

Year: 1999

Title: Evaluation of the Pre-Sidedress Soil Nitrate Test (PSNT) in Corn Planted for Silage

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

Cooperating Farmer: John Kappelman

Location: Manitowoc County

Previous Crop: Corn

Soil Type: Mosel

Soil Test: pH -7.2
P -28 ppm
K -145 ppm

Tillage: Fall chisel plow, spring field cultivate (1x)

Planting Date: April 26

Hybrid: Pioneer 36H36

Population: 37,000

Row Spacing: 30"

Fertility Program: 18,000 gal/A liquid dairy manure fall applied prior to plowing
240 lb/A 9-23-30 at planting
50 lb/A of N as 28%

Herbicide Program:	Material	Rate	Method	Date
	Atrazine 90DF	.5 lb/A	postemergence	May 31
	Accent	.67 oz/A	postemergence	May 31
	Permit	.67 oz/A	postemergence	May 31
	Crop Oil	1 qt/A	postemergence	May 31

Harvest Date: September 6

Treatments: Treatments compared corn silage dry matter yield with no supplemental N (PSNT recommendation) vs. 50 lb/A of supplemental N (grower's choice).

Plot Design: RCB, three replications

Results:

Table 1. Corn Silage Dry Matter Yield Comparisons Using PSNT Supplemental N Recommendation, Manitowoc, WI

Treatment	Corn Silage dry matter tons/A
No Supplemental N (PSNT Recommendation)	7.2
50 Lb/A Supplemental N (Grower's Choice)	7.2
Mean	7.2
Yield CV (%)	2.93
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 PSNT recommendation for supplemental N was economically the better option. Estimated cost savings/acre using the PSNT recommendation was \$11.50.