



**Illinois Fertilizer &  
Chemical Association**  
**Supply • Service • Stewardship**

**IFCA's Mission Statement:** To assist and represent the crop production supply and service industry while promoting the sound stewardship and utilization of agricultural inputs

- *1,100+ Members Including:*
- *Ag Retailers*
- *Fertilizer & Pesticide Manufacturers and Distributors*
- *Equipment Suppliers*
- *Input Transporters*



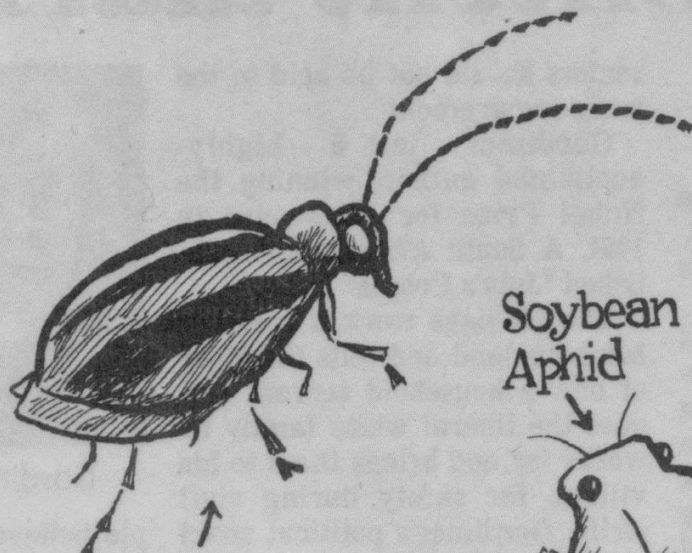
# About Illinois.....

- ▣ *Ag is \$14 billion industry with 21 million acres in production, mostly corn & soybeans*
- ▣ *Nearly 5 million tons of agricultural fertilizer used per year; 650 retail outlets*
- ▣ *72% of nitrogen used for crops is in the form of anhydrous ammonia*
- ▣ *13 million people in a mostly agricultural state*



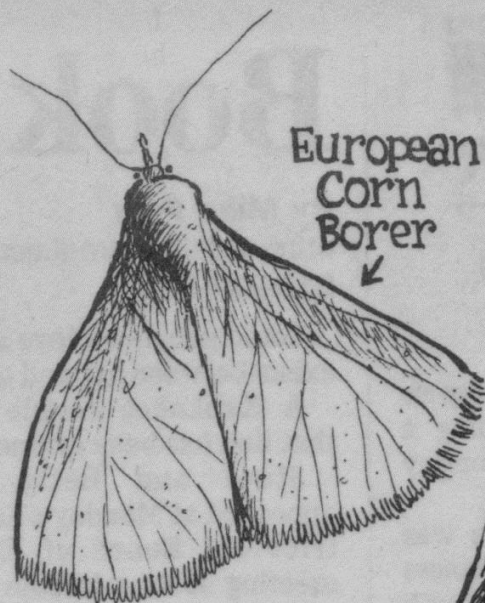


# FARM PESTS:



Western  
Corn Rootworm

Soybean  
Aphid



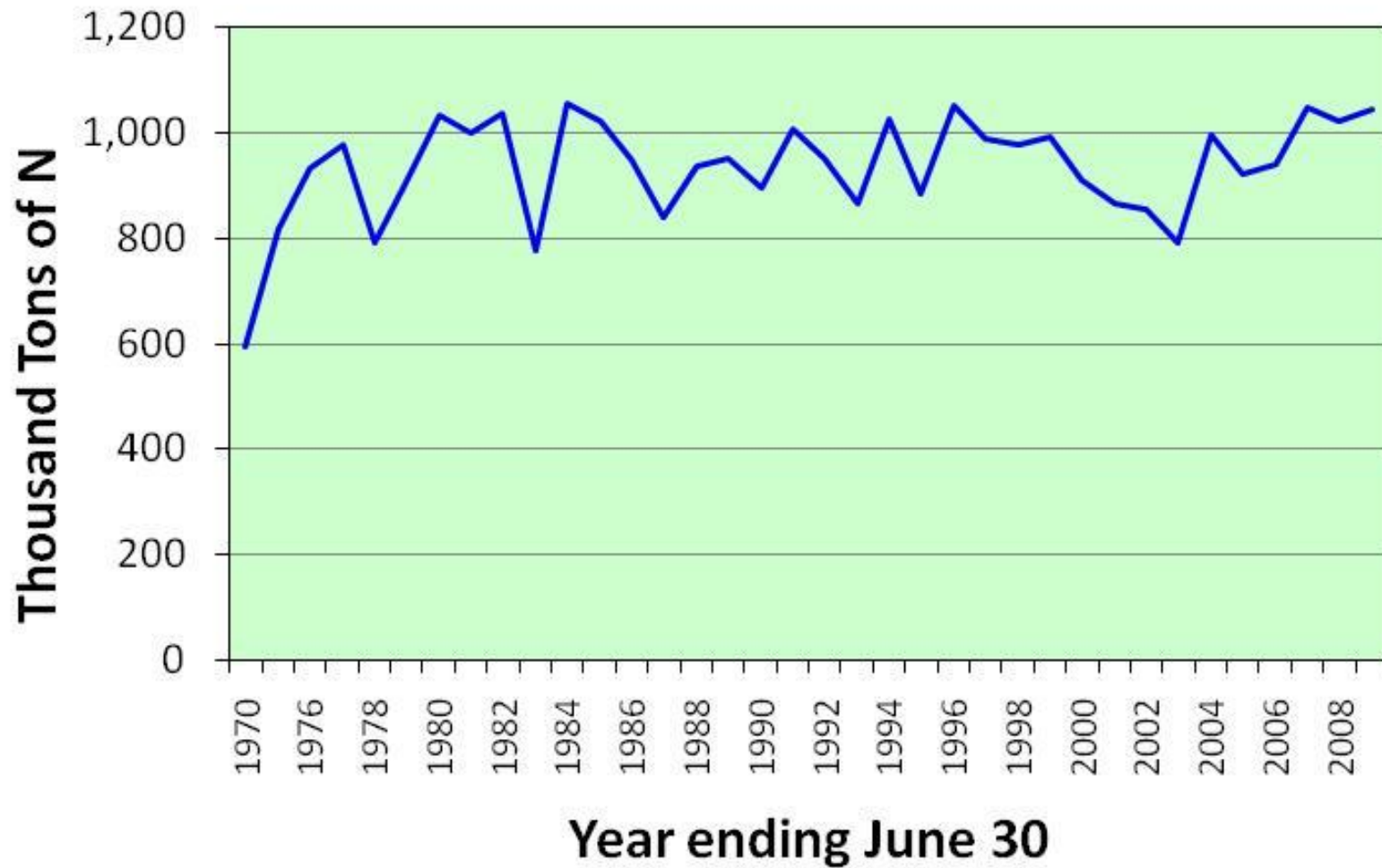
European  
Corn  
Borer

Governor  
Blagojevich



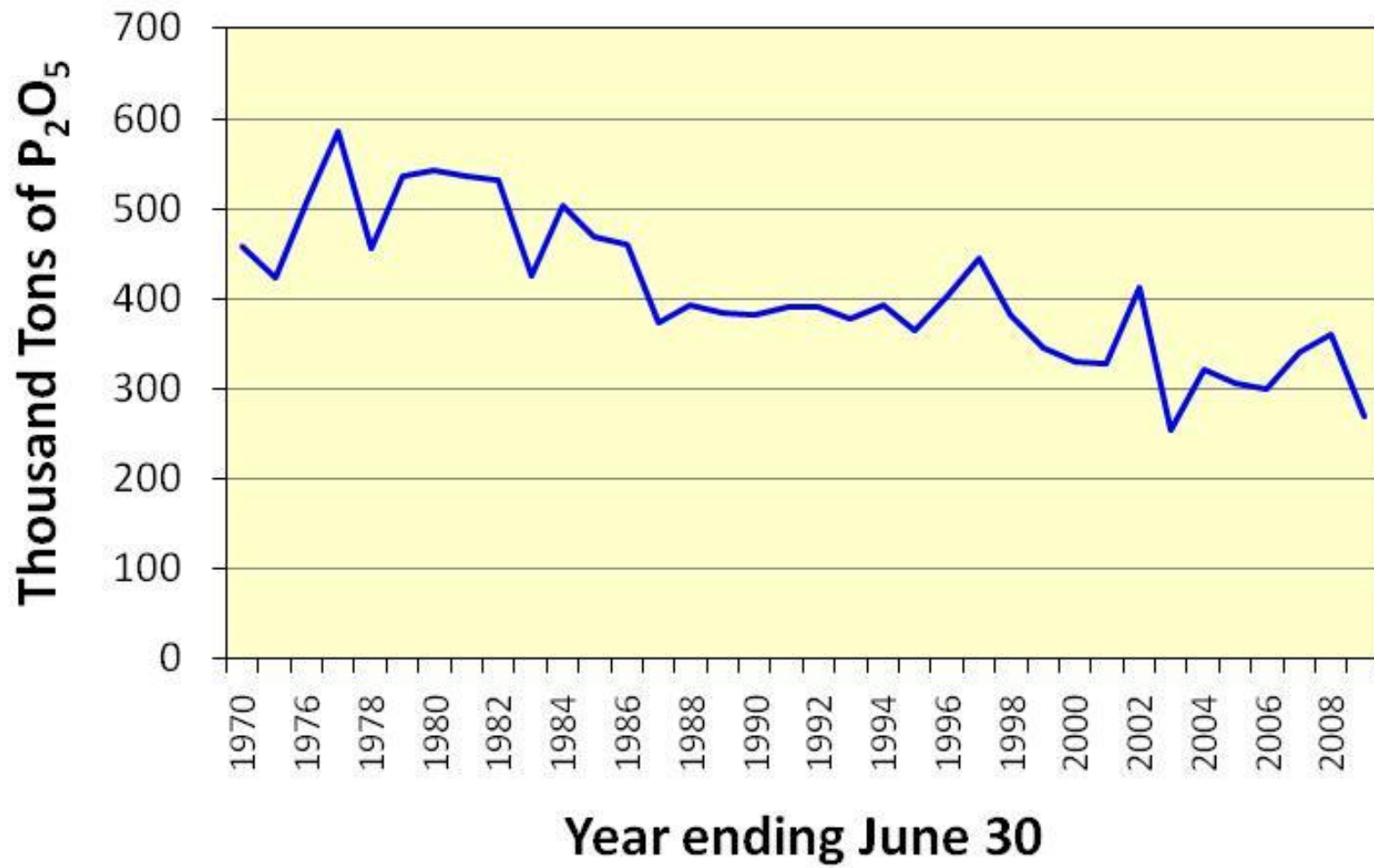
BUDGET PLAN:  
END SALES TAX  
EXEMPTIONS  
ON FARM  
SUPPLIES

## Fertilizer N Consumption - Illinois



Data sources: AAPFCO, TFI

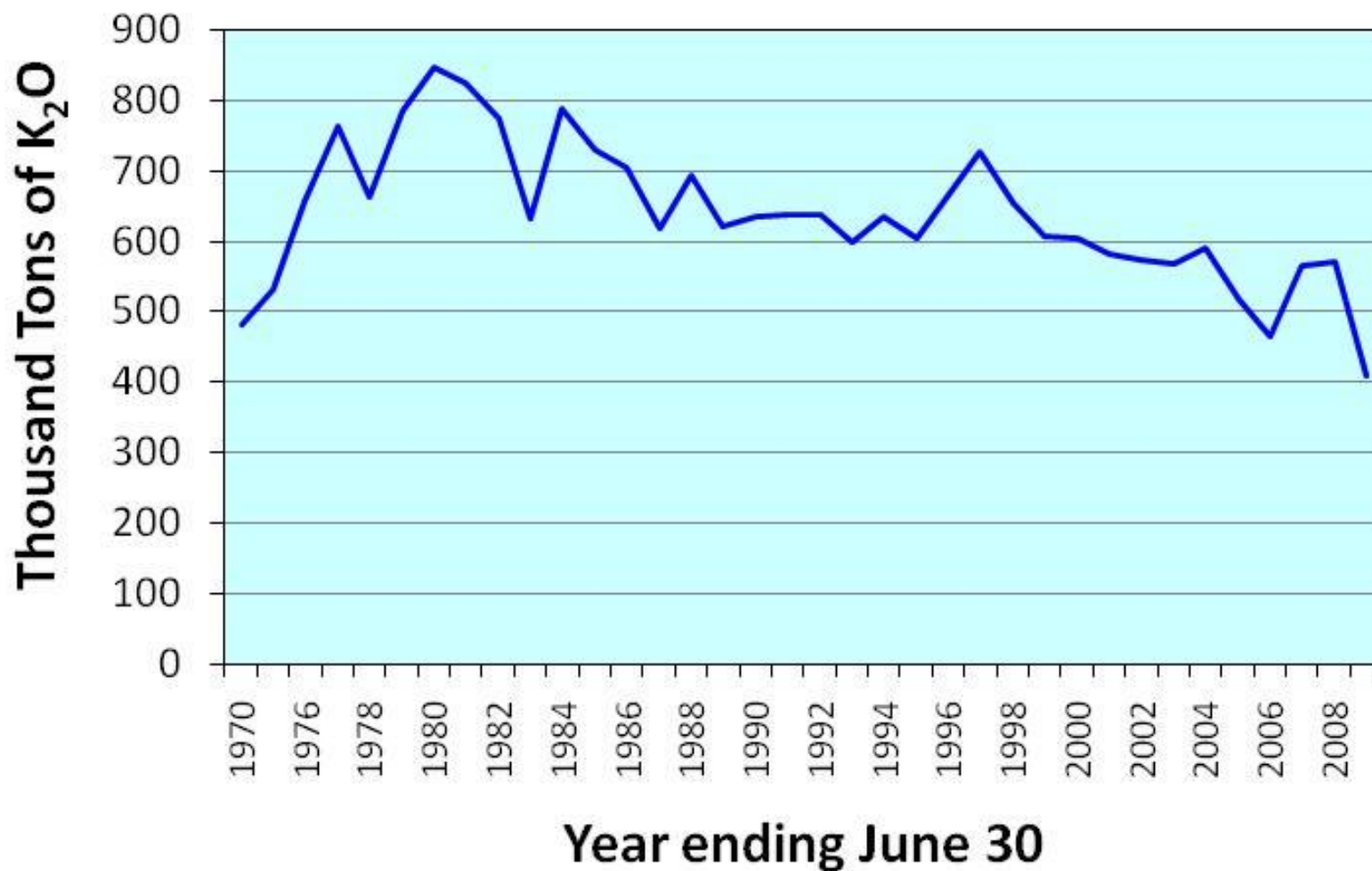
## Fertilizer $P_2O_5$ Consumption - Illinois



Data sources: AAPFCO, TFI



## Fertilizer K<sub>2</sub>O Consumption - Illinois



Data sources: AAPFCO, TFI



# Current Critical Issues for IFCA

- *Numeric Water Quality Standards*
  - *2 mg/l for Nitrogen*
  - *.075 mg/l for Phosphorus*
- *Keep it for the Crop: KIC by 2025*
- *Leadership & Oversight on CBMP Programs*

If we've learned anything.....

# NEVER ASSUME THE GOVERNMENT UNDERSTANDS AGRICULTURE



FMCSA Attorney: *"I thought the practice of crop sharing ended with the civil war"*

followed by

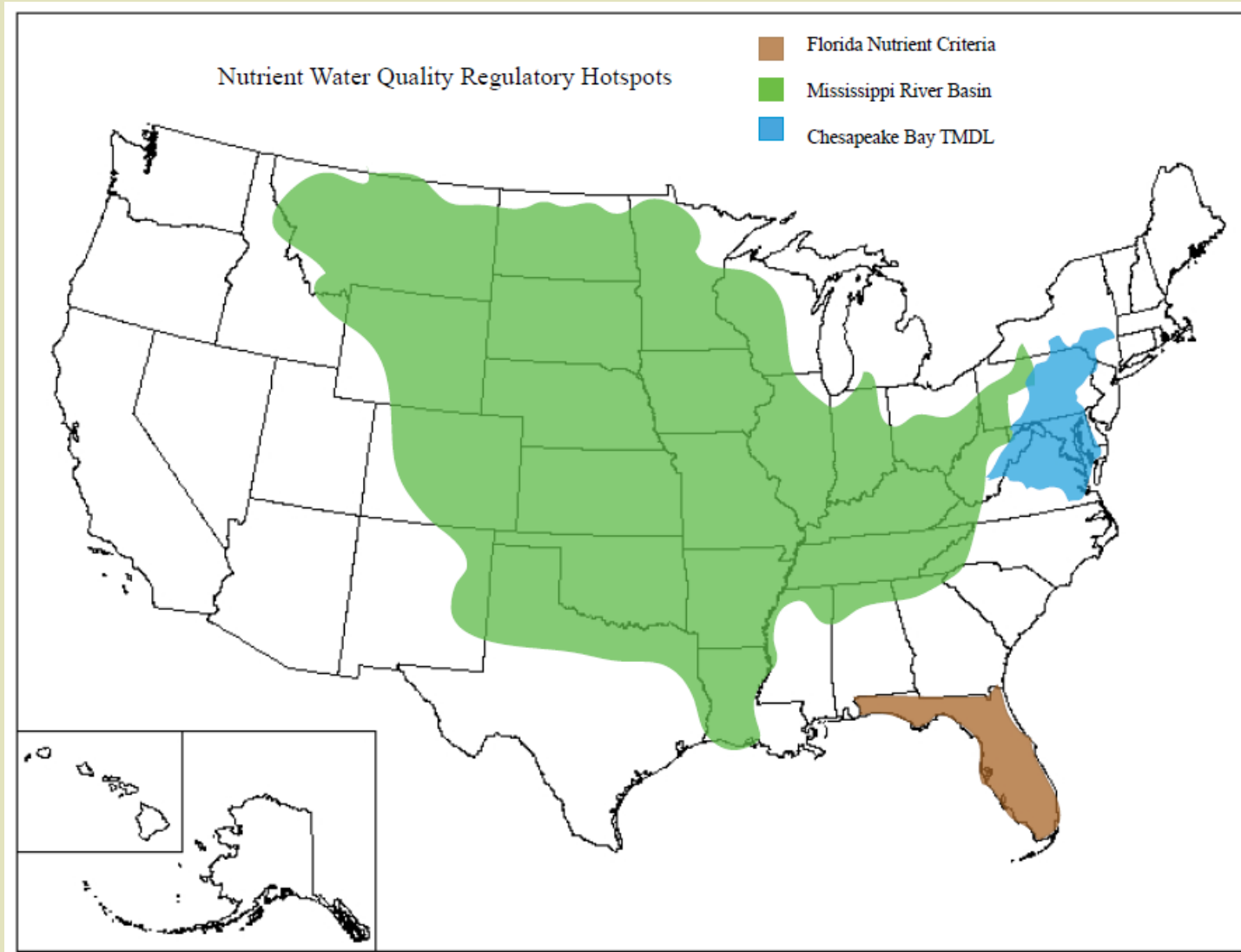
*"You mean you don't take ammonia nurse tanks down the interstate at 65 mph?"*

# **WATER QUALITY IS PRIORITY ISSUE**

Environmental Groups suing to set restrictive water quality standards in all rivers, lakes and streams

State Water Quality Agencies (IEPA) being pressured by USEPA to adopt and enforce these standards on point sources and set Total Maximum Daily Load (TMDL) regulations to protect all surface waters

# Lawsuits on Nutrient Standards





# ***Nutrient Lawsuits***

- ***In 2009 Florida Wildlife Federation sued State of Florida for not enacting standards to protect water quality...and they won.***
- ***In 2008 The USEPA set standards for the states in the Chesapeake Bay to meet water quality standards for nutrients***

# ***Nutrient Lawsuits, cont.***

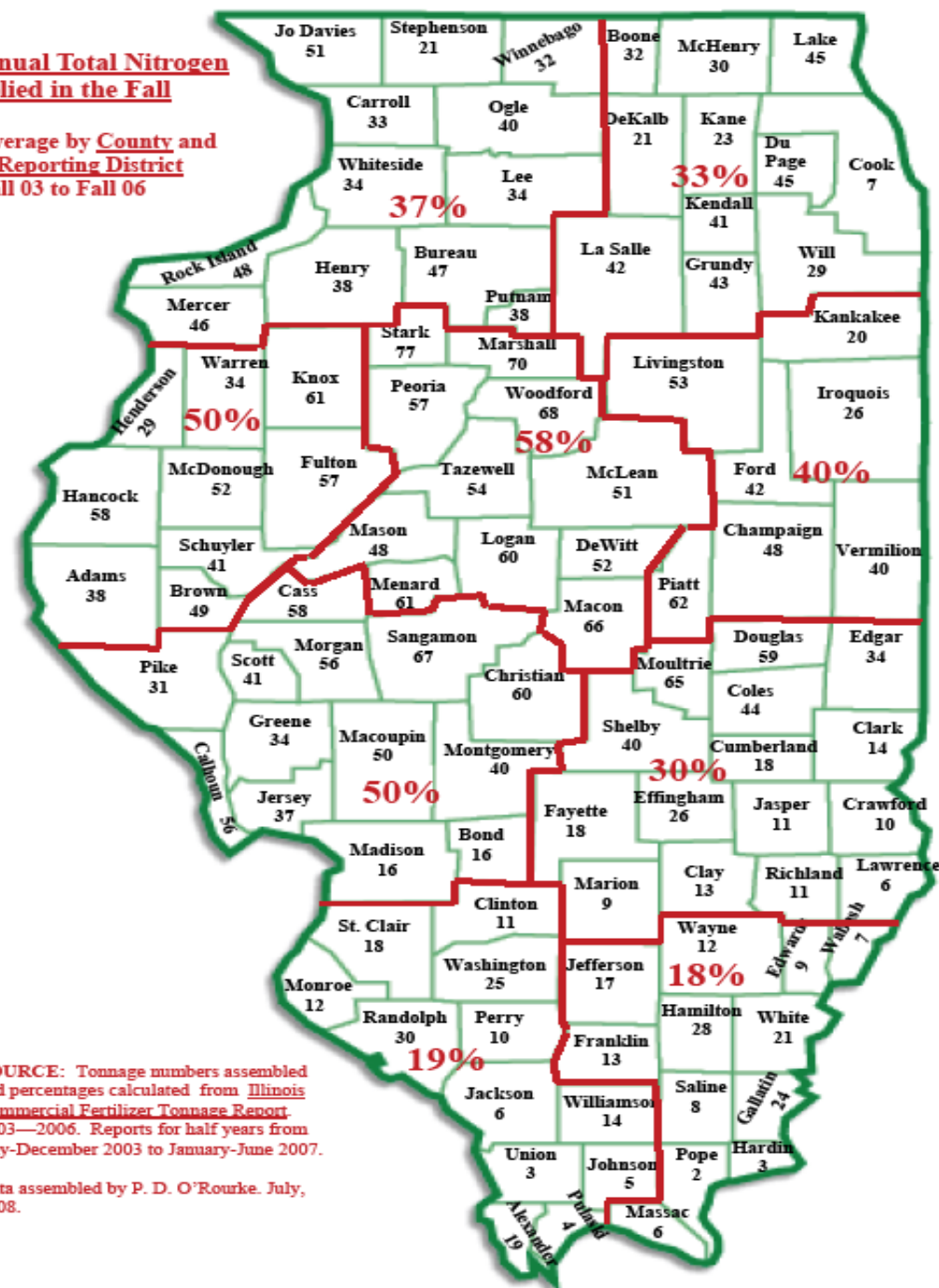
- ▣ ***Wisconsin agreed to rules for nutrient regulations on phosphorus application by agricultural producers, contingent upon cost-share funding***
- ▣ ***In Illinois, we are under threat of lawsuit similar to Florida as well as Region 5 USEPA threatening to take over the IEPA NPDES program for point sources that discharge N & P***

# Illinois' Cropping System Makes Controlling Nutrient Losses Particularly Challenging



**% of Annual Total Nitrogen  
Applied in the Fall**

**4-year Average by County and  
Crop Reporting District**  
Fall 03 to Fall 06



**SOURCE:** Tonnage numbers assembled and percentages calculated from Illinois Commercial Fertilizer Tonnage Report, 2003—2006. Reports for half years from July-December 2003 to January-June 2007.

Data assembled by P. D. O'Rourke, July, 2008.



# Illinois' Challenge: Tiles & Nutrients



- *The tiles appear brighter-dry faster*
- *Imagery was flown 2-3 days after a major storm event*

Naz et al 2009

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October 20, 2010

For as long as farmers have been farming in the Midwest, they have been laying drainage tile — often perforated plastic tubes installed 2 feet to 4 feet below the surface — to drain wetlands and create arable fields in places that would normally hold standing water. The problem is that the system also sluices away nitrogen fertilizer, which eventually flows through tributaries into the Mississippi and ends in the Gulf of Mexico.

Mark David, a University of Illinois researcher, observed that “farmers are not to blame.” We agree. Tiling is as old as Midwestern farming. What’s needed now is more research and direct incentives from the Agriculture Department to find ways to mitigate this problem.

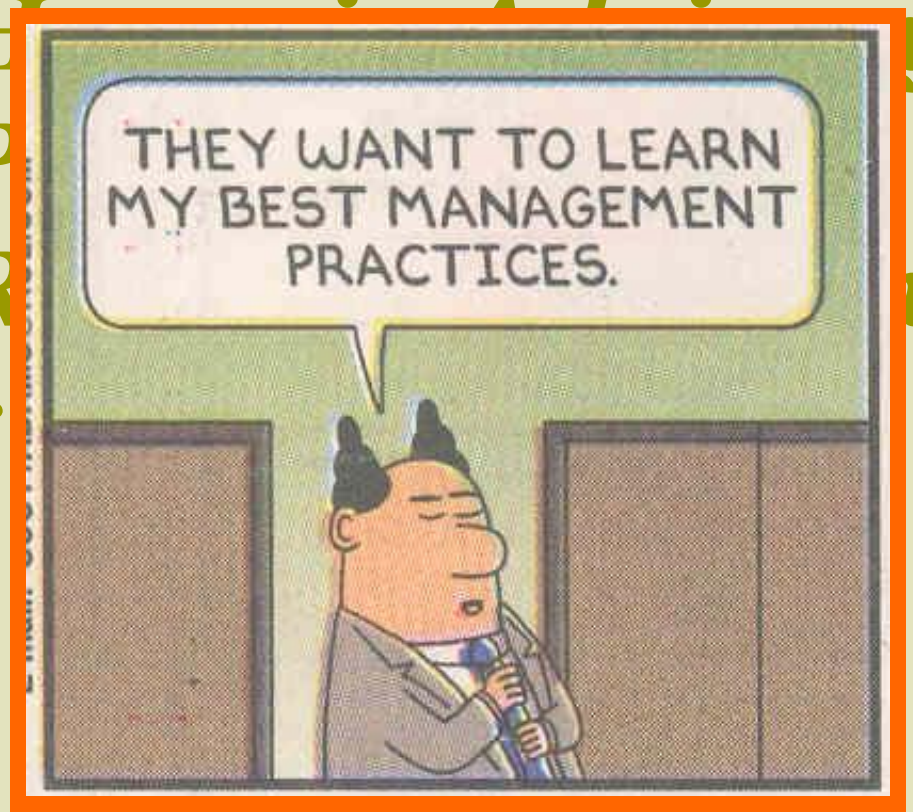
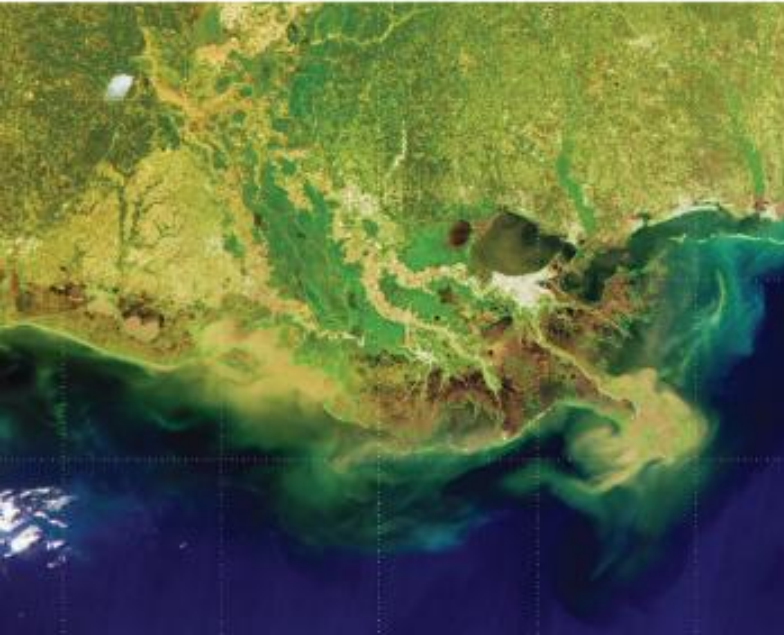
These include: restoring wetlands, where possible; growing cover crops to absorb water in the spring, when runoff is heaviest; different methods of applying fertilizer; and even methods of treating the runoff before it reaches creeks and rivers. Sacrificing life in the gulf for corn in the fields is a trade-off that has to stop.





## Hypoxia in the Northern Gulf of Mexico

An Update by the EPA Science Advisory Board



- ❑ ***A 45% reduction in both N and P loads to the Gulf is needed.***

# What is Agriculture Doing?

- 1. Met with all Nutrient Stakeholders (Sanitary Districts, Environmental Groups, Manufacturing, Construction)*
- 2. Launched KIC by 2025 Program*
- 3. Funded KIC with donations from ICGA, IFCA, ISA & IFB (\$300,000)*
- 4. CBMP Hired Full Time Director of Nutrient Stewardship*





- \* *Illinois Farm Bureau*
- \* *Illinois Corn Growers Association*
- \* *Illinois Soybean Association*
- \* *Illinois Pork Producers Association*
- \* *Illinois Fertilizer & Chemical Association*
- \* *Syngenta Crop Protection*




# **KIC 2025**

**Keep It for the Crop by 2025**

# Agriculture Funding KIC





A photograph of three people at an outdoor event. On the left, a man in a green polo shirt is speaking into a microphone at a podium. In the center, a woman in a green polo shirt is listening. On the right, a woman in a red floral top is also listening. A large black Yamaha speaker is in the foreground. The background features a white banner and a cornfield.

Farm Progress Show – KIC Launch,  
September 1, 2011

Gary Hudson, IL  
Corn Growers

Jean Payne,  
IFCA

Lisa Bonnet, IEPA



**Illinois  
Priority  
Watersheds  
to  
*Reduce  
Nutrient  
Loss***



<u>Watershed</u>	<u>Target Nutrient</u>
Lake Bloomington	Total Phosphorus Nitrate
Lake Vermilion	Total Phosphorus Nitrate
Lake Decatur	Total Phosphorus Nitrate
Vermilion River (Illinois Basin)	Nitrate
Salt Fork Vermilion River (Wabash Basin)	Nitrate
Lake Mauvassie Terre	Total Phosphorus Nitrate



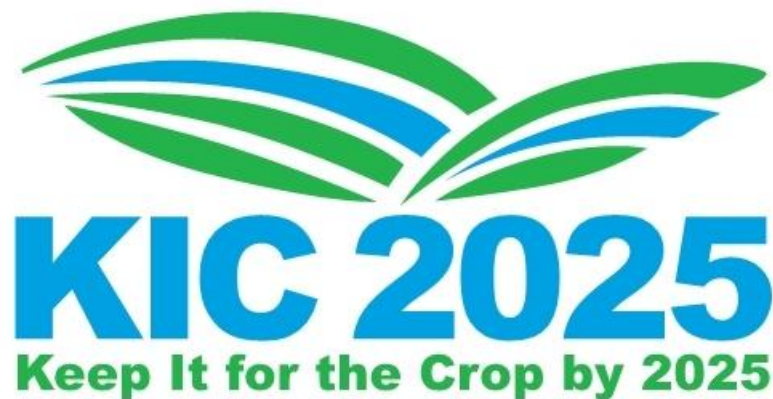




## Contact Information

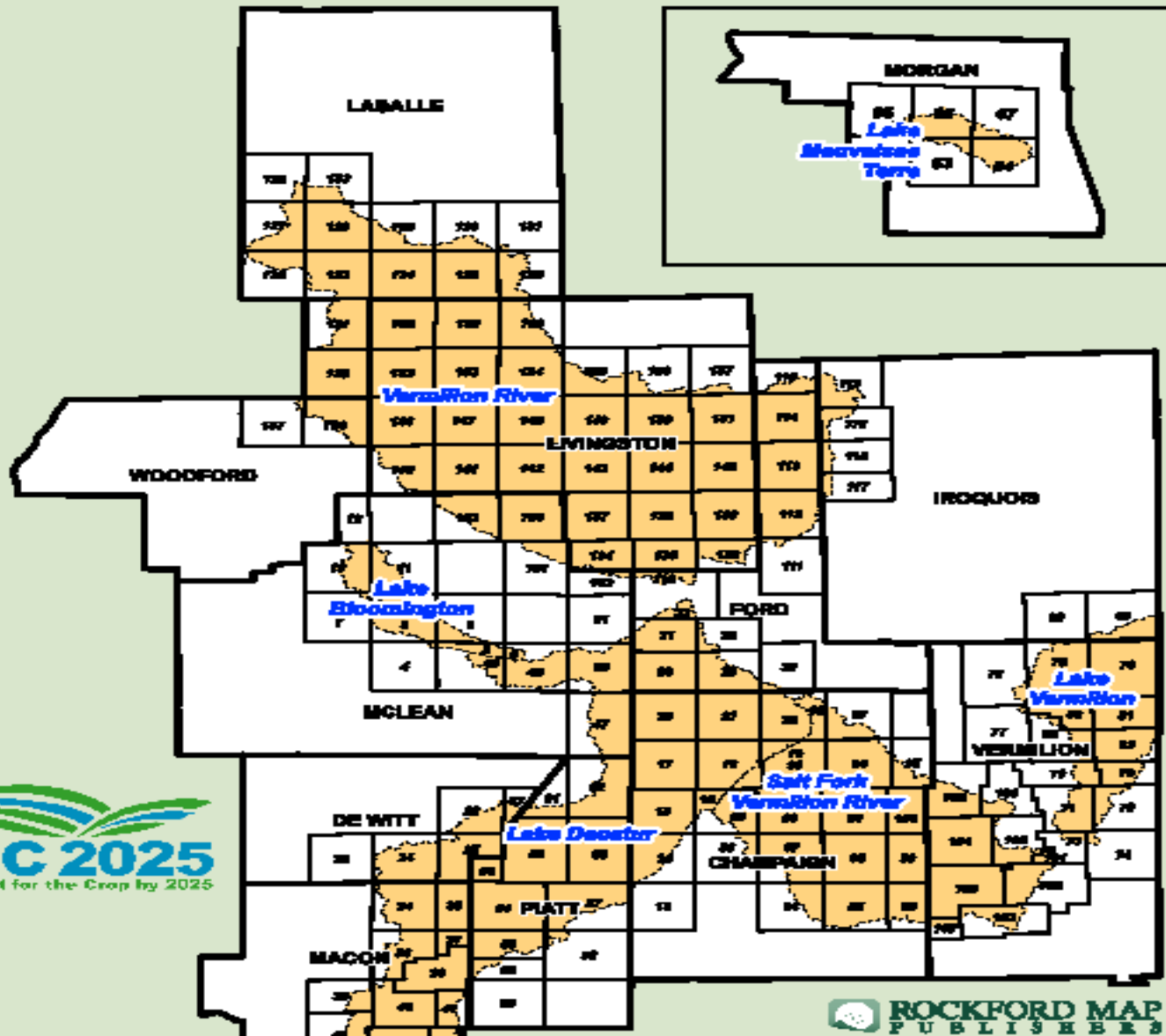
*Dan Schaefer*  
*Illinois CBMP*

*217-202-5173*  
*dschaefer@illinoiscbmp.org*



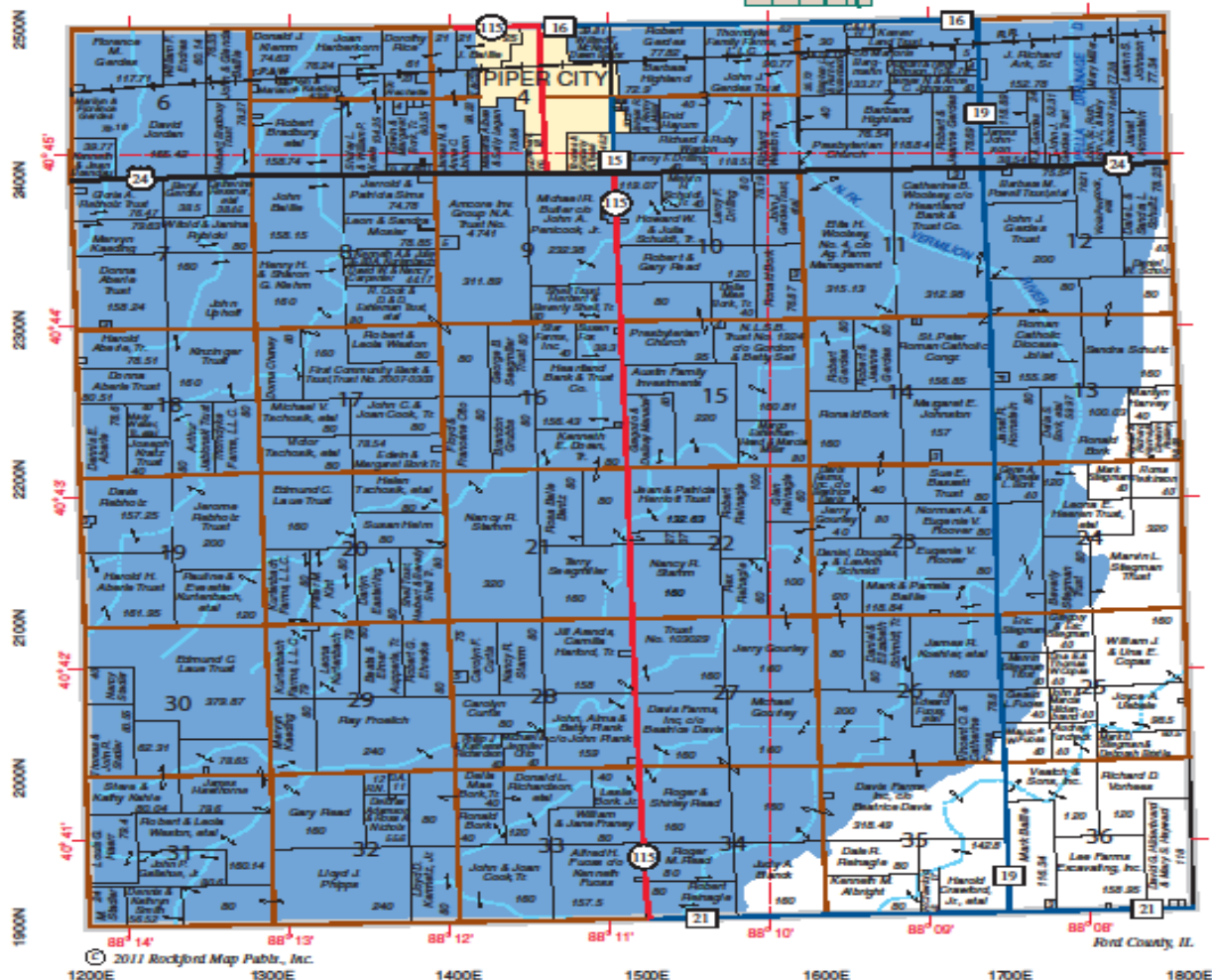
## ILLINOIS PRIORITY WATERSHEDS

## INDEX MAP



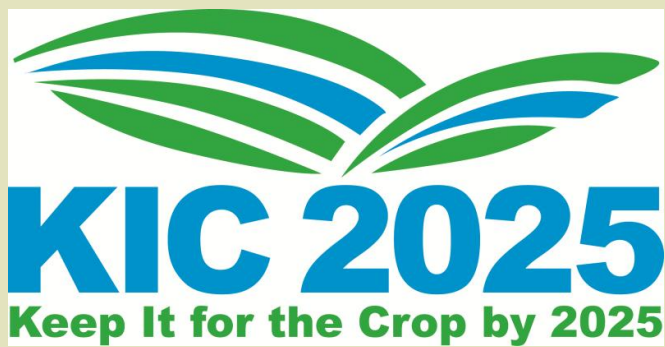
BRENTON

T.26N.-R.9E.





- *Program 2011*
  - *Initiate awareness program on U of Illinois research for fall applied Nitrogen*
  - *Promote use of nitrogen loss inhibitors/stabilizers for fall applied nitrogen*
  - *Identify priority watersheds based on nutrient losses and sources*
  - *Work with agencies and stakeholders on nutrient stewardship practices*
  - *Develop strategy to implement practices*



## ■ 2012-2013

- *Identify educational programs and Best Management Practices*
- *Collect fertilizer data to measure changes and adoption in future years*
- *Target priority watersheds for implementation due to limited resources*
- *Develop plans to initiate research on needs identified in priority watersheds*
- *Redefine current programs to address needs*



# Vern Kleiss "N" Study

REP # 1

BORDER 150 # 28%  
Super U  
MIX 1  
ESN  
MIX 2  
150 # "N" rate  
50 # "N" rate  
200 # "N" rate  
0 "N" rate  
100 # "N" rate

REP # 2

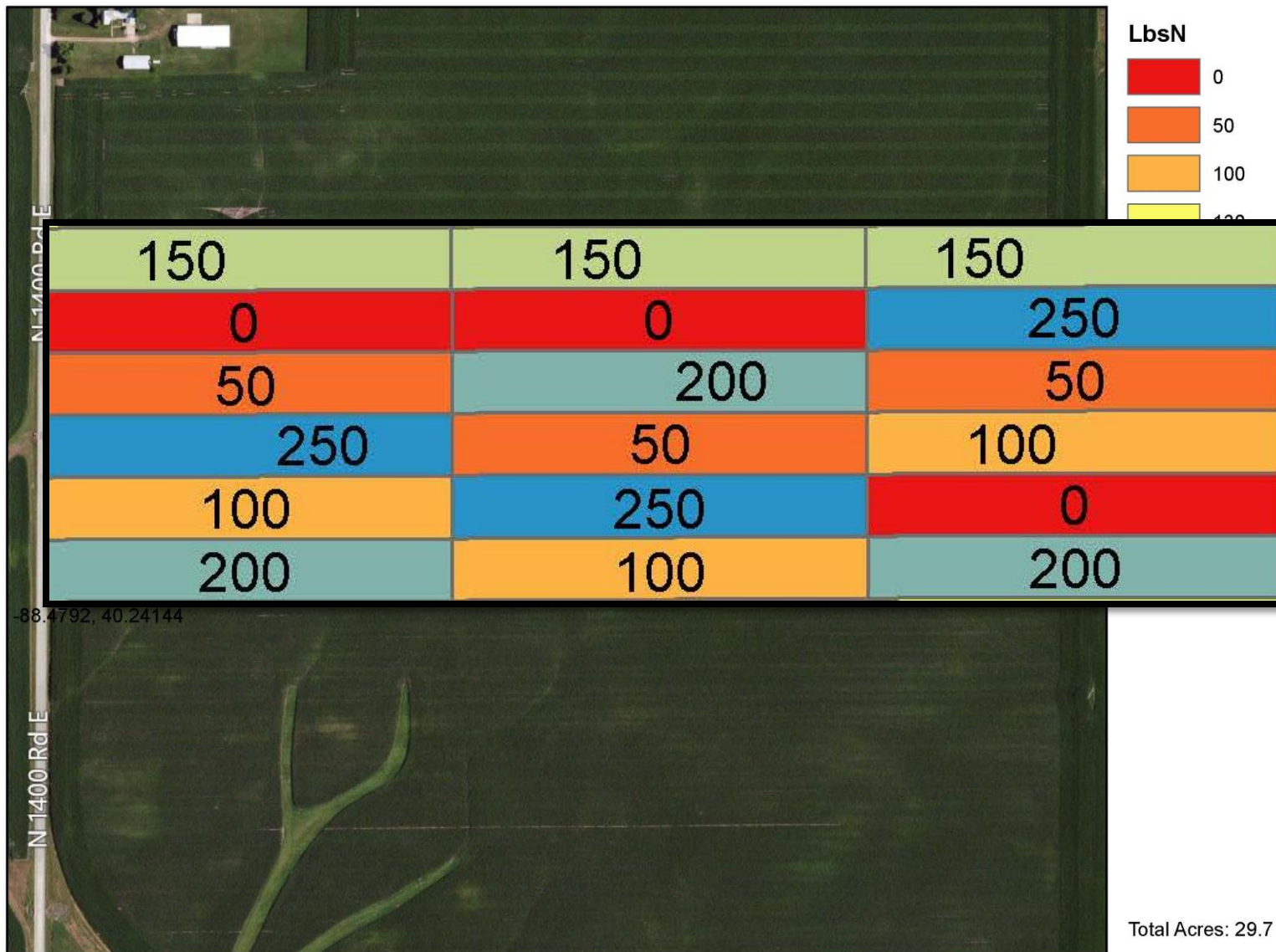
ESN  
MIX 2  
MIX 1  
Super U  
200 # "N" rate  
50 # "N" rate  
100 # "N" rate  
0 "N" rate

REP # 3

MIX 1  
Super U  
ESN  
MIX 2  
150 # "N" rate  
50 # "N" rate  
150 # "N" rate  
0 "N" rate  
200 # "N"  
100 # "N"  
BORDER 150 # 28%



# Plot Location



0 500 1,000 2,000 Feet

Total Acres: 29.7



CropSmith, Inc. (217) 621-6117  
www.cropsmith.com

Map Produced November 5 2012

# N-Rate Trial - Narrow Layout

## Plot Layout



0 270 540 1,080 Feet



Cropsmith, Inc. (217) 621-6117  
www.cropsmith.com

Map Produced November 5 2012

## MRTN Calculator



**Start MRTN Calculator**

More information about the MRTN can be found at: <http://extension.agron.iastate.edu/soilfertility/nrate.aspx>



UNIVERSITY OF ILLINOIS EXTENSION  
College of Agricultural, Consumer and Environmental Sciences

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## MRTN Calculator



Select



700

Calcu

0.43

?

Enter

Cost/Ton

Select  
Source:

UAN

AMS

Urea

Anhy. Am.

?

Enter  
Cost/Ton

Cost \$/lb N

## MRTN Calculator

## Split Application

Total to Apply

*Your  
Rate/A*

Amount Unall

**SPLIT 1**

Split 1

Fall

Anhydrous (82%)

60.0

%

# of N

Lbs./A

**SPLIT 2**

Split 2

Preplant

UAN (28%)

20.0

%

36.4

# N

12

gal/A

**SPLIT 3**

Split 3

Post/Sidedress

UAN (32%)

20

%

36.4

# N

10

gal/A

**Compare Costs**

## MRTN Calculator

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## Split Application Cost Comparison \$/A

Single application	N-rate	\$/ton	\$/A
Anhydrous (82%)	188	800	\$91.
Split applications			
Anhydrous (82%)	112.1	800	\$55.0
Urea(46%)	56.4	500	\$30.0

**Additives**

Calc Compare

Additives

\$99.10

**Application**

Costs

summary



Illinois Council on Best Management Practices



# E-mail output message

## Single Application

100%	Anhydrous (82%)	188#N	\$800 /ton	\$115.71
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## Split Applications

1	50%	Anhy. (82%)	94#N	\$800 /ton	\$69.85
2	30.0%	Urea(46%)	56#N	\$700/ton	\$58.91
3	20.0%	UAN(28%)	38#N	\$400/ton	\$26.86

Single vs. Split application

\$115.71 vs. \$175.62

Cost difference in bushels: 12.0

# The Value of a N Mgt. System.

- *N must move into plant with soil water*
- *When it rains crop N uptake can be shallow*
- *When it doesn't rain crop N uptake deeper*
- *When applied early risk of loss higher*
- *When applied late risk of no rain greater*

# N Fertilizer Management

## A Year-round Sport!



**What happened during the fall, winter and early spring?**



**What happened in since the crop was planted?**

# INVENTORY OF POST-EMERGE OPTIONS

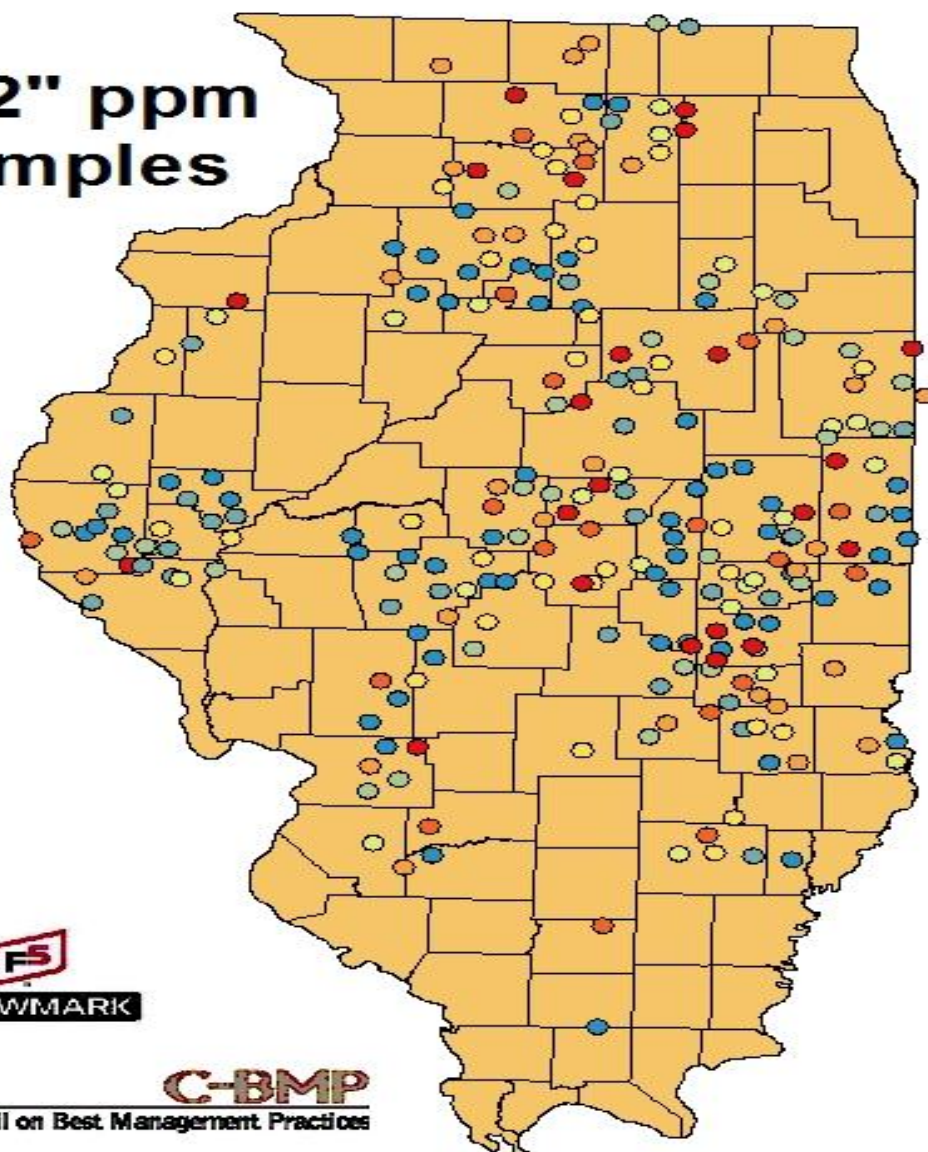
- *Anhydrous ammonia*
- *UAN (dribbled, knifed)*
- *AMS (surface broadcast)*
- *Urea w/Agrotain (surface broadcast)*
- *Super-U (surface broadcast)*
- *ESN*
- *Aerial (Urea, Super-U, ESN, Am Nitrate)*







# Nitrate 0" - 12" ppm Fall 2012 Samples



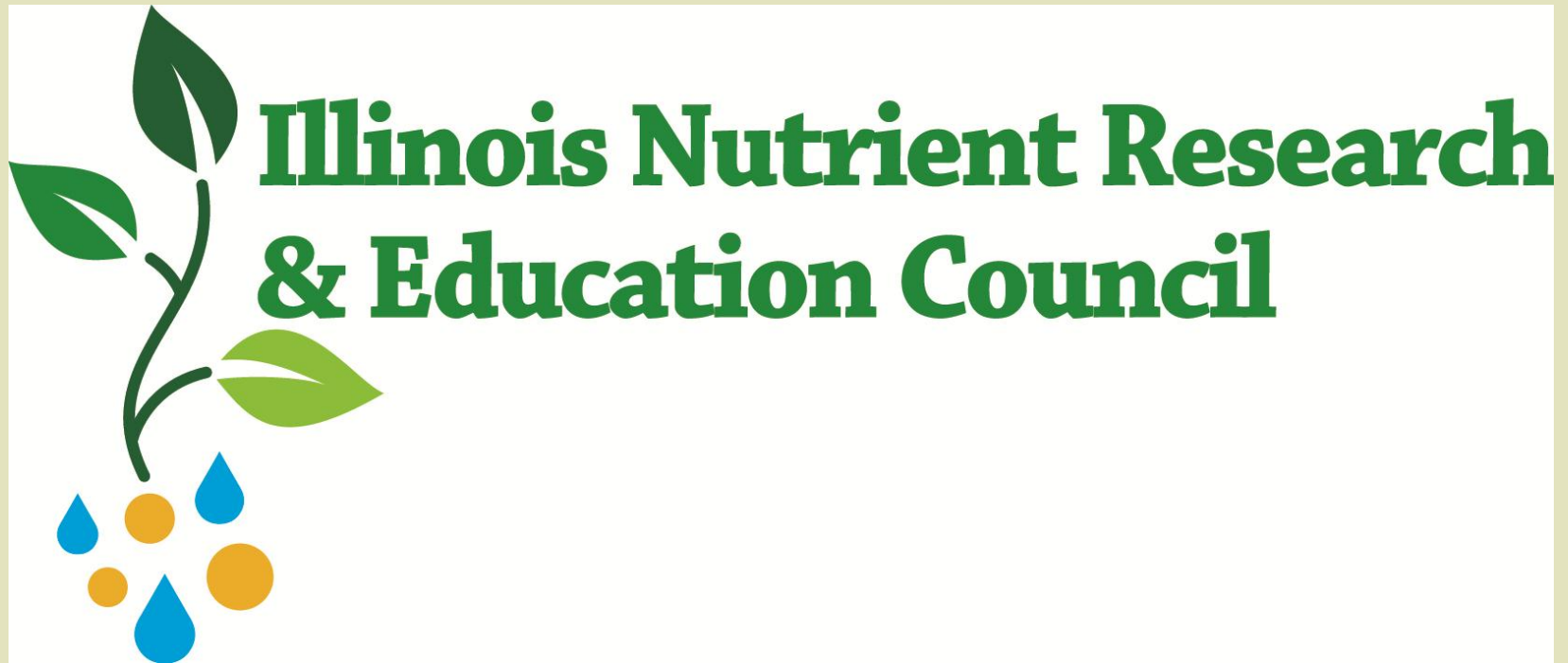
**C-BMP**  
Illinois Council on Best Management Practices

# Fall Soil Nitrate Sampling

<i>Number of Counties Reporting</i>	<i>39</i>
<i>Total Number of Sites Tested</i>	<i>200</i>
<i>Number of sites with 2+ App.</i>	<i>78</i>
<i>N03-N PPM 0-12"</i>	<i>19</i>
<i>N03-N PPM 12-24"</i>	<i>13</i>
<i>Total LBS of N Both Depths</i>	<i>128</i>

# Defensible-Responsible-Reliable

- ▣ *Nitrogen Rates based on the N-Rate Calculator*
- ▣ *On Farm N-Rate Trials*
- ▣ *Soil Testing for Nitrate Inventory*
- ▣ *Nitrate & Ammonium Tracking*
- ▣ *Spring Nitrogen Rate Recommendations*
- ▣ *Nitrogen as a System using the 4R's, Right Source, Rate, Time and Place.*



NREC serves as the foundation that for research and outreach programs that will lead Illinois agriculture into a new era of:

Enhanced nutrient optimization:  
Increased crop productivity and profitability;  
Environmental Responsibility

# NREC Supporters

**Illinois Environmental Protection Agency**

**Illinois Chapter of Sierra Club**

**Environmental Law Policy Center**

**Illinois Department of Agriculture**

**Illinois Fertilizer & Chemical Association**

**Illinois Farm Bureau**

**Illinois Corn Growers Association**

**Illinois Soybean Association**

**Illinois Seed Trade Association**

**Illinois Association of Drainage Districts**

**Grain & Feed Association of Illinois**





HB 5539 Bill Signing – Illinois State Fair, August 14, 2012

# NREC Members

## NREC Members – Voting (9)

Fertilizer Industry:	Dr. Howard Brown, GROWMARK, Bloomington IL Ed Corrigan, Brandt Consolidated, Springfield IL Matt Duncan, Crop Production Services, Galesburg IL
Specialty Fertilizer:	Chris Matlock, FS Custom Turf, Bloomington IL
IL CCA:	Dave Creech, Helena Company, Greenup IL
IL Farm Bureau:	Dale Hadden, producer, Jacksonville IL
IL Corn Growers:	Gary Hudson, producer, Hindsboro, IL
IL Soybean Assoc:	Matt Hughes, producer, Shirley IL
IDA:	Jim Larkin, Chief of Staff

## NREC Members – Non Voting (4)

Environment :	Jessica Dexter, Environmental Law Policy Center, Chicago Cindy Skrukrud, Illinois Chapter Sierra Club, Chicago
Research Station:	Dr. German Bollero, University of Illinois, Urbana-Champaign
IEPA:	Marcia Willhite, Bureau of Water Chief

# NREC: Long-Term Funding

## 100% Agriculture

- *Establishes a statutory assessment for Nutrient Research & Education Council (private foundation). IDA assures remittance to NREC. Range of funding is 50 cents to \$3.00 per ton. Private fund which cannot be swept. NREC Council set the assessment at 75 cents per ton.*
- *20% of NREC funds statutorily dedicated to on-farm nutrient & water quality projects*

# Payments to NREC

- It is condition of fertilizer distributor license to remit the fees:
  - 25¢ to IDA – check made out to IDA
  - 75¢ to NREC – check sent to NREC  
(foundation held by IFCA)
- Payable semi-annually based on tonnage (July 31 on spring tons, Feb 28 on fall tons)

# First NREC Projects, \$1.4 million:

- ▣ *Cover Crops in a Corn/Soy Rotation*
- ▣ *Fund the KIC Program*
- ▣ *Joint Project between Agriculture & Sanitary Districts to determine "Maximum Extent Practical" BMP for Point & Non Point*
- ▣ *Fund "Discovery Farms"*
- ▣ *P & K Recommendations in Illinois*
- ▣ *Phosphorus Application Methods & Runoff Study*



# We Cannot Afford this Perception..

