

Insurance against poor crop yields has been available for many years. However, income from crop production can be low even when yields are not. A risk management tool known as crop revenue insurance addresses this problem.

Revenue insurance guarantees a certain level of revenue rather than just production. It protects you from declines in both crop prices and yields. The guarantee is based on market prices and the actual yield on your farm.

Types of Revenue Insurance

The following four types of revenue insurance are currently being sold in Iowa:

- Crop Revenue Coverage (CRC)
- Revenue Assurance (RA)
- Income Protection (IP)
- Group Risk Income Protection (GRIP)

Income Protection is available for both corn and soybeans, but only in Adair, Audubon, Cass, Dallas, Guthrie, and Shelby Counties in Iowa. On the other hand, CRC, RA, and GRIP are available in all Iowa counties for both corn and soybeans.

Yield Coverage Levels

In general, yield coverage for revenue insurance is the same as for traditional Actual Production History insurance (APH). The production portion of the revenue guarantee is based on your Actual Production History (APH). This is an historic average of your actual yields. An explanation of how your APH yield is determined can be found in *Ag Decision Maker File A1-55/FM 1860 Proven Yields and Insurance Units for Crop Insurance*.

The yield levels used to calculate the CRC revenue guarantee range from 50 percent to 85 percent of the APH yield, in 5 percent increments. The yield levels available for RA range from 65 percent to 85 percent, also in 5 percent increments.

Crop Revenue Coverage

Crop Revenue Coverage uses Chicago Board of Trade futures market prices and your APH yields to compute your revenue coverage and guarantee. A base market price is determined during February by using the monthly average new-crop futures prices for corn (December futures contract) or soybeans (November futures contract).

A harvest market price is determined by averaging the new crop futures prices during October for both corn and soybeans. The final revenue guarantee is computed by multiplying the higher of either the base market price or the harvest market price by the APH yield for your farm, by your chosen coverage level (50 to 85 percent).

Your actual revenue for insurance purposes is computed by multiplying your actual yield by the harvest market price described above. You will receive an insurance payment if your actual revenue falls below your revenue guarantee. The payment is equal to the difference.

Base market price

- *Corn* - Average of December futures contract price during February.
- *Soybeans* - Average of November futures contract price during February.

Harvest market price

- *Corn* - Average of December futures contract price during October
- *Soybeans* - Average of November futures contract price during October

Revenue guarantee

- Higher of base market price or harvest market price x APH yield x coverage level chosen

Actual revenue

- Actual harvested yield x harvest market price

Indemnity payment

- Amount by which the revenue guarantee exceeds the actual revenue, if any

Revenue Assurance

Revenue Assurance (RA) policies are written in a manner similar to CRC, with two important differences. First, the standard RA policy contains the base price (BP) option, in which the level of the revenue guarantee is determined solely by the February futures prices, and does not increase even if the futures price rises by harvest. The producer may elect to purchase RA insurance with the harvest price option (HPO), under which the revenue guarantee does increase if the harvest price is higher than the February price, just as it does under CRC. The HPO option carries a higher premium than the BP option.

Second, RA uses the average price of the December corn futures contract in November instead of October for the harvest price.

Income Protection

The revenue guarantees, actual revenues, and indemnity payment for an Income Protection (IP) policy are computed in the same manner as for a RA policy using the base price option. The only difference in coverage is that IP is available only for enterprise units. All the policyholder's acres for the insured crop that are located in the same county are included in a single policy. This reduces the premiums, but requires losses to be more widespread before an indemnity payment is made.

Income protection offers coverage levels of 50 to 85 percent of expected gross revenue.

Group Risk Income Protection

Group Risk Income Protection policies are based on futures prices and county average yields, rather than individual farm yields. *Ag Decision Maker File A1-58/FM 1850 Group Risk Plan (GRP) and Group Risk Income Protection (GRIP)* contains more details.

Revenue Insurance Examples

The three examples that follow compare CRC and RA-HPO coverage with RA-BP and IP coverage. The average December corn futures price during

February is \$4. The APH yield is 160 bushels per acre, and the coverage level chosen is 75 percent. Thus, the revenue guarantee is \$480 (\$4 x 160 bu. x 75%) per acre. Remember that the CRC and RA-HPO guarantee will increase if the futures price increases from February to harvest.

In Example 1, the December futures price declines to \$3.20 at harvest. The actual yield is only 130 bushels. The estimated actual revenue of \$416 is computed by multiplying the harvest price by the actual yield. Subtracting the estimated actual revenue from the revenue guarantee results in an insurance payment of \$64 per acre under either policy type.

Example 1. Lower price, lower yield

	CRC and RA-HPO	RA-BP and IP
February futures price	\$4	\$4
APH yield	160 bu.	160 bu.
Chosen coverage level	75%	75%
Revenue guarantee	\$480 (\$4 x 160 x 75%)	\$480 (\$4 x 160 x 75%)
November futures price	\$3.20	\$3.20
Actual yield	130 bu.	130 bu.
Actual revenue	\$416 (\$3.20 x 130)	\$416 (\$3.20 x 130)
Insurance payment	\$64 (\$480-416)	\$64 (\$480-416)

In Example 2, the futures price still declines to \$2.50, lower than in the first example. However, the actual yield is now 160 bushels, equal to the APH yield. Actual revenue is 160 bushels multiplied by the harvest price of \$2.50, or \$400 per acre. Subtracting the actual revenue from the revenue guarantee results in insurance payments of \$80 for both types of policies. Note that because of the lower prices an insurance payment was made, even though the actual yield did not fall below the APH yield.

Example 2. Lower price, normal yield

	CRC and RA-HPO	RA-BP and IP
February futures price	\$4	\$4
APH yield	160 bu.	160 bu.
Chosen coverage level	75%	75%
Revenue guarantee	\$480	\$480
	(\$4 x 160 x 75%)	(\$4 x 160 x 75%)
November futures price	\$2.50	\$2.50
Revenue guarantee	\$480	\$480
Actual yield	160 bu.	160 bu.
Actual revenue	\$400	\$400
	(\$2.50 x 160)	(\$2.50 x 160)
Insurance payment	\$80	\$80
	(\$480-400)	(\$480-400)

In Example 3, the futures price increases to \$5 at harvest. Note that the revenue guarantee increases to \$600 for CRC and RA-HPO because of the higher harvest price. The actual yield is 110 bushels and the actual revenue is \$550. The insurance payment is \$50 for CRC and RA-HPO, and zero for RA-BP and IP. There is a payment for CRC and RA-HP because of the increase in the revenue guarantee.

Example 3. Higher price, low yield

	CRC and RA-HPO	RA-BP and IP
February futures price	\$4	\$4
APH yield	160 bu.	160 bu.
Chosen coverage level	75%	75%
Revenue guarantee	\$480	\$480
	(\$4 x 160 x 75%)	(\$4 x 160 x 75%)
November futures price	\$5	\$5
Revenue guarantee	\$600	\$480
	(\$5 x 160 x 75%)	(\$4 x 160 x 75%)
Actual yield	110 bu.	110 bu.
Actual revenue	\$550	\$550
	(\$5 x 110)	(\$5 x 110)
Insurance payment	\$50	\$0
	(\$600-550)	

The increased coverage when prices increase into

harvest is especially useful for producers who normally forward price much of their production before harvest. If they harvest fewer bushels than they forward price, the increased guarantee provides an indemnity payment that will offset the cost of purchasing the deficit bushels at a market price above the price at which they were forward contracted. It is also useful for livestock producers who have to purchase extra grain in a short crop year, often at a high price.

Maximum Price Movements

The harvest market price used to set the guarantee cannot be more than 100 percent above the base market price established in February - that is, double. This rule applies to all the revenue insurance products as of 2009, for all crops.

Premiums

The premiums for all types of revenue insurance are subsidized through the Federal Crop Insurance Corporation, just as traditional APH premiums are. The premium for a CRC policy is calculated using the base market price. If the harvest market price is higher, the amount of insurance coverage increases but the premium does not change. The possibility of increased coverage has already been built into the premium structure. On the other hand, RA offers the increased harvest price coverage as an optional feature, for a higher cost than the base plan policy.

Estimated premiums for CRC, RA, and IP policies can be obtained from a crop insurance agent or at the following internet site:

www.farmdoc.uiuc.edu/cropins/.

Coverage Units and Discounts

Both CRC and RA are available with basic and optional coverage, just like APH.

Coverage for both RA and CRC is also available as enterprise units. IP offers only enterprise units.

With enterprise unit coverage, all of the acres of the enterprise (crop) in a county are insured as a single unit. Discounts are available based on the number of sections of land on which the insured crop is planted. For example, corn grown on nine or more sections of land has a discount of 26 percent under RA. Similarly, a discount of 44 percent is available for soybeans.

Revenue Assurance also offers whole farm coverage. With whole farm coverage, all acres of both crops (corn and soybeans) insured in a county are covered under one insurance unit. Whole farm discounts are greatest (20 percent) when corn acres are 40 to 50 percent of the total acreage. The guaranteed revenue and actual revenue levels are an average for the two crops, weighted by the number of acres in each crop.

For example, if the revenue guarantee is \$450 per acre for corn and \$400 for soybeans, the per acre whole farm revenue guarantee for a 50/50 corn-soybean rotation is $(450 + 400)/2 = \$425$. For a corn-corn-soybean rotation, the whole farm guarantee is $(450 + 450 + 400)/3 = \$433$. An insurance payment is made when the combined per acre corn and soybean revenue falls below the whole farm guarantee. More details about coverage units can be found in *Ag Decision Maker File A1-55/FM 1860 Proven Yields and Insurance Units for Crop Insurance*.

Late Planted, Prevented Planting, and Replanting Losses

Late planted, prevented planting, and replanting losses for both CRC and RA will be adjusted in the same manner as APH losses. See *Ag Decision Maker File A1-57/FM 1859 Delayed and Prevented Planting Provisions*. Any late planting or prevented indemnity for CRC or RA-HPO will be based on the higher of the base market price or the harvest market price. However, only the base market price is used to determine replanting payments.

Exclusions

The prevented planting coverage feature can be excluded from either revenue insurance policy. However, hail and fire coverage cannot be excluded.

Summary

Revenue insurance protects you from the combined effects of yield and price risk. It is a valuable tool for reducing year-to-year income variability. A variety of coverage levels and options are available, which allows you to design the protection you want for your own operation.

... and justice for all

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