

# ***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 not 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<sup>1</sup> for Corn based on PSNT Results

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

<sup>1</sup> Amount of N to reduce from target N fertilizer application rate.

<sup>2</sup> 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](http://ipcm.wisc.edu)*

