ON-FARM RESEARCH PROJECT **TEAM GRAIN**

Year: 1999

Title: Evaluation of the pre-sidedress soil nitrate test (PSNT)

Purpose: The purpose of this project was to confirm the accuracy and demonstrate the usefulness of the PSNT as a tool for growers wanting to better estimate the amount of nitrogen (N) credited from fall applied manure.

Cooperating Agent/Coordinator: Scott Hendrickson/Carl Buchner

Cooperating Farmer: Jim Preston

Location: Manitowoc County

Previous Crop: Corn

Soil Type: Hortonville

Soil Test: pH - 7.2
P - 13 ppm
K - 89 ppm

Tillage: Fall moldboard, spring field cultivate (1x)

Planting Date: April 23

Hybrid: Dekalb 385B

Population: 32,000

Row Spacing: 30"

Fertility Program: 14,000 gal/A liquid dairy manure fall applied prior to plowing
100 lb/A 7-18-36 at planting

Herbicide Program:

Material	Rate	Method	Date
Dual II Magnum	.7 pt/A	preplant-incorporated	April 22
NorthStar	5 oz/A	postemergence	June 1

Harvest Date: October 22

Treatments: Treatments compared grain yield with no supplemental N acre (grower's choice) vs. 160 lb/A of supplemental N (PSNT recommendation).

Plot Design: RCB, three replications

Results:

Table 1. Grain Yield Comparisons Using PSNT Supplemental N Recommendation, Manitowoc, WI

Treatment	Grain yield
	-----bu/A-----
160 lb/A Supplemental N (PSNT Recommendation)	174
No Supplemental N (Grower's Choice)	164
Mean	169
Yield CV (%)	4.19
LSD 5%	NS

Yield was not significantly different between the PSNT recommendation for supplemental nitrogen and the grower's choice for supplemental nitrogen. In this experiment, the grower's choice for supplemental N was economically the better option.