U.S. Department of Agriculture **Work Unit Description AD-416** U.S. Dept. of Agriculture, State Agricultural Experiment Stations and Other Institutions			Date (Month/Day/Year) 11/03/2011
1. Accession No.	Agency Identifiers	5. Work Unit/Project No.	6. Status
	2. NIFA	3. LA.B	LAB94122	A = New Project

7. Title
Genetic Improvement of Rice for Louisiana Production

8. Performing Organization 8190 - 2010 Rice Research Station Agricultural Experiment Sta, Louisiana State Univ	9. Cooperating Departments within State Performing Institution
10. Multistate Project No.	11. Cooperating States

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12. Investigator Name(s) Last Name and Intitials)
1. Linscombe, S.D.

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14. Project Type Hatch	15. Contract/Grant/Agreement No.	16. Amount	17. FY

18. Award Date (Month/Day/Year)	19. Start Date (Month/Day/Year) 01/01/2012	20. Termination Date (Month/Day/Year) 12/31/2016

Goals/Objectives/Expected Outputs

To develop superior conventional and Clearfield varieties for Louisiana and Gulf South production with emphasis on improvements in yield, quality (milling yield, cooking quality, and processing adaptability), disease resistance, seedling vigor, earliness, ratoon potential, lodging resistance, environmental stability, and herbicide and insect tolerance. To develop non-conventional rice varieties incorporating traits such as herbicide resistance, insect resistance, disease resistance, quality characteristics, and other important traits through mutation breeding. To conduct research on agronomy, production, and management of rice as relates to increased economic return from new varieties and breeding lines. To produce additional generations of advancement and selection of rice breeding lines per year and increase seed of promising selections to facilitate the release of new varieties by the use of the Puerto Rico winter nursery.

Methods

Develop new genetic populations in all commercial classes of rice by artificial hybridization and mutagenesis. Advance these populations while selecting for desirable characteristics. Evaluate advanced selections in replicated tests over years and locations to identify superior lines. Increase superior lines through the Rice Research Station Foundation Seed Program. Conduct concurrent studies related to varietal improvement.

23. Non-Technical Summary

The development of new, superior rice varieties can have positive effects on the economic viability of the Louisiana rice industry. This project develops new improved rice varieties for Louisiana and the Gulf South region.

24. Keywords

rice; Oryza sativa; rice breeding; varietal improvement; genetics; mutation breeding; ohst plant resistance; herbicide tolerance

**** The Original signed document is on file at this institution. ****

	Signature	Title	Date
Dept: Admin:	David N. Morrison	Associate Director	11/3/11

U.S. Department of Agriculture **AD-417 Research Work Unit/Project Description - Classification of Research** U.S. Dept. of Agriculture, State Agricultural Experiment Stations and Other Institutions		Date (Month, Day, Year) 11/03/2011

1. Accession No.	Agency Identifiers 2. NIFA 3. LA.B	5. Work Unit/Project No. **LAB94122**	6. Status A New

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Genetic Improvement of Rice for Louisiana Production

25. Basic Research	26. Applied Research 100 %	27. Development Effort		28. Forestry	29. Animal Health

Classification by Knowledge Area, Subject of Investigation, and Field of Science

	Knowledge Area Code (1)	Subject of Investigation Code (2)	Field of Science Code (3)	Percent effort % (4)
30.	204 Plant Product Quality and Utility (Preharvest)	1530 Rice	1080 Genetics (includes breeding)	40
31.	211 Insects, Mites, and Other Arthropods Affecting Plants	1530 Rice	1080 Genetics (includes breeding)	20
32.	212 Pathogens and Nematodes Affecting Plants	1530 Rice	1080 Genetics (includes breeding)	20
33.	213 Weeds Affecting Plants	1530 Rice	1080 Genetics (includes breeding)	20
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35.				
36.				
37.				
38.				
39.				