



**Our Mission:** To promote and implement the 4Rs of nutrient stewardship (right source, right place, right time, right rate) to minimize environmental impact, optimize harvest yield and maximize nutrient utilization.

**IN THIS EDITION:**

- **2018 IFCA & NREC Projects Underway**
- **Strip Freshener Program to Promote Reduced Tillage**
- **Lake Springfield Watershed Project—Continued!**
- **Nitrogen Research Results & Outreach**

**2018 NREC PROJECTS FOCUS ON NITROGEN & WATER QUALITY**

For the last several years, IFCA has been involved in many projects that are funded through NREC (the Nutrient Research and Education Council). All of the projects are aimed at keeping nutrients in the field through improved utilization using the right source, rate, time and place. Dan Schaefer and Jason Solberg utilize a leased tractor, GPS tracking systems, fertilizer toolbars and soil sampling services to perform and document this work, and share the data collected with University researchers for their analysis.



IFCA puts in a spring '18 N treatment in Rockport, IL

In 2018, IFCA is assisting university researchers with five NREC funded projects:

1. **Douglas County Nitrogen Management Systems in Tile Drained Fields:** *(testing field tile for N losses in different nitrogen management environments in a corn/soy rotation and with and without cover crops)*
2. **Evaluating INLRS Activities, Piatt County:** *(evaluating the effectiveness of N rates, cover crops, and bioreactors in corn/soy/wheat rotation)*
3. **Comprehensive Corn Nitrogen Research Program:** *(implementing on-farm statewide N Rate trials to develop up to date Maximum Return to Nitrogen (MRTN) recommendations for Illinois farmers)*
4. **Tracking Soil N & Availability** *(studying the movement and uptake of N in the soil throughout the growing season and over various environmental conditions to determine how to better predict and manage N movement)*
5. **Cereal Rye Ahead of Corn: Evaluating Nitrogen Catch & Release:** *(studying effective cover crop termination timing and evaluating the N sequestration and release in a corn system)*

See the “Outreach” article on the next page for more information on how we share this information with the industry.

**REDUCING TILLAGE WITH A NEW CONCEPT—STRIP FRESHING**

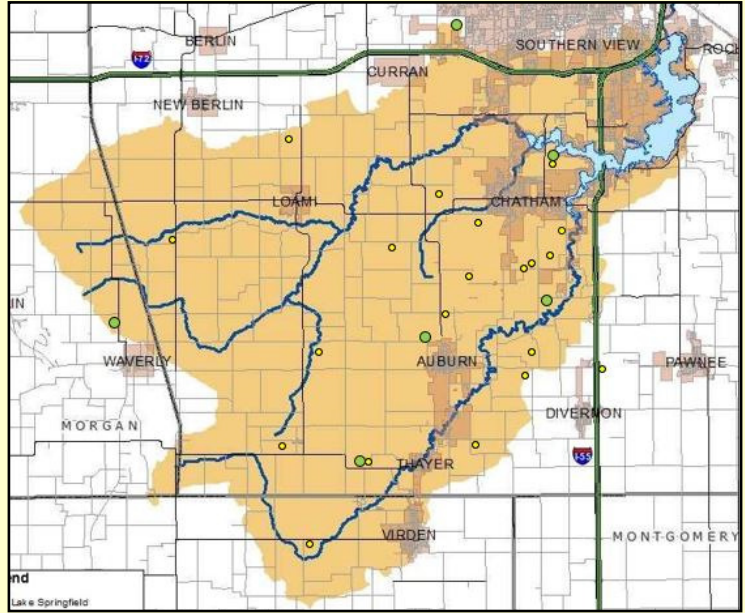
For growers who are looking for a less invasive tillage technique but don’t want to go completely to no-till, strip-till may be the answer. This season, IFCA acquired a strip freshener bar and is partnering with interested farmers to use the bar as part of a system that begins with the fall anhydrous ammonia application. The goal is soil conservation which is key to reducing phosphorus losses, even in very flat fields.

When anhydrous ammonia is applied in the fall ahead of corn, the ammonia tool bar makes a strip in the field in order to inject the ammonia into the soil. No additional fall tillage is needed, and the crop residue between the strips remains all winter, helping to hold the soil in place. In spring, a tractor and “freshener” bar does just that, it goes overtop of the fall strip and “freshens” it. This facilitates a clean strip for the seed bed, and minimizes the disturbance of the residue between the rows. The goal is to reverse the tillage trend that is occurring especially in soybean fields.

## LAKE SPRINGFIELD WATERSHED PROJECT—CONTINUED!

IFCA continues to support on-going nitrogen management programs and BMPs in the Lake Springfield watershed. Because the lake is a drinking water supply and does not have a nitrate removal system, the Sangamon County SWCD and CWLP continue to seek agriculture’s involvement in reducing nutrient losses to the lake and they asked IFCA to assist them with their 319 project. Jason Solberg is heading up the IFCA efforts.

Jason is coordinating 6 N-Rate trials and 20 N-WATCH nitrogen soil sampling sites within the watershed. In this map, the rate trials are noted with green dots and the N-WATCH sites with yellow dots. Tracking nitrogen before and throughout the growing season will help the grower understand more about what is happening to the nitrogen they applied in both the spring and the fall, and the N Rate Trials continue to support the Lake Springfield MRTN that the UI developed in 2017 for this watershed. The IL Council on Best Management Practices (CBMP) is providing funding to cover the laboratory costs of the N-WATCH sites and will sponsor educational meetings in the watershed, where we will share the results of these programs with farmers and crop advisers.



## SHARING NITROGEN RESEARCH RESULTS

On February 9, Dr. Emerson Nafziger hosted a webinar detailing responsible nitrogen management for the upcoming season. He reviewed nitrogen responses to differing rates of N from the 2017 corn year, with data taken from the on-farm N Rate Trials funded by NREC and implemented by IFCA. The results of these trials are then used to create the Maximum Return to Nitrogen (MRTN) guidelines, which are utilized by NRCS programs and promoted as a sound 4R Practice for choosing the “right rate.”

IFCA posts the results of each N Rate trial on our website at [www.ifca.com](http://www.ifca.com) under the “Keep it 4R Crop” menu and “N Rate Trials.” Anyone can see the response to nitrogen from any of the balloons depicted on the map, in years 2014-2017. Dr. Nafziger’s full presentation is also posted on the IFCA website’s home page.

IFCA participated in many winter meetings with retailers, farmers and crop advisers sharing the results of the research and encouraging adoption of the MRTN across many acres as a key activity in the INLRS. The goal is to assure farmer confidence in using a nitrogen rate that in many cases is lower than what some have been using in the past. For farmers who participate in these trials, having the science demonstrated on their own farm is a powerful thing.

IL region	Soy-corn	Corn-corn
North	154 (81)	200 (83)
Central	172 (245)	200 (152)
LSW	166 (22)	202 (10)
South	179 (116)	189 (48)

Keep It 4R Crop N-Rate Trials

