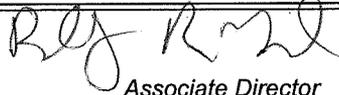


U.S. Department of Agriculture Work Unit Description AD-416 U.S. Dept. of Agriculture, State Agricultural Experiment Stations and Other Institutions				Date (Month/Day/Year) 01/26/2012
1. Accession No.	Agency Identifiers		5. Work Unit/Project No.	6. Status
	2. NIFA	3. LA.B	LAB94137	A = New Project
7. Title Cotton Disease Management in Louisiana				
8. Performing Organization 1941 - 2010 Northeast Research Station Agricultural Experiment Sta, Louisiana State Univ			9. Cooperating Departments within State Performing Institution a. Plant Pathology & Crop Physiol	
10. Multistate Project No.			11. Cooperating States	
12. Investigator Name(s) Last Name and Initials)				sent via BITNET/INTERNET @electronic mail systems Date: 1/27/12
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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				
<p>The goal of this project is to provide individuals associated with cotton production (mainly in Louisiana) with effective disease management strategies to optimize profitability. The objectives are to evaluate/develop management strategies for managing cotton diseases and nematodes in tillage/cropping systems common to Louisiana cotton production; and to monitor Louisiana cotton for new or emerging disease problems.</p>				
Methods				
<p>The project objectives will be met by conducting replicated field experiments located at LSU AgCenter experiment stations and in producer fields. Results will be used to quantify disease progress and document the impact on cotton crop establishment and yield. Strategically located soil samples will be used to characterize nematode population dynamics and distribution. (Laboratory experiments will be conducted if necessary.) Standard experimental design and statistical methods will be used to accomplish these objectives. In some tests, data will be analyzed using geostatistical methods. Management strategies, will be developed and refined using these results and extension service recommendations.</p>				
23. Non-Technical Summary				
<p>Cotton is a major row crop in northeast Louisiana and important to the economic health in this region. In 2010, cotton ranked fifth in the state among field crops and generated \$175,059,251 for the state. Cotton diseases are an annual problem that directly impact production. Based on estimates from the National Cotton Council Cotton Disease Losses Committee, from 2007 to 2010, diseases reduced Louisiana cotton yield and quality by 14 to 17%. The predominant diseases affecting cotton in Louisiana are caused by seedling pathogens and nematodes. The major seedling disease pathogens include <i>Rhizoctonia solani</i>, <i>Pythium</i> spp., <i>Fusarium</i> spp., and <i>Thielaviopsis basicola</i> (limited areas). In Louisiana, <i>Rhizoctonia solani</i>, <i>Pythium</i> spp., and <i>Fusarium</i> spp. are the major seedling disease pathogens. The reniform (<i>Rotylenchulus reniformis</i>) and Southern root-knot nematodes (<i>Meloidogyne incognita</i>) are the predominant nematodes that cause losses in Louisiana cotton. The root-knot nematode is the most damaging pathogen on cotton in the United States. Other diseases that occur less frequently are boll rots and leaf spots. Therefore, to maintain and maximize the profitability of cotton in Louisiana, effective disease management is critical.</p>				
24. Keywords				

Cotton diseases; Seedling disease; Nematodes; Root-knot nematode; Reniform nematode; Cercospora; Alternaria; Boll rot; leaf spots

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

Signature	Title	Date
Dept: Admin:	 Associate Director	1-26-12