A3630

The Presidedress Soil Nitrate Test

Take the time to find out if the presidedress soil nitrate test is right for your farming situation.

The presidedress soil nitrate test (PSNT) is one of two soil tests* available to corn growers for improving the efficiency of nitrogen (N) fertilizer applications.

The PSNT measures soil N from previous legume crops**, manure applications, soil organic matter and carry-over N from the previous growing season.

Advantages

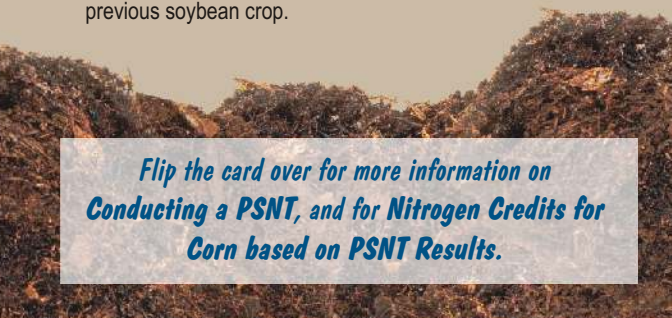
- ✓ The PSNT can reduce the need for purchased N fertilizer.
- ✓ The PSNT can be a valuable tool for growers wanting to confirm N credits from manure or legumes.**
- ✓ The PSNT can reduce the risk of nitrate movement to groundwater due to N applications in excess of crop need.

Disadvantages

- ✗ The PSNT requires *sidedress application* of supplemental N.
- ✗ The PSNT requires that soil sampling, lab analysis, and sidedress N applications all occur during early to mid-June when other field operations, such as weed control or haying, need to be done.

* The other test available is the Preplant Soil Nitrate Test (PPNT).

** The PSNT should <u>not</u> be used to assess nitrogen credits from a previous soybean crop.



Flip the card over for more information on ***Conducting a PSNT****, and for* ***Nitrogen Credits for Corn based on PSNT Results.***

Conducting a PSNT

Nitrate N is more likely to accumulate in silt loam or heavier textured soils. *The PSNT is not recommended on sands.*

Soil samples for the PSNT are collected to a depth of one foot when corn plants are from 6 to 12 inches tall. Analysis is offered by several commercial soil testing labs, as well as the University of Wisconsin labs in Madison and Marshfield.

Nitrogen Credits[1] for Corn based on PSNT Results

PSNT RESULT	Soil Yield Potential[2]	
	VERY HIGH/HIGH	MEDIUM/LOW
ppm N	lb N/acre credit	
≥21	—no additional N is needed—	
20–18	100	80
17–15	60	80
14–13	35	40
12–11	10	40
≤10	0	0

[1] Amount of N to reduce from target N fertilizer application rate.

[2] To determine a soil's yield potential, consult UWEX publication A2809, ***Nutrient application guidelines for field, vegetable and fruit crops in Wisconsin***, or contact your agronomist or UWEX county agent.

Note: When corn follows alfalfa, the maximum N recommendation is 40 lb N/acre for all PSNT results less than 21 ppm N.

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For more information, contact the Nutrient and Pest Management Program at (877) 426-0176 or on the internet: ipcm.wisc.edu

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