

You Can't Manage What You Haven't Measured



Consider PSNT Testing

- The PSNT test uses the NO₃-N content of the top foot of soil as an estimate of the amount of N available to the crop. Research in a number of states has confirmed that this test can be useful in managing N on corn & in making more accurate N fertilizer recommendations at side-dressing time.
- Use of the PSNT test requires that soil sampling, laboratory analysis, and side-dress N applications all occur during a short period.
- PSNT should be used as a guide, not a guarantee. Neither the PSNT result nor the N recommendation should be over-simplified to a simple recipe. The PSNT is simply one part of the complex process of crop management.

USI Sample Collection Option

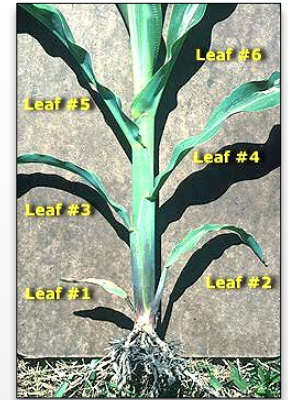
- USI collects PSNT samples. \$ 30 per / hour for field service tech travel / labor / vehicle costs.
- PSNT 1 Sample Depth (0-12") - \$ 20 per sample site.
- Does not include soil analysis. Separate PSNT soil analysis charges will apply.
- Optional: USI can take tissue samples at the PSNT sample location to compare with PSNT results. Tissue sample collection dependent on crop type. Separate tissue analysis charges will apply.
- Optional: USI can geo-reference the sample locations. Customer to advise USI of request.

Contact USI to Learn More about this Service

Accurate collection of samples is critical to obtaining reliable information from PSNT. Twelve inch (12") deep soil samples should be collected when corn is in the V4-V6 leaf growth stage, and each sample should be composed of a composite of at least **10 cores (15 to 25 cores are recommended)**.

Each composite sample should represent **no more than 10 acres**. Additional composite samples should be taken for each different management zone or practice change and represent areas of the field that have similar soil properties.

Factors that affect mineralization should be considered when determining the sample area(s), including: soil type, slope, and moisture condition –or– differences in management, including intensity of artificial drainage, rates of manure application, and cropping history differences. (If manure or fertilizers have been banded, “special sampling” protocol should be followed).



Composite samples should be placed in **non-lined paper** (not plastic) bags. Keeping samples moist and warm can cause mineralization to continue, inflating the nitrate levels resulting in “low” side-dress nitrogen rates that could hinder crop yields.

Individual core samples should be mixed as thoroughly as possible before packaging the composite sample. If the samples will not be delivered to the lab immediately, consider these options to ensure the integrity of the samples:

- (1) Quickly air-dried (i.e. spread out flat on newspaper with air circulation).
- (2) Refrigerate at 50° degrees F or less.
- (3) Freeze to stop microbial activity.

Quick turnaround from field collection to analysis should be planned to assure effectiveness of the PSNT program.

According to the Illinois Agronomy Handbook, the below chart reflects the general consensus on application levels:

Level	Application
Above 50 lbs. per ac.	No additional Nitrogen
Below 20 lbs. per ac.	Full rate of Nitrogen
Between 20 - 50 lbs. per ac.	Adjust proportionally

