

Competitive Research Grant Program**Attribute-based analysis of Mississippi deer hunters' preferences**

Investigators/Collaborators: Darren Hudson, Agricultural Economics; Ian A. Munn, Anwar Hussain, Forestry; Benjamin C. West, Kevin Hunt, Wildlife and Fisheries

Project Goal:

Advance our understanding of the hunting lease market in Mississippi by identifying combinations of lease attributes that will optimize hunter satisfaction and landowner revenues.

Project Objectives:

1. Analyze deer hunters' preferences over attributes of deer hunting leases; estimate how much a typical hunter is willing to trade more or less of one attribute for an additional unit of another, and determine the preferred combinations of those attributes;
2. Segment the hunting lease market by accounting for preference heterogeneity across deer hunters, and identify factors that differentiate one segment of hunters from another.

Synopsis of research activities per objective:

In 2007, we completed the survey and began analysis of the results. The preliminary results were presented at the Annual Southern Forest Economics Workers Conference in Savannah, GA. A complete detailed analysis of hunter preferences has been completed. Manuscripts have been prepared. The development of outreach and extension products has also been completed.

Significant findings/results per objective to date:

Willingness to pay for hunting leases is more complex than willingness to pay for access to the land. Based on this premise, scientists analyzed factors influencing willingness to pay for hunting leases in Mississippi while taking into account the potential sample selection bias. The modeling approach involved dichotomous choice modeling, choice experiments and contingent ranking. Preliminary results based on bivariate probit estimation of dichotomous choice data suggested that the Mississippi hunting lease market is characterized by sample selection bias issues. The selection component of the model indicated that hunters with following characteristics were more likely to buy hunting leases: annual household incomes in excess of 40 thousands dollars, avidity, no alternative access options to hunt, and the perception that freely available hunting lands were crowded. The regression component of the model, designed to predict willingness to pay for hunting leases, identified three sets of factors to influence hunters' willingness to pay more for site access. These included a) lease rate per acre, b) site's potential for game diversity and ATV accessibility, and c) hunters' annual household income, alternative access options, and state residency.

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

Blaylock, A.C. 2007. Effects of soil region, litter size, and gender on morphometrics of white-tailed deer fawns. Thesis, Department of Wildlife and Fisheries, Mississippi State University.

Dye, M.P. 2007. Effects of body mass, physiographic region, and environmental cues on reproductive timing in deer. Thesis, Department of Wildlife and Fisheries, Mississippi State University.



Paul T. Brown