



A Brief History of the Soils Lab (1958-2008)

One of the more pressing production problems faced by local farmers in west central MN and parts of SD and ND during the 1950's was a lack of research-based knowledge on management practices to conserve soil and water resources. The university experiment stations were doing excellent research on plant nutrient/fertilizer relationships, but basic research on soil erosion processes and water use efficiency by crops was lacking, especially along the Minnesota/Dakotas corridor. Western Minnesota and the eastern Dakotas have some of the most productive soils in the nation. While the climate is generally favorable for crop production, there were challenges in managing these soils. Research on these problems was needed both by farmers and by the USDA-Soil Conservation Service (now NRCS). As a result, the United States Congress passed Resolution 203 in 1950 providing for the establishment of USDA Soil and Water Conservation Research facilities in the upper Midwest. This resolution did not specify where the facilities would be located, nor did it provide for any funding.

In 1954, a group of farmers, professional soil conservationists, and University of Minnesota personnel was invited to testify before a U.S. Senate hearing in Ames, Iowa. This group provided testimony on the need for federally-funded soil and water conservation research in western Minnesota. U.S. Representative H. Carl Anderson (from Minnesota District 7, which at that time included Stevens County) was on the Agricultural Committee and was instrumental in arranging for the hearing.

Legislation was passed in the U.S. Congress in 1955, providing funds to establish the North Central Soil Conservation Research Laboratory; however, the location of this facility was not specified. Several communities were vying for this research station. Several factors played a major role in choosing Morris as the site of the proposed lab; these included: the presence of a group of active and progressive farmers, business people, conservationists, and the presence of the West Central Experiment Station (now West Central Research and Outreach Center) and the West Central School of Agriculture (now University of Minnesota, Morris). In 1955, Dr. Cornelius A. Van Doren was hired and charged with the task of establishing the lab. He located the present site as the most suitable on which to build the lab. The staff and the research laboratory were temporarily housed on UMM campus.

The new North Central Soil Conservation Research Lab, locally known as the "Soils Lab," was officially dedicated during an outdoor ceremony on October 16, 1959. The local Boy Scout troop conducted the 49-star flag raising ceremony, using a flag that had flown over the U.S. Capitol, compliments of the Honorable H. Carl Anderson. The charge given to the Laboratory was to conduct soil erosion research on a 38 million acre problem area extending north-south along the Minnesota-Dakotas borders, and extending down into north central Iowa. There was a need for a permanent research farm with a water source to simulate rainfall and soils typical of Western MN to conduct field experiments. All of these conditions were found on a fifty-acre site bordering Swan Lake in Swan Lake Township north of Morris. The land was acquired, and then leased to the Soils Lab for research purposes, by a non-profit organization (The Barnes-Aastad Soil and Water Conservation Research Association, officially chartered in 1958, then became the stakeholders of the Lab). However, in 1990 and in response to the Lab's growing need for research land, the Barnes-Aastad Association purchased an additional 80 acres of land adjoining the original Swan Lake Farm.

The Barnes-Aastad Association interacts directly with the Soils Lab by hosting an annual meeting and sponsoring a summer Field Day to gain new information on current research, and to provide input to the Lab's research program.

The North Central Soil Conservation Research Laboratory, a natural resources research lab, contributes to several of ARS's Strategic Goals. Through a multidisciplinary research effort that responds to emerging and changing national and stakeholder demands, the research portfolio of the Soils Lab is designed to contribute to (1) enhancing the competitiveness and sustainability of rural and farm economies, and (2) protecting and enhancing the nation's natural resources base and environment.

The Soils Lab, during its 50 years of scientific research and service to the farming community, contributed to the missions of USDA and ARS by generating scientific information and developing management practices to help farmers solve agricultural problems. Research on tillage, soil erosion, soil compaction, crop growth and production and water quality was emphasized during the 1960s and 1970s. However, during the 1980s and 1990s, there was increased emphasis on water quality aspects of soil erosion and runoff, and new research was initiated on plant physiology and weed ecology. More recently, however, and in response to stakeholders' demand and renewed emphasis on economic viability of family farms and environmental quality issues, research on integrated agricultural systems and long-term sustainability of farming was initiated. Two major objectives were emphasized for this phase: (1) determine the agronomic, economic and environmental risks and benefits of alternative production systems (including organic farming and minimum tillage), and (2) introduce alternative crops as a means of diversifying the crop rotation (including bioenergy and biomass crops).

Currently, the Lab conducts its research under four major themes, these are: Sustainable cropping systems, Land management, Global climate change, and Crops and weed biology. We use a systems approach to develop solutions to agricultural production problems faced by small- to medium-sized farms. The Lab continues to conduct its multidisciplinary research program in collaboration with farmers, federal research labs, and universities.