Southern Mn. Progressive Ag Tour

Thursday, September 9th, 2004

Location: First Lutheran Church—1114 West Traverse Road

St. Peter, Mn.

3.0 CEU credits

Registration 8:30 a.m. **Program Begins 9:00 a.m.**

"Emerging Water Quality Issues and Red Top Farm Drainage Results"
Brian Williams—Minnesota Department of Agriculture

"Managing Nutrients & Soil Variability for Enhanced Profitability"
Gary Malzer—University of Minnesota

Fertilizer Trends—"What's the Future"
Jim Nelson—Cargill Crop Nutrition

Conservation Security Program: "The Dawn of a New Era in Conservation Policy"
Kasey Reed—USDA-NRCS

Lunch

Field Tours—Buses leave at 12:15 return at 3:30 p.m.

Stop 1—"Farmable Wetlands Program & Filter Strips: Farming a Different Crop" (1:00-2:15)
Special efforts have been underway to restore small wetlands and install filter strips through the Conservation Reserve Program in the Seven Mile Creek Watershed. Participating farmers will share their experiences with the program.

"Evaluating Nitrogen Rates"
Ever wonder if you are using the right nitrogen rates for your corn? Learn from farmers who have experimented with nitrogen rate strips on their own farms and results from ongoing N rate validation trials.

Stop 2—"Northern Plains Dairy Tour" (2:30 -3:15)
Newly established 3,000 cow dairy operation located west of St. Peter. Learn new technologies this dairy has implemented for maximum efficiency and environmental quality.

Sponsored By: Southern Minnesota Corn Economics Group, University of Minnesota Extension, Minnesota Department of Agriculture, Nicollet County Soil and Water Conservation District, Nicollet County NRCS & FSA Office, Seven Mile Creek Watershed Project, Nicollet County Bank

Southern Minnesota Progressive Ag Tour

Morning Program

9:00 a.m. **Welcome:** **Tony Jacobs, Eric Annexstad--South Central Minnesota Corn Economics Group and Gary Wyatt- Regional Extension Educator**

9:10 a.m. Speaker #1 Brian Williams

"Emerging Water Quality Issues and Red Top Farm Drainage Results

Minnesota farmers will play an important role in finding solutions to increasing concerns regarding ground and surface water quality issues. Programs currently being implemented as a result of the Federal Safe Drinking Water Act, Federal Clean Water Act, and Minnesota's Groundwater Protection Act may influence agricultural practices in the future.

- Currently 1500 public water suppliers in the state are implementing measures to protect their aquifer from contamination sources through the Wellhead Protection Program.
- Federal Clean Water Act requires states to assess 100% of their waters. Currently in Minnesota 5-6% of streams and rivers, and 12-13% of lakes have been assessed for impairments.

An eighty acre site located on the Red Top Farm provides a unique opportunity to study the quality and quantity of water and agricultural chemicals moving through the subsurface tile drainage system. Results from Red Top fill a critical gap between university research (typically conducted on a small-scale under a very controlled environment) and field-scale production. The overall concept of Red Top has proven to be a highly effective approach for evaluating nutrient and pesticide "Best Management Practices" (BMP's) since 1996.

Brian Williams

Minnesota Department of Agriculture
33315 Sand Prairie Lane
LeSueur, Minnesota 56058

Phone: 507-665-6806
brian.c.williams@state.mn.us

Brian Williams works for the Minnesota Department of Agriculture as a Water Quality Coordinator. Prior work experience includes management of an agricultural retail facility and farm management. Work responsibilities include leadership and technical assistance to public water suppliers, local Wellhead groups related to non-point agricultural impacts and contaminant source management strategies. Education background includes a degree from the University of Minnesota-Waseca and numerous training opportunities through employment.

9:35 a.m. Speaker #2 Gary Malzer

Managing Nutrients and Soil Variability for Enhanced Profitability

The profitability and crop response associated with fertilizer nutrient applications is a reflection of the overall management decisions that a producer makes, the environment/weather, and how those factors interact with the ability of a soil to supply nutrients to the crop. Nutrient needs to maximize profitability may vary not only from field to field but also within fields. This presentation will discuss some of the results from currently existing research projects in the area, and examine the potential profitability associated with site-specific nutrient management.

Gary Malzer

Department of Soil, Water, and Climate
University of Minnesota
1991 Upper Buford Circle
St. Paul MN 55108

Phone: (612) 625-6728
FAX: (612) 625-2208
E-mail: gmalzer@soils.umn.edu

Research Interests:
Current research emphasis is being placed in the area of improving nutrient use efficiency. This broad area of research is being approached from three different perspectives. These include: 1) The assessment of field management techniques that can be used to minimize nutrient loss and thereby increase efficiency. 2) The development of methodologies that can be used to make more precise nutrient recommendations, thereby minimizing the application of excess fertilizer. 3) Evaluation of techniques to manage field variability that will allow for more efficient utilization of nutrient inputs.

Education and Experience:

1967	B.S. University of Nebraska, Agronomy
1967-1968	Soil Conservation Service. Soil Conservationist, Hebron Nebraska
1968-1970	M.S. University of Nebraska, Soil Fertility
1970-1973	Ph.D., Purdue University, Soil Fertility/Chemistry
1974	Post-doctoral Research Associate, Purdue University
1974-1979	Assistant Professor, Soil Science Department, University of Minnesota
1979-1990	Associate Professor, Soil Science Department, University of Minnesota
1986-1987	Sabbatical leave with the Environmental Quality research group with Dow Chemical USA at Midland MI.
1990-	Professor, Soil Science Department, University of Minnesota. One-year sabbatical leave researching corn grain quality. Sponsored by the MN Corn Research and Promotion Council.

10:30 a.m. Speaker #3 Jim Nelson

Fertilizer Trends-"What's the Future"?

Fertilizer prices within the past year have become as volatile as the commodities they produce. Jim Nelson of Cargill Crop Nutrition will give a macro perspective of the structural changes within the N, P and K fertilizer industry, reasons for the changes, and insight of future trends.

Jim Nelson

Cargill Crop Nutrition
18330 Tyler St.
Elk River, MN 55330

Phone: 763-241-5234
E-mail: jim_1_nelson@cargill.com

11:00 a.m. Speaker #4 Kasey Reed

Conservation Security Program: "Dawn of a New Era in Conservation Policy"

The Conservation Security Program (CSP) is a new federal farm program that provides financial incentives and technical assistance to farmers and ranchers who develop conservation plans on their working lands.

As authorized by Congress in the 2002 Farm Bill, the Conservation Security Program offers a new paradigm for federal farm programs—paying farmers who practice conservation on working land, rather than requiring farmers to set land aside. Kasey Reed of the St. Peter Area NRCS office will describe how the program works and what producers can do now to ensure they are eligible for the incentives when the program reaches their watershed.

Kasey Reed

USDA—NRCS
Assistant State Conservationist
for Field Operations
South Central Regional Office
St. Peter, MN 56082

Phone: 507-931-2550 ext.104
E-mail: kasey.reed@mn.usda.gov

11:30 p.m. Lunch

12:15 p.m. Board Busses for Afternoon Tours

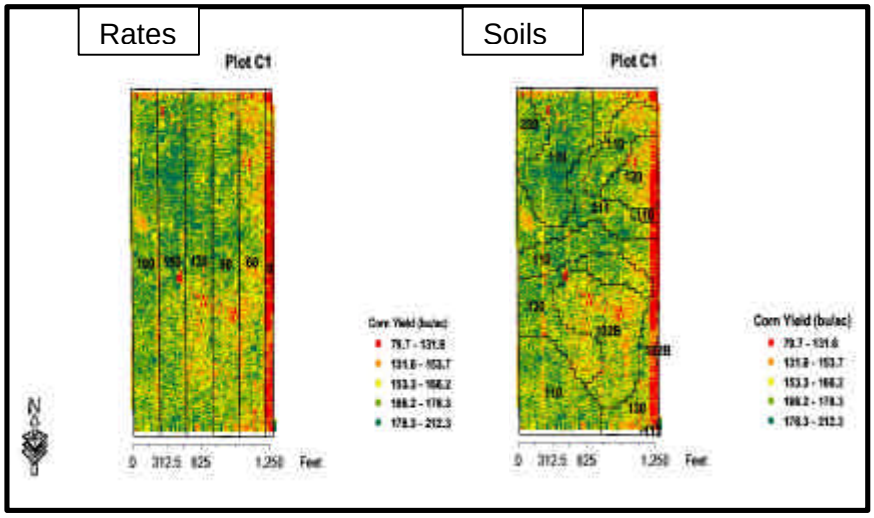
Afternoon Program

Tour Map

1:00 –2:30 p.m. Gary Gintner Farm

Tour Stop 1A Evaluating Nitrogen Rates on Your Farm

Rate of N application is the management practice that influences the economic return and environmental consequences of fertilizer N more so than any other N management practice. Numerous on-farm field strip and small plot trials have been conducted recently in south-central Minnesota to validate current University of Minnesota N recommendations. Yield results from these trials, proportion of yield coming from soil N vs. fertilizer N, fertilizer N recommendation philosophies, and an update from a recent 5-state N recommendation task force meeting to standardize N recommendations across the Midwest will be shared with the attendees.



On-Farm Nitrogen Rate Trial Yield Maps

Gyles Randall

University of Minnesota
Southern Research and Outreach Center
35838 - 120th Street
Waseca, MN 56093

Phone: (507) 835-3620
Fax: (507) 835-3622
Email: grandall@umn.edu

Gyles W. Randall is Professor and Soil Scientist at the University of Minnesota Southern Research and Outreach Center.

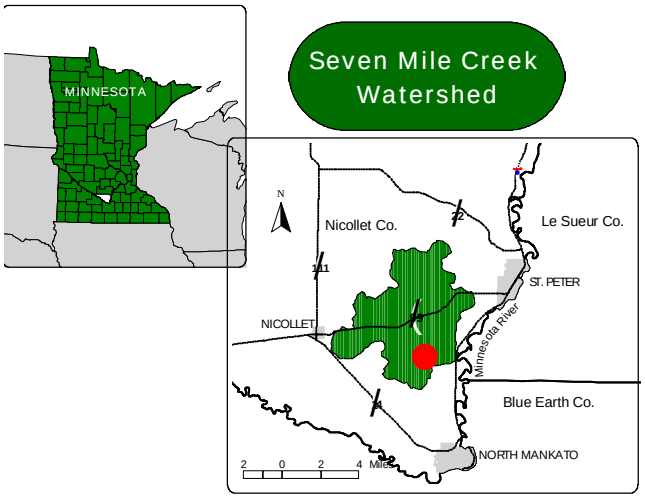
A native of Wanamingo, Minnesota, Randall earned his B.S. and M.S. degrees from the University of Minnesota and Ph.D. degree from the University of Wisconsin.

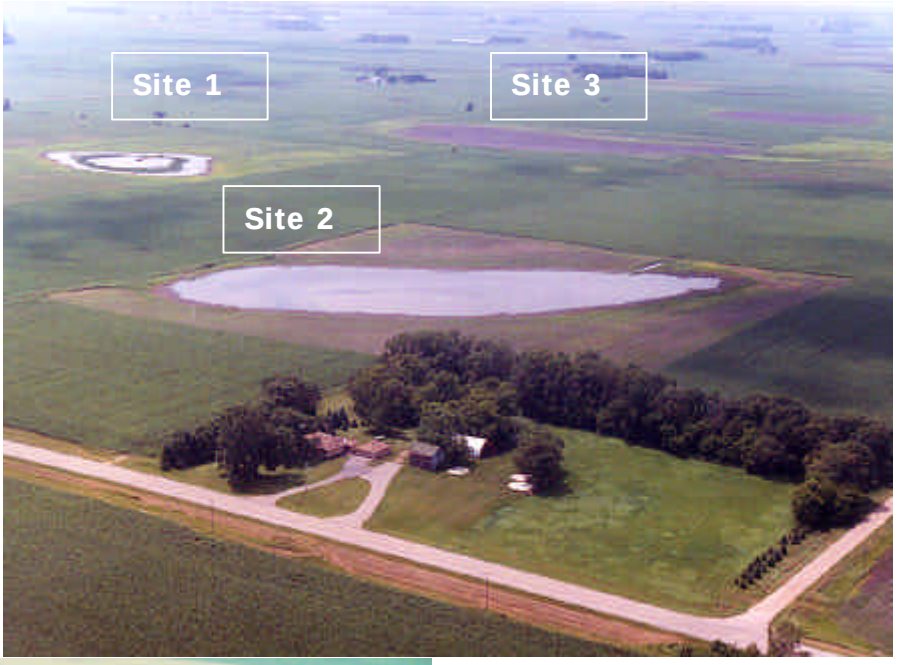
His research interests lie in soil fertility, tillage, cropping systems, and environmental quality as they relate to crop production. Specific research has centered on improved nutrient efficiency and management of fertilizers and animal manures in the development of best management practices (BMPs) to limit losses of nutrients to subsurface, tile drainage water.

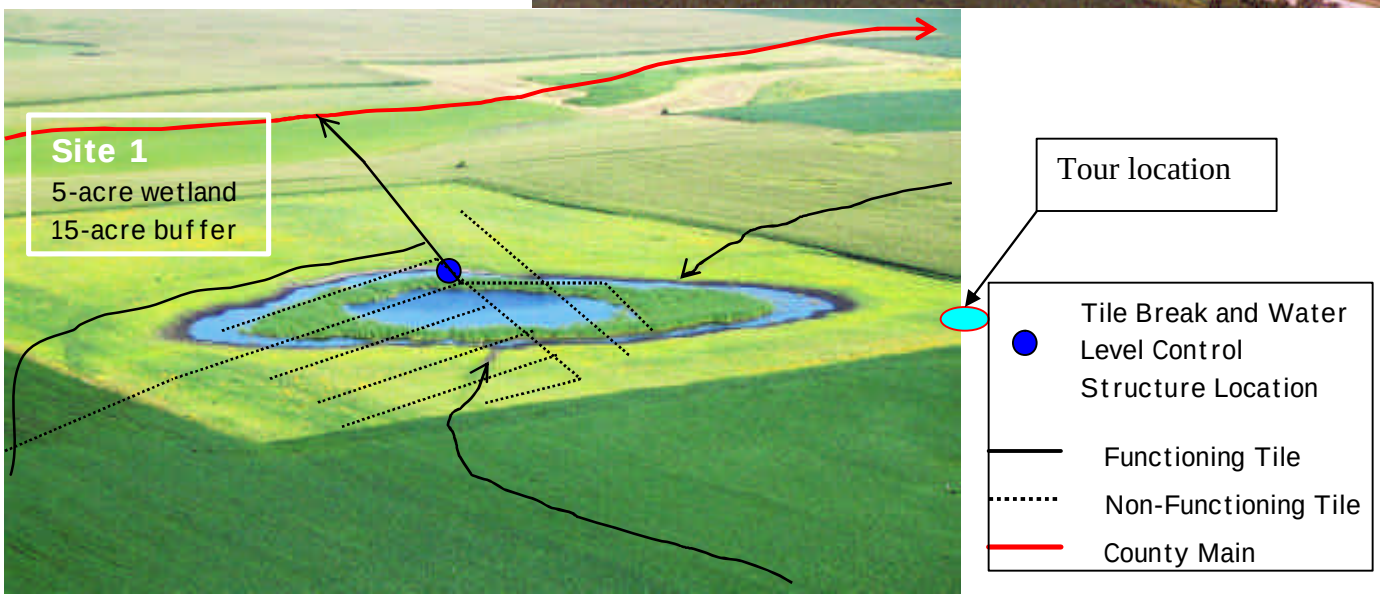
1:00 –2:15 p.m. Gary Gintner Farm

Tour Stop 1B Farmable Wetlands and Filter Strips: Farming a Different Crop

The Seven Mile Creek Watershed Project has been working with farmers and landowners to enroll some of their cropland into conservation set aside programs through the Continuous Sign-Up Conservation Reserve Program (CRP). Two very popular practices that have been used to help enhance and protect water quality, soil conservation, drainage management, and wildlife habitat has been filter strips along drainage ditches and restoring small wetlands. At this stop we will tour one of six wetlands that were recently restored to intercept agricultural drainage tile through the Farmable Wetlands Program. Watershed managers and participating landowners will discuss the basics of the program, added watershed incentives to increase enrollment, restoration and maintenance considerations, and other related topics.







Tour Stop 2 Northern Plains Dairy

2:30- 3:15 p.m. Northern Plains Dairy

This 3,000 capacity dairy was constructed in the Seven Mile Creek Watershed in 2002. It is one of the largest dairies in the state. Northern Plains Dairy is designed to milk approximately 2,400 Jersey cows and host 600 Jersey dry cows for a total of 3,000 animal units. A unique anaerobic digester is used at the dairy to minimize odors while maximizing fertilizer, power and bedding resources derived from the manure. Each cow makes enough nutrients to generate 2 Kwh of electricity per day, 1/2 lb. bedding/compost material, and 15 gal. of liquid fertilizer.

3:30 p.m. Estimated arrival time back to St. Peter

Thanks for coming and hope you enjoyed the tour.