

UNIVERSITY OF KENTUCKY

College of Agriculture Cooperative Extension Service

Presidedress Nitrogen Test (PSNT) Information Sheet

Division of Regulatory Services

Section I (lab use only)

Lab Number: \_\_\_\_\_

Billing Code: \_\_\_\_\_

Date Received: \_\_\_\_\_

Section II

County Code:

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County Sample Number:

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Section III

Date Sampled: \_\_\_\_/\_\_\_\_/\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

Owner Sample ID: \_\_\_\_\_

Acres: \_\_\_\_\_

Section IV

Pre-plant N applied:

- None
- less than 50 lbs N/acre
- 50 to 100 lbs N/acre
- 100 to 150 lbs N/acre
- greater than 150 lbs N/acre

Primary pre-plant N source:

- Manure
- Ammonium Nitrate
- Urea
- Anhydrous Ammonia
- DAP
- Other: \_\_\_\_\_

Soil drainage:

- Well
- Moderately well
- Somewhat poorly
- Poorly
- Poorly, but tilled

N inhibitor:

- None used
- Nitrification inhibitor
- Urease inhibitor

Soil management:

- Conventional tillage
- No tillage

Paid: \_\_\_\_\_

\_\_\_\_\_  
Agent Signature

## **How To Take A Sample**

Soil should be sampled when the corn is about 6 inches high with between 2 and 4 leaf collars showing (V2-V4). Samples should not be taken later since time is required for the sample to be tested by the lab for sidedressing to occur no later than the V6 stage. Samples may be taken somewhat earlier when corn has 1 leaf collar (V1) if early sidedressing is anticipated. Take soil cores to a 12-inch depth. This is deeper than “routine” soil samples which are taken from 4 to 6 inches deep. The deeper depth is required because nitrate is a soluble nutrient that moves deeper into the soil profile. If the soil probe tip is not long enough to collect a 12-inch core, you will have to probe the soil twice at each point in order to collect the 12-inch sample. Randomly walk through the field collecting about 20 soil cores. Minimize the field area being sampled to about 10 to 20 acres. Because of the variability of soil N availability and the economic importance of N nutrition to corn, it is not wise to collect a sample representing a large area.

It is critical to dry the sample before sending it to a laboratory. The soil needs to be dried because N can undergo biological transformations in a moist sample, causing a laboratory result that is not indicative of field soil conditions. Thoroughly mix each 20-core composite sample from the 10 to 20 acre field. Keep about a pint of the soil and completely air-dry the soil immediately after sampling. To dry the sample quickly, place the soil on a paper plate in front of a gently blowing fan. Do not place the sample in a plastic bag. The soil test laboratory may not perform a PSNT on samples received moist because of the uncertainty in the results.

The PSNT can be used on fields where manure or fertilizers were broadcast applied before planting. The PSNT is not recommended in fields with banded/injected N applications because it is difficult to properly sample such fields and adequately predict N availability.

Send the sample to a laboratory that will perform the PSNT test. The University of Kentucky soil test laboratory at Princeton can perform this test. Submit the sample to a local county extension office and they will send the sample to the laboratory for testing.