

Grain Quality Newsletter

News and Highlights from NC-213: Marketing and Delivery of Quality Grains and BioProducts Coproducts.

Volume 36:1

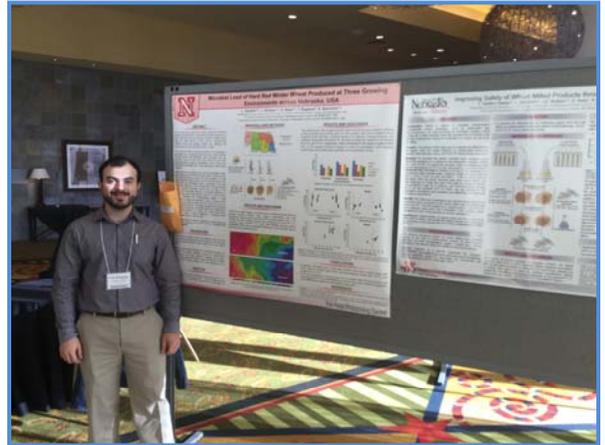
NC-213 The U.S. Quality Grains Research Consortium

NC-213 Annual Meeting 2016 – March 1-2, 2016. Annual Meeting in Review.

The NC-213 Annual Meeting – 2016 was March 1-2 – at the Austin Convention Center, 500 East Cesar Chavez Street, Austin Texas. We joined the Grain and Elevator Processing Society (GEAPS) for a joint Banquet and the banquet included the presentation of the 2016 Andersons Cereals and Oilseeds Award of Excellence to Mr. Joe Needham, The Andersons, Inc., and the 2016 Andersons Cereals and Oilseeds Early-in-Career Award of Excellence to Gretchen Mosher, Iowa State University (see accompanying photograph).

There were 18 Technical Sessions, representing seven land grant institutions, one USDA Agency and one Industry partner. We also had our annual Industry Panel Discussion. We are offered our second year of our “Posting Showing” opportunity and our Graduate Student People’s Choice Award. There was a wide variety of posters and this year’s recipient was Luis E. Sabillón Galeas, University of Nebraska, and the title of his poster; “Microbial Load of Hard Red Winter Wheat Produced at Three Growing Environments across Nebraska, USA”. (See accompanying photograph.)

During the meeting, Dr. Steven A. Slack, Administrative Advisor/Coordinator, introduced Dr. David A. Benfield as the incoming Administrative Advisor/Coordinator (see accompanying article).



The Grain Quality Newsletter is published and distributed at no charge to NC-213 (formerly NC-151) participants and supporters of research on “Marketing and Delivery of Quality Grains and BioProcess Coproducts.”

Send your contributions, comments, suggestions, and subscription requests to:

Bill Koshar
Grain Quality Newsletter
The Ohio State University
OARDC
1680 Madison Avenue
Wooster, OH 44691-4096
e-mail: koshar.3@osu.edu

Awarded Grant Announcement.

Iowa State University and Purdue University have been awarded a **Department of Labor Susan Harwood Targeted Topic Grant “Training on Prevention of Grain Dust Explosions”**. Total funding was \$140,000 for training to be completed from October 1, 2015 through September 30, 2016. From Iowa State University, investigators are Gretchen Mosher (PI) and Dirk Maier (Co-PI); from Purdue University, investigators are Kingsly Ambrose (Co-PI) and Klein Ileleji (Co-PI). The team will focus on training grain elevator employees in the upper Midwest on strategies for preventing grain dust explosions in grain handling environments.

For more details, please contact Gretchen A. Mosher, Ph.D., Assistant Professor, Agricultural & Biosystems Engineering, Iowa State University. E-mail: gamosher@iastate.edu.

The Andersons Research Grant Program – Regular Competition 2015 – Winner Announced!

In June 2015, the NC-213 Administrative Advisor's Office released the Request for Proposals (RFP) for The Andersons Research Grant Program – Regular Competition 2015. Eight proposals were submitted and reviewed for possible funding. The review committee reviewed, offered comments, and scored all of the proposals and one was selected to be funded for a two year period. The proposal selected for funding was submitted by Carol Jones, Ph.D., Oklahoma State University and titled; "Evaluating Sealing Quality of Grain Storage Bins Combined with Appropriate Phosphine Application Strategy to Minimize Insect Resistance in U.S." and includes the Team of (in order on proposal):

Mark Casada, USDA-ARS, CGAHR, Manhattan, Kansas
Rumela Bhadra, Kansas State University
Frank Arthur, USDA-ARS, CGAHR, Manhattan, Kansas
Ronaldo Maghirang, Kansas State University
Brian Adam, Oklahoma State University
Dirk Maier, Iowa State University
Samuel Cook, Kansas State University



Carol Jones, Ph.D. Photo Courtesy of: Carol Jones, Ph.D.

Please offer your congratulations to Dr. Jones and to her Team.

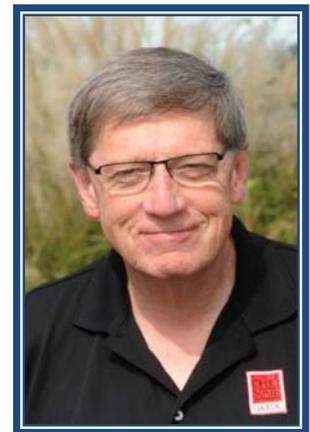
NC-213 Administrative Advisor/Coordinator – Changing of The Guard

Dr. David A. Benfield, The Ohio State University, will take over as NC-213 Administrative Advisor/Coordinator. Steven A.



Slack, The Ohio State University, has held this role since July 2014. In his role of Administrative Advisor/Coordinator, Steven has overseen all of the functions and opportunities of NC-213. He has guided NC-213 along during this period by overseeing the grant programs, the Mid-Term Review, and making it possible for NC-213 researchers and economists the opportunity to meet to discuss funding opportunities. Steven has also overseen the Executive Committee and Industry Advisory Committee in their missions. He has overseen the Quarterly Newsletters, NC-213

website and the NC-213 one pagers, three mechanisms that are used to share NC-213 knowledge and research with industry and learning institutions. Dr. David A. Benfield, The Ohio State University, will assume the role of Administrative Advisor/Coordinator. He is anxious to get acquainted with NC-213 researchers and to work with the group to continue research in the areas of cereals and oilseeds.



Join us as we bid; "farewell and good luck" to Steven and join us in welcoming David Benfield!

Latest News

Grain C.A.R.T. Training-The Ohio State University's Wooster Campus

On Tuesday, November 24, a Grain C.A.R.T. training program was offered on the campus of The Ohio State University's



The Grace Drake Learning Lab in Wooster, Ohio. The training was conducted by OSU's Agricultural Safety and Health Program, within the College of Food, Agricultural and Environmental Sciences. The grain-handling simulator was built by OSU students and travels the State teaching farm communities and rural fire departments about flowing grain hazards. Class

participants had an opportunity to see the trailer and participate in the safety program. The topics presented by instructors Dr. Dee Jepsen, Associate Professor with Ag Systems Management and Mr. Kent McGuire, CFAES Safety & Health Program Coordinator, included: How entrapment and engulfment incidents occur in the grain industry; how to avoid entanglements, falls, and electrocution at grain facilities; and, what to do in an emergency before trained help arrives.



(Photos courtesy of Bill Koshar, NC-213 Administrative Support)

For immediate release

Contact: Sara Delheimer

sara.delheimer@colostate.edu

970-491-6564

New Public Website Launched to Share Multistate Research Impacts and Impact Writing Resources

A new public website about multistate research impacts went live this past weekend. The "Multistate Research Impacts" website (multistateresearchimpacts.org) presents a comprehensive, but concise picture of the impact of the Multistate Research Program and the importance of impact writing. The website offers public audiences a streamlined, "one-stop-shopping" option for information about federally-funded Multistate Research Projects and the Impact Statements written about those projects. While optimized for searching for, viewing, and downloading Impact Statements, the website also showcases press releases, feature articles, and other media about Multistate Research Projects and their impacts. Through the website, interested parties can find details about in-person and video conference Impact Writing Trainings as well as other impact writing, research reporting, and science communication resources. The website is mobile-ready for on-the-go viewers. Using Google Analytics, website clicks and time spent on each page will be tracked—important information that will help the team continue to create engaging and informative media about multistate research impacts. (Reprinted with permission from the author.)

In remembrance of

A personal note from Lowell Hill;

“Dear Friends, because many of you spent time with Betty at some of our Regional committee meetings, I wanted to let you know that her struggle with Parkinson’s ended peacefully at home Tuesday, February 9, 2016. Click here for the [link](#) to her obituary and funeral service held February 18, 2016.” Here is the URL to view details:

http://www.renner-wikoffchapel.com/fh/obituaries/obituary.cfm?o_id=3598411&fh_id=10562

Latest Research from ARS-USDSA

Single Kernel Deoxynivalenol Accumulation in Wheat Cultivars having different Resistance Levels to Fusarium head blight.

Fusarium head blight (FHB) is a destructive disease of wheat and has severely affected the economic outlook of major wheat growing communities in the Northern Great Plains. In this study, we used near-infrared spectroscopy (NIRS) to determine FHB symptoms, single kernel deoxynivalenol (DON) levels, and distribution of DON levels among kernels in wheat cultivars that had different levels of FHB resistance. The percentage of DON-containing spikelets/spike were significantly different among point inoculated spikes of cultivars with different levels of resistance. The percentage of visually Fusarium damaged kernels in point inoculated susceptible cultivars was significantly higher than the resistant cultivar. However, values for spray inoculated spikes were not significantly different among the three cultivars. DON levels in spikelets below the inoculated spikelet in point inoculated spikes showed marked differences among the three cultivars. The susceptible cultivar had the highest DON accumulation in kernels. This NIRS method may be used to evaluate wheat cultivars for FHB resistance components such as resistance to pathogen infection, resistance to pathogen spread, and resistance to toxin accumulation. This information can then be used by breeders to improve their efforts to develop FHB-resistant cultivars. (Floyd Dowell – Floyd.dowell@ars.usda.gov.)

Food Source and Residual efficacy of Chlorfenapyr on sealed and unsealed concrete. J. Stored Prod. Res. 64A: 65-71.

Adult *Tribolium castaneum* (Herbst), the red flour beetle, were exposed at 1 day, and 2, 4, and 6 weeks post-treatment on sealed and unsealed concrete arenas treated with chlorfenapyr at rates of 2.8, 6.9, 13.5, 20.6, 27.5 mg active ingredient/m². Beetles were held either with or without flour, and assessments were done of the percentage of active beetles after 24 hr and after 1 wk, and the percentage of beetles knocked down and dead after 1-wk. Although the percentage of active individuals after 24-hr of exposure increased on sealed and unsealed concrete with increasing post-treatment interval, generally there were less active beetles on the arenas without flour compared to those with flour. At the one week assessments, there were usually more beetles remaining active and more beetles knocked down on arenas with flour compared to those without flour, and more dead beetles on arenas without flour compared to those with flour. Sealing had mixed effects. The presence of the flour food source greatly decreased efficacy of the insecticide, regardless of concentration. (Frank Arthur – Frank.Arthur@ars.usda.gov)

Additional Pictures from our Annual Meeting

