

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) 06/19/2012	
1. Accession No.	Agency Identifiers		5. Work Unit/Project No.	6. Status
	2. NIFA	3. LA.B	LAB94150	A = New Project
7. Title Human Dimensions of Nonindigenous Invasive Plants				
8. Performing Organization 1001 - 2010 School of Renewable Natural Resources Agricultural Experiment Sta, Louisiana State Univ			9. Cooperating Departments within State Performing Institution Sent via BITNET/INTERNET Electronic mail systems	
10. Multistate Project No.			11. Cooperating States Date: 7/3/12	
12. Investigator Name(s) Last Name and Initials) 1. Dozier, H.				
13. Project Contact Last Name and Initials: Dozier, H.			Phone: 225-578-7219 Fax: 225-578-4227	
E-Mail: hdozier@agcenter.lsu.edu URL:				
14. Project Type McIntire-Stennis	15. Contract/Grant/Agreement No.		16. Amount	17. FY
18. Award Date (Month/Day/Year)	19. Start Date (Month/Day/Year) 09/01/2012		20. Termination Date (Month/Day/Year) 08/31/2016	
Goals/Objectives/Expected Outputs The overall objective is to understand sociological processes that affect efforts to manage invasive populations of nonindigenous plants in natural areas. The research will help elucidate perceptions, attitudes, awareness and concern among various stakeholder groups regarding the issue of invasive, nonindigenous plants in Louisiana's urban, suburban and rural forests areas. It will also elucidate best approaches for outreach regarding this issue. Specific objectives are to: (1) Evaluate stakeholder receptiveness to various educational messages/themes and delivery methods regarding nonindigenous plant invasions; (2) Evaluate potential impact of educational program regarding nonindigenous plant invasions; and (3) Evaluate potential for change in behavior regarding adoption of environmentally sound activities and support for eradication and prevention programs to address nonindigenous plant invasions.				
Methods The approach to all objectives will be to use survey methods to explore stakeholder knowledge, attitudes and perceptions of the issue of nonindigenous plant invasions and to identify best practices for outreach programs. We will use a combination of personal interviews as well as web-based surveys to best reach different respondent groups. Where possible, we will use web-based methods as the least intrusive and costly in terms of time and funds, and most convenient for users. We will conduct personal interviews with visitors to outdoor recreational areas that offer a range of "wild" outdoor experiences (from hiking to a stroll among manicured garden beds) such as the Louisiana State Arboretum, the New Orleans Botanical Gardens, the Jungle Gardens at Avery Island, Jean Lafitte National Historic Park and Preserve and Hodges Gardens State Park. We will survey other stakeholder groups using online questionnaires: (1) conservation professionals employed by various natural resource management agencies (e.g., Louisiana Department of Wildlife and Fisheries, Louisiana Department of Agriculture and Forestry, Louisiana Office of State Parks); (2) plant nursery professionals (growers, retailers, licensed horticulturalists); (3) licensed landscape architects; (4) other green industry workers (e.g., contractors, arborists); (5) university students in natural resource related programs; (6) general public - reached through homeowner associations. In both cases (interviews and surveys), the constructs of interest will include respondent receptiveness to different education themes and delivery methods, awareness and understanding of the issue, potential to adopt environmentally sound activities, and potential to support eradication and prevention programs. Survey sample sizes will depend on populations of the various respondent groups. For example, there are roughly 1,700 active Louisiana Master Gardeners in the state; with a group of this size, only a sub-sample will be surveyed. For smaller groups (<100), such as recruits to the nascent Louisiana Master Naturalist Program, being launched in late 2012, a complete census may be surveyed. Data				



collected with the surveys will be analyzed with psychometric methods. We will employ Rasch analytical methods to assess respondent and instrument reliability and validity and to explore the validity of our item rating scales. Having these measures of instrument validity and reliability assures that the data fit the model (i.e., the questions ask the same thing across respondents). Large misfit for an item or respondent can lead to better understanding of the respondent and the item. This is essential before applying standard statistical analyses (analysis of variance, t-tests, etc.) to the data and confers great diagnostic strength, leading to believability and ease of interpretation of results. We will analyze survey results using appropriate statistical methods, depending on the form the surveys take.

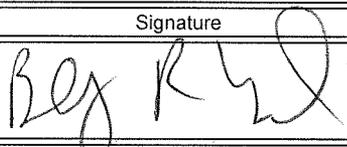
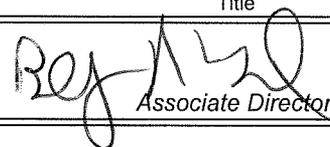
23. Non-Technical Summary

Survey respondents do not always distinguish native from nonindigenous plants and thus may understand the issue of plant invasions poorly, if at all. Respondents may frame their attitudes about this issue based on their personal view of nature as something of intrinsic value or as something that provides services. On the other hand, their attitudes may align with their occupation (i.e., garden center owner or wildlife ecologist), or their views may depend on the proximity of their homes to a natural area. As such, knowledge of the issue and opinions regarding nonindigenous plant introductions and eradication programs can vary among different groups of people. These differences in knowledge and opinion often translate into varying degrees of support or opposition to eradication/prevention programs that target invasive plants. Stakeholders also differ in who they believe should remedy the situation (for those who believe a remedy is needed). These differences have sometime manifested in contentious debate among stakeholders including out and out opposition to management/prevention efforts. At best, they leads to confusion among those less directly involved in the issue. The fact that there are so many sides of this issue (economic, health, environmental, political) and associated perspectives signals a clear need for better identification and understanding of stakeholders, their interests, and for better tailoring of educational programs about nonindigenous plant invasions to those stakeholders. It may be fortunate that Louisiana has seen less discussion and debate of nonindigenous plant invasions than has been seen on the regional and national levels. That is, the argument has not reached the bitter pitch it has elsewhere, despite the historical presence of serious pests such as kudzu and the more recent threat from cogongrass. Since Louisiana has not yet enthusiastically taken up the charge to identify, study or control nonindigenous invasive plants - at least those outside of aquatic systems - and since there have not been the conflicts over this issue seen elsewhere, we have the opportunity to address this issue in a thoughtful, effective manner. By first identifying and describing various stakeholder groups in Louisiana and their attitudes regarding this issue, we can develop a foundation for education and outreach. The expected outcomes of the survey include clear identification of stakeholder groups and their attitudes towards this issue as well as identification of best educational messages to deliver to these groups. The potential impact of developing this basic knowledge could be development of stakeholder-specific education that would promote broader awareness of the issue, and greater environmental awareness and responsibility on the parts of the citizens of the state in regards to nonindigenous plant invasions.

24. Keywords

nonindigenous plants; invasive plants; stakeholder perception stakeholder attitude stakeholder awareness ; Louisiana stakeholder education

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

Signature		Title	Date
Dept:		 Associate Director	6/27/12
Admin:			