INMC Minutes

9/21/2010, 1PM, NCDA Agronomic Lab

1. Introductions of committee members

2. Presentation, Joe Rudek, Environmental Defense Fund (EDF)

Joe Rudek gave the group a presentation on the "On Farm Network" adaptive-type nutrient management project that EDF has been working on in a partnership with the Iowa Soybean Association since 2004. The multi-state project utilizes the Corn stalk nitrate test (CSNT) and prior year's corn nitrogen application to as a method of determining nitrogen application efficiency. CSNT values, along with yield results, soil type aerial imagery, and replicated strip trials can give information on how N applications would have affected yields at specified application levels. None of the NC samples demonstrated excess N application. Some fields indicated based on CSNT more nitrogen should be applied, but most at the meeting agreed that excess nitrogen would not have helped yield.

The group expressed some concern that corn nitrate levels in this effort are being touted as a yield predictor, when there are many other factors that affect crop yields, and expressed that the CSNT is only to be a predictor of the nitrogen status of the crop.

Deanna suggested that EDF talk with NCSU Extension prior to setting further trials in NC since many more crops than just corn are grown. The group discussed the viability of petiole sampling for wheat and cotton as a more reliable N evaluation method than CSNT. The group also made suggestions to be able to manage and adjust in season rather than in the next season, and also recommended various techniques to fine tune the testing effort, including the "Green Seeker".

3. Update on new Integrated Nutrient Management Software (INMS) product

Deanna updated the group on the status of the new integrated software. The new software product will be a web-based application, and will combine NCANAT and the current Nutrient Management Software. This should eliminate duplicative data entry for users, and make software database updates much more efficient and uniform, thus largely eliminating the need for USDA IT installations. The next version of the INMS is almost ready to beta test per the programmers. Josh and Joseph agreed to work to identify 10-15 conservation field staff testers for the new product at beta stage.

4. Update on revised Nutrient Management Training module

David C. and Deanna updated the group on the revamped Nutrient Management training course. Taking into account the coming new nutrient management software product, the ability to use RUSLE 2 in PLAT, and input from consumers of the current trainings, NCSU is currently working to revamp Nutrient Management Training provided to agency personnel and technical specialists. The new version of the course will likely include: (a) an online component to establish core competencies as a

prerequisite, and (b) a combined week-long course on nutrient management, nutrient management software, and RUSLE/PLAT. These courses are currently separate sessions.

5. <u>Presentation by Karl Shaffer on revised Waste Data Tables effort</u>

Karl Shaffer updated the group on his data collection efforts for revising the current Barker waste data tables to a revised product based on recent NCDA sample data and data collected from producer farms. Karl's work is being funded through an NCSU agreement with NRCS, and also a DWQ 319 grant to NCSU.

The presentation centered on the distribution of nutrient values within production phases and application types (based on NCDA samples) for the years 2005-2009. Normal distribution curves existed for irrigated anaerobic swine lagoon liquid, where Karl analyzed over 62,000 samples. Other animal types and production phase information were not quite as consistent, though many had some 'normal' statistical trends. Analysis of nutrient data for anaerobic swine lagoons show that water conservation measures and feed additives to reduce phosphorus have been effective in reducing water volumes and P produced in sampled liquid. Karl noted that there was very little difference in nutrient content in samples of stockpiled and whole house poultry litter, and also noted that the poultry numbers are problematic because of unknowns in sample origin, clean out methods and frequency, and 'mixing' of samples at 3rd party application sites.

The group asked Karl to return to another meeting (to take place October 25) with more detailed analysis of his collected data, including tables of mean, median, and comparison to current Barker data for all sample data sets. The group also requested that Karl compute PAN per animal unit tables for mean and median of collected sample data.

The group discussed the necessity for having all available data analysis prior to making any recommendations on how the new data should be compiled and used by field planners, and also that discussing consequences of any data recommendations with Integrators and environmental community would be vital.

Deanna mentioned that a discussion of Plant Availability Coefficients also needs to occur within the group, and thus, raw manure data is needed.

The meeting concluded at 3:30 PM.

The next meeting of the INMC, for further discussion of the waste data sample analysis, will take place October 25, 1PM, at NCDA Agronomic Lab.

Minutes completed by Josh Spencer, INMC Chairperson