

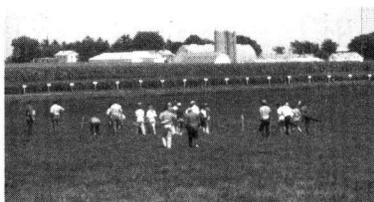
Something for Everyone at Sustainable Ag Field Day

Over 200 people toured UW agricultural research plots and conversed with researchers on topics ranging from intensive rotational grazing to cover crops at the 1991 Sustainable Agriculture field day. The event held August 1 at the Arlington Research Station was cosponsored by the CIAS, WDATCP, and UW-Extension.

At the seven field stops, there was much for farmers interested in reducing fertilizer and herbicide inputs. In two separate research projects, Keith Kelling and Margaret Smith



Above: Margret Smith, a PH D student in Agronomy at UW-Madison, presenting alternative corn/forage legume rotations at the field day. Right: Attendees examining alternative pastures for intensive rotational grazing systems.



found that the nitrogen value of legumes in rotations was substantial, as was the value of carry-over nitrogen in the medium textured soils at Arlington in 1989 and 1990. Tom Mulder discussed the results of his work with Dr. Jerry Doll comparing the weed control effectiveness of four different types of cultivators. He said that there was not that much difference in cultivator performance this year. Gordon Harvey presented the method he is developing for tracking weed pressure in fields which could help producers decide between weed control options. Another principal field stop featured a team project of Dave Combs, Kim Vaughan, and others on intensive rotational grazing for dairy cattle.

continued on page 4

NPM Will Have a Busy Biennium

On August 8, Governor Thompson signed the Wisconsin state budget for the 1991- 1993 biennium. Included in this budget was the \$645,000 that the U.W. System had originally requested for the operation of the Center for Integrated Agricultural Systems and the NPM program. Although this funding was not in the budget the Governor presented to the legislature, it was restored by the Assembly and Senate.

This considerable political accomplishment was made possible by a broad coalition of organizations and individuals. Many share the goals of sustainable family farming systems and protection of water resources with NPM, but it was those of you who called or wrote who made the difference. NPM is proud to be your program. We look forward to listening to you and developing new avenues for information exchange.

We also want to sincerely thank the chief builders of the coalition. Thanks especially to Margaret Krome (Wisconsin Rural Development Center), Jim Arts (Wisconsin Federation of Cooperatives), Roger Cliff (Wisconsin Farm Bureau), Representative Stan Gruszynski and aide Linda Barth-Sutter, Senator Charles Chvala and aide Curt Pawlisch, Steve Diercks (CIAS Advisory Council and WPVGA), Bryce Luchterhand (NPM Technical Advisory Committee), Mark Lederer (UWEX Chancellor's Office), and Michael Williamson (UW-Madison Chancellor's Office). ♦

Before The Land Conservation Board

The Farm Assessment Technique (FAT) was a special topic before members of the Wisconsin Land Conservation Board August 13th. Professor Peter Nowak, Soil and Water Conservation Specialist with the Environmental Resources Center and a member of the NPM Technical Advisory Committee presented a partial summary of data collected during the pilot year of FAT projects.

The Farm Assessment Technique is a landuser survey that assesses a farmer's nutrient and pesticide management levels. The intent of these assessments is to gain an understanding of what farmers are currently doing in the area of agri-chemical management, why they are using specific management practices and potential obstacles to adopting recommended Best Management Practices (BMPs). Once the results are collected they can help water quality agencies design targeted information and educational assistance based on what farmers say they want and need.

In his presentation Peter Nowak described results showing that farmers know there's nutrient value in manure and legume crops, but most aren't taking full advantage of these natural fertilizers. "More than one-half of the farmers in the study overapplied nitrogen fertilizer because they did not adjust overall nitrogen application rates for the nitrogen found in manure applications or legume crops," said Nowak. More than 40 percent of these farmers overapplied nitrogen by at least 60 pounds per acre, and 85 percent applied too much phosphorus to the same field.

According to Nowak, farmers overapply nitrogen and phosphorus mainly because they don't fully utilize the nutrient value that is available from manure. By improving both manure and legume management on corn ground, he adds, farmers could increase their profits by \$8 per acre, and also reduce the risk of groundwater and surface water contamination.

Offering conclusions before the board Nowak stated, "The challenge is to find creative ways to inform and encourage farmers to make use of the value of manure and legume crops. We've been talking about this in our Extension publications for almost 100 years and have not succeeded in convincing farmers of the benefit, instead we've created programs that focus too much on technical fixes with government cost-sharing of practices such as manure storage facilities, Nowak added. The challenge for water quality programs is placing the emphasis on nutrient management rather than focusing on the structural solutions said Nowak. FAT results from three priority watershed projects show no statistical difference between farmers with manure storage structures and those without storage structures.

The Wisconsin Land Conservation Board consists of nine members, including Secretary of Agriculture Alan Tracy and Department of Natural Resources Secretary C.D. Besadny. The Board advises on all matters related to soil and water conservation, animal waste management, and farmland preservation. The Board also advises the University of Wisconsin annually about needed research and education programs.

Watch for an upcoming Special Edition of *NPM Field Notes* focusing on the Farm Assessment Technique. ❖

Upcoming NPM Field Days

Northwest Region:

Sept. 4	10:00 - 3:00 p.m.	Chippewa Co. Farm	Near Chippewa Falls
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Southeast Region:

Sept. 4	10:00 - 3:00 p.m.	Wilfred Meier Farm	Near Bristol in Kenosha Co.
Sept. 5	Noon - 3:00 p.m.	William Thull Farm	Near Kewaskum in Sheboygan Co.
Sept. 25	10:00 - 2:00 p.m.	Lakeland Farm*	Near Elkhorn in Walworth Co.
TBA		Bob Topel Farm	Near Lake Mills in Jefferson Co.

(*See accompanying story in this issue.)

Southwest Region:

Aug. 28	1:00 - 3:00 p.m.	Steve Mergen Farm	Near Bloomington in Grant Co.
Sept. 5	1:00 - 3:00 p.m.	Gene Abraham Farm	Near Monroe in Green Co.
Sept. 10	Noon - 3:00 p.m.	Lee Montgomery Farm	Near Argyle in Lafayette Co.
Sept. 19	1:00 - 2:30 p.m.	Jody Wirts Farm	Near La Farge in Vernon Co.
Sept. 24	11:30 - 4:00 p.m.	Dick Folbrecht Farm*	Near Wauzeka in Crawford Co.

(*Note: To be held at the Ted Bay Farm near Steuben in Crawford Co. in conjunction with the Crawford Co. Conservation Recognition Day.)

South-central Region:

Aug. 29	4:30 - 9:00 p.m.	Goose Pond	Near Arlington in Columbia Co.
TBA		River Valley FFA	Spring Green in Sauk Co.
TBA		Paul Swenson Farm	Near Arena in Iowa Co.
TBA		Albert Greenheck Farm	Near Lone Rock in Richland Co.

TBA = To Be Announced

Modified Band Sprayer Demonstrated at Trempealeau County Farm

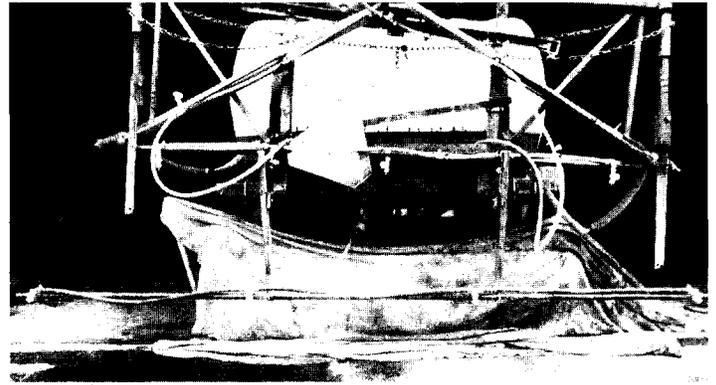
by Paul Kivlin

The Trempealeau County Farm is the host of a Nutrient and Pest Management Demonstration that illustrates a range of weed control options. With the help of Trempealeau County Ag Agent, Dennis Frame, treatments that include full and reduced broadcast herbicide rates, full and reduced banded herbicide rates, and totally mechanical weed control are compared side-by-side. One of the featured topics at a field day here on August 20 was the modified sprayer used to apply herbicide in bands for this demonstration.

Banding a herbicide over the crop row has tremendous potential to reduce the amount of herbicide applied to a field.

A grower needs to consider many factors when deciding what type of weed control program to adopt. For a chemical program, most of the decisions revolve around proper herbicide selection for the prevalent weeds in the field. To evaluate a weed control program that moves towards a reduction or elimination of herbicide use, additional decisions must be made about equipment availability (rotary hoe and cultivator), access to labor, and the ability to devote a higher level of attention to weed management.

Banding a herbicide over the crop row has tremendous potential to reduce the amount of herbicide applied to a field. While not a new concept, herbicide banding is currently used by only a very small percentage of farmers. Typically, banded herbicides are applied at planting and needed equipment includes tractor-mounted saddle tanks and nozzles attached to the planter.



Modified Band Sprayer used for Trempealeau County Farm NPM demonstration.

However, a grower can experiment with banding without a lot of equipment alteration or expense by modifying a typical field sprayer with a very simple, inexpensive addition.

The modification involves adding a second spray boom below the main boom using adjustable steel braces attached to the sprayer frame. The boom is equipped with even-spray banding nozzles adjusted in height to achieve the desired band width and connected to the tank using the existing hoses. The nozzle spaces are set to correspond to row width and the herbicide can be banded over the row by following the wheel tracks laid by the planting operation. While not necessarily a permanent fix, these modifications can be done for under \$50.00 and will allow growers to judge the advantages and disadvantages of herbicide banding for their farming operations. ❖

Reduced Rate Herbicide Controls Weeds at Thull Farm

by Richard Proost

Interest in reducing agricultural inputs, specifically herbicide rates, continues to grow. More and more farmers are questioning whether or not these practices will work on their farm under their conditions. NPM demonstrations have tried to answer these questions by working with interested farmers in setting up demonstrations on their farms. One such farm in Washington County is the William Thull Farm, run by William Thull with his sons, Mike and Ralph.

The Thull Farm has a wide range of agricultural practices being demonstrated on second year corn in both a moldboard plow system and a chisel plow system. One practice is that of reduced herbicide rates. On one part of the demonstration field, the Thulls applied Bladex at 2 pounds per acre plus Lasso at 2 quarts per acre preemergence. This is the normal rate for this type of soil and weed pressure. The demonstration compares the

normal rate to half this rate combined with a supplemental row cultivation. The Thulls have also added a purely mechanical weed control system to the demonstration as an additional comparison.

Observations made so far this season has shown no real differences between the normal and half rate of Bladex and Lasso. There have been some velvetleaf escapes, as expected, but not to a degree that will influence yield. The purely mechanical system has more weed pressure, which may be severe enough to hurt corn yield. Yield differences are not expected between the normal and half rate herbicide treatments; however, yields may be lower in the mechanical weed control system due to increased weed pressure and "cultivator blight". Needless to say, proper timing of cultivation and PROPER cultivator adjustments are a key to making this approach work.

You are invited to see this demonstration for yourself at a field day on September 5 from noon to 3:00 p.m.. Contact the NPM or Washington County UWEX office for directions and information. ❖

Snap Beans Undamaged by Rotary Hoeing

Rotary hoeing snap beans caused no damage to the plants in an experiment recently conducted by Bruce Michaelis, Richard Rittmeyer, Bob Hughes, and Larry Binning at the Arlington Horticulture Farm. Snap beans were planted on June 14 and emerged five days later. The field was rotary hoed daily from the third to the eleventh day after planting. There was no difference in finished stand between the rotary hoed field and the check field which was not hoed.

In a second experiment, rotary hoeing was delayed until the first true leaf had developed on the snap bean plants. In this case, the rotary hoe damaged about 1% of the stand, resulting in a reduction in plant population from about 116,200 plants per acre to 115,000 plants per acre.

From the results of these two experiments, "... it is apparent that if the rotary hoe is the choice for weed management, snap bean damage will be minimal," according to Binning. ❖

Walworth County WICST Project Field Day

You are invited to see six farming systems being used side-by-side and to learn about the Wisconsin Integrated Cropping Systems Trial (WICST) at the Lakeland Agricultural Complex (formerly the Lakeland County Farm) on September 25 from 10 a.m. to 2 p.m.. An NPM demonstration will also be featured at the field day. Participants will be able to select which of six half-hour presentations to attend and in what order. For more information, call Lee Cunningham, Walworth County UWEX Agent, at 414-741-3190. ❖

Ag Field Day

(continued from page 1)

Sixteen programs and projects on a wide range of topics were represented in a poster session. Posters highlighted NPM, the Farm Assessment Technique, and DATCP Sustainable Agriculture Program projects. One display featured a project in which NPM regional specialist Pam Porter participated by conducting farmer interviews. This project, "Soil Tests in Sustainable Agriculture: Characterization of Soil Biological Health" is headed by Dr. Robin Harris and will be featured in an upcoming NPM newsletter. ❖

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**



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