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7. Title

Economics of Invasive Species: Case of Nutria and Formosan Subterranean Termites in Louisiana

POSTED

12. Investigator Name(s) (Last Name and Initials)

Paudel, K. P.

20. Termination Date 10/31/2012	40. Period Covered (mo/da/year): 11/01/2007 TO 10/31/2012

Outputs:

The results of this project were presented at the annual meetings of agricultural economists and published in a peer reviewed journal. Results were shared with academicians and policy makers.

Outcomes/Impacts:

The project used spectral analysis to identify the most preferred option for Formosan subterranean termite (FST) control as ranked by Louisiana homeowners. Respondents were asked to rank four termite control methods from the most preferred option to the least preferred option. Spectral analysis of complete ranked data indicated that the most preferred FST control choice is a relatively cheap ($0.13/square foot) option of a liquid treatment. Similarly, analysis indicated that liquid and bait treatments are the two most desired control choices. Multinomial logit analysis indicated that survey location, household pre-tax income, and knowledge of FST determined Louisiana homeowners' ranking pattern choices. The existence of preference bloc amoung homeowners is established and determined that survey location, household pre-tax income, and knowledge of FST are important factors in influencing choice.This work also explored to what extent hypothetical bias exists regarding willingness to pay (WTP) for a good given that it is a private good with characteristics of a public good beyond some threshold level. Discrepancies in real and hypothetical measures of WTP were assessed as a function of implicit information available to the respondents. Field-level contingent valuation data was used to explain discrepancies attributable to implicit information available to respondents and the impact of these discrepancies on measures of real and hypothetical WTP. Findings showed that hypothesized termite control threshold effect does indeed exist among homeowners. The threshold distance was found to be approximately 87 miles from the most heavily termite infested area. As respondents' distances increased from the threshold distance, their real WTP decreased but the difference between their real WTP and their hypothetical WTP increased at a greater rate.

Publications:

Paudel, K., Pandit, M. and Dunn, M. 2010. Analysis of Ranked Ordered Data When There Are Complete and Partial Ranking. Abstract Journal of Agricultural and Applied Economics 42:576

Hummel, N., Paudel, K., Roussel, C., Hardy, T. and Spitzer, W. 2010. On Guard for Invasive Species. Louisiana Agriculture 53:8-11.

Paudel, K., Pandit, M. and Dunn, M. 2010. Choice of Invasive Species Control Methods in Louisiana. Louisiana Agriculture 53:24-25.

Participants:

K.P. Paudel (PI), Mike Dunn, Mahesh Pandit, Biswo Poudel, Natalie Hummel, LSU AgCenter.

Target Audiences:

Louisiana homeowners and policy makers.

Project Modifications:

Nothing significant to report during this reporting period.

Approved (Signature)	Title	Date