

Nutrient Management in the Missouri Bootheel

Teleconference Aug 29, 2008

Bob Ball, Glenn Davis, Jim Steuver, Pat Turman, Scott Crumpecker, Alan Rowland (producer and Farm Bureau), David Dunne, Karen Scanlon

Do we want to focus on soil testing?

Or do we want to focus on nitrogen mgmt – more relevant to hypoxia?

AR: if N causes most problems, then makes sense to focus on it

DD: national strategy says P has a role, many states dealing with P for local water; not as much focus on N; N is main driver

Peter has active research on Jim's fields; results after harvest. Yield monitor on cotton picker.

PT: agree with nitrogen focus

DD: SALT project

Can't be specific about contribution from Lower St Francis

SPARROW Model

Need to find research: USGS, EPA, DNR

Then, we need analysis

BB: will go to Bryan for help in locating data relevant to region. Get summary of data, in layman's terms. John Ford

Will also ask for funds to support this grant, assign staff person to be main contact.

But, don't focus too much on problem, emphasize tools

Suggested Workshop Agenda Topics & Points of Emphasis

Survey cropland producers:

- determine utilization of soil fertility testing in crop management
- survey results may serve as an indicator of nitrogen management as well

Or look at soil tests with info from labs

Focus on Nutrient Management:

- proper procedures isn taking soil samples
- developing a nutrient management plan
- following current soil tests

Focus on Nitrogen Management Options:

- split nitrogen application
- crop canopy color sensing
- crop monitoring
 - a. stalk nitrate tests
 - b. using chlorophyll meters on plant tissues
- drainage water management – new, learning about it

Finally, identify a local point of contact for producers who can provide followup technical assistance on these and other topics. That person would have a support network of other professionals to draw on as needed.

This approach is offered for comment and discussion.

Not likely to get landowners to attend. Need to focus on operators and active farmers.

Most farmers have heard of this, if they are familiar with NRCS programs.
But some are not following recommendations, stay away from govt programs.

DD: starting to reach new clientele as fertilizer prices rise. Might be good time to track people.

GD: add economic component to workshop. Ray Massey, crops economist

PT: gene stevens has economic-based program

AR: small groups for short time, rather than large event

Fert Dealers, Equipment Dealers

Multiple sessions of short duration

KEY: familiar setting, food, together with another event

Discussed progress on Next Steps from June 24

SC talked to contact at A & L labs. She is getting sample information from Stoddard and Dunklin county. Can't ID which watershed, but can ID by zip codes and poll to see how many producers are soil testing through the lab. Sent email this week that are working on it. David, through U of MO, may be able to do the same. Producers may also use U of Ark. Need to check with David Dunne and Gene Stevens and Earl Vorhees, ARS.

Gene: use of soil testing is low, even among progressive farmers. Soil test lab at Delta Center was almost closed down 5 years ago. Can query DC lab to check on soil test samples. Ward Lab is another possible source.

Gene: Joe Henggeler (Delta Center). Gene will check on his research and see if anything related to nutrient management.

Most farmers understand importance of soil testing; but it's hard work.

Bob: in-depth research available, not necessarily unique to bootheel. NASS offered to include questions on their survey. Add 2-3 questions. Bob sending contact.

Want to do this?

Bob: would add validity to this effort. Would respond to question of what local vendors know? We either have a need or we don't. use to acquire additional dollars.

Do you soil test on a regular basis?

Do you follow the Univ of Missouri recommendations for soil testing?

Bob: reasonableness, timeliness, workload....what can we realistically expect to accomplish within a tight timeline. Do we need to narrow the scope and make a more realistic target. If focus is on nut mgmt and soil test, that seems right direction. If we can do something proactive to get handle on hypoxia situation and offer options to landowners, that's win-win. May come back in form of additional dollars.

Bryan: concur with Bob. Interest and growing awareness of water quality is regional as well as related to Gulf. If study shows gap in soil sampling and awareness. That, in and of itself, will be very useful for statewide planning for how to improve nutrient issues. Get clear demographics for soil testing and implementation...DNR would be very interest.

Alan: Do we have mechanism to go by ditches/streams to get samples and analyze and see how much load is being put in? easier to talk to farmers if can demonstrate that ag is contributing to a problem.

Bob: some data is being collected. We could also try to locate available data about water quality.

Bryan: monitoring no where it needs to be. Using that data is very complicated. Most of load that ends in waterways can be N-rich. When N applied and in what amounts is also information that we need. Have been SALT studies and FAPRI modeling. Bryan will find what was done within bootheel.

Gene: computer program, put in price of fertilizer and price of crop, uses economics to calculate point at which price of fertilizer exceeds benefits of yields.

www.plantsci.missouri.edu/deltacrops

Jim: economic forces are having influence on producer's decisions now. Even about what methods are used to apply nutrients.

Farm Bureau doesn't have nutrient mgmt/soil testing information.

ERC does have some; trying nutrient mgmt plan. Troy Huntley is good contact. Work closely with ARS and consultants with monitoring.

Gene: parent material high in phosphorus.

Keep to Stoddard and Dunklin Counties.

Bob: Should we run a model to get a better picture?

Next Steps

Karen: contact MO NASS and ERC

Gene: contact Joe Henggeler about research and David Dunne about soil tests from counties

Bryan: look for studies/modeling from counties