

Weathering the Unpredictable: The Protection Crop Insurance Provides

In the face of a changing climate, producers must have access to risk management tools like crop insurance to protect themselves from unpredictable weather. In 2023, producers throughout Nebraska, Iowa, Minnesota, South Dakota, and Kansas faced losses totaling more than \$7 billion from climate disasters and severe weather. Of these, roughly 60% were insured.¹

Federal crop insurance, administered by the U.S. Department of Agriculture's Risk Management Agency (RMA), provides protection for farmers and ranchers who face yield or revenue losses from natural causes or market fluctuations. This booklet outlines the most common perils covered by crop insurance and how they impact farmers.



¹ Munch, Daniel. "Major Disasters and Severe Weather Caused over \$21 Billion in Crop Losses in 2023." American Farm Bureau Federation, Feb. 29, 2024, fb.org/market-intel/major-disasters-and-severe-weather-caused-over-21-billion-in-crop-losses-in-2023. Accessed July 2024.



Policies included in this booklet

Yield Protection policies insure against a variety of yield losses. Coverage is based on anticipated yields and projected local crop prices recognized by RMA. Producers can purchase coverage for 55% to 100% of the projected crop price. Availability of this coverage depends on location and crop. Includes options for organic operations.

Actual Production History (APH) policies also provide protection for a variety of yield losses. Coverage is based on an operation's yield history as well as the predicted price of the given crop. Unlike yield protection, producers make two insurance selections for this coverage based on how much of their expected yield they want to insure—from 50% to 75%—and how much of the predicted price of the crop they want to insure—between 55% and 100%. Availability of this coverage depends on location and crop.

Actual Revenue History (ARH) policies provide protection for revenue losses from low yields or low market prices. Coverage is available for 50% to 75% of an operation's historic revenue. Availability of this coverage depends on location and crop.

Revenue Protection policies insure against revenue losses from low yields or low market prices. Protection is available for 50% to 85% of the crop value, which is determined by RMA's projected prices and the producer's anticipated yields rather than historic revenue like Actual Revenue History plans. Availability of this coverage depends on location and crop. Includes options for organic operations.

Whole Farm Revenue Protection (WFRP) insures against revenue losses from low yields or low market prices for one or multiple crops and/or livestock under a single policy. The insured value of the operation is based on its unique revenue history. Coverage is available for up to \$17 million in insured revenue. WFRP is available in all U.S. counties and is not dependent on crop type. Organic operations are eligible for this coverage.

Microfarm policies are designed for small operations. As a subprogram of Whole Farm Revenue Protection, it also provides protection for one or multiple crops and/or livestock under a single policy. It includes an insurance cap of \$350,000. This type of policy is available in all U.S. counties and is not dependent on crop type. Organic operations are eligible for this coverage.

Rainfall Index (RI) policies provide protection for pasture, rangeland, and forage losses caused by low precipitation. Coverage is based on weather data on local precipitation. Availability depends on location.



Causes of loss and coverage options

▶ Replant coverage

If crops are lost early in the season due to severe weather such as hail or flooding, crop insurance policies are available that will cover the cost of replanting. Timing is critical for the availability of this coverage, as the crop will need time to mature to provide expected yields.



Center for Rural Affairs photo

Policy options:

- » Yield Protection
- » Actual Production History
- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm

▶ Excess moisture

Excess moisture and flooding have caused significant damage to crops in recent years, with hundreds of millions of dollars in losses in the 2023 crop year alone. In some areas, flash flooding can wipe out entire fields following a single rain event. Sustained rates of precipitation also cause widespread damage. Many policies provide financial protection from these losses.



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Policy options:

- » Yield Protection
- » Actual Production History
- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm



Producer losses from excess moisture in 2023:²

- Iowa - \$17.8 million
- Minnesota - \$45.7 million
- Kansas - \$66.1 million
- Nebraska - \$19 million

Causes of loss and coverage options, continued



Photo credit: JJ Gouin - stock.adobe.com

► Lack of moisture or drought

Lack of moisture or drought has negatively affected states throughout the Midwest, especially in the past four years, causing billions of dollars of losses. A continued lack of precipitation can limit or destroy yields throughout the season. Crop insurance continues to provide a needed safety net for states facing significant drought.

Policy options:

- » Yield Protection
- » Actual Production History
- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm
- » Rainfall Index



Producer losses from drought, wildfire, and heat in 2023:³

- Iowa - \$997.01 million
- Minnesota - \$1,015.92 million
- South Dakota - \$632.56 million
- Kansas - \$2,614.16 million
- Nebraska - \$1,065.88 million

³ Ibid.

► Disease

Crop diseases caused by bacteria, viruses, and fungus lead to millions of bushels of lost yields each year. This loss can be covered if producers follow Good Farming Practices outlined by RMA, which require them to stay up to date with disease risks in their area and take reasonable actions to protect and prevent the spread of disease. Provided these practices are followed, many crop insurance policies can provide protection for disease losses.



Photo credit: YuanGeng - stock.adobe.com

Policy options:

- » Yield Protection
- » Actual Production History
- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm



Disease accounted for 2.9% of crop losses of corn in the U.S. in 2023.⁴

► Wind

Wind can damage crops, ripping tender stems, leaves, and buds, eroding away needed soil and nutrients, and uprooting entire plants. Losses from wind are included in policies when yields are diminished as a result.



Photo credit: pdm - stock.adobe.com

Policy options:

- » Yield Protection
- » Actual Production History
- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm

4 Sikora, Ed, et al. "Corn Disease Loss Estimates from the United States and Ontario, Canada - 2023." Crop Protection Network, March 12, 2024, cropprotectionnetwork.org/publications/corn-disease-loss-estimates-from-the-united-states-and-ontario-canada-2023. Accessed July 2024.

Causes of loss and coverage options, continued



▶ Pest infestations

All farmers have to compete with pests, from insects to encroaching animals, for their crops' success. Invasive species can cause even more damage, as there may not be easy mitigation methods or native predators to keep populations in check. Following Good Farming Practices guidelines set by RMA⁵ and securing crop insurance can help farmers protect their operations from losses caused by pests.

Policy options:

- » Yield Protection
- » Actual Production History
- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm

Center for Rural Affairs photo



Worldwide, pests are the cause of 20% to 40% of the crop damage each year.⁶ In 2023, more than 830 million bushels of corn were lost to pests.⁷

5 “Good Farming Practice Determination Standards Handbook 2023 and Succeeding Crop Years.” U.S. Department of Agriculture, Risk Management Agency, 2022, [rma.usda.gov/-/media/RMA/Handbooks/Program-Administration--14000/Good-Farming-Practice/2023-14060-Good-Farming-Practice-Determination-Standards.ashx](https://www.usda.gov/-/media/RMA/Handbooks/Program-Administration--14000/Good-Farming-Practice/2023-14060-Good-Farming-Practice-Determination-Standards.ashx). Accessed July 2024.

6 Gula, Lori Tyler. “Researchers Helping Protect Crops from Pests.” U.S. Department of Agriculture, National Institute of Food and Agriculture, Feb. 6, 2023, [nifa.usda.gov/about-nifa/blogs/researchers-helping-protect-crops-pests](https://www.nifa.usda.gov/about-nifa/blogs/researchers-helping-protect-crops-pests). Accessed July 2024.

7 Reisig, Dominic, et al. “Corn Invertebrate Loss Estimates from the United States and Ontario, Canada - 2023.” Crop Protection Network, Feb. 14, 2024, [cropprotectionnetwork.org/publications/corn-invertebrate-loss-estimates-from-the-united-states-and-ontario-canada-2023](https://www.cropprotectionnetwork.org/publications/corn-invertebrate-loss-estimates-from-the-united-states-and-ontario-canada-2023). Accessed July 2024.

Frost

Frost—even short periods of low temperatures—can be damaging, especially to young plants. Coverage options are available to protect against frost losses, provided producers have planted during RMA’s designated windows. If a frost event occurs early enough in the season, producers may also be able to use their coverage to replant.



Photo credit: Stefan - stock.adobe.com

Policy options:

- » Yield Protection
- » Actual Production History
- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm

▶ Hail

Hail can defoliate plants, reduce crop stands, and damage budding or mature fruits and vegetables in minutes. Surviving crops can also produce decreased yields later in the season, leading to further financial losses.⁸ The level of protection offered for hail damage varies from policy to policy.



Photo credit: Photozi - stock.adobe.com

Policy options:

- » Yield Protection
- » Actual Production History
- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm



Producer losses from hailstorms in 2023:⁹

- Iowa - \$11.03 million
- Minnesota - \$27.77 million
- South Dakota - \$25.69 million
- Kansas - \$366.76 million
- Nebraska - \$250.76 million

8 “Hail Damage Can Affect Crop Insurance Yields.” Iowa State University Extension and Outreach, Ag Decision Maker, June 2020, extension.iastate.edu/agdm/crops/html/a1-49.html. Accessed July 2024.

9 Munch, Daniel. “Major Disasters and Severe Weather Caused over \$21 Billion in Crop Losses in 2023.” American Farm Bureau Federation, Feb. 29, 2024, fb.org/market-intel/major-disasters-and-severe-weather-caused-over-21-billion-in-crop-losses-in-2023. Accessed July 2024.

Causes of loss and coverage options, continued

► Fire

To be covered under RMA's policies, losses from a fire must meet specific requirements, including being traced back to a natural cause, such as a lightning strike. The spreading of a fire must be due to an insured cause of loss incident such as excessive heat, drought, or wind.

If the stipulations are not met, farmers cannot make claims. When selecting a policy, producers should familiarize themselves with the fire coverage available and its limitations.



Photo credit: ThomasLENNE - stock.adobe.com

Policy options:

- » Yield Protection
- » Actual Production History
- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm



In 2023, more than 1.5 million acres of cropland were lost to wildfires in the U.S.¹⁰

► Loss due to drop in local market price

Along with severe weather, farmers can experience financial losses from unexpected market changes. Crop insurance policies are available to cover the losses and ensure farmers receive their anticipated revenue. Categorized as revenue protection, the policies allow farmers to make claims if their actual revenues are less than the anticipated revenue they have insured. A loss can come from low yields or low market values.

Policy options:

- » Actual Revenue History
- » Revenue Protection
- » Whole Farm Revenue Protection
- » Microfarm

10 Samborska, Veronika, and Hannah Ritchie. "Wildfires." Our World in Data, April 2, 2024, ourworldindata.org/wildfires. Accessed July 2024.