

# North Central Crop Evaluation Committee

**\*\* Minutes from the 2002 Annual Meeting \*\***

**August 13-14, 2002**

**University of Missouri**

**Columbia, Missouri**

**Present:** Eddie Adams (Missouri), Jim Beuerlein (Ohio), John Boyse (Michigan), Bruce Burdick (Missouri), Kelly Day (Indiana), Phil DeVillez (Indiana), Tim Dietz (Michigan), Keith Dysinger (Michigan), Ralph Esgar (Illinois), Travis Fritts (Missouri), Wayne Haas (Pennsylvania), Scott Harkcom (Pennsylvania), Richard Hasty (Missouri), Brian Henry (Illinois), Mike Huge (Ohio), Darin Joos (Illinois), Delbert Knerr (Missouri), Chris Kroon van Diest (Ohio), Howard Mason (Missouri), Len Nelson (Nebraska), Kraig Roozeboom (Kansas), John Shaffer (Pennsylvania), Dick Todd (Pennsylvania), Bruce Voss (Iowa), Bill Widdieombe (Michigan), Bill Wiebold (Missouri), Ray Wright (Missouri), Ken Ziegler (Iowa).

The meeting began with a welcome from Dr. Bill Wiebold and a little information about the Missouri Variety Testing Program. Then each member present introduced himself and gave a short update on their program and the current weather and crop conditions for their state. A few of the concerns expressed included dry weather, declining entry numbers, limited funding, equipment costs, and pressure from private testing companies.



At 9:30 the group toured the Bradford Research and Extension Center where the conference was hosted. For about an hour the group rode a tour wagon while Tim Reinbott, the superintendent, described several different research projects conducted there. The research center boasts 360 acres of actual plots, represented by 34 research scientists covering all of the major grain and forage crops as well as several alternative crops.

After a short break, the agenda took a more serious tone and discussion began on the several topics listed. Howard Mason led the discussion on "Criteria used for Discarding Variety Trial Data". He talked about the timing of the decision whether to discard and how that may affect objectivity towards the data. Also whether to drop reps affected by microclimate and confidence in data reported was discussed. Several comments from the audience about spatial analysis, nearest neighbor, and other choices for statistical analysis indicated that many researchers have struggled with the best method for determining quality of data. The general consensus of the group was that if the data is questionably variable, don't use it - we are measuring genetic potential.

The moderator for the "Contract Work to Support Variety Testing" discussion was Eddie Adams. Eddie discussed definitions of contract work and variety trial work. He stated that variety trial work always has precedence over any contract work. The discussion started with some questions about how to start doing contract work. Several participants had good suggestions for those who have not already done some type of contract work in the past. The states that had not done any contract work were trying to decide if it would fit their particular program. One concern voiced was not to let contract work become more important than variety testing. However, the general consensus was that contract work could provide some additional revenue that would benefit variety testing programs.

Bruce Burdick led the discussion on "Private Testing". Bruce got the discussion going by talking about why seed companies would turn to private testing for performance data. Some of the reasons included cost, timeliness of data and region specific data. Bruce has worked in the agriculture chemical industry most of his career and provided some great insight into the advantages of using state yield trial information versus using private testing data. The main reasons were reliability and being non-biased. The discussion also involved some interaction about the effect private testing companies are having on state variety testing programs.

Travis Fritts discussed "If State Variety Trials should Mimic State Cultural Practices". This topic began with a discussion of the importance of mimicking state cultural practices. Some states thought it was important while others were not so sure. With further discussion, some cultural practices such as tillage and row spacing were debated. Should a no-till test be offered if a large portion of the state is no-till? Should variety trial row spacing reflect the state row width average? These were some of the questions discussed. The answers to the questions were not as easy to come up with. Some states thought that as long as there was no interaction between the cultural practice and yield then it did not matter. While others thought that it was important to provide the same conditions for a variety trial as what producers would face. Another issue was public relations. It would most likely be better promotion for the variety testing program if their practices mimicked the state practices. However, when money is tight, it may not be feasible.

Travis Fritts also discussed "Effects of Declining Entry Numbers on Trials". The discussion started out with some obvious concerns. Some of these concerns were reduced revenue, staffing concerns and equipment replacement. One of the ideas brought up for discussion was merging trials. With declining entry numbers for standard trials, was anyone going to merge glyphosate and non-glyphosate trials? No state showed an interest in this idea. The general consensus was if a trial did not have an adequate number of entries then the entries would be returned before any type of trial merging would occur. This discussion spurred another sub discussion about adding hybrids or varieties into a trial at no cost to fill out a trial design requirement (fillers). Most states did not have a problem with this procedure if the data was not published. Continuing on with the discussion, most states were using a lattice design, which requires fillers for a complete design size. However, some were using a RCBD which the filler issue would not be applicable. The idea of using spatial analysis was also brought up. Some states were

doing some type of spatial analysis. To end this discussion, some thoughts about how to increase entry numbers were discussed. Most states thought public relations was the answer. Getting information out to the public about the individual programs was important. This information could be provided many different ways such as field day meetings or program brochures.

"Implementing GPS for Variety Trials" was discussed by Delbert Knerr and Richard Hasty. The discussion started with an overview of how the University of Missouri Variety Testing program is utilizing GPS technology. Delbert discussed the history of how planting a variety trial under a pivot irrigation system has changed with technology. In short, utilizing new technology has made missing pivot tracks much easier than in the past. Richard then led the discussion by opening the GPS software and loading a map. He used the MapInfo Professional program to demonstrate how to setup a trial under a pivot. He demonstrated that you could collect coordinates and produce a layer to build the pivot system on. The pivot system would be a combination of circles depending on how many sections were in the irrigation system. Then this layer could be set over the map with the defined trial location and used to sort seed packets. With the combination of these two pieces of information you would know where the pivot track would cross the trial and also which plots would be effected. Then you could place fillers in the appropriate plots. With this system no actual variety trial plots are damaged by the irrigator track. After this discussion, some questions were brought up about how you know what plots will be damaged and so forth. Another question was asked, "Does Missouri do any remote sensing"? The answer was, "not at this time, but we have the capability and may start soon".

Kelly Day from Purdue University gave a short explanation of how his variety testing program uses bar codes. He brought all of the equipment necessary and gave a demonstration of the usefulness of the system. Kelly thinks bar coding has greatly improved the efficiency of his program.

At about 3:00, the group assembled outside for presentations from three research equipment manufacturers on new planters and combines available from each company.

Ed Spexarth and Adam Krueger from Seed Research Equipment; Fritz Hoeckner, Shawn Soyer, and Douglas Blank from Wintersteiger/Hege, and Roger Handsaker and Patrick Clem from ALMACO all went over the latest offerings from their respective companies and answered questions from the audience. Supper was sponsored by the three equipment companies present.



On Wednesday, the group assembled at Sanborn Field on the University of Missouri Campus at 9:00 for a tour and discussion led by Randy Miles, director and Steve Troesser, research specialist. The field has much history dating back to 1888 when Dr. J.W. Sanborn began researching the benefits of crop rotation and manure application in grain crop production. The antibiotic aureomycin was isolated from a soil sample taken from plot 23 at Sanborn Field in 1948.

At 10:30, the group was transported to the Anheuser Busch Natural Resources Building for our final business meeting. Penn State agreed to host the NCCEC meeting next year on August 12 and 13 at State College, PN. Topics for discussion for next year included electronic hardware and software available for data collection and analysis, statistical analysis packages, and uniformity of entry forms. It was suggested that we all bring examples of our current entry forms to the meeting. There was some discussion about combining our meeting with SRIEG which is the southern states variety testing group. Either group would be open to visits from members of the other. Some members expressed interest in going to SRIEG in February 2003.

The meeting was adjourned at 11:30 and participants were transported back to their motel for departure.

Submitted by Travis Fritts