Margin Protection (MP) Crop Insurance

File A1-53

Margin Protection (MP) crop insurance is an area-based plan, using county yields and can be purchased annually for acres to be planted to corn, rice, soybeans, and spring wheat the following year in select states and counties. MP coverage is protection against an unexpected decrease in operating margin.

Revenue (Yield × Price) – Costs = Margin

An MP indemnity is paid when the actual margin falls below the trigger margin. Since MP utilizes county-based yields, it is possible to experience a farm-based loss but not trigger an MP indemnity payment, or vice-versa.

An MP policy can be purchased as a stand-alone policy, or with a Multi-Peril Revenue or Yield Protection policy (denoted as a base policy) on the same crop acres. For corn and soybeans, the *base policy* uses farm-based yields with a price discovery period during the month of February and a sales closing date of March 15. However, the *MP policy* uses county yields with a price discovery period nearly six months earlier, mid-August through mid-September, with a sales closing date of September 30 of the calendar year prior to the crop year. MP indemnities, if triggered, are paid between mid-June and mid-July of the calendar year following the crop year.

How Margin Protection Works

Projected prices for a Revenue Protection (RP) base policy and an MP policy use the same December corn futures and November soybean futures market prices. Harvest prices are determined for both policies using the same futures trading months, but the simple average price is determined during the month of October.

Variable input costs changes for an MP policy are reflected by diesel fuel, interest rates, and fertilizer costs (diammonium phosphate, plus urea for corn) and compared the following April. These costs are calculated by the Risk Management Agency (RMA) using national average prices.

Figure 1 features Revenue Protection as the underlying base policy with up to an 85% coverage level for the insured crop. The MP coverage can be purchased up to the 95% coverage level.

Figure 1
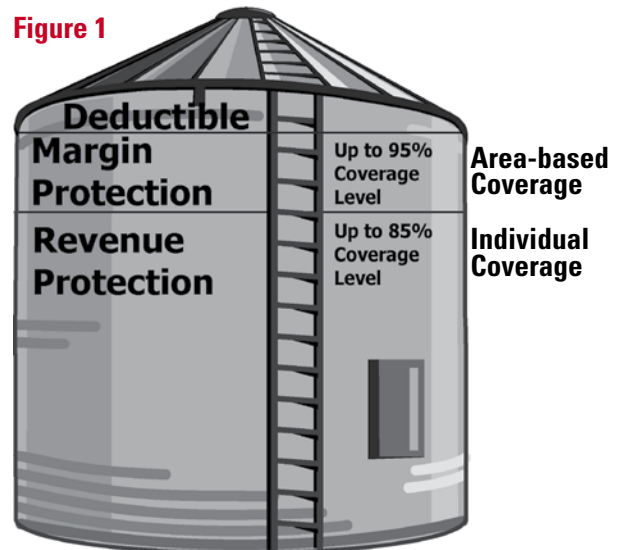
Premium Subsidy

MP offers the same premium subsidies as other existing area-based plans, which vary by coverage level including:

- For 70% coverage, the subsidy factor is 59%.
- For 75% and 80% coverage, the subsidy factor is 55%.
- For 85% coverage, the subsidy factor is 49%.
- For 90% and 95% coverage, the subsidy factor is 44%.
- Beginning farmers qualify for an additional 10% subsidy factor across all coverage levels.

Protection Factors

When purchasing an MP policy, a specific *Protection Factor* must be elected for that policy. A *Protection Factor* can range from 80% to 120% in 1% increments.

IOWA STATE UNIVERSITY
Extension and Outreach

MP and the Underlying Base Policy

The base policy and the MP policy must be purchased from the same Approved Insurance Provider (AIP); however, the base policy and the MP policy may be purchased from a different insurance agent or insurance agency. When an insured buys a base policy, they may receive a credit to their MP premium because indemnity payments from the base policy are used to offset indemnity payments from the MP policy. To receive a premium credit, the base policy type and practices must match the type and practices elected on the insured's MP policy.

MP can be purchased with a Harvest Price Option (MP-HPO). In this case, the higher of the MP projected crop price and the harvest price will be used in the calculation of the trigger margin.

MP Indemnity Payments

Potential margin losses could be associated with reduced county yields, a decline in commodity futures prices, increased costs of certain inputs, or any combination of these perils. Since MP uses county-based yields, the MP indemnity payment is not known until the *Final County Yield* is determined by RMA as the acre-weighted average yield within the county as provided by insured producers. RMA is expected to publish *Final County Yields* for corn and soybeans in Iowa on or before June 16 of the year following the production of the insured crop (ex. June 2023 for the 2022 crop).

If an MP indemnity payment is triggered, the insured will receive a payment. Payment will be equal to the difference between the MP indemnity amount and the largest of the base policy indemnity payment and the MP credit received in the fall of the insured crop year.

Calculating MP Coverage

Examples of MP coverage and policy for corn are featured in Steps 1 through 3 in Example 1 and with the Harvest Price Option in Example 2.

Example 1: The Expected County Yield is assumed to be 200 bushels per acre for corn. Note that each county has a specific yield calculated by the RMA using a trendline over 30 years of final county average yields (see Table 1). The MP example below is for corn featuring a 95% coverage level and a 120% Protection Factor.

Step 1. Calculate minimum trigger margin		
Item		**Corn**
a	RMA expected county yield	200
b	MP projected price per bushel	$5.50
c=a×b	MP expected county revenue	$1,100
d	MP expected costs per acre	$500
e=c−d	RMA expected margin per acre	$600
f	MP coverage level (70% to 95%)	95%
g=c×(1−f)	Deductible per acre	$55
h=e−g	Minimum trigger margin per acre	$545

Step 2. Estimate harvest margin		
Item		**Corn**
i	RMA final county yield	200
j	RMA crop insurance harvest price	$5.00
k=i×j	MP final county revenue per acre	$1,000
l	MP harvest costs per acre	$570
m=k−l	MP harvest margin per acre	$430

Step 3. Estimate the potential indemnity		
Item		**Corn**
n=h−m	MP final trigger margin ($545−$430)	$115
o	MP protection factor (80% to 120%)	120%
p=n×o	MP indemnity per acre	$138

Assume acres are insured at 100% of operator share.

MP expected county revenue × Coverage level × Protection factor × Operator share = **Indemnity cap**

$1,100 × 95% × 120% × 100% = **$1,254**

Since the potential indemnity amount of $138 is lower than the indemnity cap, the cap does not apply in this example. If a potential indemnity exceeds the cap, then the indemnity payment is limited to the cap amount.

Example 2: Using the same assumptions as in the previous example, but assuming that the harvest price is **higher**, at $6.00 per bushel instead of $5.00, the new trigger margin under MP-HPO is calculated as follows:

Step 1. Calculate minimum trigger margin		
Item		**Corn**
a	RMA expected county yield	200
b	MP projected price per bushel	$5.50
c=a×b	MP expected county revenue	$1,100
d	MP expected costs per acre	$500
e=c−d	RMA expected margin per acre	$600
f	MP coverage level (70% to 95%)	95%
g=c×(1−f)	Deductible per acre	$55
h=e−g	Minimum trigger margin per acre	$545

Step 1b. Update trigger margin in November of crop year		
Item		**Corn**
a	RMA expected county yield	200
b	MP **harvest** price per bushel	**$6.00**
c=a×b	MP **updated** expected county revenue	$1,200
d	MP expected costs per acre	$500
e=c−d	RMA **updated** expected margin per acre	$700
f	MP coverage level (70% to 95%)	95%
g=c×(1−f)	**Updated** deductible per acre	$60
h=e−g	**Updated** trigger margin per acre	$640

Step 2. Estimate harvest margin		
Item		**Corn**
i	RMA final county yield	200
j	RMA crop insurance harvest price	$6.00
k=i×j	MP final county revenue per acre	$1,200
l	MP harvest costs per acre	$570
m=k−l	MP harvest margin per acre	$630

Step 3. Estimate the potential indemnity		
Item		**Corn**
n=h−m	MP final trigger margin ($640–$630)	$10
o	MP protection factor (80% to 120%)	120%
p=n×o	MP indemnity per acre	$12

The resulting harvest margin is $630, and the potential indemnity is $12, which is lower than the updated indemnity cap of $1,368.

Advantages of MP Coverage

Some of the advantages of the purchase of an MP policy along with the base policy on the same crop acres include:

- Higher coverage levels and protection factors available.
- Subsidy factors that range from 44% to 59%.
- Protects against a decline in margin, not just a drop in yield and/or futures price.
- Provides for an earlier discovery period for the projected price (other than the month of February).

Disadvantages of MP Coverage

Some of the disadvantages of purchasing an MP policy along with the base policy on the same crop acres include:

- MP purchase decision must be made on or before the September 30 sales closing date.
- An additional premium will be charged for the MP policy, along with an MP administrative fee.
- Understanding how the MP coverage interacts with the base policy.
- Not knowing the final MP indemnity until mid-June, more than six months following harvest.
- Individual farm revenues and input costs are not considered under MP, and it is possible an individual farm may experience reduced revenue or increased costs and not receive an indemnity under MP.
- A Supplemental Coverage Option (SCO) or an Enhanced Coverage Option (ECO) policy cannot be purchased for the crop if the insured has a Margin Protection or an Area Risk Management Protection Insurance policy.

Timing of Events

Twenty-one months separate the closing date to purchase MP and the date when final MP indemnities are calculated. It is important to understand the timing of events with MP:

- September 30, *prior* to crop year: closing date to purchase MP.

- March 15 of the crop year: closing date to purchase base policy. If a base policy is purchased, insured has the potential to receive a credit on the MP premium.

- August 15 of the crop year: premium billing date for both the base and MP policies.

- Fall of crop year: insured receives greater of MP credit or base policy indemnity (not both).

- The MP premium must be paid by November 15 in order to retain coverage for the following crop year.

- December 10 of the crop year: last day to file notice of crop damage for base policy (or 15 days after end of crop, whichever comes first).

- February 15 *after* crop year: report harvest yields if MP is purchased as a stand-alone policy.

- April 29 *after* crop year: report harvest yields for base policy if MP is purchased along with a base policy.

- June 16 *after* crop year: RMA releases *Final County Yields*.

- July 16 *after* crop year: deadline to issue MP indemnity payment (net of base policy indemnity payment or MP credit received in fall of crop year).

Before Purchasing MP

Consult a crop insurance agent to determine if MP best meets the insured's risk management needs and for detailed price quotes. Quick estimates of MP premiums can be obtained from the USDA Risk Management Agency Margin Protection Premium Estimator and Price Discovery, www.marginprotection.com/, and to see prices published daily during the price discovery period.

Resources

Margin Protection for Federal Crop Insurance - Risk Management Agency Fact Sheet, www.rma.usda.gov/en/Fact-Sheets/National-Fact-Sheets/Margin-Protection-for-Federal-Crop-Insurance

Ag Decision Maker Crop Insurance Publications, www.extension.iastate.edu/agdm/cdcostsreturns.html#insurance

Margin Protection Crop Insurance Frequently Asked Questions, https://blogs.extension.iastate.edu/agdm/2022/08/11/margin-protection-crop-insurance-faq/

The Expected County Yield (Table 1) Margin Protection (MP) (bushels per acre) features each Iowa county determined annually by the USDA Risk Management Agency (RMA) using a linear trend over 30 years of acre-weighted average.

Table 1. Expected 2022 County Yield for Margin Protection (MP) (bushels per acre)

	Corn	Soybeans		Corn	Soybeans		Corn	Soybeans
Adair	177.7	53.8	Floyd	196.3	55.9	Monona	206.1	56.1
Adams	179.9	53.2	Franklin	203.0	56.5	Monroe	141.9	45.0
Allamakee	192.3	55.5	Fremont	198.0	55.8	Montgomery	197.6	57.4
Appanoose	144.0	44.5	Greene	203.5	56.3	Muscatine	189.8	59.1
Audubon	209.9	60.5	Grundy	219.6	64.3	O'Brien	211.4	62.8
Benton	207.8	59.5	Guthrie	192.5	55.0	Osceola	200.5	58.5
Black Hawk	198.1	56.2	Hamilton	194.1	53.7	Page	191.8	56.1
Boone	202.8	55.7	Hancock	201.8	58.7	Palo Alto	199.6	55.2
Bremer	204.8	59.1	Hardin	200.4	57.8	Plymouth	214.6	61.4
Buchanan	199.8	57.1	Harrison	201.5	56.4	Pocahontas	195.9	56.0
Buena Vista	197.3	56.9	Henry	197.3	58.4	Polk	186.7	55.0
Butler	200.2	55.8	Howard	201.0	57.0	Pottawattamie	199.8	57.3
Calhoun	204.5	55.9	Humboldt	201.3	56.7	Poweshiek	200.5	58.5
Carroll	216.5	61.5	Ida	222.0	61.7	Ringgold	143.3	48.4
Cass	196.6	57.3	Iowa	196.7	56.2	Sac	211.8	60.2
Cedar	209.8	61.9	Jackson	196.9	58.7	Scott	207.6	64.2
Cerro Gordo	194.7	56.3	Jasper	203.4	62.0	Shelby	206.9	61.5
Cherokee	208.1	62.4	Jefferson	170.1	52.2	Sioux	219.0	66.5
Chickasaw	194.4	56.2	Johnson	193.0	56.5	Story	194.4	54.3
Clarke	131.1	46.8	Jones	200.4	58.4	Tama	209.9	60.1
Clay	189.4	54.6	Keokuk	192.8	56.2	Taylor	167.1	51.4
Clayton	203.1	61.5	Kossuth	203.9	61.0	Union	163.7	51.2
Clinton	200.6	60.5	Lee	177.6	56.9	Van Buren	155.0	46.8
Crawford	219.6	62.3	Linn	206.6	57.5	Wapello	172.1	51.4
Dallas	193.9	54.7	Louisa	198.1	58.1	Warren	175.3	52.6
Davis	155.1	43.1	Lucas	131.9	45.0	Washington	200.5	59.0
Decatur	146.7	45.5	Lyon	207.5	63.4	Wayne	139.6	45.8
Delaware	200.0	62.2	Madison	180.8	53.5	Webster	197.0	52.7
Des Moines	200.3	61.3	Mahaska	191.0	58.1	Winnebago	205.2	57.5
Dickinson	186.2	54.5	Marion	181.6	54.1	Winneshiek	200.6	56.3
Dubuque	203.2	63.3	Marshall	212.6	62.2	Woodbury	196.3	57.5
Emmet	195.0	55.5	Mills	200.9	56.5	Worth	197.8	57.0
Fayette	199.4	57.1	Mitchell	202.2	57.3	Wright	189.7	54.8

Source: USDA RMA, https://webapp.rma.usda.gov/apps/RIRS/Default.aspx

Prepared by Alejandro Plastina, extension economist
515-294-6160 | plastina@iastate.edu

Steven Johnson, retired extension farm management field specialist

extension.iastate.edu/agdm