# MANAGING RISK WITH CROP INSURANCE

Every year Iowa farmers face the threat of damage to their crops from drought, hail, flood, insects, and other natural disasters. The Federal Crop Insurance Corporation (FCIC) and private crop insurance venders have developed a set of insurance programs to help control crop production risks at a reasonable cost. Crop insurance coverage is not mandatory, but it does provide a financial safety net in case of severe production losses.

Crop producers in Iowa can choose from among the following types of crop insurance:

- Multiple Peril Crop Insurance
- Catastrophic Insurance
- Group Risk Plan
- Crop Revenue Insurance
- Supplemental Coverage

**Multiple Peril Crop Insurance**

Multiple Peril Crop Insurance (MPCI) protects against production losses from a wide range of natural causes. Producers can choose to insure their crops at 50, 55, 60, 65, 70, or 75 percent of their actual production history (APH) yield. These bushels can be insured at a price ranging from 60 percent to 100 percent of the FCIC expected market price each year.

If the farm's actual yield is less than the guaranteed yield, the MPCI payment is equal to the production deficit multiplied by the price election.

Premiums increase in direct proportion to the price coverage level selected, and at an increasing rate for higher yield guarantees. The level of government subsidy of the MPCI premiums ranges from 100 percent at the lowest yield and price coverage level to just over 23 percent at the maximum coverage level.

Prevented and delayed planting provisions have been very important to Iowa producers in recent years. When planting is delayed, the level of the yield guarantee on the insured crop is reduced by 1 percent per day for the first 10 days, then by two percent per day for the next 15 days. Delayed planting provisions take effect after May 31 for corn and June 15 for soybeans.

If no crop at all can be planted (prevented planting), the guarantee remains at 60 percent of the original level. Prevented planting provisions apply after June 25 for corn and July 10 for soybeans. Prevented and delayed planting coverage can be excluded in exchange for a reduction in premiums. Prevented planting coverage can also be raised to 65 or 70 percent of the original level, for an added premium.

For more detailed information on MPCI crop insurance see ISU Extension publication FM-1826, *Multiple Peril Crop Insurance*.

**Catastrophic Insurance**

Catastrophic insurance (CAT) is a minimum coverage MPCI policy that protects against yield losses in excess of 50 percent of the APH yield. Losses are paid at the rate of 60 percent of the FCIC expected market price.

The farmer pays no premium for CAT, but there is a $50 processing fee for each crop and farm unit insured. Small policy holders who have a total coverage guarantee of less than $500 for a crop are exempt from paying the processing fee. For corn and soybean producers this amounts to about five acres of production.

CAT offers partial protection against significant crop failures at a low cost, and is a useful option for producers with high risk-bearing ability. It replaces the ad hoc crop disaster programs offered by USDA in the past. For more information about CAT insurance see ISU Extension publication FM-1852, *Catastrophic Crop Insurance*.

**Group Risk Plan**

Group Risk Plan (GRP) insurance protects producers against a widespread crop failure. If the average yield for the county

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Ames, Iowa

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in which the insured crop is located falls below the insured level chosen, the producer receives a payment, regardless of the farm's individual yield.

Guarantees of up to 90 percent of the long-term expected county yield can be purchased. Rather than selecting a price guarantee, the producer selects a dollar value of coverage per acre. The maximum dollar value that can be chosen is equal to 150 percent of the guaranteed county yield multiplied by the current FCIC expected market price. Premiums increase in direct proportion to the dollar coverage selected, and at an increasing rate for higher yield coverage levels.

The GRP policy generally has lower premiums than comparable MPCI coverage, and does not require any farm production history. This makes it attractive to producers who do not have production records. Producers whose farm yields closely follow the year-to-year pattern of the county averages receive the most risk protection from GRP. Because payments are not based on individual farm yields, however, some short-term yield risk remains. Generally, GRP will result in smaller, but more frequent indemnity payments.

Supplemental insurance for localized hazards such as hail is a good complement to the Group Risk Plan policy. For more information about GRP insurance see ISU Extension publication FM-1850, *Group Risk Plan: A New Crop Insurance Program.*

**Crop Revenue Insurance**

Revenue insurance protects against reductions in both price and yield rather than yield alone. Three different revenue insurance plans are available to Iowa producers.

**Crop Revenue Coverage** (CRC) is available for both corn and soybeans in Iowa. Part of the revenue guarantee is based on the APH yield, just as for an MPCI policy. However, the insurable price level is equal to 95 or 100 percent of the average new crop futures market price during the month of February rather than the FCIC expected price. The insurable price times the APH yield times the level of coverage chosen equals the gross income guarantee. Coverage options are 50, 55, 60, 65, 70, and 75 percent.

If prices for the insured crop are higher by harvest time, the revenue guarantee increases accordingly, with no additional premium. The maximum increase in the insurable price is $1.50 per bushel for corn and $3.00 per bushel for soybeans. The revenue guarantee cannot be lowered.

If the producer's actual gross revenue, calculated as the actual yield times 95 or 100 percent of the new crop futures price at harvest, is below the insured level an indemnity payment equal to the difference is paid. Thus, indemnity payments can be triggered by various combinations of low prices and low yields.

A similar plan, called **Income Protection,** is available in certain Iowa counties for corn and soybeans. The Income Protection plan uses 100 percent of the new crop futures prices during February to set the level of gross income protection, but protection levels do not increase if prices rise by harvest. It insures all of a producer's corn acres as a single unit, whereas the CRC plan allows separate units for farms in different townships.

A third revenue insurance plan, called **Revenue Assurance** (RA), also guarantees a minimum gross income per acre for corn or soybeans. However, the price used to calculate the income guarantee is the average of the new crop futures price in February minus the historical difference between the futures price at harvest and the Farm Service Agency (FSA) posted county price at harvest. This difference ranges from $.20 to $.40 per bushel for most Iowa counties. The yield levels used to calculate the guaranteed revenue per acre can range from 65 to 75 percent of the APH yield.

The fall price used to calculate the actual revenue is the FSA posted market price in each county. Unlike CRC, the revenue guarantee does not increase if prices rise between February and harvest. However, premium costs will generally be lower without this feature.

Revenue insurance premiums under all three plans are subsidized by FCIC at a rate comparable to MPCI policies. For more information about crop revenue insurance see ISU Extension publication FM-1853, *Crop Revenue Insurance.*

**Supplemental Coverage**

Private insurance companies have developed a variety of policies that supplement the coverage available under the standard MPCI policies.

The most common supplemental policy used in Iowa is companion hail insurance, which generally has a lower deductible loss than MPCI, but for hail damage, only. If companion hail insurance is purchased, coverage for hail damage can be removed from the MPCI policy and the premium reduced.

Supplemental replacement cost insurance is available for producers who like to utilize preharvest pricing as a marketing tool. These producers must be concerned with the possibility that poor growing conditions could cause their actual production to be less than the amount they have forward priced. If low production is widespread, they may have to purchase replacement bushels at a price higher than the price for which they contracted. Supplemental replacement cost insurance will pay the producer the difference between the FCIC insured price and the actual harvest price on all bushels for which an MPCI indemnity is paid.

Other supplemental policies are available which effectively raise either the bushel guarantee or the price guarantee offered by traditional MPCI insurance. Of course, all these supplemental policies require extra premium costs, so are generally used only by producers in a high risk position.

**Summary**

The tables in this publication compare some of the important features of the different types of crop insurance available. Each type of policy can be customized by selecting different price and yield coverage levels, add-on features, and insurance unit designations. See your local insurance agent to get details on coverages and premiums available for your own farm.

## Comparison of Crop Insurance Plans

| Characteristic | Multiple Peril Crop Insurance | Catastrophic | Group Risk Plan | Crop Revenue Coverage | Revenue Assurance |
|---|---|---|---|---|---|
| Insures against | Individual Production risk | Individual Production risk | County Production risk | Individual Revenue risk | Individual Revenue risk |
| Yield coverage | 50 to 75% of APH yield | 50% of APH yield | 70 to 90% of county yield | 50 to 75% of APH yield | 65 to 75% of APH yield |
| Price coverage | 60 to 100% of FCIC price | 60% of FCIC price | 90 to 150% of FCIC price | Higher of 95% or 100% of Feb. or harvest futures price | Futures price in Feb. less FSA basis |
| Results on which indemnity is based | Actual yield | Actual yield | County yield | Actual yield and 95% or 100% of futures price at harvest | Actual yield and FSA posted county price |
| Insurable units | Basic and optional units | Basic units | Basic units | Basic and optional units | Basic, optional, enterprise and farm units |

# Comparison of Crop Insurance Plans-Example

| Example: Corn, one acre | Multiple Peril Crop Insurance | Catastrophic | Group Risk Plan | Crop Revenue Coverage | Revenue Assurance |
|---|---|---|---|---|---|
| APH yield | 132 bu. | 132 bu. | 130 bu. (county) | 132 bu. | 132 bu. |
| FCIC expected price | $2.45 | $2.45 | $2.45 | not applicable | not applicable |
| Futures price during February | not applicable | not applicable | not applicable | $2.60 | $2.60 |
| Insurance coverage price | $2.45 | $2.45 | $2.45 | $2.47 (2.60 x .95) | $2.30 (2.60 - .30) |
| Yield election | 75% (99 bu.) | 50% (66 bu.) | 80% (104 bu.) | 75% (99 bu.) | 75% (99 bu.) |
| Price election | 100% ($2.45) | 60% ($1.47) | 100% ($2.45) | 100% ($2.47) | 100% ($2.30) |
| Insurance guarantee | 99 bu. | 66 bu. | $255 (2.45 x 104) | $245 ($2.47 x 99) | $228 ($2.30 x 99) |
| Premium | $9 | $50 per crop | $4 | $13 | $8 |
| **Results: low yield, high price** | | | | | |
| Actual yield | 50 bu. | 50 bu. | 75 bu. (county) | 50 bu. | 50 bu. |
| Harvest futures price | not applicable | not applicable | not applicable | $3.80 | Not applicable |
| Harvest insurance price | not applicable | not applicable | not applicable | $3.61 (3.80 x .95) | $3.50 (FSA price) |
| Harvest insurance guarantee | no change | no change | no change | $357 ($3.61 x 99) | no change |
| Actual crop value | not applicable | not applicable | not applicable | $180 ($3.61 x 50) | $175 ($3.50 x 50) |
| Insurance payment received | $120 (49 bu. x $2.45) | $39 (16 bu. x $2.45) | $71 ($255 x (104 - 75) / 104) | $177 ($357 - 180) | $53 ($228 - 175) |
| Insurance payment less premium | $111 | $39 | $67 | $164 | $45 |
| **Results: low yield, avg. price** | | | | | |
| Actual yield | 50 bu. | 50 bu. | 75 bu. (county) | 50 bu. | 50 bu. |
| Harvest futures price | not applicable | not applicable | not applicable | $2.90 | not applicable |
| Harvest insurance price | not applicable | not applicable | not applicable | $2.76 (2.90 x .95) | $2.60 (FSA price) |
| Harvest insurance guarantee | no change | no change | no change | $273 ($2.76 x 99) | no change |
| Actual crop value | not applicable | not applicable | not applicable | $138 ($2.76 x 50) | $130 ($2.60 x 50) |
| Insurance payment received | $120 (49 bu. x $2.45) | $39 (16 bu. x $2.45) | $71 ($255 x (104 - 75) / 104) | $135 ($273 - 138) | $98 ($228 - 130) |
| Insurance payment less premium | $111 | $39 | $67 | $122 | $90 |
| **Results: avg. yield, low price** | | | | | |
| Actual yield | 125 bu. | 125 bu. | 125 bu. (county) | 125 bu. | 125 bu. |
| Harvest futures price | not applicable | not applicable | not applicable | $1.90 | Not applicable |
| Harvest insurance price | not applicable | not applicable | not applicable | $1.81 (1.90 x .95) | $1.60 (FSA price) |
| Harvest insurance guarantee | no change | no change | no change | no change | no change |
| Actual crop value | not applicable | not applicable | not applicable | $226 (1.81 x 125) | $200 (1.60 x 125) |
| Insurance payment received | $0 | $0 | $0 | $19 ($245 - 226) | $28 ($228 - 200) |
| Insurance payment less premium | -$9 | $0 | -$4 | $6 | $20 |

The examples above are for purposes of illustration only. For specific information on coverages, premiums, and policy details see your insurance agent.

*Prepared by William Edwards, ISU Extension economist, Department of Economics.*



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