



## **NREC Annual Report January 1, 2014 – December 31, 2014**

### **Cover Crop Training Initiative & Keep it for the Crop (KIC) 4R Nutrient Stewardship Program**

#### **Illinois Council on Best Management Practices**

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##### **Dear NREC Council Members,**

Thank you for your funding the Cover Crop Training Initiative Program and the Keep it for the Crop (KIC) program, which is a nutrient stewardship outreach & education program based upon the 4Rs of nutrient stewardship: Right Source, Right Rate, Right Time and Right Place. An overview of the activities and budget outline for 2014 are included for your review. If you have any questions or concerns regarding the annual report please contact Jennifer Tirey at (217) 971-3842.

#### **1. Summary of Accomplishments**

The Cover Crop Training Program was designed to utilize regional cover crop specialists to provide training, education and outreach to promote the use of cover crops for nutrient management in production agriculture in Illinois. During the first year, one State level, three Regional level, and three local level Cover Crop Specialists have been actively engaged in training programs, outreach events, establishing cover crop demonstration sites and research plots, incorporating cover crop lessons into Community College curriculums and have been working with local Soil and Water Conservation Districts, NRCS, Illinois Department of Agriculture and in cooperation with other NGO watershed projects to identify and recruit farmers statewide. The training and outreach activities have targeted community college faculty, Extension agents, Certified Crop Advisors (CCAs), Certified Crop Consultants, farmers and farmer managers, as well as producer and commodity groups. In addition to training and outreach, the Cover Crop Specialists work directly with farmers to encourage them to incorporate cover crops into their farming operations and to help them chose the best implementation strategy for their farm. The impact of this program has been significant in establishing a strong network of specialists and trained individuals who have spread knowledge widely and have influenced the establishment of many acres of cover crops in Illinois and participation in both State and Federal Cover Crop cost share programs.

#### **2. Project Activities & Outcomes**

##### **Activities**

- **Cover Crop Specialists**

Mike Plumer serves as the project team coordinator and state level Cover Crop Specialist. He has 32 years of experience with cover crops and 37 years with conservation tillage. Mike travels across the country and around the world conducting programing and research in cover crops and conservation to provide

information and recommendations on using cover crops to improve crop production, soil health and water quality. He is a sought after speaker capable of drawing in large crowds and is known for his detailed expertise in fielding specific cover crop management questions.

Pete Fandel, Associate Professor in Agriculture at Illinois Central College in East Peoria, started as a Regional Cover Crop Specialist last fall as soon as the project started and has played a key role in planning and organizing the training sessions at ICC, establishing demonstration plots on campus as well as demonstration sites on his own farm and various research trials in the Peoria area. Pete engages his students both in the classroom and in the field to teach the important role of cover crops in production agriculture. Pete serves as a project advisor to CBMP's Sugar Grove Nature Center Cover Crop demonstration site, an on-farm demonstration project, works with individual farmers in his region of the state and is actively engaged in ongoing farm media columns focusing on cover crops.

Dean Oswald joined CBMP in April 2014 as a regional Cover Crop Specialist after spending 34 years with University of Illinois Extension and working as a Forage / Grazing Specialist with Midwest Grass & Forage in Macomb and is a Certified Forage and Grassland Professional with the American Forage and Grassland Council. Dean will assist with training, education and outreach activities in the Northern part of the state, discussing the benefits of cover crops and related nutrient cycling. He is cooperating with Natural Resources Conservation Service, University Extension, Community Colleges and other agricultural groups interested in cover crops and has developed cover crop plots as well as educational training sessions for farmers, livestock producers and the agricultural community covering the selection, management, grazing and termination of cover crops.

Richard Lyons from Morgan County, IL joined CBMP in December 2014 as a regional Cover Crop Specialist. Richard has over 15 years of no-till production experience and three years of cover crop experience. Richard taught agriculture and agronomy classes for over 30 years and led the Lincoln Land College Agriculture program. Dick also farms 800 acres with his brother and has been active in the local watershed resource committee for Lake Springfield. One of Lyons' primary focuses will be outreach to the NRCS District Conservationists in the South Central region of the state.

This program has reached out to the Agriculture Departments at Community Colleges in Illinois to serve as partners in providing trainers and training sites and has been met with an enthusiastic response. Community Colleges are in a unique position to benefit from the sustainability aspect of this program while providing classroom and in field learning opportunities for agriculture students and development opportunities for agriculture faculty. Two Community College instructors are building their knowledge to serve as local cover crop specialists. Bill Harmon at Lincoln Land Community College attended several training sessions and field days and is looking forward to having his ag classes hand-seed the cover crop demonstration plots on campus this fall. This demonstration site will serve as both an outdoor classroom and a field day site for area farmers and the general public to learn more about cover crops. Dyke Barkley at Lake Land Community College in Mattoon reported "I have already incorporated some of the data and slide pictures into the lectures during the first week of classes. I am using in my alternative ag and small farm/vegetable production classes. I was able to get some soil samples from my own home place (conventional till, twenty year no till, and 100 year pasture across from each other). After letting the samples dry down we are going to try Barry's soil experiment in class this week. Several of the students have perked up and are really interested, I even have several non-traditional 60 year old students that want

more information to pass onto their tenant farmers.” He would also like to host a Cover Crop Training session at Lake Land, where they are planning to put in a cover crop demonstration site.

- **Train the Trainers Events**

CBMP and the four trained Cover Crop Specialists hosted four intensive training sessions in the first year. The initial Specialist Training Session was held at Illinois Central College in East Peoria on January 8-9<sup>th</sup>, 2014, where twenty eight participants spent two full days learning about the many aspects of growing and managing cover crops in production agriculture systems. NRCS experts from neighboring states were brought in to share their expertise on Cover Crop Species and Soil Health while university experts from within the state shared results of their Cover Crop Research Trials. Local farmers, seed companies and program managers provided additional information and insights on their personal experiences implementing cover crops. A presentation was also given on Understanding the Cover Crop Decision Tool and how to use it (<http://mcccdev.anr.msu.edu/VertIndex.php>). Survey responses from the session evaluation were very positive. Participants gained valuable information and felt that one of the most beneficial components of the training was the interactive, engaging environment where many questions were asked and discussed. Conversations over lunch and dinner complimented the day’s learning as participants shared experiences and ideas. Trainees have reported back that over 20 different programs have been conducted by them around the state since they completed their training.

A similar training session was held in March when Illinois Central College hosted a Cover Crops Conference on the East Peoria Campus, drawing in 40 participants, including 18 farmers and 1 junior college instructor. The conference included presentations for area farmers and Certified Crop Advisors (CCA’s) interested in the use of cover crops.

A full day training session specifically for University of Illinois Extension Educators was attended by 16 people and those trainees have since reached over 375 producers. They are planning 5 cover crop meetings and field days for this fall, two of which will be Regional programs utilizing the trained staff.

In July, another specialist training session was held as part of the Black Hawk College Cover Crops Conference, which included 45 farmers as well as Certified Crop Consultants and teaching staff from the College that will continue to use the information with students and farmers.

- **Additional Training, Education and Outreach Activities**

In addition to hosting the four intensive training sessions, the Cover Crop Specialists have conducted more than 40 cover crop presentations as part of other training and outreach events this year, reaching over 4500 farmers and CCAs across Illinois and 4 states. These are some highlights of where the Cover Crop Team (Mike Plumer / Pete Fandel / Dean Oswald) presented -

- Midwest Cover Crop Annual Meeting - Mike Plumer presented on all the efforts of this project and of CBMP.
- Henry County Farm Bureau - Planning for Successful Cover Crops – NRCS and CBMP – 36 Attended
- Rock Island County NRCS Cover Crop Tour - 35 Attended
- 7<sup>th</sup> Annual Residue Management Conference – Carthage IL - Cover Crop Application Methods – 70 Attended
- Illinois Forage Expo, Mulberry Grove IL – Reducing Livestock Production Costs Using Annuals and Cover Crops – 100 Attended

- Mercer County Soil & Water Conservation District - Cover Crop Planting and Species Options – 30 Attended
- Cover Crop Planning Presentation Rushville IL - 75 Attended
- December 17<sup>th</sup> presentation to farmers on cover crops species and management - 75 producers attended
- Peoria County Farm Bureau meeting – February 7<sup>th</sup> - 50 farmers attended
- IFB Commodities Conference – July 30<sup>th</sup> - 25 producers attended
- Lake Springfield Watershed Project Outreach meeting and Field Day – August 6<sup>th</sup> – 75 attended including farmers from the watershed, professional farm managers, Certified Crop Consultants, agency staff and farm media.
- Illinois Soybean Association program - Effingham County – attended by Soybean directors, farmers, crop consultants and media who videotaped the program to place on the Illinois Soybean website.
- 2013 Farm Progress Show
- Soy 2020 Roundtable
- Conducted cover crop program for the Southern States Cooperative agronomy staff and certified crop advisors at Raleigh, North Carolina as a professional development program reaching 48 staff from North Carolina, South Carolina, Georgia and Florida.
- Conducted a cover crop training program for Southern States Cooperative agronomists and certified crops advisors in Blacksburg, Virginia for 76 staff. They were from Virginia, West Virginia, Tennessee, Maryland and Delaware.

The Cover Crop Specialists also participate in ongoing media cover, including:

- Illinois Farm Bureau *Farm Week* – Discover Cover Crops Question & Answer Series, Circulation: 74,500
- Discover Cover Crop questions and answers are also posted on FarmWeekNow.com and the IL Department of Agriculture Discover Cover Crop site.
- AgriNews question and answer series
- Developing a Cover Crop How To video

- **Research and Demonstration Activities**

Illinois Central College – Pete Fandel has established cover crop demonstration plots on the ICC campus and hosted an August Field Day - 50 people attended

Auburn, IL - A replicated cover crop trial with 15 different varieties and combinations has been established and is being used for educational outreach and field days. A Lake Springfield Watershed Field Day was held to visit these demonstration plots – 75 people attended

Research Projects have been established by Pete Fandel at sites near Peoria

Herbicide trials at ICC, both corn and soybeans

Annual Ryegrass variety trials

Long term cover crop vs no cover soil quality trial

Cover crop nitrogen uptake trial

Two variety trials established as a learning opportunity for the general public

The cover crop research program Mike Plumer started with University of Kentucky has received funding from the Corn and Soybean Associations and has documented the ability of annual ryegrass roots to breakdown fragipan soils, increasing productivity dramatically.

- **Direct Farmer Assistance Activities**

The impact of this program on the adoption of cover crops may be apparent in NRCS reports from several counties in the target areas, including:

- Mercer County - 13 Signed up for State Cost Share on 520 Acres
- Henry County - 1 CSP recipient is planning 576 acres of cover crops for 5 years
- Adams County – one producer is planning 80 Acres of Cover Crops for the first time
- Woodford County NRCS – 8 producers applied for Cover crop funding last year and 3 additional this year
- Rock Island County - 6 farmers will be applying cover crops in their operation: three are using state IDOA funds for 20 acres each, two are using the USDA CSP program for a total of 300 acres and one producer is planting 5 acres using his own funding
- Hancock County – State IDOA funds were used by 7 producers on a total of 127 acres
- Lake Springfield Watershed – 12 producers established cover crop comparison sites for a total of 504 acres
- Meetings are being held with NRCS District Conservationists in Macoupin, Montgomery, Greene, Jersey and Calhoun Counties

- **Outcomes**

- One State level, three Regional level, and three local level Cover Crop Specialists are actively engaged across the state.
- Four intensive training sessions have educated 129 individuals on the use and management of cover crops, including Extension staff, Community College instructors, CCAs, Crop Consultants and Farmers.
- Training materials have been developed, including Powerpoint presentations, Factsheets, Management Guides and some of these materials have been posted online at CBMP's Cover Crop page – [www.illinoiscbmp.org](http://www.illinoiscbmp.org)
- Two demonstration sites have been established and visited as part of Outreach Field Days.
- More than 40 presentations about Cover Crops have been shared at events across the state.
- Through training efforts and presentations, more than 6000 individuals have been impacted by this program.
- There has been an increase in the number of farmers implementing Cover Crops on their farms.

- **Outcomes - Lessons learned**

- The farmers have also requested more economic cost/benefit information. We've identified this as a need to help reassure the farmers that trying cover crops is a wise financial decision in addition to providing nutrient management and soil health benefits. We plan to develop these financially focused materials more fully as we begin our second year of the program.
- We have identified a need to more effectively capture the impact of the program and plan to create a standard template and protocol for tracking the wide-reaching effect of cover crop training and outreach programs and the increased adoption rate of cover crop utilization by regions, including better tracking of cover crop acres planted, NRCS program enrollments completed, management plans developed and other changes in management practices implemented as a result of these efforts.

- **Some of the additional activities conducted since the above report was completed**
  - August 26-28th - Farm Progress Show Cover Crop Booth, 540 participants
  - August 29th - Springfield, Illinois – worked with 12 farmers to implement Cover Crops
  - September 8<sup>th</sup> - Sugar Grove Nature Center near Mclean, IL - Cover Crop Fly-in, 21 participants
  - September 29<sup>th</sup> – Decatur, IL - Macon SWCD project, 4 participants
  - Oct 28-29<sup>th</sup> – Jonesboro – Cover Crop program, 220 participants
  - November 4<sup>th</sup> - Sugar Grove Nature Center near Mclean, IL - Cover Crop Field Day, 26 participants
  - November 5<sup>th</sup> - Midwest Aviation Cover Crop program, 180 participants
  - November 11<sup>th</sup> – Illinois Central College, East Peoria, IL - Cover Crop Training Session ~ 20 people
  - November 11<sup>th</sup> – Illinois Central College, Cover Crop Field Day ~10 producers (bitterly cold day)
  - November 12<sup>th</sup> – Illinois Central College, - Cover Crop Training Meeting, 28 CCA’s and farmers
  - November 14<sup>th</sup> – Mike Plumer worked with several farmers, University of Illinois Extension staff and Hamilton County Soil and Water Conservation District to submit a grant to SARE to develop cover crop planting equipment.
  - November 25<sup>th</sup> - A cover crop information program was held at the Illinois Commodity Conference. Mike Plumer discussed cover crops and BMP’s to reduce nutrient losses. Jennifer Tirey also presented information on the use of the media to increase farmer awareness, showing video of the Sugar Grove aerial seeding. Caroline Wade gave an update on soil health, cover crops and all the programs being done on farm.
  - December 2<sup>nd</sup> - Provided a training session at the Illinois Soil and Water Conservation District’s annual training program in Springfield and working with several Districts on setting up field days and training sessions

### 3. Cover Crop Budget

For calendar year 2014, CBMP spent \$77,112.46 for its statewide Cover Crop Project. The funding for the three year project was awarded by the National Fish and Wildlife Foundation (NFWF) and NREC funds served as the project match for 2014.

\$67,250 was spent from NREC

\$9,862.46 was spent from NFWF

Here is a breakdown of the NREC funds spent on the Cover Crop program from January 1, 2014 – December 31, 2014.

	<b>Cover Crop Training Initiative Expenses</b>	<b>Amount spent from NREC funds</b>
	Contractual Services	\$ 46,139.10
	Supplies & Materials	\$ 6,511.08
	Printing	\$ 422.61
	Equipment Rental & Maintenance	\$ -
	Travel	\$ 7,647.25
	Meetings	\$ 6,529.97
	Site Rental - Demonstration Site Rental	\$ -
		<b>\$ 67,250.00</b>

**A video from the Sugar Grove Field Day can be accessed on you tube at:**

<https://www.youtube.com/channel/UCxpTIEqoLsQbOLArw-6sa0Q>



Dan Schaefer was responsible for achieving the objectives of this program within eight priority watersheds, working directly with Jean Payne at the Illinois Fertilizer & Chemical Association to identify cooperating ag retailers and certified crop advisers to promote nitrogen management systems, assist farmers in determining reliable, economical nitrogen rates, evaluate nitrogen uptake and soil nitrate levels using N-WATCH and encourage application methods to reduce phosphorus losses from surface runoff. Funds from NREC enabled the utilization of the necessary equipment and resources to assist farmers and ag retailers with all aspects of the program, and also the human resources needed to accomplish the work involved with this nutrient education and outreach program.

Dan and Jean also engaged in many presentations throughout the year on the KIC program to various audiences as outlined in this report, and published three KIC newsletters on behalf of CBMP which they distributed widely to ag organizations, agencies and all nutrient stakeholders representing both point and non-point source interests to share the work and accomplishments of the KIC program. Copies of the KIC newsletters are included as an attachment to this report.

In 2014, the KIC program continued to collaborate extensively with the University of Illinois Department of Crop Sciences, UI Extension Crop Production Specialists and with researchers at Illinois State University to assure proper protocols for all on-farm projects, to discuss findings and observations throughout the growing season, and to assure University evaluation of the projects at their conclusion. This industry/academia collaboration provides farmers and ag retailers with a qualified analysis of the results and provides a larger perspective of the findings with the industry as a whole through University publications and Extension programs. Dan is also engaged with several NREC funded research projects to assist with nutrient treatments and timings and communication with the farmers participating in these research-based projects.

A summary of the KIC activities in the calendar year 2014 are as follows:

### **N Rate Trials**

One of KIC's goals is to provide farmers in priority watersheds with the ability to determine a reliable, defensible and optimum nitrogen rate for their individual fields, using the MRTN calculator as the base. Dan has coordinated with ag retailers to establish 29 N-Rate trials, which are a combination of different nitrogen rates utilizing split applications, some with fall and spring splits and some just spring splits.

These trials also utilize various sources of nitrogen and applicable nitrogen stabilizers. Four of the 29 trials are in their third year, 11 in the 2<sup>nd</sup> year and 14 are in their first year. It has been our goal to empower more ag retailers to work directly with their customers on an individual basis on N Rate trials and these may not all be reported back to Dan, but should still be considered as significant progress in terms of farmers wanting to improve their knowledge of the optimum nitrogen rates on their individual fields. The types of nitrogen splits and replications are designed to accommodate the needs of the



KIC project assistants Jason Solberg and Kyle Case set up a fall N rate trial, November 2014

individual farmers who are participating, and while we focus on fields in the eight priority watersheds, we do not turn farmers away if they fall outside of a watershed boundary and want to participate.

Dan provides harvest results from the N rate trials to Dr. Emerson Nafziger at UI who uses the information to update the MRTN calculator and as a source of information to the ag industry through UI his authorship of Extension bulletins and presentations at conferences. Dr. Nafziger will report his analysis of the 2014 N Rate Trials at the Illinois Fertilizer & Chemical Conference on January 20, 2015; we will share a copy of his presentation after that occurs. An example of graphs that illustrate the outcome of N rate trials in one watershed (Lake Springfield) are attached. Many graphs, tables, photos and aerial views are included in Dan and Jean's presentations to illustrate the scope and impact of the KIC program to the various audiences.

### **N-Calc**

Dennis Bowman at UI Extension assisted Dan in developing a web-based tool which took the iPhone and Android split nitrogen calculator developed by the KIC program last year to a more easily accessible platform for farmers and retailers to use. PAQ Interactive (a agricultural data management firm in Monticello, IL) also assisted in this effort. Ag retailers and farmers are now able to easily enter their nitrogen budgets and split application plans into their office or home computers to plan and implement their source, rate, time and place nutrient objectives for their crop. N-Calc can be accessed from the CBMP website at [www.illinoiscbmp.org](http://www.illinoiscbmp.org).

### **Outreach & Education Efforts**

Combined, Dan and Jean presented the goals and efforts of the KIC program at well over 70 meetings and events in 2014 to a variety of audiences to magnify the positive nutrient stewardship message of the KIC program and explain the elements of the program. These meeting audiences included:

- Ag retailers and fertilizer distributors including multiple meetings for Brandt Consolidated, FS Member Cooperatives, Crop Production Services, CHS, GROWMARK, Helena, Winfield, United Suppliers, ADM, Koch Nitrogen, Mosaic and the Fertilizer Institute National 4R Conference. Also conducted several nitrogen management webinars demonstrating the N rate trials and N-WATCH results, and 200+ CCAs participated in each of these webinars.
- Certified Crop Advisor training sessions, the IL CCA annual meeting and UI Ag Masters Conference.
- Agribusiness and farm organization sector meetings including Farm Manager meetings, Farm Credit customer meetings, CoBank customer meeting, the InfoAg Conference, the IFB Commodity Conference, CTIC Indian Creek Events and CTIC National DC Conference, IL Soy 20/20 meetings, Sustainable Corn Conference, IFB SWAT meetings, the Ag Leadership Program, the Lake Springfield Watershed meetings, Fishers & Farmers, the American Society of Agronomy and the IL Association of Drainage Districts annual meeting.
- Soil & Water Conservation District Meetings in LaSalle, Vermilion, McLean, Macon, Douglas, Ford-Iroquois and Champaign counties.
- Non-farm audiences including the Nature Conservancy, League of Women Voters, National Agronomic Health & Safety School, Chamber of Commerce Youth Leaders, Rotary Club.
- State and federal agencies and governmental entities including the Gulf Hypoxia conference in Alton, the Upper Mississippi River Basin state agency meeting and Aqua America in Danville.

**Youth Education:** Dan served as a guest instructor at Parkland Community College's Soil & Fertility Class, teaching the students about the nitrogen cycle and



nutrient stewardship for a period of 5 weeks, 3 classes per week (see photo right). He also spoke to the Lincoln Land Community College ag class, Dr. George Czapar's Crop Science 199 class at UI and Dr. Shalamar Armstrong's agronomy students at Illinois State University.

### **N-WATCH™**

N-WATCH™ is a management tool that provides a way to estimate plant-available nitrogen at a specific field location over time. It is not a recommendation system that tells a farmer what to apply. It is a tool that provides a new layer of information to consider when creating or modifying nitrogen management systems to fit individual farming operations. It also reveals the behavior of soil nitrate and ammonium-N over time. N-WATCH provides a way to inventory, track and verify plant available nitrogen.

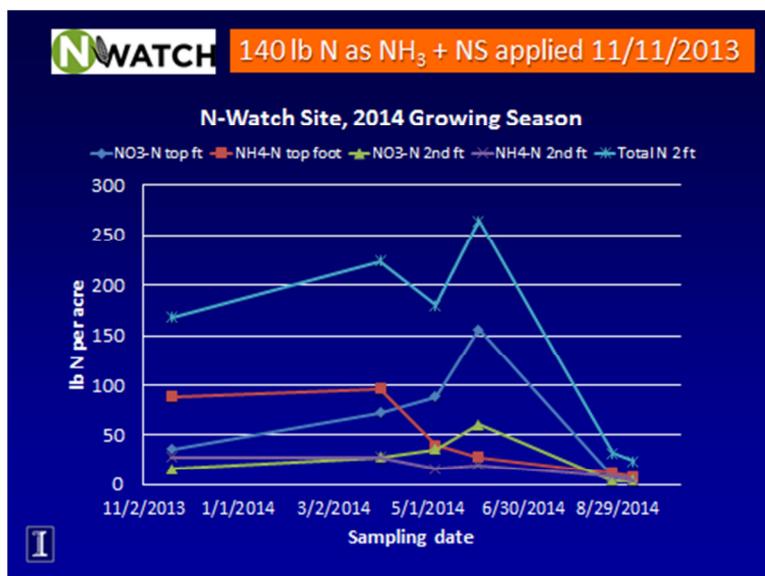
In 2014, there were 250 N-WATCH sites located mostly in priority watersheds. There is a special emphasis in the Lake Springfield watershed with 37 N-WATCH sites as part of the Lake Springfield project. Dr. Howard Brown evaluates N-WATCH soil sample reports and coordinates with Dan on the findings, to ensure that the participating retailers and farmers receive an evaluation that helps them fine-tune their nitrogen management systems.

**N-WATCH Outreach and Education:** Each farmer and retailer who participates receives a report of their N-WATCH results. Dan Schaefer shares aggregated information with Dr. Nafziger at UI for utilization in UI Extension education programs and publications. Below is a slide that illustrates a comparison of fall applied ammonia with a nitrification inhibitor vs. that applied without an inhibitor, and what N-WATCH reveals about conversion from the ammonium form to nitrate in the upper foot and second foot of the soil, as well as conversion throughout the growing season. This reveals that when fall ammonia is applied at the right time (50 degree soil temps or less) and with a nitrification inhibitor, that this form of fertilization is comparable to spring applied nitrogen in terms of potential for nutrient loss and plant available N. This is extremely powerful in helping to educate farmers about the value of using a nitrification inhibitor in the fall, rather than considering an increased nitrogen rate in the fall to insure against potential nitrogen losses.

Dr. Nafziger's analysis of the N-WATCH is being shared at the 2015 Corn & Soybean Classic Extension meetings with farmers and ag retailers. Dan Schaefer is also using these slides in his many presentations on proper nitrogen stewardship and education on nitrogen movement in the soil based on 4R approaches (source, rate, time, place).

### Fall N-Serve/No Serve

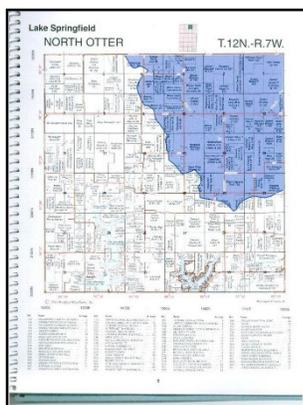
	Fall NH3 No N-Serve		Fall NH3 With N-Serve		
AVAILABLE N	0-12"	12-24"	AVAILABLE N	0-12"	12-24"
NO3-N ppm	20.3	7.7	NO3-N ppm	12.3	6.2
NH4-N ppm	11.0	3.2	NH4-N ppm	24.5	2.5
<b>Total Available N</b>	<b>31.3</b>	<b>10.9</b>	<b>Total Available N</b>	<b>36.7</b>	<b>8.6</b>
% N as NO <sub>3</sub> :	65%	71%	% N as NO <sub>3</sub> :	33%	72%
% N as NH <sub>4</sub> :	35%	29%	% N as NH <sub>4</sub> :	67%	28%



This slide compares fall applied ammonia with N-Serve™ and pounds of N applied per acre, showing levels of nitrate in the soil throughout the growing season; at harvest, remaining nitrate was very small. This helps to educate farmers and retailers, who often wonder how much soil N remains later in the growing season after an application of nitrogen. It also serves to guide the economic consideration for the need for a cover crop to capture excess nitrate that could be present after a drought or poor yield due to poor nutrient utilization.

### Nitrogen and Phosphorus Management Systems

A goal of the KIC program is to promote better nitrogen stewardship through enhanced nitrogen management. This effort is broad-based and can be adopted on a significant number of acres, led mainly by the fertilizer retailers working with their individual farmer customers to encourage split applications of the recommended nitrogen rate rather than a single application of the entire nitrogen rate at one time. At all meetings with ag retailers and CCAs, Dan and Jean have emphasized the opportunity for retailers to design a 4R nitrogen and phosphorus management program for their customers utilizing the products and services unique to that retailer. Based upon reports from retailers, trends in fertilizer tonnage sales and sales in post-application equipment and strip-till bars, adoption of nitrogen management systems and phosphorus placement is rapid and continues to grow, setting the stage to reduce nutrient losses by increasing the opportunity for better nutrient utilization by the plant during different stages of growth and development.



There are efforts underway to develop a software program to that ag retailers can utilize to facilitate methods to capturing nutrient application timings, rates and utilization of nitrogen enhancement products based on product sales by each ag retailers. This effort is on-going as the blending and billing of nutrient products is different by company, and the need to protect business and customer information is essential. Progress is being made and within two years the goal is to product a 4R nutrient use report by HUC-8 watershed. The KIC program utilizes plat books (see photo) of each priority watershed showing the boundaries of the watershed. Dan distributes these to ag retailers and they have been extremely helpful in helping the retailers identify which customers are within the watershed and better target their efforts toward promoting split applications based upon their knowledge of their customer's current nutrient practices.

**KIC Budget**

As of January 8, 2015, the KIC program expenses are below. **The total budget for the program with NREC and NRCS support was \$694,124.00.** The program also received payments for work unrelated to the NREC funded project, including the Lake Springfield project, to reimburse the program for the services of the staff assigned to this project.

NREC provided CBMP with quarterly payments of \$152,281 in 2014 for the KIC 4R program for a total of \$609,124. NRCS provided \$85,000 in funds for expenses related to the N-WATCH program (personnel, sampling, reporting and lab analysis).

A summary of our expenses from January 1, 2014 – December 31, 2014 is as follows:

Equipment Costs:	126,617.24
N-WATCH Sample Analysis	50,030.80
Personnel & Part-Time Help:	261,400.09
Supplies/Postage:	7,124.22
Mapping, Web and Data Services:	67,334.00
Printing, Plat Maps	10,129.00
Mileage/Meeting Expenses:	53,455.35
Phone/Computer:	699.15
Management Services & Communications	53,068.58
Farmer Payments for N Rate Trials:	<u>27,500.00</u>
TOTAL NREC/NRCS Project Expenses	\$657,358.43

TOTAL NREC Grant:	\$609,124.00
TOTAL NRCS Grant:	85,000.00
Income from Unrelated NREC Project Services	<u>57,382.21</u>

TOTAL Program Income: \$751,506.21

TOTAL NRCS Project Expenses:	\$48,647.11
TOTAL NREC Project Expenses:	\$551,714.44

<b>NRCS Balance Remaining:</b>	<b>\$36,352.89</b>
<b>NREC Balance Remaining:</b>	<b>\$ 57,409.56</b>

**TOTAL PROJECT BALANCE NREC/NRCS = \$93,762.45**

**CBMP respectively requests from NREC the opportunity to spend the 2014 remaining balance of \$57,409.56 on additional farmer education and outreach programs related to our Keep it for the Crop initiative.**

If you have any questions about this report or the KIC budget, please contact us at 309.827.2774.

The KIC report was prepared by Dan Schaefer, CBMP Director of Nutrient Stewardship and Jean Payne, President of the Illinois Fertilizer & Chemical Association.