



## Tracking Plant-Available N (When N is knifed-in)

**Purpose:** A program sponsored by the Illinois Council for Best Management Practices (CBMP) to provide local growers an estimate of the location, form, and concentration of plant-available N remaining in the soil. Plant-available N at a point in a field and a point in time can be estimated utilizing this technique and provide information that may help minimize environmental impact by improving harvest yield and maximizing nitrogen utilization. (*This is not to be used as a stand-alone N recommendation system.*)

1. Contact the Illinois CBMP through Leslie Forrest (309-827-2774 or [leslief@ifca.com](mailto:leslief@ifca.com)) to register sites for the program. She will need: contact name, cell phone, UPS shipping address, whether knifed or broadcast sites, and number of sites.
2. Use a template (Image 1) to pull soil samples. Place the template perpendicular to the direction of N application if knifed or dribbled-in. Use only one set of holes to collect the sample. Combine all 11 cores in a bucket, thoroughly mix and fill a labeled soil sample bag. Pull samples to a 1 foot depth with a sampler specifically designed to pull 1 foot soil samples. No exceptions on depth. Must be 1 foot core. Make sure the 11 cores are thoroughly mixed before filling a soil sample bag with the subsample. **Please, no short cuts with the sampling protocol.** Request templates (no charge) or extended probes (at cost) through Illinois CBMP (Leslie Forrest, [leslief@ifca.com](mailto:leslief@ifca.com) or 309-827-2774).
3. Collect a 2<sup>nd</sup> sample at 1 to 2 feet as described above using the same holes. Mark the probe with a permanent marker or a metal file when the first 1-2 foot core is removed. This can serve as a guide for the remaining core depths.

**Note:** *Some surface soil may fall into the hole prior to pulling the 1-2 foot sample. Observe the core as it is extracted from the soil. If you note loose, dry soil sitting on top of the 1-2 foot core, remove it with your fingers prior to placing the sample in the mixing bucket. Use good judgment.*

4. **Tracking plant-available N over time:** Mark the sample site with a flag to easily identify the site's location. You will need to collect the next sample in the same way from the same location, moving the template a few inches. Pull a set of samples (0-1 ft. and 1-2 ft.) periodically or following a significant rain event. Pull samples from the same area in the same way. **No reason to sample soils when dry and hard.**
5. Submit all samples with the provided shipping materials within 24 hours of collection. Refrigerate over weekend if pulled on a Friday and ship on Monday. Do not ship samples to the lab unless they will arrive and be processed prior to the weekend (ship no later than the last UPS pick-up on Thursday).
6. Complete the provided sample submittal forms **completely**. Any incomplete forms will delay the return of the N-WATCH report showing the test results. Submittal forms will be provided with sampling and shipping materials sent when sites are registered. You can obtain additional supplies by contacting the Illinois CBMP through Leslie Forrest ([leslief@ifca.com](mailto:leslief@ifca.com) or 309-827-2774). Register **all** N-WATCH sites.
7. The cost of shipping and laboratory analyses (estimated at \$120/site) will be covered by Illinois CBMP.
8. Reports will be generated and e-mailed to site contact within two business days of receiving sample results.

**PROCEEDINGS OF THE**

**43<sup>rd</sup>**

**NORTH CENTRAL**

**EXTENSION-INDUSTRY**

**SOIL FERTILITY CONFERENCE**

**Volume 29**

**November 20-21, 2013**  
**Holiday Inn Airport**  
**Des Moines, IA**

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**ON-LINE PROCEEDINGS:**

**<http://extension.agron.iastate.edu/NCE/>**