

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 U.S.D.A. Risk Management Agency (RMA) and private crop insurance vendors 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 general types of crop insurance:

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

Multiple Peril Crop Insurance

Multiple Peril Crop Insurance (MPCI), also known as Actual Production History (APH) insurance, protects against production losses from a wide range of natural causes. Producers can choose to insure their crops at levels ranging from 50 to 85 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 insurable market price set by RMA 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 (catastrophic) to over 38 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 for the yield guarantee on the insured crop is reduced by 1 percent per day for the next 25 days. Delayed planting provisions take effect after June 1 for corn and after June 16 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 after July 10 for soybeans. 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 55 percent of the RMA expected market price.

The farmer pays no premium for CAT, but there is a \$100 processing fee for each crop and farm unit insured. Small policyholders 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*.

Crop Revenue Insurance

Revenue insurance protects against reductions in both price and yield rather than yield alone. Three different individual 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 MPCCI policy. However, the insurable price level is equal to 100 percent of the average new crop futures market price during the month of February rather than the RMA 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, 75, 80, and 85 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, however.

If the producer's actual gross revenue, calculated as the actual yield times 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 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. The price used to calculate the income guarantee is also the average of the new crop futures price in February. The yield levels used to calculate the guaranteed revenue per acre can range from 65 to 85 percent of the APH yield.

The fall price used to calculate the actual revenue is the average futures market closing price during

October for soybeans and November for corn. Under the standard RA contract the revenue guarantee does not increase if prices rise between February and harvest. RA does offer an increased guarantee when prices rise as an option. However, premium costs will generally be lower without this feature.

For more information about crop revenue insurance see ISU Extension publication FM-1853, *Crop Revenue Insurance*.

Group Risk Plan

Group Risk Plan (GRP) insurance protects producers against a widespread crop failure. If the average yield for the county in which the insured crop is located falls below the trigger level chosen, the producer receives a payment, regardless of the farm's individual yield.

Policies with trigger levels of 70 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 RMA expected market price. Premiums increase in direct proportion to the dollar coverage selected, and at an increasing rate for higher trigger yields.

Gross revenue can also be insured under a group risk policy. This plan is known as Group Risk Income Protection, or GRIP. The income guarantee level is based on the county expected yield and the average futures price during the last 5 days of February. Likewise, the actual gross revenue is based on the actual county yield and the average futures price at harvest. Trigger levels and indemnity payments for GRIP are calculated in a manner similar to that used for GRP.

The GRP and GRIP policies generally have lower premiums than comparable MPCCI coverage, and do not require any farm production history. This makes them attractive to producers who have no production records, or a low APH yield. Producers whose farm yields closely follow the year-to-year pattern of the county averages received the most risk protection from GRP. Because payments are not based on individual farm yields, however, some short-term yield risk remains. Generally, GRP and

GRIP 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 and GRIP insurance see ISU Extension publication FM-1850, *Group Risk Plan and Group Risk Income Protection*.

Supplemental Coverage

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

The most common supplemental policy used in Iowa is companion hail insurance, which generally has a lower deductible loss than MPCCI, but for hail damage, only. If companion hail insurance is purchased, coverage for hail damage can be

removed from the MPCCI policy and the premium reduced.

Other supplemental policies are available which effectively raise either the bushel guarantee or the price guarantee offered by traditional MPCCI or revenue 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 85% of APH yield	50% of APH yield	70 to 90% of county yield	50 to 85% of APH yield	65 to 85% of APH yield
Price coverage	60 to 100% of RMA price	55% of RMA price	90 to 150% of RMA price	Higher of futures price in Feb. or at harvest	Futures price in Feb. or higher of futures price in February or at harvest (optional)
Results on which indemnity is based	Actual yield	Actual yield	County yield	Actual yield and futures price at harvest	Actual yield and futures price at harvest
Insurable units	Basic and optional units	Basic units	Enterprise units	Basic, optional and enterprise units	Basic, optional, enterprise and whole 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 (Basic)
APH yield	132 bu.	132 bu.	130 bu. (county)	132 bu.	132 bu.
RMA 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	\$2.60	\$2.60
Yield or revenue election	75% (99 bu.)	50% (66 bu.)	80% (104 bu.)	75%	75%
Price election	100% (\$2.45)	55% (\$1.35)	100% (\$2.45)	not applicable	not applicable
Insurance guarantee	99 bu.	66 bu.	\$255 (\$2.45 x 104)	\$257	\$257
Premium	\$5	\$100 per crop	\$6	\$9	\$5
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	\$3.80	\$2.60
Harvest insurance guarantee	no change	no change	no change	\$376 (\$3.80 x 132 x 75%)	no change
Actual crop value	not applicable	not applicable	not applicable	\$190 (\$3.80 x 50)	\$190 (\$3.80 x 50)
Insurance payment received	\$120 (49 bu. x \$2.45)	\$22 (16 bu. x \$1.35)	\$71 (\$255 x - 75) / 104	(104) \$186 (\$376 - 190)	\$67 (\$257 - 190)
Insurance payment less premium	\$115	\$22	\$65	\$177	\$62
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	\$2.90	\$2.60
Harvest insurance guarantee	no change	no change	no change	\$287 (\$2.90 x 132 x 75%)	no change
Actual crop value	not applicable	not applicable	not applicable	\$145 (\$2.90 x 50)	\$145 (\$2.90 x 50)
Insurance payment received	\$120 (49 bu. x \$2.45)	\$22 (16 bu. x \$1.35)	\$71 (\$255 x - 75) / 104	(104) \$142 (\$287 - 145)	\$112 (\$257 - 145)
Insurance payment less premium	\$115	\$22	\$65	\$133	\$107
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	\$1.90	\$2.60
Harvest insurance guarantee	no change	no change	no change	no change	no change
Actual crop value	not applicable	not applicable	not applicable	\$238 (\$1.90 x 125)	\$238 (\$1.90 x 125)
Insurance payment received	\$0	\$0	\$0	\$19 (\$257 - 238)	\$19 (\$257 - 238)
Insurance payment less premium	-\$5	\$0	-\$6	\$10	\$14

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

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