

Competitive Research Grant Program

Landowner involvement and attitudes: Fee-access wildlife and fisheries recreation

Investigators: John D. Byrd, Plant and Soil Sciences; Stephen C. Grado, Emily K. Loden, Ian A. Munn, Forestry; W. Daryl Jones, Jeanne C. Jones, Ben C. West, Wildlife and Fisheries

Project Goals:

1. Enhance knowledge of current fee-access fish and wildlife recreation activity of nonindustrial private (NIP) landowners in Mississippi.
2. Increase our knowledge of attitudes of NIP landowners concerning fee-access fish and wildlife recreation and the potential for NIP landowners to engage in this type of business venture if university educators address perceived problems, challenges, and knowledge deficiencies among Mississippi's landowners.
3. Provide Mississippi NIP landowners and citizens with educational programs in fish and wildlife management and fee-access recreation that accomplishes the following:
 - a. enhances their ability to engage in compatible land uses that promote sustainable natural resource use and recreation while producing income for the landowner,
 - b. conserves soil, forests, water, fish, and wildlife resources while reducing the role and necessity for environmental regulatory actions,
 - c. increases fish and wildlife fee-access recreation to diversify income sources for the landowner and strengthen local and statewide economies, and
 - d. retain and improve the quality of life for Mississippi landowners, recreationists, and the public through sustainable natural resource management.

Project Objectives:

1. Determine the type and amount of fee-access fish and wildlife recreation provided by Mississippi NIP landowners, specifically:
 - types of activities (e.g., hunting, fishing, wildlife viewing),
 - species featured, and
 - amenities provided.



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2. Determine property characteristics of fee-access fish and wildlife recreation endeavors in Mississippi, specifically:
 - location,
 - size,
 - composition by land use type (e.g., agriculture, forestry, water), and
 - wildlife/habitat management practices.
3. Determine the business characteristics of fee-access fish and wildlife recreation endeavors in Mississippi:
 - level of landowner involvement
 - passive management - little to no landowner involvement, (e.g., standard hunting lease),
 - moderate management - some habitat management and part-time/seasonal landowner participation, (e.g., dove hunts or occasional guided hunts),
 - intensive management - intensive habitat management, major contribution by landowner in terms of time and effort (e.g., guided hunts and amenities such as room and board)
 - payment methods,
 - number of clientele,
 - revenues and cost,
 - number of employees, and
 - facilities
4. Determine differences between landowners that participate in fee-access recreation and those that do not, with respect to:
 - their demographic characteristics,
 - characteristics of their landholdings,
 - their attitudes/concerns about fee-access hunting, and
 - their knowledge of complementary conservation programs (government and nongovernmental organization (NGO)).
5. Determine factors that influence the amount of revenue landowners receive. For example these would include landowner involvement, payment methods, amenities provided, habitat quality, hunter success, and land-use composition. Such information will serve to identify ways for landowners to maximize their returns from fee-access recreation.
6. Develop a minimum of three workshops or distance learning classes and Web site information through the Mississippi Cooperative Extension Service to assist Mississippi NIP landowners in developing fee-access fish and wildlife recreation businesses on their lands and/or waters. The information developed by this project will also provide valuable insights for targeting other outreach/extension programs.



Synopsis of January 2003 through December 2008 research activities per objective:

Data was collected from NIP landowners owning a minimum of 100 acres in Mississippi. Landowners were identified and randomly selected from the property tax records of 70 Mississippi counties. One hundred acres was chosen as a minimum to target more NIP landowners participating in wildlife enterprises, and eliminate urban and suburban properties within property tax records. Twelve counties were not included in the study because we were unable to obtain landowner addresses. In October 2003, 2000 questionnaires were mailed, following Dillman's procedures (Dillman 1978), to a stratified random sample of Mississippi NIP landowners. Landowners were mailed a reminder postcard one week afterwards, and a second questionnaire four weeks later. The first mailing was October 29, 2003 and the last was November 25, 2003. Analysis of the survey data has been completed and manuscripts presenting the results of this research have been published.

Objectives 1, 2, 3 and 4. The necessary data to address these objectives have been collected, entered into an electronic database, and summary statistics have been computed. A report titled "Wildlife and Fisheries Economic Enterprises in

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Mississippi” has been published as a FWRC Research Bulletin.

Objective 5. Analysis has been completed. Preliminary results were presented at the Annual American Agricultural Economics Meeting in Providence, Rhode Island, July 24-27, 2005. A manuscript reporting our results pertinent to this objective has been published in Forest Science.

Objective 6. This objective identified our proposed outreach activities for the project. Our accomplishments are summarized in the Outreach Section below. In addition, an analysis of landowner need for wildlife management information has been published in the Journal of Agricultural and Applied Economics.

Significant findings/results per objective to date:

Factors that significantly influence lease revenues can be broken down into two broad categories: those under direct control of the landowner and those that are not. Factors under direct control of the landowner include lease type (i.e., seasonal, annual, brokerage, gun permits/hunts), services provided, area dedicated to food plots, and area available to either active or passive flooding. Factors not under the direct control of the landowner include land use/cover type and region within the state - with property closer to Jackson Mississippi than

other metropolitan areas commanding the highest values. Landowner access to information about operating a fee hunting operation had the largest marginal impact on lease revenue of all variables tested. Landowners who indicated that such information was readily available performed considerably better than landowners who indicated that such information was not available. This point suggested that outreach efforts to better publicize this information and its availability should be emphasized.

Factors that influence the probability that a NIP landowner engages in fee hunting include size of ownership, concerns about property damage, liability, and privacy, and if the landowner lived within 20 miles of the property.

Determining appropriate topics and target audiences is essential to design effective educational outreach programs. Based on landowner responses to the mail survey, we determined both the importance and availability of wildlife and forest management information topics to Mississippi landowners. Combining this information clearly identified the appropriate subject matter for outreach programs - topics that were important to landowners and for which information was relatively unavailable. Focusing on these topics, further analysis



showed that importance of wildlife and forest management information relative to its availability depended on the region, land use patterns, and landowner characteristics; thus demonstrating which specific segments of the population should be targeted to maximize program impact.

Applications or broader impacts of significant findings, including economic impacts or projected impacts:

Trends detected in the study thus far suggest that size of land ownership, available information and education on liability, insurance, and information on initiating a wildlife enterprise business play a role in landowner involvement in fee hunting business activity. This information could provide guidance for the development of educational programs through forestry and wildlife extension at land grant universities to assist private landowners in establishing and maintaining fee access businesses. Increased landowner involvement could perhaps diversify income sources for private landowners and increase recreationists' expenditures in rural communities.

Project success relative to original objectives:

The project has been completed and all the original objectives of the study have been met.

Post-docs and graduate students with title of thesis or dissertation, if completed, and estimated graduation date:

Rhyne, J. 2007. Key factors determining per acre market value of hunting leases on Sixteenth Section lands in Mississippi. Thesis, Department of Forestry, Mississippi State University.

Fund Leveraging

US Fish and Wildlife Services

\$56,859