

Farm Cooperators

Farm cooperators are critical to the success of this program. Knowledge and understanding of their farming system and local landscape is essential in connecting water quality data to farm management practices. Farmers participating in the DFM program work closely with key advisors to examine their existing farming system and explore and implement changes, if needed, to reduce or eliminate adverse environmental impacts. Participating farmers keep and provide detailed records on practices that occur in the monitored area.

Cooperating farmers are not involved with sample collection or troubleshooting of the monitoring equipment. All sample collection and equipment maintenance is the responsibility of MAWRC and MDA. MDA developed standard operating procedures (SOPs) for site maintenance, sample collection, processing and analysis and trained local partners using these guidance documents. The participating farm cooperators are responsible for providing farm management information, anecdotal information (unusual occurrences), and guidance for the project.

PARTNERS

There are multiple partners involved in the operation of the DFM program including research, data collection, outreach, and educational activities. The roles and responsibilities of the key partners will continue to evolve as the DFM program grows. The current roles and responsibilities are summarized below.

Minnesota Agricultural Water Resources Center (MAWRC)

- Organize data collection activities
- Lead educational and outreach activities
- Coordinate contracts and agreements with local partners and farm cooperators
- Collect and store farm management and site specific data
- Purchase monitoring equipment

Minnesota Department of Agriculture (MDA)

The primary responsibility of MDA is to assist with the establishment and operation of monitoring systems that will provide high-quality, water-quantity and -quality data from agricultural systems. More specifically MDA is a technical partner and responsible for the following activities:

- Providing staff support and purchasing monitoring equipment
- Identifying appropriate locations for monitoring equipment within a selected farm
- Developing procedures for site maintenance, sample collection, processing and analysis and training local partners
- Quantifying annual and event specific runoff volumes and losses of sediment, nutrients and other selected constituents and providing annual water quality reports to MAWRC staff

Local Partners

Goodhue SWCD, Chisago SWCD, Stearns County SWCD, Sauk River Watershed District, Hawk Creek Watershed Project, Dodge SWCD, Wilkin SWCD, Norman SWCD, Mahnoman SWCD, Wright SWCD, and Rock SWCD

- Provide routine sample collection as needed and maintenance at Core Farms
- Assist with local meetings (field days, etc.) and other outreach activities

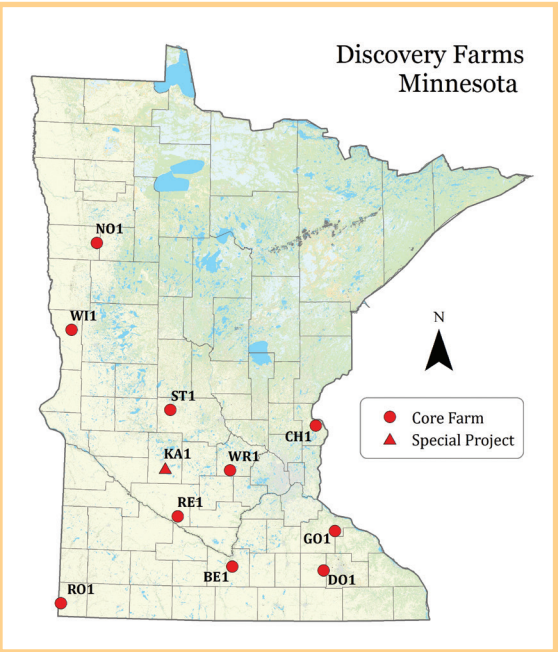
FUNDING

Funding for the Discovery Farms program comes from a number of sources. MAWRC provides funding for the general operation of the Discovery Farms program through grants provided by the Minnesota Corn Research and Promotion Council, Minnesota Soybean Research and Promotion Council, and Minnesota Turkey Research and Promotion Council. MDA provides funding for monitoring equipment and staff utilizing the Clean Water Fund. The Natural Resources Conservation Service (NRCS) supports the Discovery Farms Minnesota program through a grant targeted toward drainage related research projects and through a Mississippi River Basin Initiative grant for the Stearns County location.

FOR MORE INFORMATION, PLEASE CONTACT

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PROGRAM OVERVIEW
2013



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GOALS AND OBJECTIVES

Discovery Farms Minnesota (DFM) is a farmer led effort to gather water quality information from different types of farming systems, in landscapes all across Minnesota. The mission of the program is to collect water quality information under real-world conditions and provide practical, credible, and site-specific information to support better farm management decisions. This program is designed to collect accurate measurements of sediment, nitrogen, and phosphorus movement over the soil surface and through sub-surface drainage tiles and generate a better understanding of the relationships between agricultural land management and water quality.

Discovery Farms Minnesota is committed to:

- Farmer leadership
- Collecting water quality information on privately owned and operated farms
- Providing an educational environment in which all participants will learn from each other
- Improving communication among farmers, consumers, researchers and policy-makers
- A proactive approach to environmental protection – providing opportunities for farmers to find solutions that work within their farming systems

The specific goals of DFM are to:

- Increase understanding of the relationships between agricultural practices and soil and water quality
- Better identify management practices that will improve farm profitability and environmental performance
- Provide science-based information on agricultural production and natural resource management

This program provides:

- Baseline data on the environmental performance of Minnesota farms
- Information on how farmers can adopt best management practices
- An educational environment where farmers learn from each other

CORE FARMS AND SPECIAL PROJECTS

Discovery Farms Minnesota has two main features:

Core Farms

Core Farms represent a farming system or setting that needs to be better understood and are selected to be representative of the farm enterprises in Minnesota. Core Farms are typically long-term studies that begin with baseline water quality monitoring (1-3 years) to assess current water quality conditions.

Currently, there are nine Core Farms. They are located in Blue Earth, Chisago, Dodge, Goodhue, Norman, Renville, Stearns, Wilkin and Wright counties. The DFM Steering Committee provides leadership in the selection of Core Farms.

It is anticipated that DFM will operate/conduct water monitoring on 10-12 Core Farms. Future Core Farms will be selected using a standardized application process, which is guided by the Steering Committee.

Special Projects

Special Projects are often shorter term projects that focus on a specific environmental concern that has already been identified. The data collected are focused on a specific problem or question. Anticipated length is 2-4 years.

Discovery Farms Minnesota is currently supporting a Special Project in Kandiyohi County. The project is designed to assess the nutrient and sediment loss from a corn-corn-soybean rotation where nitrogen and phosphorus are supplied from either turkey manure or commercial fertilizer. A control (no nutrients applied) is also included in the study. A University of Minnesota research team led by Dr. John Moncrief of the Department of Soil, Water, and Climate is in charge of the experimental procedure and data collection at this site. Sole funding for this special project is provided by the Minnesota Turkey, Corn and Soybean Research & Promotion Councils.

In the future, DFM will coordinate additional Special Projects with guidance from the Steering Committee. Special Projects may involve one farm or may investigate certain management practices across multiple farms.

PROGRAM ORGANIZATION

Steering Committee

Discovery Farms Minnesota emphasizes farmer input and direction. A steering committee comprised of representatives from Minnesota farm, agribusiness, and conservation organizations guides the overall direction of the program, assists in the identification of research priorities and helps in the selection of cooperators and projects. The Steering Committee also includes non-voting members representing various state agencies and academia.

The following organizations are currently represented on the DFM Steering Committee:

- Broiler and Egg Association of Minnesota
- Irrigators Association of Minnesota
- Minnesota Corn Growers Association
- Minnesota Department of Agriculture
- Minnesota Farm Bureau Federation
- Minnesota Farmers Union
- Minnesota Milk Producers Association
- Minnesota Pork Producers
- Minnesota Soybean Growers Association
- Minnesota State Cattleman’s Association
- Minnesota Turkey Growers Association
- Natural Resources Conservation Service
- Stearns County SWCD
- The Nature Conservancy
- University of Minnesota

