

Second-Year Demonstrations Show Improved Management Pays Off

by Kathleen Duffy, NPM Economist

The 1991 on-farm demonstration results showed that three-fourths of the 33 statewide demonstration sites were able to achieve comparable corn yields and maintain or increase farm profit using improved management practices.

Host farmers, involved in all aspects of the demonstration, decided what to test in their fields. Some looked at weed management practices -- atrazine alternatives, reduced herbicide rates and mechanical weed control methods. Others looked at nutrient management practices -- legume and manure crediting, routine soil testing and preplant soil nitrate testing. Some farmers explored both weed and nutrient management.

Fritz and Ginny Wytenbach, of Sauk County, completed their second year as on-farm demonstration cooperators. And again their plots showed that they could maintain yields while banding herbicides half rate and even eliminating herbicides completely. The consequent elimination of herbicide costs on the no-herbicide plot improved their profits by \$10 per acre over their normal herbicide application rate of 2 quarts per acre of Lasso. Over the Wytenbach's 500 acres of corn ground, given uniform weed pressure, this could translate into total potential cost savings of \$5,000.

The weed control in 1991 was not as good as it was the previous year on the Wytenbach plots. However, Fritz re-



Kathleen Duffy, at right, featured results from 1991 demonstration projects at recent Nonpoint source conference.

marked, "I don't think it's worth the money to get every weed out of the field."

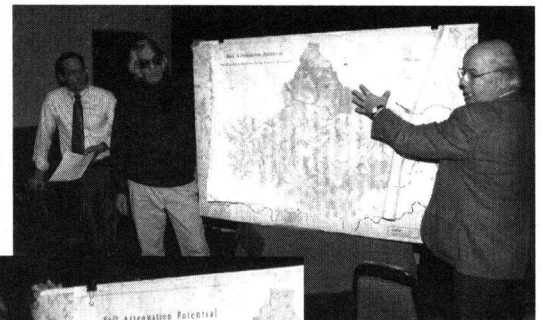
First-year demonstration cooperators Ed and Sandy Strauss, of Sheboygan County, focused on improving their nitrogen management. Using the preplant soil nitrate test for the first time, the results for the field showed a 98-lb nitrogen credit per

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Nonpoint Source Conference: Where are we Today?

The NPM team joined over 400 resource conservationists involved in the state's nonpoint source pollution abatement at a joint conference held in late January. The challenging program considered critical issues facing the priority watershed program. NPM's faculty advisors, Soil Scientist Fred Madison and Rural Sociologist Peter Nowak, set the stage during the first afternoon.

As keynote speaker, Fred Madison confronted the audience with the issue facing the Big Springs, Iowa project. Substantial efforts based on technology have reduced agriculture's nitrogen use in the watershed by a million pounds. However, to achieve water quality goals, reductions of a second million pounds are necessary. Fred maintained that a similar challenge is facing Wisconsin's water quality efforts. He suggested the audience



Robin Shepard, Fred Madison, and Peter Nowak explain linking farmer survey data and soil attenuation mapping as a means of targeting educational efforts.

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Future Directions in Manure Management

The UWEX Manure Planning Committee is continuing to examine educational programs in livestock waste management and water quality. The committee, which is chaired by Keith Kelling (Soil Science) and Brian Holmes (Agricultural Engineering), was formed in an attempt to plan strategies and secure resources for assisting county and area UWEX staff in conducting successful outreach programs on environmentally and economically sound manure management. In the last issue of *NPM Field Notes*, we summarized existing educational programs in manure management reviewed by the UWEX Manure Planning Committee. With this issue, we would like to report the new manure management programs the committee is considering.

Demonstrations: Increase the number and visibility of on-farm manure management demonstrations. University-based UWEX faculty could develop models that identify the components of successful on-farm demonstrations.

Publications: i) Create a visual guide for assessing manure application rates on various ground covers (corn residue, alfalfa stubble, bare and snow covered ground). ii) Develop a publication for farmers that contains the guidelines for setting up manure nutrient crediting trials on their own farms. iii) Develop written materials that describe the conditions when full nutrient credits should not be taken following manure applications (i.e. denitrification losses from manure applied to wet soils. etc).

Video: Develop a manure management video production. The video would focus on spreader calibration techniques, suitable spreading sites, and other topics.

Other: i) Approach local seed dealers with the idea of offering manure spreader calibration services to clients by using their portable scales when they are on farms selling or purchasing seed. ii) Meet with other midwestern Extension specialists to discuss current activities, the potential for cooperative programs, and the development of future research and or extension programs relative to manure management.

Comments on the proposed items are encouraged and should be voiced to the committee chairs or other members of the Manure Planning Committee. Additional reports on the progress of the committee will be reported in future issues of *NPM Field Notes*. ❖

Second-Year Demonstrations

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acre. This effectively allowed them to reduce their nitrogen application rate from a customary rate of 160 lb of nitrogen fertilizer per acre down to 60 lb of nitrogen per acre. Profits increased by over \$20 per acre due to the savings on nitrogen fertilizer costs.

In reaction to the demonstration, Ed commented, "I thought using the preplant soil nitrate test was a real eye-opener. The yields showed no difference between the high rate of N application and the low, so you'd be a fool to stick with the high rate." However, he added with caution, "I'm not going to switch everything over to using the low rate yet. I want more data and follow-up. I want to feel more comfortable with how the deep nitrate test works."

The on-farm demonstrations stress the need to tailor production to each farm's uniqueness: crop, soil, management, and economic conditions. It is impossible to recommend uniform nutrient and weed management strategies for all farms. However, as these two years of on-farm demonstrations show, certain principles apply on most farms and can work toward protecting farm profits and water quality.

The 1991 on-farm demonstration results are all in and being compiled for publication. Look for the results bulletin in April, or for more information, call NPM economist, Kathleen Duffy at (608) 262-5383. ❖

A Simple Technique for Predicting Future Weed Problems



A new research note, *A Simple Technique for Predicting Future Weed Problems*, by Professor R. Gordon Harvey, describes how to use untreated check areas within a corn or soybean field to plan next year's weed management program. For copies, contact the Department of Agronomy (608-262-1390) or the NPM office (608-262-5200). ❖

Clark Wagner visually rates weed pressure by comparing check areas with the color photographs included with new publication.

NPM profile: *Bryan Black*

From the beginning, NPM like Wisconsin agriculture as a whole has benefitted from the expertise of the state's independent crop consultants. One example is Bryan Black who is contracted to provide vital services in NPM's whole farm research project in Lafayette County.

Working with Lee and Tammy Montgomery and NPM Regional Specialist, Karen Talarczyk this fall, Bryan completed standard soil testing on each of 88 individual cropland fields of the 290 acre Montgomery dairy operation. Bryan will continue to provide crop scouting services and field monitoring during the growing season.

An independent consultant for the past five years, Bryan is busy on over 10,000 crop acres in six counties in southwestern Wisconsin and northern Illinois.



Crop consultant, Bryan Black

Byran grew up on a dairy farm near Shullsburg, graduated from UW-Madison in 1983, and worked for four years with Control of Sauk City. Since starting his own business in rural Darlington, he has offered soil testing, nutrient management, crop scouting, pesticide recommendations, alfalfa cutting schedules, color computer field mapping and conservation compliance consulting to area farm operations.

Readers interested in a listing of independent or industry agricultural consultants can contact the Wisconsin Association of Professional Agricultural Consultants

(WAPAC) for a directory of Wisconsin members. Write or call Cindy Baumgartner, WAPAC Executive Secretary, Route 1, Box 137, Plainfield, Wisconsin 54966 (phone 715-335-4841) for a directory or membership information. ❖

Upcoming Events

Integrated Crop and Pest Management Workshops Forages and Small Grains

UW-Madison
Basic Workshop, February 24-25, 1992 - **canceled**
Advanced Workshop, February 26-27, 1992
For information contact Bryan Jensen at (608)-263-4073

Wisconsin Association of Land Conservation Employees (WALCE)

Annual Professional Improvement Seminar

Marc Plaza, Milwaukee
February 26-28, 1992
For information contact Joe Van Berkel at (608)-356-5581

Wisconsin Association of Professional Agricultural Consultants (WAPAC)

Annual meeting

Theme: *Expanding WAPAC's Horizons in the 1990's*
Holiday Inn, Tomah
March 6, 1992
For information contact Cindy Baumgartner at (715)-335-4841

Nonpoint Source Section, DNR

"Kick-off" meeting for new Priority Watersheds

Stevens Point
March 11-12, 1992
For information contact Carol Holden at (608)-266-0140

Lake Management Conference

Stevens Point
March 12-14, 1992
For information contact Lowell Klessig at (715)-346-3783

American Water Resources Association Wisconsin Section annual meeting

Theme: *Land Use Impacts on Water Quality*
Radisson, LaCrosse
March 12-13, 1992
For information contact Bill Kowalski at (608)-787-1393

Field Scout Training Class

Integrated Pest Management Program and UW-River Falls

River Falls
March 18-19, 1992
For information contact Bryan Jensen at (608)-263-4073

NPM Technical Advisory Committee Convenes

Friday, February 21, 1992
11:30 to 4:00 pm
473 Horticulture, UW-Madison

Topics to include: agency updates, on-farm field demonstrations, useful related demonstrations or services, educational directions, publications, initial farming systems projects, nutrient plans, and summary from the *Center for Integrated Agricultural Systems*.

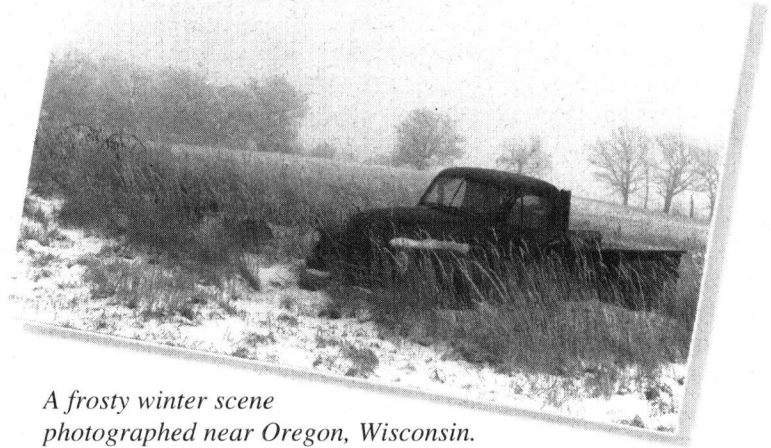
NonpointConference *(continued from page 1)*

renew efforts to promote improved management, expand research, and create innovative educational programs.

Peter Nowak wrapped up with a fervent speech calling for a reassessment of the priority watershed program. He made the case that we have lost direction in this voluntary program. Peter maintained that we are beginning to view the farmer as someone who must be dependent on our technical expertise to develop plans to protect soil and water resources. The shift has been toward technological solutions built around compliance, regulation, and providing cost-sharing assistance.

At later sessions on marketing change, NPM economist Kathleen Duffy featured results from 1991 NPM demonstration projects. Robin Shepard, Peter Nowak, and Fred Madison explained linking farmer survey data and soil attenuation mapping as a means of targeting educational efforts. Peter was also featured in another breakout session at which he discussed the reasons why farmers do not adopt new practices.

The joint conference received high marks from participants. Congratulations for a great effort go to conference committee members Carol Holden of Department of Natural Resources, Sue Porter, Kris Modaff, and Jim Vanden Brook of Department of Agriculture, Trade and Consumer Protection, Jeff Hastings of Wisconsin Association of Land Conservation Employees, Dave Dillingham of Wisconsin Land Conservation Association, Gary Korb of University of Wisconsin-Extension, and Renae Anderson of Soil Conservation Service. ♦



*A frosty winter scene
photographed near Oregon, Wisconsin.*

Wisconsin Nutrient and Pest Management (NPM) program provides educational and informational opportunities for Wisconsin farmers, farm supply businesses, and agchemical dealers. NPM is administered through:

**University of Wisconsin-Extension
Cooperative Extension Service**

**College of Agricultural and Life Sciences
University of Wisconsin-Madison**



NPM Field Notes
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