



**Dale Bumpers National Rice Research Center
USDA-ARS
Stuttgart, Arkansas**



DECEMBER 2022

MONTHLY RESEARCH HIGHLIGHTS

For More Information: Dr. Yulin Jia, Acting Research Leader/Center Director
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- **Technology Transfer**
 - ✓ **Interactions with the Research Community**

On Dec. 1, Dr. Anna McClung, recommended and provided seed of seven rice varieties for field testing under organic farming practices in northeastern Ohio.

On Dec. 5, Dr. Anna McClung was interviewed by a Canadian plant breeder on sabbatical on the role of public and private rice breeding efforts in the USA. The goal was to glean lessons that could be beneficial in applying to breeding efforts in Canada for minor crops.

On Dec. 6, Dr. Anna McClung, participated as a board member in the virtual winter meeting of the Carolina Gold Rice Foundation. Discussions included continuing efforts to expand the production and milling capacity of rice in the southeast USA and research efforts on agronomy, salt tolerance and pure seed production to support the industry.

On Dec. 12, Dr. Yulin Jia shared disease reactions of selected rice germplasm to rice blast fungus and ideas of developing an improved disease assay for rice breeders with Dr. Oliveira-Garcia, Assistant Professor of Department of Plant Pathology of Louisiana State University, Baton Rouge, LA.

Dr. Anna McClung was interviewed on Dec. 14th for the Farm Show trade magazine. This publication presents articles on all aspects of crops and has been in circulation for 47 years. Currently, it has 130,000 subscribers in the Midwest and Canada. The topic of the interview was the recent release of Scarlett and USDA-Tiara, pigmented bran rice cultivars.

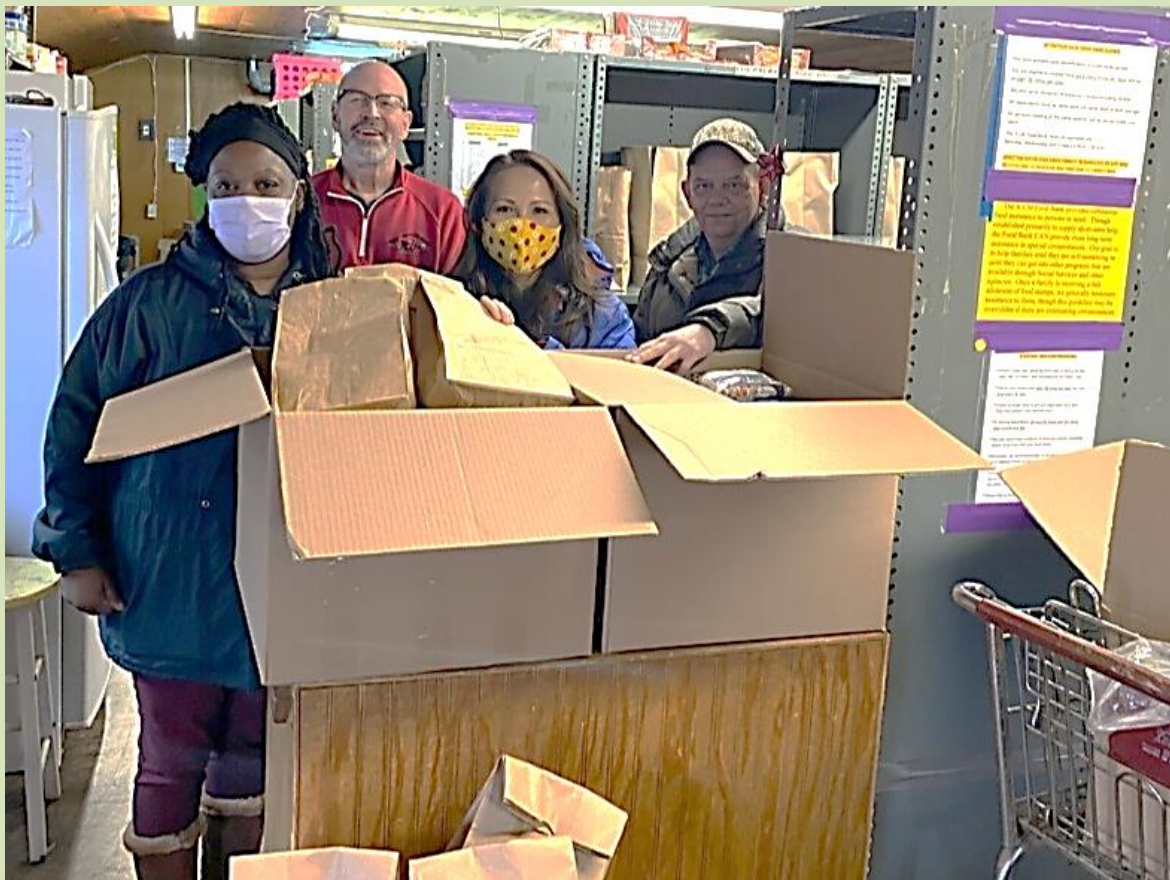
On Dec.16, Dr. Yulin Jia discussed a few research gaps with Dr. Alton Johnson, Director of University of Arkansas Rice Research and Extension Center at DB NRRC.

✓ **Rice Germplasm Distributed**

During the month of December, 216 rice genetic stocks were shipped to researchers in the United States.

● **Education and Outreach**

On Dec. 19th, as part of the annual Holiday activities, DBNRRC employees came together to collect items to create children's goody bags to donate to the ICCM (Inter-Church Community Ministry) Foodbank in Stuttgart. Sixty-two goody bags were distributed - each included a winter hat, pair of gloves and a pair of socks, as well as holiday candies, fruit cups and other snacks. In addition to the goody bags, 60 lbs. of food items were delivered to ICCM collected by staff at DBNRRC.



Dr. Nisha Patwa is the latest addition to Dale Bumpers National Rice Research Center (DBNRRRC), Stuttgart, AR. She is a postdoctoral scientist on an NSF-funded project in Dr. Jai Rohila lab in collaboration with Oklahoma State University, University of Arizona, and University of Pennsylvania.

Nisha has always been intrigued by plants and nature. It is something that fascinated her since high school. After graduating from high school, she decided to continue with science as a major subject because of her curious nature. As a result, she ended up with double bachelor's degrees. One, in Education (with life science major) and second in Botany. Later she decided to go for M.S. in Botany. By nature, Nisha always seeks to learn more in-depth knowledge, thus subsequently she decided to enroll in a Ph.D. program in Biotechnology at Visva-Bharati University, Santiniketan, India. While pursuing her Ph.D. in Santiniketan, a city that produced two Nobel laureates:

Rabindranath Tagore and Dr. Amartya

Sen, the great vibes encouraged her to set goals high in life. During Ph.D. she studied miRNAs in French beans and identified their roles during virus infection. Teaching is another activity where she finds joy and satisfaction because it is a way by which she can dissipate the wealth of knowledge gathered while working on higher degrees. Later, she found opportunities to serve as guest lecturer in three different Universities: University of Calcutta, Burdwan University and West Bengal State University. However, she was enjoying her teaching assignments very much, but her ambitious mind-set was looking for some higher research opportunity.

She was very happy when she got a postdoctoral opportunity at Wheat Quality Research Unit in USDA-ARS, Ohio. At the USDA-ARS, as an ORISE postdoctoral fellow Nisha conducted genetic characterization of pre-harvest sprouting in soft winter wheat, and later she studied transcriptome profiling of the mycangium, a fungal transport organ on the ambrosia beetle. She was also part of the on-going study on plant-microbe-insect interaction at the Application Technology Research Unit of USDA-ARS. She believed that her supervisors Dr. Jolly Basak (Ph.D. supervisor), Dr. Bryan Penning (USDA-ARS) and Dr. Christopher Ranger (USDA-ARS) have a tremendous influence in keeping her motivated and moving forward in science. Now, she is very excited to study abiotic stress tolerance mechanisms in rice at the DBNRRRC.



Raeann Braithwaite was raised in Almyra, Arkansas. Growing up with a close-knit family and grandparents with a small farming operation, she learned early on of the importance of faith, family, and farming. She and her cousins were always happy to help grandpa with driving the tractor or moving the grain cart. Her parents owned a heavy equipment business specializing in irrigation, so many Saturdays were spent on the dragline or bulldozer with her dad, watching the creation of reservoirs and the burying of huge pipes the size of train cars.

Following graduation from DeWitt High School, Raeann attended the University of Arkansas at Little Rock where she received a bachelor's degree in Biology with a minor in Math. After a short stint working with Environmental Services Company in Little Rock, she returned home to work for Hartz Seed in soybeans and cotton research and eventually as a technician with the UA RREC working in Dr. Georgia Eizenga's lab. In 2004, she joined ARS as the Stuttgart location Financial Technician and became the Administrative Officer in 2019. In 2021, she also became the Administrative Officer for the new ARS location in Little Rock.



Raeann is active in her church and community organizations. In her free time, she enjoys traveling with her husband Paul and spending time with family.

See the web version of all DBNRRC research highlights at: <https://www.ars.usda.gov/southeast-area/stuttgart-ar/dale-bumpers-national-rice-research-center/docs/monthly-research-highlights/>