year record. Growers with two to four years of yield records have a floor equal to 75 percent of the T yield, while growers with five or more yield records have an 80 percent of T yield floor. This prevents a year in which a producer has a severe crop failure from having a disproportionately large influence on the APH yield, especially when only a few years of yield records are available.

Producers also can request that a low yield for a particular year be replaced with a yield equal to 60 percent of the county T yield. Operators who qualify as beginning farmers can replace a low yield with 80 percent of the county T yield. In effect, this becomes the minimum reported yield. This adjustment can be requested for any past year used to calculate the APH yield.

Although the APH yield is usually just a simple average of the production history for each insurance unit, a grower who enters farming, adds new land, plants a new crop, or has a crop failure can cause one or more of the special provisions to be implemented. Therefore, it is a good idea to establish the APH for each insurance unit with a licensed crop insurance agent long before the sign-up date. Even for the catastrophic level of coverage, an APH value for each farm unit is needed.

### **Insurance Units**

Each parcel of land that is insured independently of other parcels is called a unit. One farming operation can have several insurance units. It is possible to be hailed out on one unit and receive an indemnity payment, while other units on the same farm produce a record crop. Consequently, many farmers like to divide their land into as many units as possible. Of course, this may result in higher premiums on each one.

### **Basic Units**

Producers can designate a basic unit for all tracts of land they own and/or cash rent within a county. They also receive one basic unit for all of the land they share rent with a different landlord. For example, if a crop is planted on land rented under a crop share lease with Mr. Smith (Farms B & E), a cash rent lease with Mrs. Jones (Farms C & D), and a crop share lease with Black, Inc. (Farm G), and the remaining crop land is owned (Farms A & F), the acreage would qualify as three basic units (see Example 2). There would be one basic unit with each crop share owner, and one basic unit for the cash rented and owned land combined. Each crop share landowner can also insure his/her own interest in the crop as a separate unit.

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Each different crop also creates a separate unit, and tracts of land in different counties must be insured as separate units. Each crop can have a different type of policy and level of coverage, and could receive an indemnity payment independent of the other units. Separate production records must be kept for each basic unit. Insuring all acres as basic units entitles producers to a 10 percent discount on their premiums.

**Optional Units**

If the four farms discussed above were all owned or rented under a cash lease, they would qualify for only one basic unit for each crop. However, if the four farms were located in four different township sections, the operator could elect to insure them as four separate optional units. Separate actual production history (APH) records must be reported for each optional unit and the operator would not receive the 10 percent premium discount.

Optional units may also be designated when a crop is being grown under distinctly different farming practices. For example, a grower with both irrigated and dryland acres of the same crop may qualify for optional units. There must be an obvious break between the irrigated and dry land acres, however. Other special farming practices may qualify acres to be insured as separate units.

**Enterprise Units**

Both Yield Protection (YP) and Revenue Protection (RP and RP-HPE) policies offer enterprise units as an option. An enterprise unit combines all acres of a single crop within a county in which the policyholder has a financial interest into a single unit, regardless of whether they are owned or rented, or how many landlords are involved. For example, corn-soybean growers could have just two enterprise units for all their land, a corn enterprise unit and a soybean enterprise unit. To be an enterprise unit, two or more basic units must be combined. The crop must be grown in at least two township sections within a county, and at least two of the sections must have the smaller of 20 acres or 20 percent of the total area of that crop.

Since the enterprise units are usually larger than basic units or optional units, it is less likely that the average yield will be low enough to trigger an indemnity payment in a given year. Consequently, premiums are usually lower for enterprise units. In addition, they receive the same dollar subsidy as basic units, which results in a higher percent subsidy (see Table 1).

**Table 1. Premium subsidy rates by level of coverage and units**

Coverage level	Basic and Optional Units	Enterprise Units	Whole Farm Units
50%	67%	80%	80%
55%	64%	80%	80%
60%	64%	80%	80%
65%	59%	80%	80%
70%	59%	80%	80%
75%	55%	77%	80%
80%	48%	68%	71%
85%	38%	53%	56%

Source: Shields, D. 2015. "Federal Crop Insurance: Background." CRS Report for Congress, Congressional Research Service, 7-5700, R40532. Washington, DC.

**Whole Farm Unit**

Growers who are willing to combine both their corn and soybean acres into a single insurance unit can gain an additional premium discount. This is called a whole farm unit. The amount of the discount will depend on the proportion of the total acres planted to each crop. Growers planting an equal number of corn and soybean acres qualify for the largest whole farm unit premium discount. The premium subsidy is also higher for whole farm units, at higher levels of coverage. Whole farm units are available only for Revenue Protection, both RP and RP-HPE.

All producers should check with an informed crop insurance representative when making decisions about insurance units for their crops.

**Example 2. Insurance units**

Farm A owned  Township Section 1	Farm B 50 - 50 crop share lease from Smith	Farm D cash rent lease from Jones	Township Section 2
	Farm C cash rent lease from Jones	Farm E 50 - 50 crop share lease from Smith	
Farm F owned		Farm G 60 - 40 crop share lease from Black	
Township Section 12		Township Section 11	

**Example:** Farms A, B, C, D, E, F, and G are all farmed by the same operator, and planted to the same crop.

**Basic units**

This operation would qualify for three basic units.  
 Unit 1 includes Farms A, C, D, and F (all owned or cash rented).  
 Unit 2 includes Farms B and E (both crop share rented from Smith).  
 Unit 3 includes Farm G (crop share rented from Black).

**Optional units**

This operation would qualify for six optional units.  
 Unit 1 includes Farms A and C (owned or cash rented in Section 1).  
 Unit 2 includes Farm B (crop share rented in Section 1).

Unit 3 includes Farm D (cash rented in Section 2).  
 Unit 4 includes Farm E (crop share rented in Section 2).  
 Unit 5 includes Farm F (owned in Section 12).  
 Unit 6 includes Farm G (crop share rented in Section 11).

**Enterprise units**

This operation would qualify for one enterprise unit, including all the farms shown. If more than one crop was being grown, or if some farms were located in a different county, additional enterprise units could be designated.

**Whole farm unit**

If both corn and soybeans were being grown on the farms shown, all acres could be combined into a single whole farm unit. Additional whole farm units could be designated in other counties.

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