



Soil Health Financial Assistance Pilot Program

Fiscal Year 2023 Legislative Report

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Executive Summary

Building soil health is key to facilitating resiliency across Minnesota's working lands in the face of a changing climate. However, soil health practices typically require specialized, expensive equipment that many producers do not own. To meet this challenge, the Soil Health Financial Assistance Pilot Program was established to provide grants to individual producers, groups of producers, and local government units for the purchase of soil health equipment. Established as a \$500,000 appropriation in the 2022 legislative session, the Soil Health Financial Assistance Pilot Program awarded 16 grants to 15 Minnesota producers and one Soil and Water Conservation District in spring 2023. The program has since received additional funding from the Legislature, and another Request for Proposals for a total of \$2.375 million was released in fall 2023. This report covers only the \$500,000 appropriated for the FY23 Soil Health Financial Assistance Pilot Program.

Soil Health Management Practices

Statewide assessment

A [Minnesota Soil Health Baseline Database](#) and soil health baseline will be finalized in calendar year 2024 through an established, collaborative process lead by the Board of Water and Soil Resources and the University of Minnesota's Minnesota Office of Soil Health, in consultation with the Minnesota Department of Agriculture (MDA), and including coordination and consultation with an array of participants and data sets including the United States Department of Agriculture (USDA) Natural Resources Conservation Service, Minnesota Pollution Control Agency, the USDA National Agricultural Statistics Service (NASS) Census of Agriculture, Minnesota Soil and Water Conservation Districts (SWCDs), and additional expert and established sources. The database is expected to contain 41 sets of data within 11 categories of soil health indicators. The analysis, as well as the assumptions and limitations for the data sources used, will be outlined in a user manual. The completed database and accompanying materials will be included in the December 31, 2024, report on the Soil Health Financial Assistance Pilot Program.

Five-and ten-year goals

Acre-denominated five-and 10-year goals for healthy soil management practice implementation are being determined in consultation with the University of Minnesota, USDA Natural Resources Conservation Service, Board of Water and Soil Resources, Minnesota Pollution Control Agency, and nongovernmental environmental and agricultural organizations. The partners have identified the USDA NASS Census of Agriculture as the foundational element for setting goals. The Census of Agriculture is released once every five years and the census-recorded statewide acreage totals of various soil health practices (e.g., cover crops, no-till, other) will serve as the starting point for determining increased acreage goals at five and 10 years. USDA will release the 2022 Census of Agriculture data on February 13, 2024, so goals have not yet been set by the completion of this report and will be provided in the December 31, 2024, report.

Grant Award Process

Building soil health on Minnesota’s working lands is an important step in ensuring the state’s agricultural industry remains resilient and productive. Practices widely accepted to foster soil health include reducing tillage, cover cropping, manure management, precision agriculture, rotating crops, integrating perennials, and well-managed livestock grazing. These and other soil health practices offer co-benefits, including increasing the quantity of organic carbon stored in the soil, reducing nitrous oxide emissions, and promoting water quality.

Recognizing both the interconnections between building soil health and other climate benefits in agriculture, as well as the wide variety of soil health practices used across farming operations, the Commissioner of Agriculture sought to create as much space as possible for applicants to seek the equipment needed for their specific soil health goals. As a result, applicants to the Soil Health Financial Assistance Pilot Program were asked to describe the equipment they planned to purchase along with its soil health benefit. This open-ended approach allowed reviewers to score applications based on their soil health impact and gave applicants the freedom to apply for funding to purchase whatever soil health equipment was uniquely needed on their operations. Ultimately, this strategy promoted a wide range of soil health practice adoption – including cover cropping, strip tillage, incorporating livestock manure into row crop operations, and incorporating small grains into crop rotations – rather than limiting applicants to a prescribed list of options.

Fair Distribution of Funding

To ensure fair geographic distribution of the Soil Health Financial Assistance Pilot Program funding across a broad group of crop types, soil management practices, and farm sizes, MDA staff connected with SWCDs across Minnesota in the months leading up to the 2023 application period so SWCD staff would be prepared to promote the opportunity in their districts and assist producers with applications.

Furthermore, extra points were given to applicants who identified as socially disadvantaged as defined by USDA, in many cases allowing smaller scale and specialty crop producers to earn additional points, as emerging farmers typically have less access to capital and may be more likely to operate smaller farms. A cost efficiency ratio was built into the grant application and review process, giving producers with fewer acres the opportunity to reduce their grant request to score more points in that category, thereby maintaining competitiveness with larger acreage operations.

No type of crop or farming operation was excluded from applying to the Soil Health Financial Assistance Pilot Program. Equipment eligibility was broad, allowing applicants to select the equipment best suited to their cropping system or farming operation rather than prescribing a set list.

Ultimately, the efforts described above resulted in 16 awards made across 15 Minnesota counties in the 2023 Soil Health Financial Assistance Pilot Program funding cycle (Figure 1). Counties with an awarded application are Benton, Carver, Clay, Faribault, Goodhue, Kanabec, Lincoln, Nicollet, Olmsted, Renville, Scott, Sibley, Wabasha, Washington, and Wright.

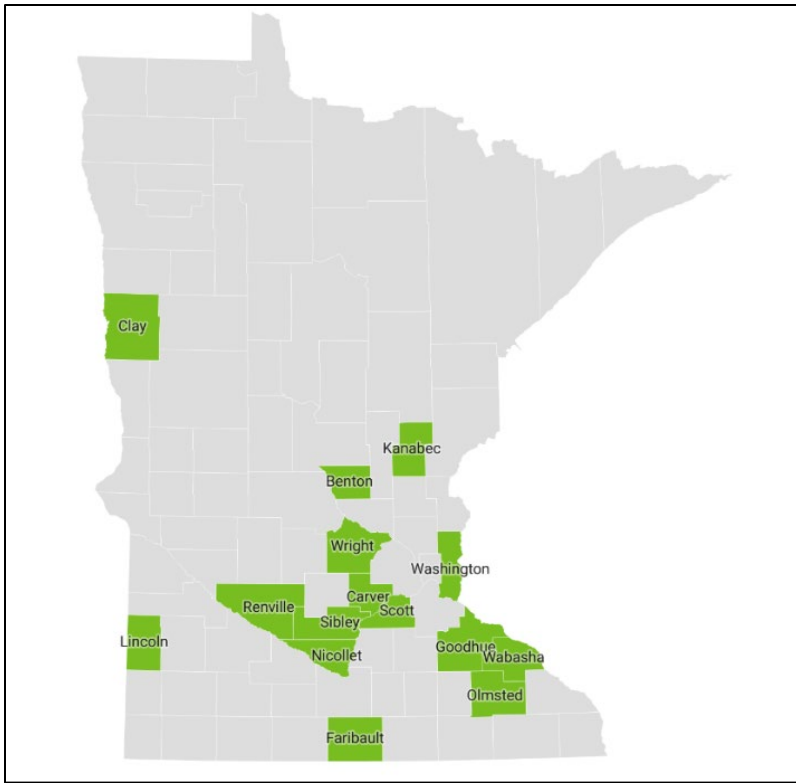


Figure 1. Distribution of FY23 awards for the Soil Health Financial Assistance Pilot Program by county.

Leveraging Other Public and Private Sources of Money to Expand Soil Health

Outside of the Soil Health Financial Assistance Pilot Program – now the Soil Health Financial Assistance Program as funded in the 2023 legislative session – there are no other public forms of funding for soil health equipment available in Minnesota. The long-standing policy of USDA is to outright prohibit use of federal agricultural conservation financial assistance to purchase equipment, starkly preventing any opportunity to leverage federal support. In the private sector, options are restricted to financed products and loans for purchasing equipment. The limited availability of public and private assistance in this area emphasizes the impact of and the need for the Soil Health Financial Assistance Program.

Although the funding for the pilot phase has been awarded, strategies for enhancing the permanent program’s impact moving forward include coordination with the MDA’s Ag BMP Loan Program and with the Board of Water and Soil Resource’s grants for conservation practice implementation. Additionally, Clean Water Fund appropriations of \$3,500,000 for the FY24-FY25 biennium have been provided for the Soil Health Financial Assistance Program. Leveraging these sources of money together will provide maximum assistance to producers looking to adopt soil health on their operations. Furthermore, the Soil Health Financial Assistance Program is promoted alongside other conservation agriculture programs and initiatives in Minnesota, including the Minnesota Agricultural Water Quality Certification Program and equipment demonstrations and field days hosted by the Minnesota Soil Health Coalition and others. Cross-promoting these opportunities helps expand the network of producers who can benefit from them and allows producers to maximize co-benefits for soil health, water quality, and reduced carbon emissions.

Program Operations

Spending as of December 21, 2023, includes \$251,288.89 state, \$0.00 federal, and \$605,209.90 private investment from grant recipients.

Sixteen grants were awarded to 15 individuals and one local government unit for 16 equipment purchases (one per grantee). At the completion of this report, 10 purchases had been made. Of the 10 grantees who purchased their equipment, three reported using the equipment on a combined 3,057 acres. It is likely that the other seven recipients had already used their equipment to implement soil health practices as well, making the affected acres to date much higher than 3,057. However, the grant recipients' reporting forms are not due until spring 2024; so program staff did not have complete data at the time this report was drafted. An estimated minimum of 34,998 acres will be affected annually once all 16 grantees purchase their equipment, based on data provided in the grantees' applications.

Practice	Acres	CO2 Equivalent Tons
Replacing synthetic N with manure	2,900	629
Planting cover crops	157	20
Total:	3,057	649

Table 1. Carbon emissions reduced by the practices reported by grant recipients as of December 2023.

As of December 2023, data from only three of the grant recipients was available. Of the 3,057 acres reported, 2,857 are new acres. More comprehensive emissions reductions numbers will be available in the December 31, 2024, report.