

Locally Led Conservation Education



Photos provided by Local Work Groups.

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**EQIP Education
in Minnesota Counties
and Watersheds**

Locally Led: EQIP Education in Minnesota

Natural resources in Minnesota range from trout streams and hardwoods in the southeast to prairie fields and wetlands in the west, from fertile soils in the Red River Valley to aspen and pine forests in the north. Conservation of these resources depends on the stewardship of thousands of landowners and rural residents. This requires targeted conservation education.

Since 1998, conservation education programs have been designed and delivered by Local Work Groups made up of county or watershed staff from the USDA-Natural Resources Conservation Service (NRCS), Soil and Water Conservation Districts (SWCD), University of Minnesota Extension Service (Extension), County Water Planners, Watershed Districts, and other organizations. Local Work Groups select topics, methods, and audiences for their educational programs.

Funds are available to these groups on a competitive-grant basis from the Environmental Quality Incentives Program (EQIP), part of the 1996 Federal Farm Bill. NRCS in Minnesota works with Extension to administer EQIP education grants and to support the Local Work Groups with educational methods, materials, and expertise.



Many Local Work Groups install recommended practices on farms where neighbors can see results and ask questions at field days.

Why Does Minnesota Need an EQIP Education Program?

- Farmers need to understand EQIP practices such as nutrient and manure management to carry them out effectively. That requires education.
- EQIP Education programs reach a much larger and more diverse audience than the approximately 250 agricultural producers who receive EQIP financial assistance in Minnesota each year.
- The EQIP Education program brings together the educational and technical expertise of Extension, NRCS, SWCD, and other organizations at the local, regional, and state levels to present a unified message about conservation practices.
- EQIP Education funds have been matched with funds or staff time from Extension, the Board of Water and Soil Resources (BWSR), the Minnesota Department of Agriculture (MDA), and local governments. This cooperative approach leverages resources not available to one organization alone.

The following pages highlight examples of the 62 educational programs supported by EQIP education grants. The programs are organized into four categories:

1. Protecting lakes and rivers in agricultural areas
2. Protecting ground and drinking water
3. Protecting lakes and rivers in forested areas
4. Reaching non-traditional audiences

A list of all 62 grants and a complete description of EQIP Education in Minnesota can be seen at <http://wrc.coafes.umn.edu/EQIP/>

Protecting Lakes and Rivers in Agricultural Areas

Protection of lakes and rivers in agricultural areas was the educational goal most often selected by Local Work Groups. Programs usually focused on management practices related to manure, grazing, or tillage.

Manure and Nutrient Management. Concerns about phosphorus and bacteria entering rivers and lakes prompted development of new feedlot rules at the state and federal level, and are motivating more livestock farmers to improve feedlot and manure management. Field demonstrations of manure injection equipment and spreader calibration, tours of feedlot improvements, and workshops on manure and nutrient management planning were emphasized in fifteen local education programs across the state.



In Stearns County, workshops increased the number of producers preparing manure management plans.



Field demonstrations of newer techniques for land application of manure drew a large audience of farmers.

Tillage Management. Soil and phosphorus are washed off cropland into rivers and lakes with every major rainfall, reducing soil productivity and polluting water. Fall strip tillage is being introduced in Minnesota as a way to maintain soil-conserving crop residue between rows and allow rapid in-row soil warm-up and drying in the spring. Three Local Work Groups emphasized tillage practices in their education programs, two with on-farm demonstrations of strip tillage.



Field day participants at the Tom Muller farm in Cottonwood County take a close look at a strip-till unit in action. Muller and staff from Extension and the Cottonwood SWCD presented agronomic and economic considerations for strip tillage at the field day and at winter meetings.

Grazing Management. Producers looking for higher profits, healthier grass stands, better soil management, and less personal stress are learning about managed grazing systems, the subject of nine EQIP local education programs. Demonstration sites for native grasses and other forage species have been established in Clay, Norman, and Olmsted counties. Workshops on planning and management of rotational grazing systems were held in counties from Fillmore in the south to Koochiching in the north.



Livestock producers can compare modern fencing options for managed grazing at the new fencing demonstration site established by the Cottonwood SWCD on the grounds of the SW Research and Outreach Center at Lamberton. The site is open all year and is reviewed by farmers and professionals on field day tours. A video on fencing alternatives filmed during site construction was distributed throughout the state.

Paul Peterson, Extension Forage Specialist, along with other Extension, NRCS, and SWCD staff and farmers reviewed forage and livestock management for grazing at the Dan Miller Farm in Fillmore County. The field day was attended by 130 farm family members and others from the region.



Windbreaks. Wind lifts topsoil from farm fields and deposits it in ditches and streams. Wind speeds the loss of crop moisture in summer, and can kill unprotected livestock in winter. Several local education programs emphasized establishment and management of windbreaks. Mower and Olmsted counties planted and upgraded sites to demonstrate use of several types of trees and shrubs in windbreaks.

Fugles' Mill, a long-established demonstration site for trees, shrubs, and grasses, was the focal point for the Olmsted County education project. New signs and brochures guide visitors through the plots, and field days provide an opportunity for local audiences and specialists to discuss uses and management of windbreak plants.



Protecting Ground and Drinking Water

Shallow aquifers overlain by sandy soils in agricultural areas are susceptible to nitrate contamination, and well water in these areas often approaches or exceeds drinking water standards for nitrate. Local Work Groups in Nicollet, Martin, Pipestone, Lincoln, Hubbard, Todd, Wadena, and Otter Tail counties chose protection of surface water and groundwater used for drinking as a focus for educational programs.



High nitrate levels in well water required the Lincoln-Pipestone Rural Water System to install an expensive denitrification plant. To reduce the amount of nitrate reaching the groundwater, nitrogen fertilizer application rate demonstrations were established in the Verdi wellhead protection area of Lincoln County, funded by EQIP Education grants and additional state funds. Here University of Minnesota researcher Neal Eash tests for soil nitrate at several depths in the demonstration plots early in the season to follow nitrate movement down through the soil.

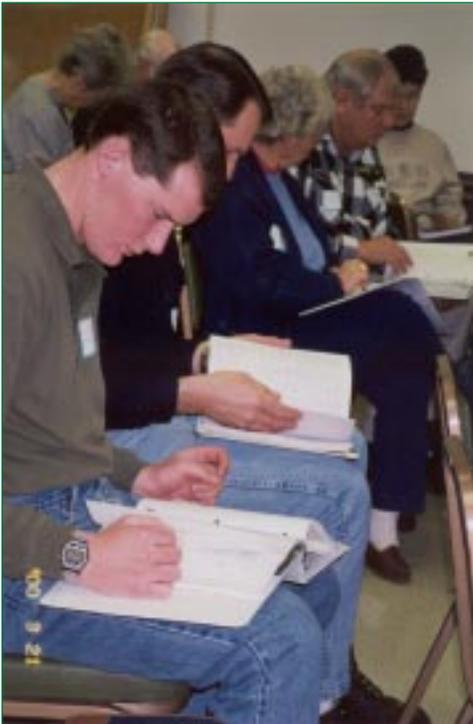
Fertilizer Management. Over-application of nitrogen fertilizer is a primary cause of groundwater contamination by nitrate, according to MDA tile line monitoring studies and detailed surveys. Most of these Local Work Groups are collaborating with Extension and the MDA to demonstrate appropriate nitrogen fertilizer rates on farms in source-water protection areas. Project staff contacted farmers in the wellhead or source-water protection area with information about the demonstration site and about nutrient management planning. On-site field days were followed with winter workshops to present yield results and nutrient management strategies.



In mid-July, area farmers attended a field day at the Verdi demonstration site to compare plots and learn about agronomic, economic, and water quality aspects of nitrogen management over vulnerable aquifers. USDA, Extension, and local water system staff presented options for combining water quality protection with agricultural practices.

Protecting Northern Rivers and Lakes

The pristine rivers and lakes of the northern Minnesota forest region are being degraded by sediment, nutrients, and altered stream flows. Stream bank restoration, stream buffers, tree planting, and forestry practices were highlighted by Local Work Groups in the Flute Reed, Knife, and Nemadji River watersheds. The Mississippi Headwaters area and St. Louis County programs concentrated on agriculture, forestry, landscaping, and shoreland management. Newsletters to landowners in the forest zone projects focused on practices to restore streams and manage woodlands.



Sixty-four participants attended the Park Rapids field tour and workshop organized by the Mississippi Headwaters Board. Speakers covered the glacial and geological history of the area; management of shoreland vegetation, pastures, and forest land; and other concerns in the rivers and lakes region of the north. The workshop was repeated in three additional Headwaters locations.



Paul Sandstrom, NRCS District Conservationist in St. Louis County, explains features of the Knife River watershed and the steps needed for its protection.

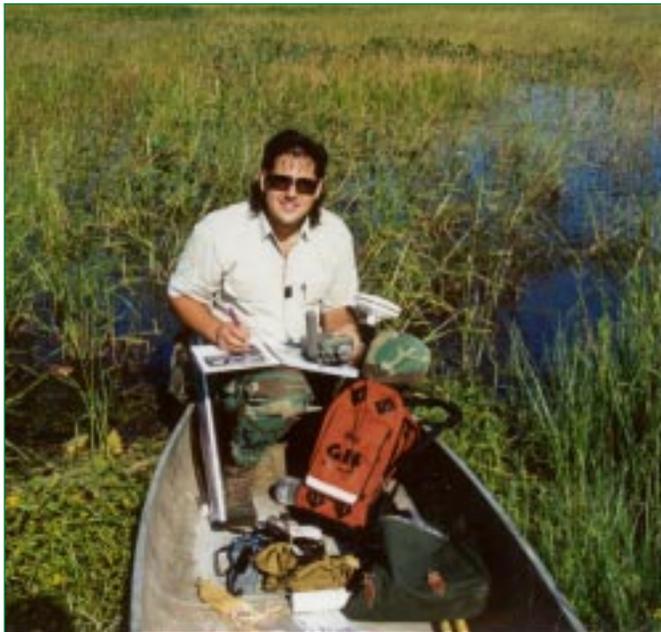


Forest stewardship, tree planting in riparian areas, erosion control along streams, pasture management, and fish population monitoring were featured in a bus tour, a workshop, a portable display, and a series of newsletters for the Knife River watershed.

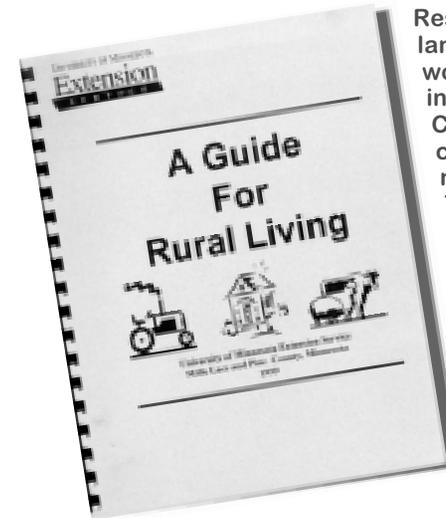
Reaching Non-traditional Audiences

USDA financial and technical assistance programs are used primarily by conventional farm operators. EQIP local education programs have been successful in reaching audiences less often served by USDA programs with education about resource concerns and practices.

Examples of EQIP Education programs addressing traditionally underserved audiences include a rotational grazing workshop developed for Amish farmers (hosted by Fillmore County) and a Renville County student field day focusing on natural resource awareness for children and families.



David Wise, NRCS staff and member of the Fond du Lac Band of Ojibwe, organized educational programs about lake water management to enhance stands of native wild rice and improve wildlife habitat. With the Fond du Lac Tribal and Community College, he hosted a regional conference and developed a video on wild rice management.



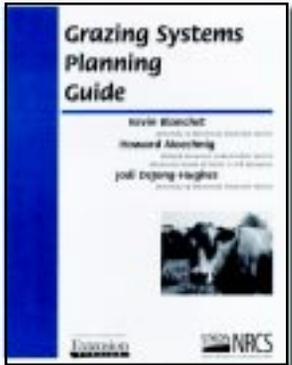
Resource management for small landowners was addressed through workshops, tours, and publications in Chisago, Pine, Mille Lacs, Carlton, Kanabec, and Hennepin counties as well as in many of the northern forest region counties. This conservation publication, produced by a Local Work Group from Pine and Mille Lacs counties, became the foundation for several workshops in central Minnesota.



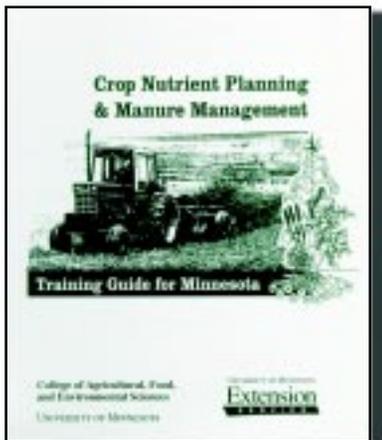
Land Stewardship Opportunities for Women, an annual conference conducted with EQIP Education assistance, has drawn a large audience of women landowners from south central Minnesota for three years. Topics range from conservation clauses in farmland leases to native prairie restoration. Here, participants get hands-on experience in identifying prairie species native to their region of the state.

Educational Materials

Educational materials have been developed by state and regional staff of NRCS and Extension for use in local and regional education programs:



■ The *Grazing Systems Planning Guide* assists producers and agricultural professionals in the preparation of a rotational grazing plan. It is available from the Extension website, <www.extension.umn.edu>, as BU-07606.



■ The *Crop Nutrient Planning and Manure Management* training guide and slide set was prepared to assist with teaching crop nutrient and manure management planning. The guide was distributed to county NRCS and Extension offices.



■ The *Nutrient Management Planner for Minnesota* computer software guides producers, professionals, and agency staff through the preparation of a field-level nutrient management plan, based on Extension recommended nutrient rates. The software has been distributed at EQIP training workshops organized by Extension.

Resources

Four Extension coordinators located around the state provide direct assistance to Local Work Groups with educational materials, specialist presenters, and grant writing support. They also provide regional programs, together with other Extension and NRCS specialists, as part of EQIP Education. A current staff listing is available at: <http://wrc.coafes.umn.edu/EQIP/>

EQIP Education is organized by the University of Minnesota Extension Service and Water Resources Center, the USDA-Natural Resources Conservation Service in Minnesota, and the Board of Water and Soil Resources working with Soil and Water Conservation Districts. The State Coordinator, at the UM Water Resources Center, can be reached at 612-625-2282. A description of EQIP Education and a listing of local grants can be viewed at <http://wrc.coafes.umn.edu/EQIP/>



Conservation education reaches a wide audience through the EQIP Education partnership.