

## **Cover crops can help improve agricultural sustainability.**

Farming practices for major crops like corn and soybeans often leave soil exposed during much of the year. Bare soil is susceptible to runoff and leaching of sediment, chemicals, and pathogens and loses carbon dioxide to the atmosphere. Planting cover crops can improve soil health, protect water quality, and sequester carbon. Many cover crops can be used for food, feed, or fuel, providing additional revenue for farmers.

## **Land-grant universities are working together to provide much-needed research and outreach about cover crops.**

Some cover crops are expensive to plant, and some don't grow well in certain conditions, making it hard for farmers to select and grow cover crops effectively. To increase successful use of cover crops, a committee of researchers and Extension educators is:

- Determining the best practices for cover crop species.
- Documenting the economic value and environmental impacts of cover crops.
- Sharing information with farmers, crop consultants, state and federal agencies, and agribusinesses.

## **The committee's multistate, multidisciplinary approach:**

- Enhances sharing of knowledge, tools, and funding among scientists and helps information reach more farmers.
- Makes it easier to coordinate with federal agencies and national organizations.
- Enables a comprehensive look at agronomic, economic, environmental, and social factors and impacts of cover crop adoption across the Midwest.



## The committee's research, outreach, and leadership have contributed to an increase in successful adoption of cover crops in the Midwest.

Experts in multiple states evaluated cover crops, providing essential data that helped develop, enhance, and expand the Midwest Cover Crop Field Guide. Data from committee members also led to the inclusion of more states in the Midwest Cover Crops Council Cover Crop Decision Tool. These and other data-driven resources help growers select the right cover crops and understand how to grow them.

In the past five years, the committee reached more than 28,000 crop consultants, farmers, government workers, fellow scientists, and others through workshops, conferences, websites, journal articles, and other media. This research-based information has supported successful cover crop implementation.

The committee's research has also influenced policy. For example, research led to the inclusion of cover crops in the Nutrient Reduction Strategies that Iowa, Minnesota, Ohio, and Illinois use to reduce agriculture's impact on water quality. Committee members also worked with the USDA Risk Management Agency to discuss changes to cover crop insurance policies and relay them to farmers. Creating official strategies and better policies for cover crops facilitates their use and enhances the positive impacts they have.

## The committee's efforts have led to increased capacity for cover crop research and Extension.

Working with the committee has helped members secure grants that support graduate student education and faculty positions focused on cover crops.

Trainings for Extension educators increased their knowledge of cover crops and improved their ability to provide useful tools and information to farmers.

To further strengthen cover crop recommendations, committee members are engaged in numerous research projects about cover crops and farmers' willingness to use them.



*Cover Crops to Improve Agricultural Sustainability and Environmental Quality in the Upper Midwest (2015-2020)* was funded in part by the Multistate Research Fund through USDA-NIFA and by grants to participating institutions: Iowa State University, Kansas State University, University of Kentucky, Michigan State University, University of Minnesota, University of Nebraska, North Dakota State University, Purdue University, South Dakota State University, University of Wisconsin, and the USDA-ARS. In 2020, this project was renewed through 2025.

Learn more: [bit.ly/NCCC-211](https://bit.ly/NCCC-211)