

NCERA-213 Annual Meeting  
October 3, 2013  
Hampton Inn Convention Center, Scottsbluff, Nebraska

## Meeting Minutes

### Officers:

Jeff Bradshaw – University of Nebraska—Lincoln  
Marcos Algara-Siller-Universidad Autonoma de San Luis Potosi  
Rob Meagher-USDA/ARS-rob.meagher@ars.usda.gov [not present]

### Attendance:

Jeff Bradshaw- University of Nebraska-Lincoln-jbradshaw2@unl.edu  
Marcos Algara-Siller-Universidad Autonoma de San Luis Potosi -marcos.algara@uaslp.mx  
Andy Michel-The Ohio State University-michael.70@osu.edu  
Bill Ravlin-The Ohio State University-ravlin.1@osu.edu  
Shelby Fleisher-Penn State-sjf4@psu.edu  
María del Carmen Caledrón- CCA-UNAM-mclce@atmosfera.unam.mx  
Gary Hein- University of Nebraska—Lincoln-ghein@unl.edu  
Greg Kruger- University of Nebraska—Lincoln, Westcentral Research and Extension Center-  
gkruger2@unl.edu  
Cristóbal Aldama—Aguilera- Universidad Autonoma de San Luis Potosi-  
cristobal.aldama@uaslp.mx  
Forrest Nutter- Iowa State University-fwn@iastate.edu  
Elwynn Taylor- Iowa State University-setaylor@iastate.edu

Welcome remarks: Jeff made some remarks about the logistics and details of the day's agenda.

### Administrator's report (Bill Ravlin)

Remarks were made regarding capacity funds for institutions and the continued movement of these funds to competitive funds. Bill noted that these project funds are competitive and that the funding awards are highly variable; therefore, they are not adequate for long-term projects. The “sequestration” event reduced funding levels further, thus there is much more competition for far fewer dollars. Bill posed the question in regards to funding levels at land-grant institutions: How close are we to our full potential? Bill shared a rough economic analysis and suggested that [Land Grants] should diversify sources of funding as much as possible! He notes that this later point could be a very important role for NCERA-213. He suggests looking at programs and priorities from Federal Government to find a role for NCERA and noted that Sonny Ramaswami (director of NIFA) is keen on impacts.

Andy asked about conflict of interest issues regarding private industry support. There was some discussion about this and some agreement around remaining mission focused (i.e., what is the mission of your university) as central to conflict of interest issues.

Bill ended the discussion with the value of showing impacts for workgroups. Could restate as, “What would not have occurred had we not been sitting at the table?” Need to share success stories (e.g., soybean rust, etc.) – and we need the appropriate story-tellers. Need to answer “So What?” and “Who Cares?” Scientific impacts (which largely defines our group’s impacts) are more internal and that is fine, they are no less important! Moving forward, we have some discussion about developing a key objective for NCERA-213 to develop a series of symposia for the next three ESA (perhaps other societies?) meetings. These will accomplish 1) recruitment for NCERA-213 and 2) increase opportunities for developing good ideas for collaboration

#### Keynote speaker

Dr. Greg Kruger was invited as our keynote speaker To discuss his work using wind tunnels and their use in pesticide drift research. He discussed how he uses the tool to evaluate pesticide efficacy and the processes (e.g., wind speed, boom height, distance from vegetation, particle size) that influence efficacy. His wind tunnels are designed to measure the size by drift interactions of pesticide droplets and to date has focused mostly on the engineering side of the work. He is gearing up to begin some biological work now. He also has a protocol for field validation of this work, including biological validation. Greg also provided a detailed, walk-through with specific hand-held examples of nozzles.

#### Reports

Forrest Nutter gave us an update on his work with a Plum Pox Virus case analysis between Ontario and Pennsylvania with a comparative analysis of disease risk of plum pox between the two locations.

Maria Caledron shared information on developing models to determine pollen sources and their impact on human allergies. She is also looking at pollution particles that adhere to pollen particles. The question she is asking is if the pollen or the adherent pollution particles that are the source of human allergy? Has a rough model for plant pollen species to develop numerous forecast platforms: paper, web, mobile, social network

Forrest Nutter presented information on identifying plant stress remotely to identify the cause of plant stress. He had students measure canopy reflectance without them knowing where the source of inoculum was in a peanut field. The results of this work suggested that you can use reflectance to determine a point source. He is building models for disease epidemiology. Forrest posed a question to the workgroup concerning a project for the committee to develop an instruction module for disease deposition models? He concluded his presentation with a conclusion that aerial foci detection can be used to determine foci locations for field biosecurity risk.

Gary Hein was invited to the meeting to detail his recent work concerning wheat curl mite and virus complexes in wheat. He discussed the interactions between three viruses of wheat. He talked about gradients and movement of wheat curl mites. There was discussion of seasonality of wheat curl mites and trap cone procedures.

Rod Nagoshi, Rob Meagher, and Shelby Fleischer (presenter). Shelby reported on Rod Nagoshi's work. Rod is looking at the movement of fall armyworm haplotypes. Shelby reported on Rob Meagher's work to modify the landscape by using ground covers to influence the FAW populations that might move out of those areas. Rob is looking at sunn hemp, sorghum sudan, and cowpeas and they are also measuring pollinators.

Shelby Fleischer is working on bees and bee stress. He discussed his SCRI project concerning Integrated Crop Pollination. He discussed that the pollinator project came on after the FAW migration study and he is dove-tailing this project into the FAW study. They identified a proper sampling tool for sampling the full complex of bees. He has started to work to try to estimate the number of native bee colonies via genotype analysis and is interested in how do bees contribute to alternative crop seed production.

Andy Michel presented an update on his work that is looking at virulence/avirulence in soybean aphids and exploring the use of an IRM strategy for managing for virulence in soybean aphids.

Maria Calderon presented her work on coffee rust and an Integrated Aerobiology Modeling System (IAMS). They have set out a very large network of various traps and environmental measurement tools throughout Mexico to detect and forecast coffee rust. They have compared atmospheric models to evaluate the best model for their data

Marcos Algara-Siller presented his research concerning the detection and modeling of airborne biological agents of agricultural and public health concern in San Luis Potosi. They are setting up "super stations" with numerous instruments onto a single platform at a number of locations to monitor for climate change impacts. Their granting efforts are just now starting to pay off. Marcos credits NCERA-213 to the collaboration was initiated and sustained aerobiological efforts.

Break

A motion was made to move Rob Meagher to President and to have Marcos retains VP and to nominate Maria to International Liason and Greg Kruger nominated to Sec/treasurer. Shelby second. Pass.

Prior to the end of the meeting, there was discussion concerning the 5-year rewrite for NCERA-213. Jeff Bradshaw expressed some apprehension for carrying the group forward. However, a majority of the members present were supportive of a continued effort for the group to continue and to make a special effort to improve enrollment. After some discussion, Bill resolved a focus for NCERA-213 on human health, food, and the environment – through an understanding of aerobiology. Forrest Nutter suggested an objective that would expand our breadth to agro-transmitted human pathogens. Forrest also suggested a special topics paper that be developed as an output from the workgroup. This could be proposed to APS. There was continued discussion of developing a series of ESA symposia targeting the next three years focused on topics related to this group. The group was adjourned.