

MAINTAINING OWNERSHIP OF NUTRIENT MANAGEMENT



A Tool to Estimate the Where, What and How Much of N Management

INCREASED SCRUTINY OF LAND AND RESOURCE MANAGEMENT

- Negative headlines
- Potential rulemaking
- Litigation



We must start demonstrating how serious we are about maintaining ownership of nutrient management through accountability and sustainability and profitability.

WORLD POPULATION GROWTH

- 1800 1 Billion People
- 211 Years Later 7 Billion People
- In 35 - 39 more years **9 Billion People**

AGRICULTURE'S MESSAGE

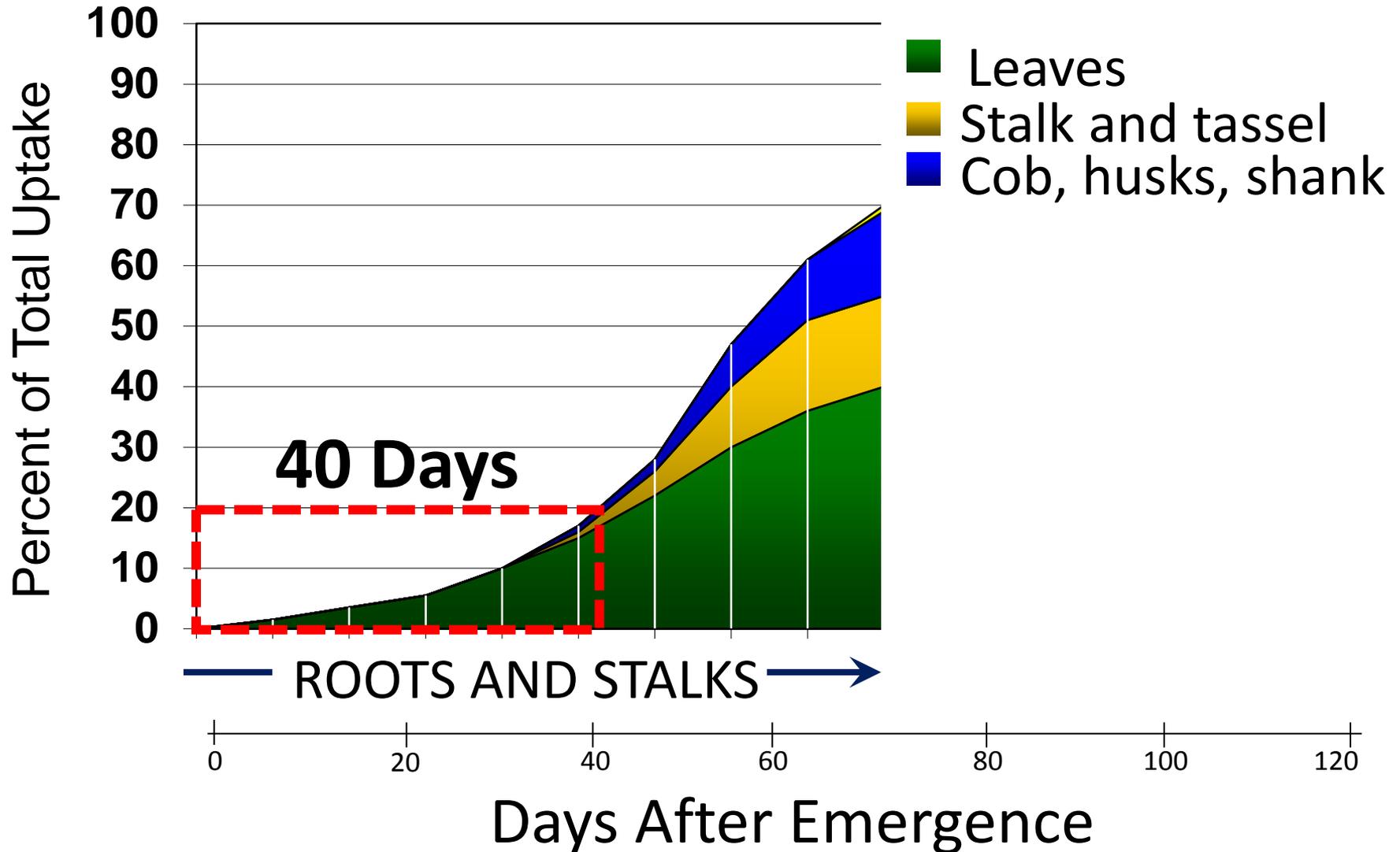
Focusing On What Is Important

Minimizing Environmental Impact

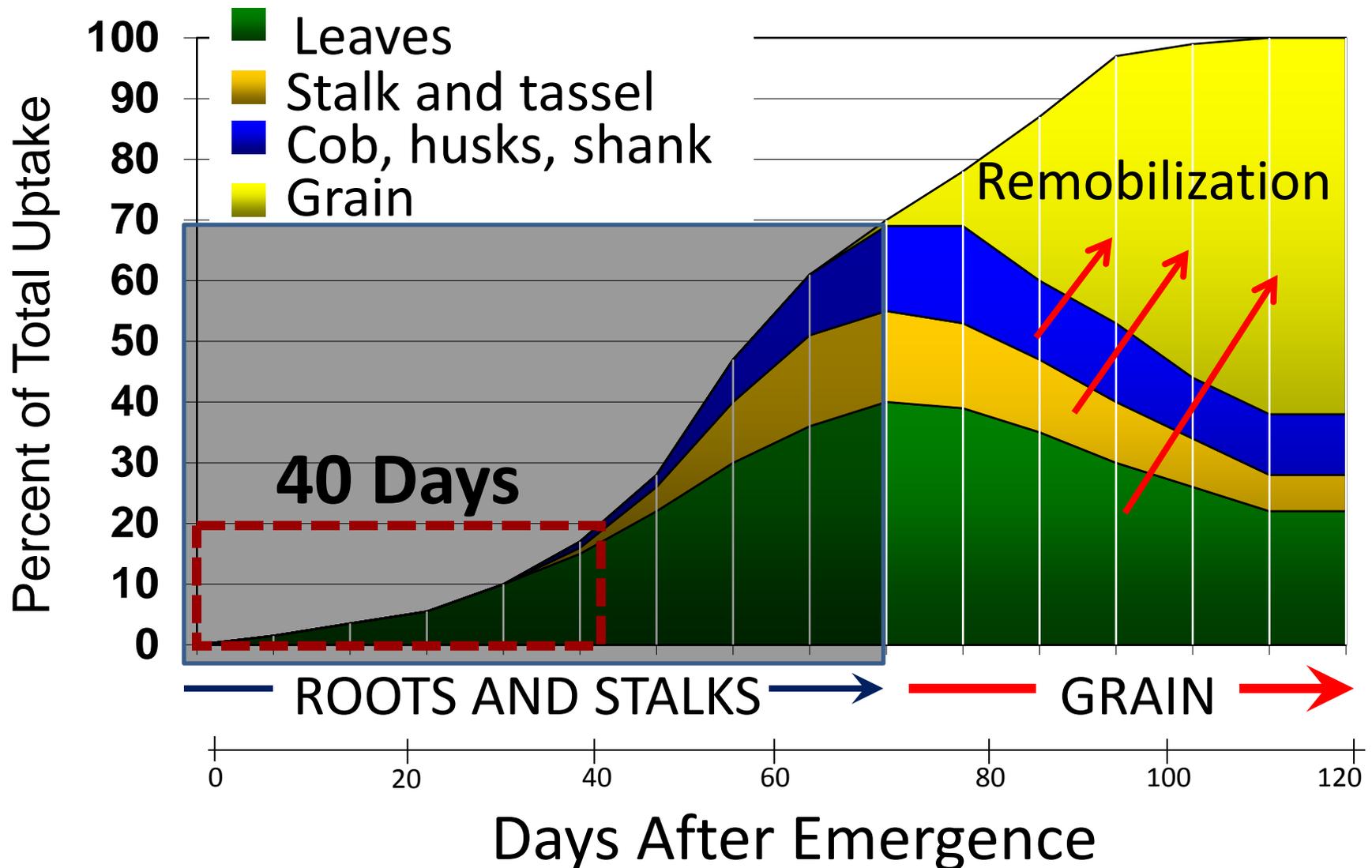
Optimizing Harvest Yield

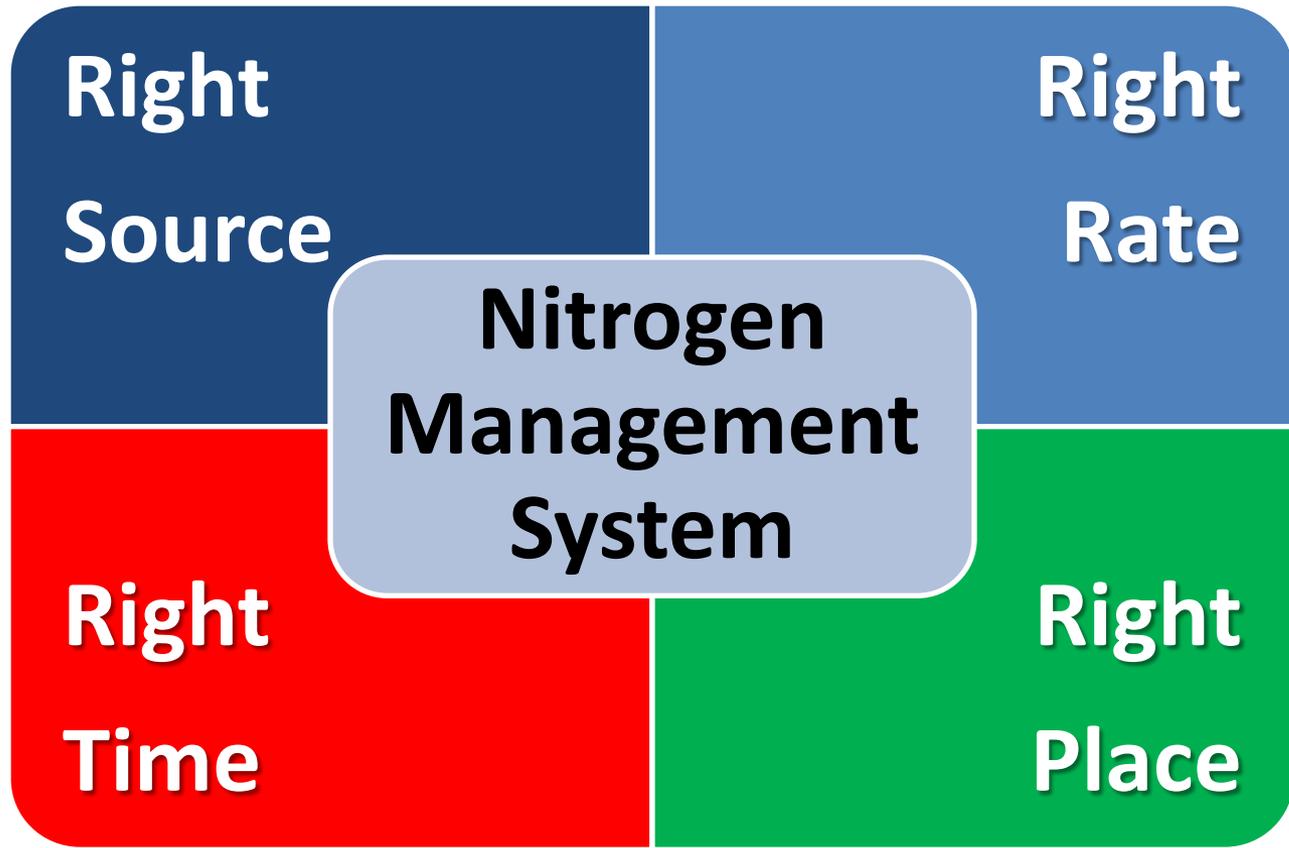
Maximizing Input Utilization

NITROGEN UPTAKE IN CORN



NITROGEN UPTAKE IN CORN





APPLICATION CONSIDERATIONS

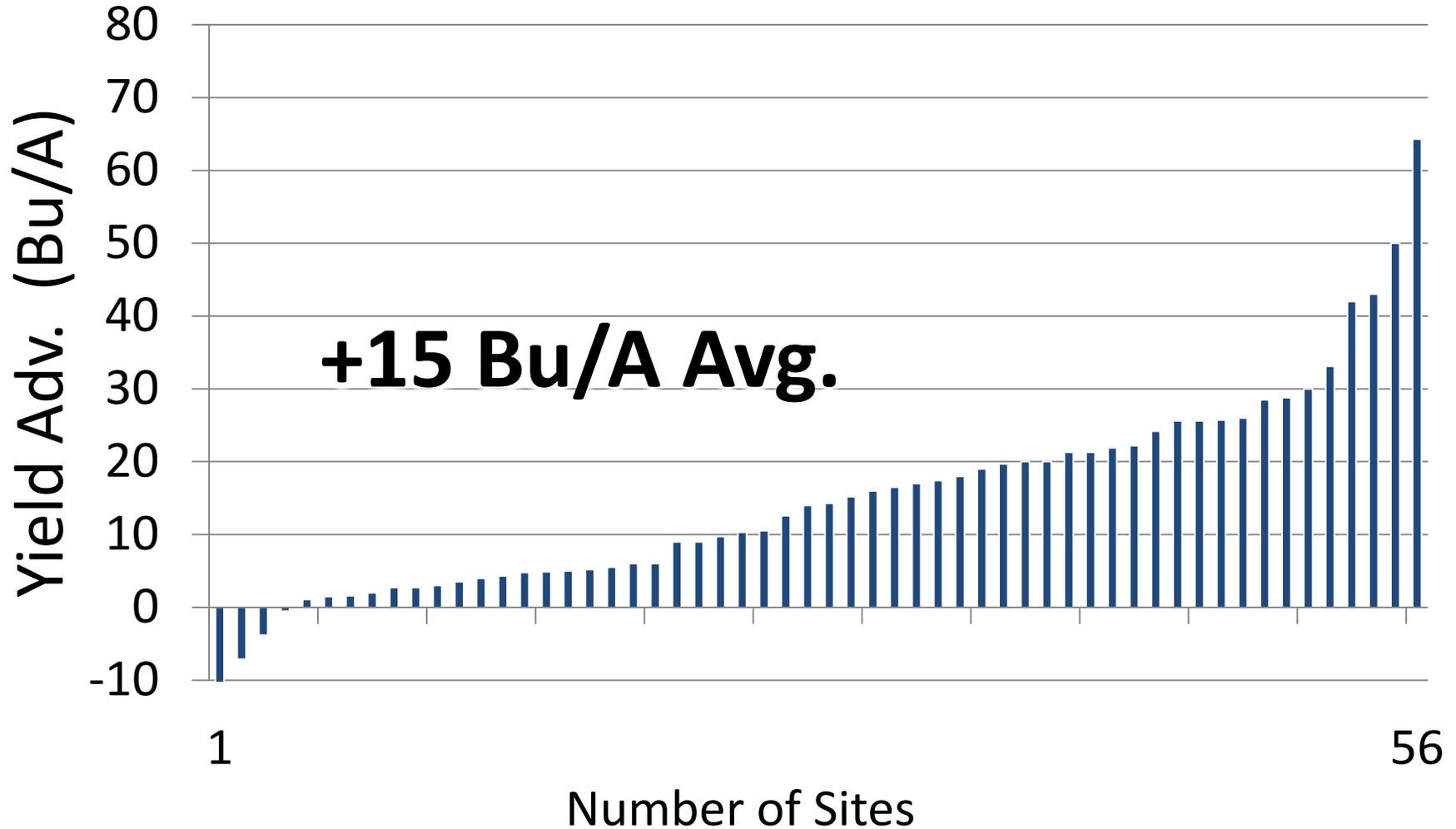
- Early
- Pre-plant
- Post-emerge

Its not about increasing N rates.
Its about increasing N utilization.



N SYSTEM vs. NORMAL

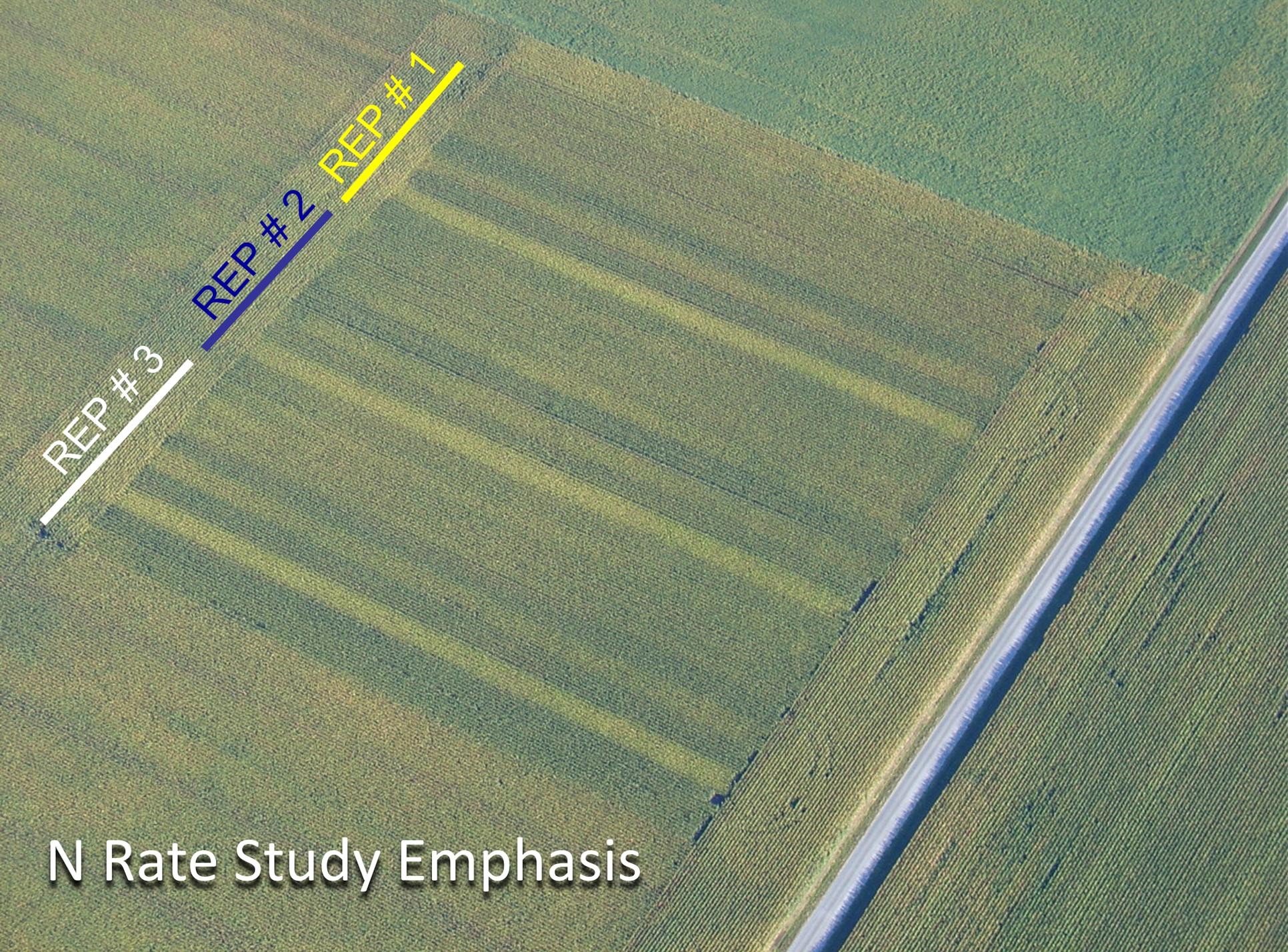
2011 - 2012



RIGHT RATE

- Farmer fields, Farmer Data
- Application vs. System
- Variable Rate N
- Looking at new technologies





N Rate Study Emphasis



A Tool to Estimate the Where, What and How Much of N Management

- Illinois – CBMP
- Iowa – GROWMARK, Inc.
- Wisconsin – GROWMARK, Inc.
- Testimonials

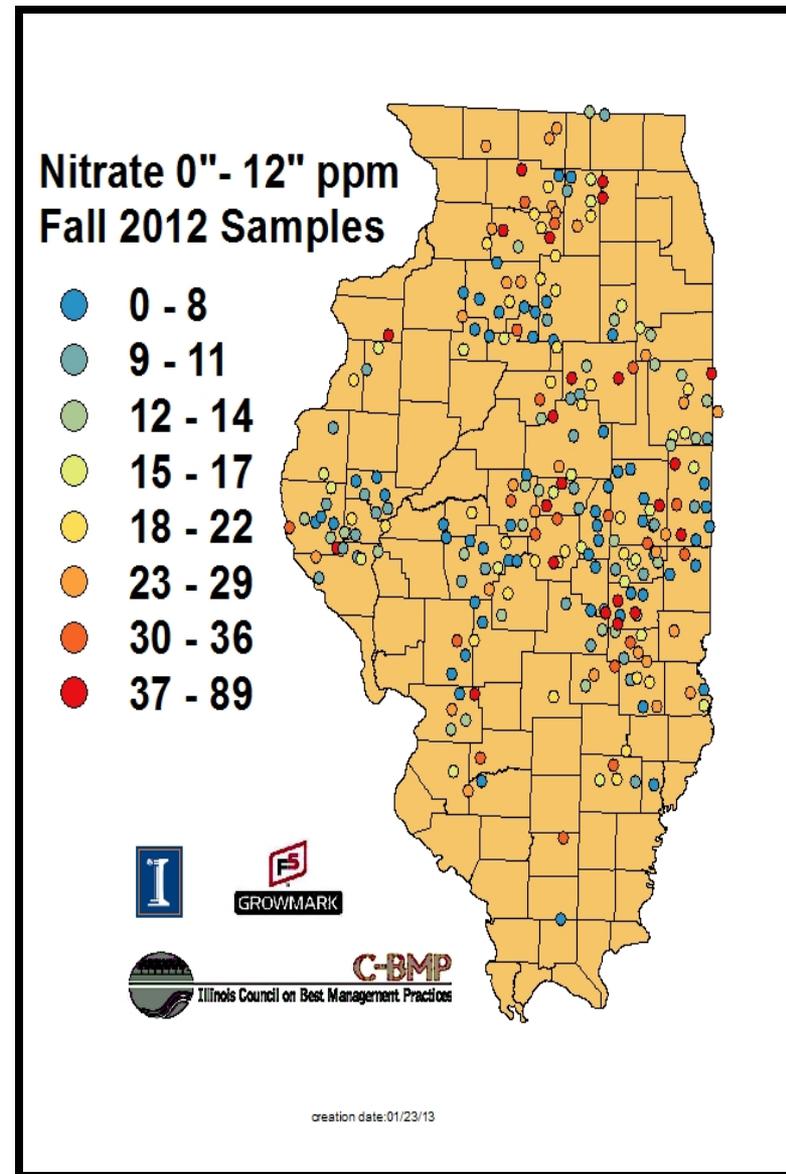
PURPOSE

- Inventory
- Track
- Verify
- Apply

NWATCH

2012-2013TM

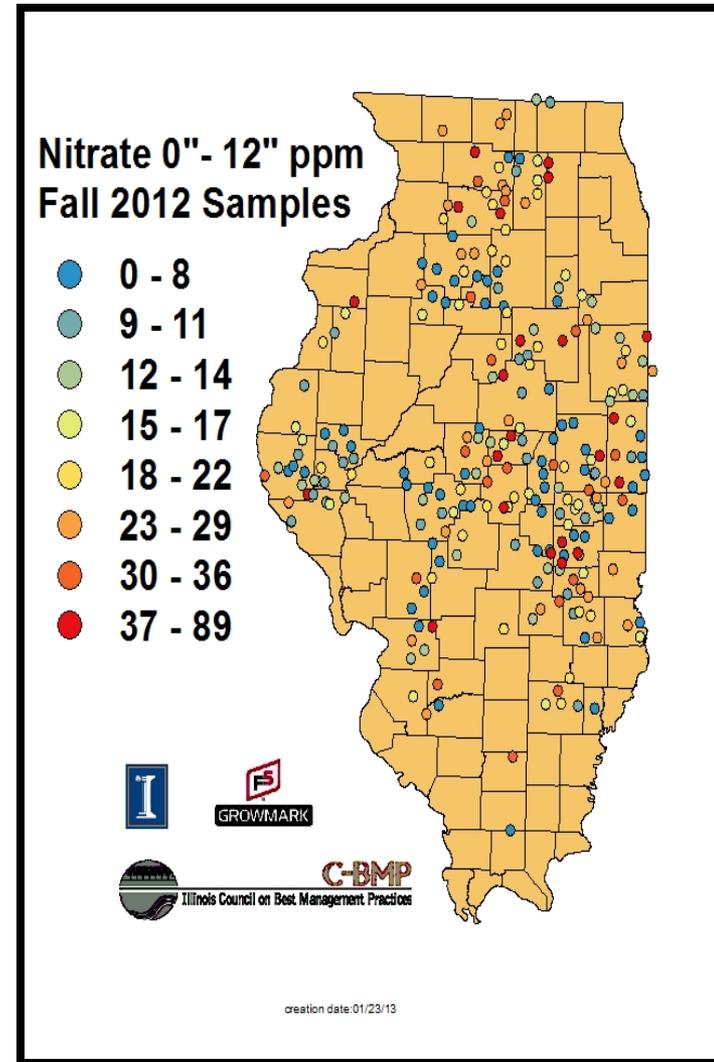
- 300 fields-Fall residual N
- 28 ag retailers
- Over 250 farmers
- Representing over 325 fields



NWATCH

2012-2013TM

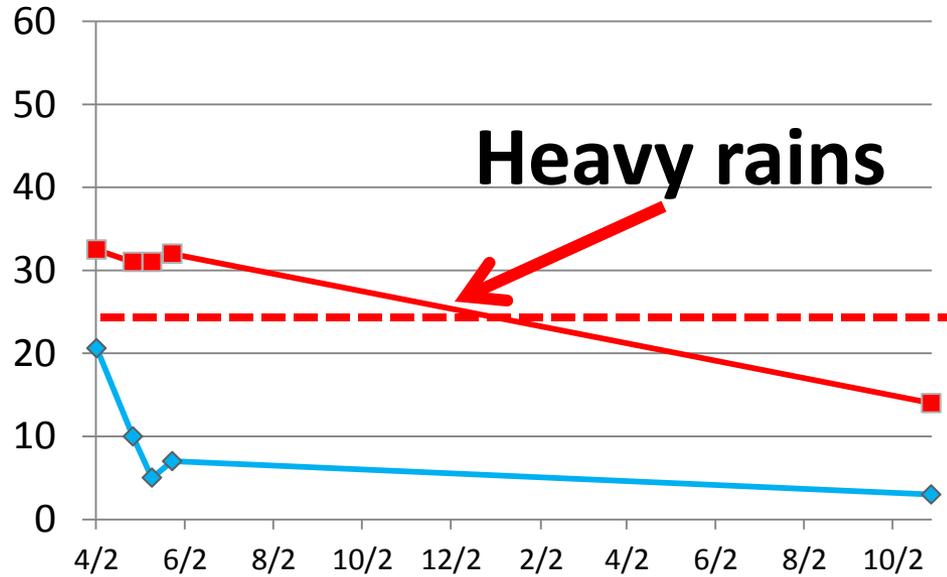
- 30 N Rate Studies
- 12 40-acre fields grid sampled
- Research collaboration
- Watershed projects





TRACKING REPORT

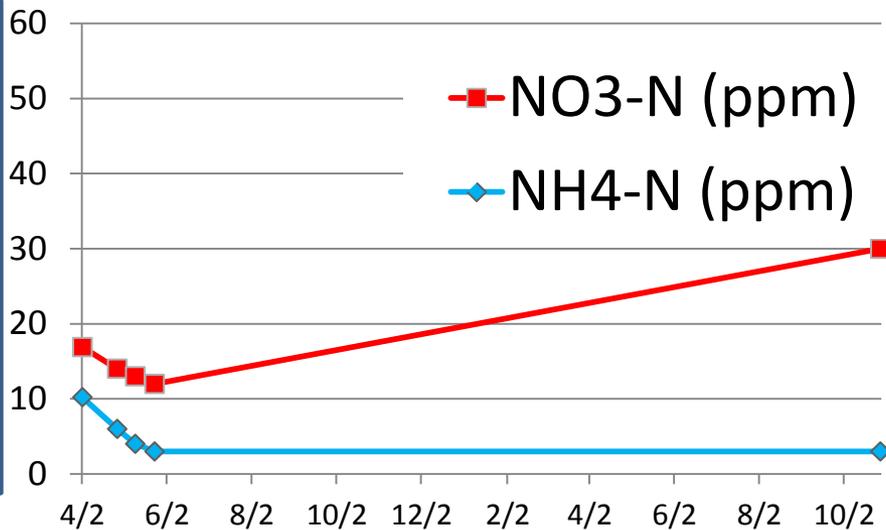
0-1 ft



0 to 12-Inch Sampling Depth

Date of Sampling	NO ₃ -N (ppm)	NH ₄ -N (ppm)
4/2	32.5	20.6
4/27	31	10
5/10	31	5
5/24	32	7
10/28	14	3

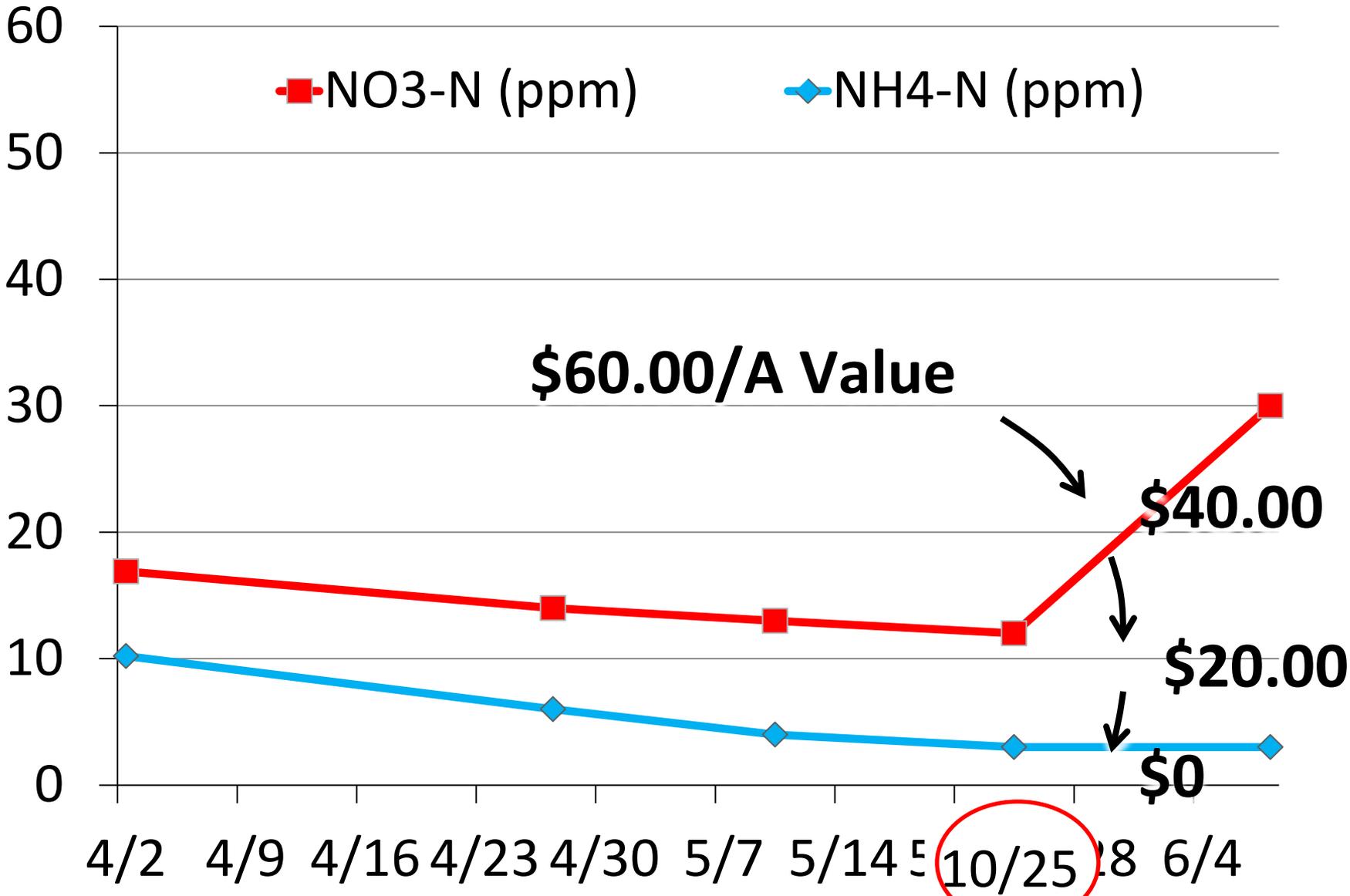
Subsurface



12 to 24-Inch Sampling Depth

Date of Sampling	NO ₃ -N (ppm)	NH ₄ -N (ppm)
4/2	16.9	10.2
4/27	14	6
5/10	13	4
5/24	12	3
10/28	30	3

Subsurface (1-2 ft)





TM

WHAT WE HAVE LEARNED

- Farmers are interested and curious
- N-Serve has an effect on nitrification
- Not all N changes can be explained
- Depth of fall application may be important
- Tillage following appl. may effect nitrification
- Cover crops immobilization applied N



APPLIED RESEARCH NEEDS

- Cover crop mgt. (establ., N uptake & destruction)
- Effect of fall appl. depth and tillage on N form
- Activity of N Inhibitors w/reduced N rate of N
- Efficacy of different N Inhibitors
- Effects of slow-release N on appl. timing

CERTIFIED CROP ADVISERS (CCA)

- Non-partisan
- Based on Ethics
- Professional Accreditation
- Recommendation - Referral driven



Maintaining Ownership of Nutrient Management Through:

Accountability
Sustainability
Profitability

IT'S ALL ABOUT MOM

Minimize Environmental Impact

Optimize Harvest Yield

Maximize Input Utilization

MENTARY

The News-C
Sunday, January 22, 201
Opinions Editor Jim Dey: 217-351-5369; jdey@news-ga

Crop production, environmental protection both achievable
By MARK DAVID and ERIC DAVIDSON
In the Midwest, corn prices are so high they're creating a new gold rush. Farm acreage is selling at record prices in Iowa, with golf courses and housing developments being converted to fields. Here in Illinois, many producers are investing corn profits in new tile drainage systems that will increase their yields even more.
That may sound like good news for Corn Belt farmers, but it's a short-term gain. Those drainage systems put much of the fertilizer runoff from farms on a fast track to the Gulf of Mexico, where it feeds an

CROPS
Continued from C-1
to follow these and other conservation practices. This is a welcome step, but in order to see real change we need a national mandate that combines funding and incentives to serious farmers.

algae bloom the size of Connecticut that consumes available oxygen on the bottom layer of the ocean, suffocating shellfish and forcing fish and shrimp to flee. It hurts the Corn Belt locally too. Iowa, Indiana and Wisconsin are just some of the states battling algae blooms in their lakes and estuaries, fed by excess nutrients and spurred by warmer summers, that are harming fisheries, closing down swimming holes and hurting tourism.
Nitrate from fertilizer can also leak into local drinking water supplies, posing health risks to infants and adults. For example, the cities of Danville and Decatur had to

When all of the views on a national survey of the Environmental Protection Agency has the potential to become one of the most challenging environmental problems facing the country.
Solutions are portable energy and transportation

also release nitrogen pollution, but unlike agriculture, those emissions are decreasing. That success took political will, created after we documented and understood the heart of the problem.
current practices and technologies can reduce nitrogen pollution from farm and livestock operations by 30 to 50 percent. They include timing, optimizing manure, implementing wetlands, winter cover crops, and nitrogen. Our current practices are not doing it. We need to be deploying these systems through leadership and voluntary action by farmers and producers.

“Crop production, environmental protection both achievable.”

report can be viewed at
<http://www.esa.org/science/resources/issues/FileEnglish/issuesinecology15.pdf>
contact him at
whrc.org

PS, C-4

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"We're seeing a significant drop in customer complaints since we stopped answering our phones."