Cargill Grant to Help Kansas State University Develop Feed Safety Research Center

MINNEAPOLIS, Jan. 24, 2013 /PRNewswire/ — Cargill today announced a partnership with Kansas State University (KSU) for the construction of the Cargill Center for Feed Safety Research. The facility, built in part from a $500,000 grant from Cargill, will conduct studies to address current food and feed safety issues facing the animal feed industry.

"At present, there is not a single facility in the United States licensed and approved for feed-related research involving Salmonella, E. coli, and other common, food-related pathogens. We are thankful that Cargill’s contribution helps support the construction of this Kansas State research facility," said Dr. Kirk Schulz, Kansas State University president.

"Animal nutrition research during the past 50-plus years has focused on several key areas, including the establishment of nutritional requirements of animals," said Dr. Gary Pierzynski, interim dean, KSU College of Agriculture. "The growing importance of related factors, such as food safety and control of food-borne pathogens, is increasingly evident. Future animal nutrition and feed processing technologies research must take these factors into consideration to ensure the long-term sustainability of animal agriculture."

Once operational in late 2012, the planned research efforts include feed processing technologies to lower bacterial/viral introduction to animal food livestock operations and the food chain. The facility will be located on the Manhattan, Kansas, KSU campus and housed in the O.H. Kruse Feed Mill and Bio-refinery. It will be in close proximity to the new National Bio and Agro-Defense Facility laboratory, built by the Department of Homeland Security. The laboratory will be capable of conducting food and feed research relating to dangerous and exotic foreign animal diseases. The Cargill Center for Food Safety Research will be a critical link between the research and teaching efforts of these facilities.

"Advancements in food safety are one of the biggest focus areas for the industry at the present time," said Chuck Warta, a vice president at Cargill Animal Nutrition. "Feed and feed ingredients are an increasingly critical part of the safe food system. Helping enable this research is an investment that reaches beyond Cargill. The entire animal feed industry will benefit from the continued development of feed, food, and feed ingredient safety."

About Cargill

Cargill is an international producer and marketer of food, agricultural, financial, and industrial products and services. Founded in 1865, the privately held company employs 131,000 people in 70 countries. Cargill helps customers succeed through collaboration and innovation, and is committed to applying its global knowledge and experience to help meet economic, environmental, and social challenges wherever it business is located. For more information, visit www.cargill.com.

Source: Cargill

The Andersons Research Grant Program: Regular Competition is Announced

A large measure of the success of the NC-151/NC-213 Committee over its 25-year existence is due to the research funds made available on a recurring basis by The Andersons Agricultural Research Fund. This competition also aids in fostering collaboration between researchers, institutions, and industry. Additionally, the goal of the competition is to develop new approaches and technologies to maintain or improve the quality of cereals and oilseeds from harvest to delivery, while preserving the environment and maintaining consumer safety. These approaches and technologies must be developed and implemented if the United States is to remain at the forefront of the world’s major producers. This program is focused on facilitating multidisciplinary, multistate, and multiagency collaborative research to address critical cereal and oilseed research issues.

With this competition, NC-213 follows other grant competitions by offering online submission of proposals. Along with this new approach, reviewers will be able to review proposals online and researchers will be able to submit first year, second year, and supplemental reports online. Complete details can be found in the request for proposals. The Administrative Advisor’s office is anxious to hear your feedback regarding these online processes. Hurry! The deadline is September 1, 2011.
Impact of Different Isolation Procedures on the Functionality of Zein and Kafirin

Authors: T. Schober, S. Bean, M. Tilley, B.M. Smith, B.P. Ioerger

Submitted to: Journal of Cereal Science

Producing high-quality baked products such as bread from corn and sorghum is challenging due to the fact that the native proteins of these grains do not form dough when mixed with water. Previous research has shown that commercially isolated corn proteins will form dough however. Laboratory isolated corn and sorghum proteins, however, did not have the same functionality as the commercial proteins. Understanding modifying the extraction conditions, the lab isolated proteins improved. Likewise, by modifying extraction procedures to enrich isolated proteins with a specific component of corn proteins improved the functionality of these proteins.

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Cracked Hulls Affect Population Development of Rhizopertha dominica in Rough Rice

Authors: N. Kavallieratos, C. Athanassiou, F.H. Arthur, J.E. Throne

Submitted to: Insect Science

Lesser grain borers are serious pests of stored rice throughout the world. Varieties of rice vary in their resistance to insects, and resistance may be related to cracks in the hull of the rice kernel. Lesser grain borers lay their eggs loose in the mass of rice kernels, and young larvae search out and bore into a rice kernel, where they complete development. Thus, kernels with cracked hulls may be selected by females for egg laying or they may be selected by larvae because they may be easier to enter. We showed that more progeny emerged from kernels with cracked hulls when these kernels were mixed in with intact rice kernels, but some progeny did emerge from intact kernels. Thus, using grain handling methods that reduce cracked hulls in rice would be expected to reduce insect damage to rice in storage.

Contact Frank Arthur, telephone 785-776-2796, e-mail: frank.arthur@ars.usda.gov

“Effect of Bacillus thuringiensis Cry3Aa intoxication on the expression of cysteine and serine peptidase transcripts in the midgut of the yellow mealworm, Tenebrio molitor,” and Jim Throne gave the invited talk “Publications and the ARS Evaluation System.” Jeff Lord presented the poster “Comparison of entomopathogenic fungi for hide beetles on various substrates,” Brenda Oppert presented the poster “Microarray analysis reveals adaptive strategies of Tribolium castaneum larvae to compensate for cysteine and serine protease inhibitors,” and Joel Perez-Mendoza presented the poster “Effect of physiological factors on flight initiation of the red flour beetle, Tribolium castaneum (Herbst).”

Frank Arthur presented the talk “Insect growth regulators as an alternative in controlling stored product insects,” and Jim Campbell presented the talks “Biological, habitat and control of Indian meal moths” and “Surveillance and monitoring programs for foreign stored grain pests” at the Nebraska Urban Pest Management Conference in Lincoln, NE.

Frank Arthur presented the talk “Stored product insects and control in structures: Pilot-scale studies” at a departmental seminar at the Department of Entomology, Kansas State University, Manhattan, KS.

Frank Arthur presented the talk “Integrating pest management for stored product insects” at the Industrial Fumigant Co. 2011 Training Conference for Food Industry Pest Management in Overland Park, KS.

Brenda Oppert presented the talk “Developing sorghum flours with increased resistant starch content for health benefits” from the Kansas Grain Sorghum Commission.

Meeting/Conferences:

Scott Bean, Mike Tilley, Jeff Wilson, and Tom Herald attended the Celiac Sprue Research Unit.

Grants:

Jeff Wilson and Scott Bean were awarded $12,864 for their project “Effect of starch content on the functional quality of sorghum” from the Kansas Grain Sorghum Commission.

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