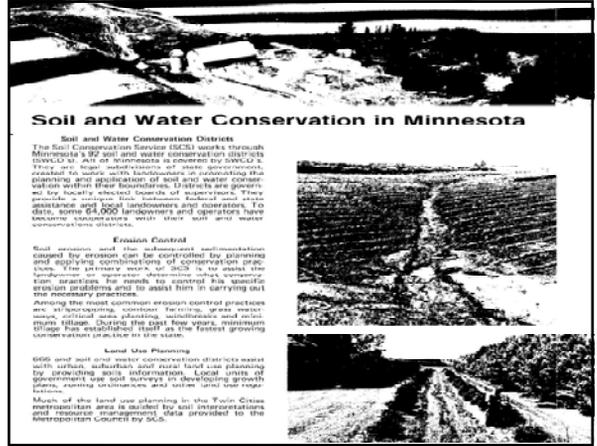


Soil and Water Conservation in Minnesota
U. S. Department of Agriculture
Soil Conservation Service
St. Paul, Minnesota



Soil and Water Conservation in Minnesota

Soil and Water Conservation Districts
The Soil Conservation Service (SCS) works through Minnesota's 22 soil and water conservation districts to help farmers and landowners conserve their soil and water resources. SCS is authorized to make surveys, conduct research, and provide technical assistance and local landowners and operators. To date, some 60,000 landowners and operators have become acquainted with their soil and water conservation districts.

Erosion Control
Soil erosion and the subsequent sedimentation caused by erosion can be controlled by planning and applying combinations of conservation practices. The primary work of SCS is to assist the landowner in proper planning and application of conservation practices. SCS also provides technical assistance and local landowners and operators. To date, some 60,000 landowners and operators have become acquainted with their soil and water conservation districts.

Land Use Planning
SCS soil and water conservation districts assist with urban, suburban and rural land use planning by providing soils information, local units of government are encouraged to develop local zoning ordinances and other land use regulations. Much of the land use planning in the Twin Cities metropolitan area is based on soil information and resource management data provided to the metropolitan Council by SCS.



CONSERVATION ACRES
a model farm

M. A. (Matt) Thorsness, extension soil conservationist in Minnesota, had the idea of the miniature farm demonstration when mulling over in his mind ways of teaching soil conservation to a 4-H group. He thought of the expensive model farm exhibit built for the State fair and just then happened to pass a miniature golf course. Combining the two, he had his idea.

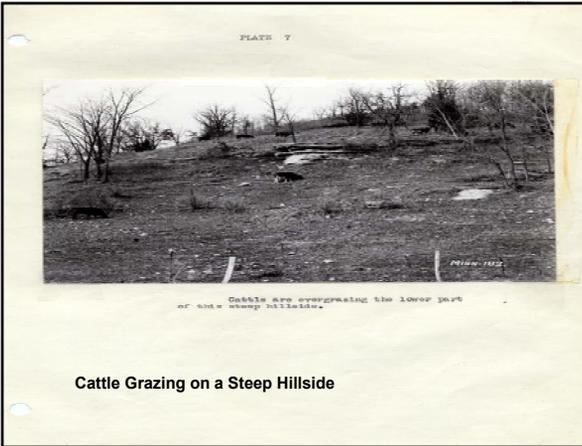
SUCR soil conservation terms as "practical" and "concretizing" have been used since they were developed in the 1930s. The idea of a miniature farm in a park in Burlington, Vt., was well known. The idea of a miniature farm, complete with a model conservation farm, complete with model soil conservation strip, erosion control, and other features. The entire farm, except for farm buildings and fence lines, was made of wood. Length and percentage of the road design were carefully measured and the design and paving practice applied. Where concrete was needed that was laid with a rod and level, in the same manner as any full-sized road would be properly laid out.

The miniature, excellent and comprehensive guide to soil conservation. The model, with these various sections, was used to illustrate to a 4-H club and to give the workers an idea of what various soil conservation jobs were involved in their project.

The model was made by dividing into 10 sections. Each section was made of wood or stone in a study morning work period of 45 minutes. As the various courses to work there were directed to construction, just as you would build a miniature farm, complete with field, woods, stream, and other features. The model was made of wood, stone, and other materials. The model was made of wood, stone, and other materials. The model was made of wood, stone, and other materials.

The model was made of wood, stone, and other materials. The model was made of wood, stone, and other materials. The model was made of wood, stone, and other materials. The model was made of wood, stone, and other materials. The model was made of wood, stone, and other materials.

Extension Service Review for January 1949 5



Cattle Grazing on a Steep Hillside



Display model of "before-after" farm scene built by the staff at the Deer-Bear Project Office.

Figure 23 One of the model farms built at the project office of the Deer-Bear Project Office during the last year and which used in exhibits and displays in the office. A similar model was built in the Bremer Creek project office during the winter.



Figure 18 Willow abutment placed in a dry run draining approximately 2000 acres. This type of bank protection has been widely used in Orop and project areas in Minnesota. Picture taken in Willow Creek Project area.



Figure 19 Notch spillway dam in the Dorehour Creek area. The gully in which this dam is placed has a drainage area of 200 acres. The old gully was about six feet deep and 15 feet wide and was steadily eating back.



Figure 20 This trench outlet, serving for a system of terraces in the Weaver Creek project, has its upper portion finished while the lower portion, where the water is uncontrolled, is protected by the rock necessary work shown in the picture.



Stratifying manure for spring planting in field and nursery.



CCC boys at work quarrying limestone for gully control structures.



Arched notch-and-wier head-spillway of rubble masonry under construction with CCC labor.



Figure 5. Soil removed from a cultivated field by sheep erosion is seen in foreground. Gullies indicate advanced stage of erosion.



Plate No. 4

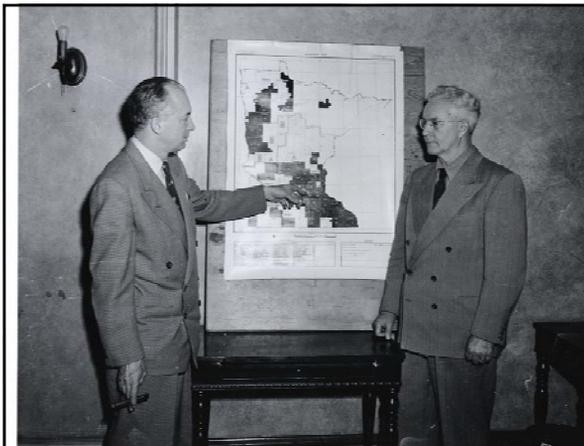
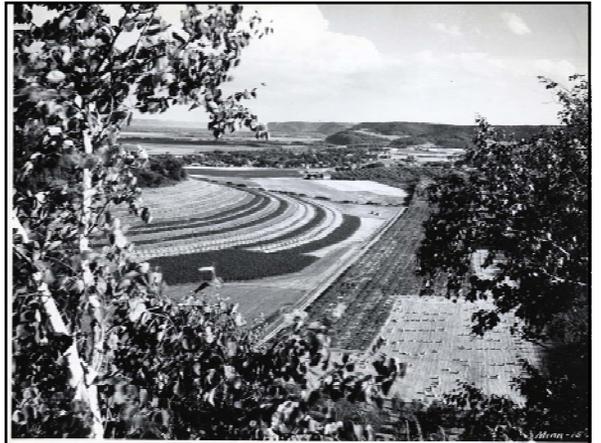
Grassone one year after planting, showing green ash in foreground, followed by soft maple and black locust. Survival 97% and growth above average. Spruce grass also seeded and showing good growth.

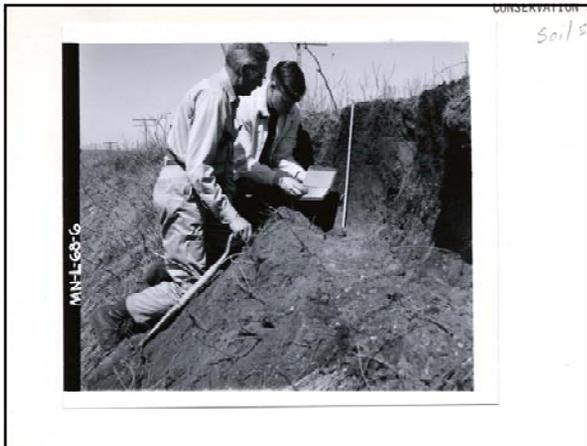
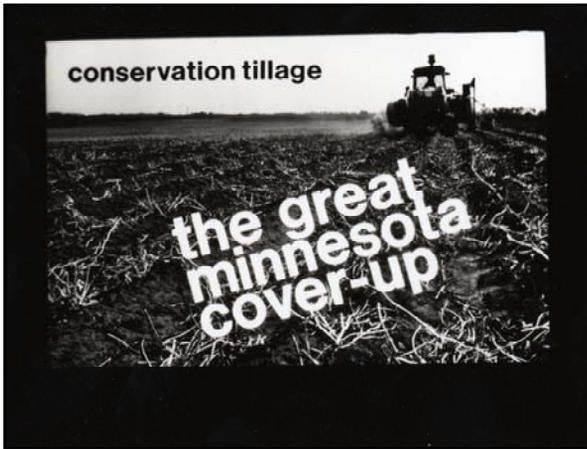
Plates 5 and 6 show growth of trees after one year on grassone. Besides on grassone, a simpler method of planting was done in individual places on steep dug into the earth and rock and spaced 2 feet apart. This type of planting was done this spring and results cannot yet be predicted. Other suggestions which might be given given consideration are: regulated grazing, introduction of sweet clover and protection and planting of other species, such as red cedar.

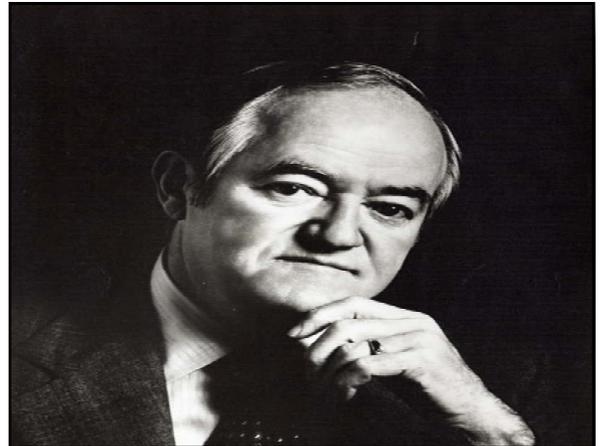
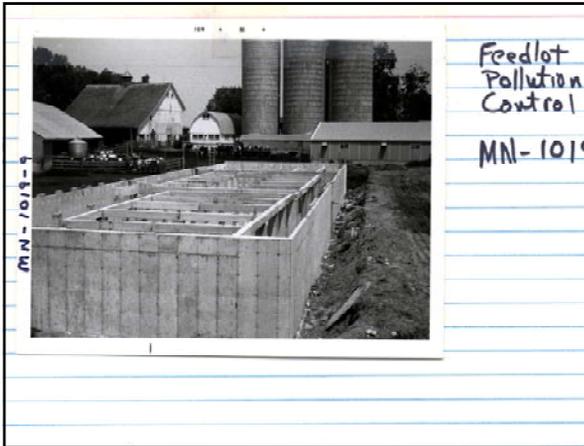
Plate 8.



A dry treeless southwest-facing steep slope in the foreground showing shallow stony soil appears a densely timbered equally steep north-facing slope. Gradient terraces which have been built recently aide in showing the shallow nature of the soil on these slopes.







"I grew up in the State of South Dakota as a boy, my father was in business in Huron, South Dakota, and I saw the dust storms, I saw the plains move away, I saw the topsoil literally blow off. And I remember as a young man as a scoutmaster how I would take my Boy Scout troop out in the country and we would go out to the old Indian camping grounds and find literally hundreds of arrowheads that had worked their way down through the topsoil onto what we call 'hard pan.' And how well I remember the Soil Conservation Service coming into being and remember them moving that earth that had piled over the barns--some of the old timers here will remember it--I can remember being able to go to my grandfather's farm, walk from the road right over the top of the barn because all of the earth had blown up off all those fields and it was like a mountain right over the top of the sheds and barns. I've never forgotten it."

Senator Hubert Humphrey's Speech
 President's Reception SWCS 31st Annual Meeting Minneapolis, MN August 1, 1976





Figure 10
 Plowing under a crop of sweet clover for green manure along
 terraces with tractor and gang plow.

SOIL CONSERVATION

HENRY A. WALLACE
 Secretary of Agriculture

VOLUME 1
 AUGUST 1935

ISSUED MONTHLY BY THE SOIL CONSERVATION SERVICE, DEPARTMENT OF AGRICULTURE, WASHINGTON

A MESSAGE
 FROM THE SECRETARY OF AGRICULTURE

Soil erosion cannot, to be effective, permanent, and economically feasible, involve more than the use of vegetative and engineering methods. It involves, also, general land-use planning, proper crop rotation, controlled livestock grazing, and the application of other sound farm management practices. Hence, practically every branch of the Department is concerned, should be called on, and should cooperate at all times in shaping and carrying forward a practicable program. Similarly, the Soil Conservation Service should cooperate with the other branches of the Department in order to utilize to the greatest extent possible all existing resources and information.

It is largely through cordial working agreements with the State colleges, the experiment stations and the extension services that the Department is accustomed to reach the individual farmer. And it is upon such agencies that we are relying for practical assistance in making the soil conservation program effective.

Many have spoken to me of the sincere desire of officials in all branches to help make this new undertaking a truly successful one. I am very much gratified, too, by reports coming to me from the field. The spirit which pervades soil conservation work everywhere enables us to go forward with confidence.

H. A. Wallace

SOIL CONSERVATION

OFFICIAL ORGAN OF THE SOIL CONSERVATION SERVICE
 UNITED STATES DEPARTMENT OF AGRICULTURE - WASHINGTON

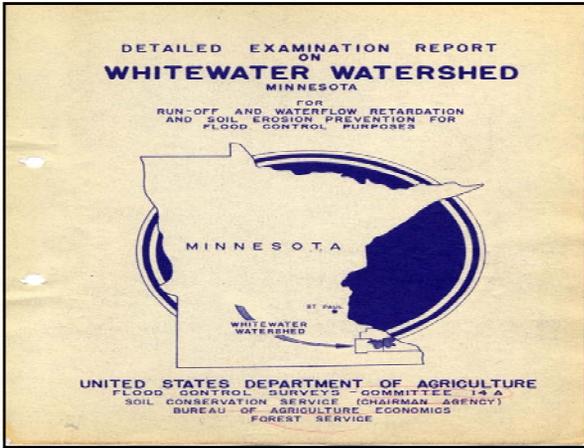
**AUGUST
 1935**

SOIL EROSION SENTINEL

UPPER MISSISSIPPI VALLEY
 REGION

U.S. SOIL EROSION SERVICE
 DEPARTMENT OF THE INTERIOR
 LA CROSSE, WISCONSIN





2003 State Report - Minnesota

NRCS
Natural Resources Conservation Service

2175 Michigan Street, Suite 200
St. Paul, Minnesota 55105-1506
612-291-2866
www.nrcs.usda.gov

Executive Summary

Friends in Conservation:

Fiscal Year 2003 was a banner year for conservation in Minnesota. Higher funding levels for existing programs and new programs made conservation an easier and more accessible choice for Minnesota's private landowners.

This past year our agency business plan and goals were achieved in basically all programs. While a major part of our work effort was directed to Farm Bill program implementation, much was accomplished in our ongoing Soil Service, Watersheds, Wetlands, and Conservation Technical Assistance Programs. Technical assistance was our success with the agricultural, non-forestry land, Environmental Quality Incentives Program (EQIP). NRCS worked closely with the Minnesota Association of Conservation Districts and Cooperative Extension staff to roll out a successful Local Work Group testing program to NRCS and SWCS partner state-wide. This testing provided the necessary ground-work to make locally-led conservation process work extremely well in Minnesota. Despite the short implementation timeline placed on the local field offices, our field staff and conservation partnership signed up over three times as many EQIP contracts compared to Fiscal Year 2002. FY 2003 brought forth the implementation of a new effort involving greater use of Technical Service Providers in Farm Bill program implementation.

Another good example of excellent partnership work in Minnesota is the Wetland Reserve Program. By working hand in hand with Ducks Unlimited, The Nature Conservancy, U.S. Fish and Wildlife Service, we were able to leverage even more dollars for wetland restoration. An example that shines brightly in northeastern Minnesota is the Glacial Ridge Project. Glacial Ridge is the site of the Nation's largest wetland and native plant restoration project in North America. A total of 26 partners and private landowners have shown that by working together a great deal, more can be accomplished.

WILLIAM HUNT
State Conservationist

A Partnership for Good Stewardship

NRCS works closely with our 91 Soil and Water Conservation Districts in Minnesota. NRCS employees in 83 field offices provide conservation technical assistance to owners and operators of private lands to assist them in making sound land use decisions.

Minnesota NRCS has a total of 210 employees. There were 22 students under the Student Career Experience Program and Student Teacher Experience Program and two Hispanic Association of Colleges and Universities (HACU) students. Participants in our EQIP program are currently a mix of 45% that NRCS has hired. Recruitment accomplishments continue to be made from the 1990 schools and 1994 Tribal Colleges.

