

Rice

U.S. Department of Agriculture Accomplishments Report AD-421 U.S. Dept. of Agriculture, State Agricultural Experiment Stations and Other Institutions			Date (Month, Day, Year) 09/28/2012
1. Accession 0213072	Agency Identification No. 2. SAES 3. LA.B	5. Work Unit/Project No. LAB03887	6. Status Final Report
7. Title Development of Improved Long-Grain and Aromatic Specialty Rice Varieties for the Southern United States			
12. Investigator Name(s) (Last Name and Initials) Sha, X. Y.			
20. Termination Date 09/30/2013		40. Period Covered (mo/da/year): 10/01/2007 TO 09/30/2013	
Outputs: Three new aromatic specialty rice varieties have been developed and released to rice growers in the southern rice growing states during the last five years. Jazzman, officially released in 2008, is the first U.S.-bred jasmine-type, soft-cooking, long-grain rice. Jazzman-2 was developed in 2010, which has much enhanced specialty characteristics over Jazzman. In 2011, a much improved Della-type variety, Della-2, was developed to replace the old varieties Dellrose and Della. Four abstracts were presented in the 34th Rice Technical Working Group bi-annual meeting held in Hot Spring, AR, in Spring 2012. The latest progress on variety development has also been presented to rice growers, extension agents, and industry as a whole throughout 2012.			
Outcomes/Impacts: A total of 1,348 single crosses or backcrosses have been made for the breeding of improved long-grain, specialty, and hybrid rice varieties in the last five years. By integrating the on-going conventional long-grain breeding with the development of adapted A, B, R, and S lines, a hybrid rice breeding program has been ongoing since 2009. Over 640 testcrosses were made for hybrid rice development. About 1,427 transplanted F1s or BC1F1s, 1,192 space-planted F2 populations, and 187,600 progeny rows ranging from F3 to F8 have been selected in field trials. Over 2,000 breeding lines or hybrids of long-grain, medium-grain, and specialty types have been tested in preliminary yield trials. Forty-seven elite experimental lines were advanced to the Uniform Regional Rice Nursery in five southern rice producing states and/or Commercial-Advanced tests at multiple locations across Louisiana. Jazzman consistently showed superior yield potential, outstanding milling yield, and ideal grain and/or cooking quality. Jazzman has shown tolerance to the major diseases sheath blight and blast and also has smooth leaves and sheath and no dormancy. The release of Jazzman and other hybrid rice cultivars should be able to help U.S. rice industry to capture the fast growing, high value specialty rice market, both domestically and internationally. The elite breeding lines created in this project have been and will continuously be adopted as critical germplasm of all rice types for further improvement of U.S. rice.			
Publications: Blanche, S.B., Sha, X.Y., Harrell, D.L., Groth, D.E., Bearb, K.F., White, L.M., and Linscombe, S.D. 2012. Registration of 'Caffey' Rice. Journal of Plant Registrations 6:284-288. Sha, X.Y., Linscombe, S.D., Li, W.K., Oard, J.H., Theunissen, S.J., and Henry, B.J. 2011. Development of improved long-grain and special purpose, and hybrid rice varieties for Louisiana. p. 62-77. In 103rd Annual Research Report. Rice Research Station, La. Agri. Exp. Stn., LSU AgCenter. (Published in 2012). Sha, X.Y., Li, W.K., Linscombe, S.D., Groth, D.E., Oard, J.H., Theunissen, S.J., and Henry, B.J. 2011. Development of hybrid rice for Louisiana. p. 78-79. In 103rd Annual Research Report. Rice Research Station, La. Agri. Exp. Stn., LSU AgCenter. (Published in 2012). Linscombe, S.D., Sha, X.Y., Bearb, K.F., Dilly Jr., R.R., Theunissen, B.W., Theunissen, S.J., Zaunbrecher, R.E., Henry, B.J., and Hoffpauir, H.L. 2011. Genetic improvement of rice for Louisiana production. p. 3-61. In 103rd Annual Research Report. Rice Research Station, La. Agri. Exp. Stn., LSU AgCenter. (Published in 2012). Oard, J.H., Groth, D., Linscombe, S.D., Sha, X., Li, W., Silva, J., Sanabria, Y., Galam, D., and, de Guzman, C. 2011. Rice genetics and germplasm development. p. 80-81. In 103rd Annual Research Report. Rice Research Station, La. Agri. Exp. Stn., LSU AgCenter. (Published in 2012).			
Participants:			

POSTED

Date: 10/1/12
sent via BRUNET/WIRENET
electronic mail systems

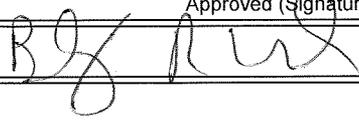
X.Y. Sha (PI), S.D. Linscombe (co-PI), S.J. Theunissen, and B.J. Henry, LSU AgCenter.

Target Audiences:

Target audiences for this project include rice breeders, rice growers, crop consultants, and extension personnel.

Project Modifications:

Nothing significant to report during this reporting period.

Approved (Signature)	Title	Date
		9/28/12