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Goals/Objectives/Expected Outputs					
<p>The overall objective of this research is to determine the economic viability of Louisiana livestock, poultry, and aquaculture industries, and the impact that technology has on the economic viability of these industries. Specific objectives are to: 1. Determine the costs and returns of Louisiana animal agricultural enterprises; 2. Determine the impacts of alternative technologies, management practices, marketing strategies, and production systems on the economic performance of Louisiana animal agricultural industries; and 3. Determine the impacts of producer goal structure, risk preference, and other factors on animal agricultural farmers' adoption of technology, management practices, marketing strategies, production systems, and risk-reducing strategies and the resultant changes in industry structure. Expected outputs include: 1. Annual publications of projected cost and return estimates for Louisiana livestock and aquaculture enterprises; 2. Presentations at professional meetings of research examining the impact of technology on the economic viability of Louisiana livestock and aquaculture enterprises; and 3. Publications in peer-reviewed outlets of research examining the impact of technology on the economic viability of Louisiana livestock and aquaculture enterprises.</p>					
Methods					
<p>Annual cost and returns estimates will be made for beef, dairy, crawfish, and forage crop enterprises. As production systems for these enterprises change, surveys will be conducted to determine updated production parameters for cost and returns estimates. These surveys will be conducted by personal interview, mail, or internet survey, depending upon the detail of information needed. Dillman's (1991) procedures for collecting mail survey data will be used. Acceptable numbers of responses will depend upon industry size and diversity of production systems used within the industry. All surveys, both mail and personal interview, will be approved by the LSU AgCenter Internal Review Board for Human Subjects before being administered. Key Louisiana State University AgCenter personnel will be consulted annually for information on production parameters used by producers. Annual surveys of agricultural businesses will be conducted to determine prices of outputs and inputs to be included in the cost and returns estimates. Determination of the impacts of technology, management practices, marketing strategies, and production systems on farm economic performance will be conducted in several different ways. In cases where the project is experimental in nature with cooperation from research station scientists, detailed production data from the</p>					



experiment will be collected. Cost and return estimates will be developed for each of the treatments. These estimates will then be compared using appropriate statistical procedures to determine the strategy that leads to lowest cost and/or greatest profit. In cases where survey data are used to determine the impacts of technology on economic performance, limited dependent variable models will be used to determine the impacts of farm characteristics, socioeconomic characteristics, risk preference, region, and other factors on the adoption of technology in U.S. livestock and aquaculture industries. Specific methods for determining technological impacts will include two-stage estimation, where a probit model is run for the technology in the first stage to determine the most likely adopter of the technology, and a linear regression model used in the second stage to determine the impact of the technology and other factors on economic indicators. Methods to correct for endogeneity bias will be used when needed. Models that correct for selection bias will be used when needed. Estimation of stochastic production frontier models will be conducted to determine types of firms that are the most technically and/or scale efficient.

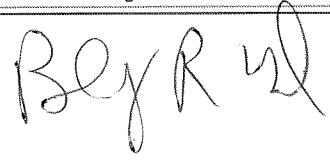
23. Non-Technical Summary

Animal agricultural enterprises are important to the Louisiana economy. In 2011, Louisiana Summary estimates show that, of the \$6.08 billion in gross value from farming in Louisiana, \$1.69 billion was from livestock and poultry enterprises and an additional \$264.1 million was from aquaculture farms, for a total of \$1.93 billion from all animal agricultural enterprises. Not only did animal agricultural industries produce significant gross farm value, but large numbers of producers were involved in animal agriculture in Louisiana. There were estimated to be 20,729 horse owners, 11,015 cattle producers, 1,260 crawfish farmers, 677 goat farmers, 523 egg producers, 482 broiler producers, 330 sheep producers, and 140 dairy farmers. Producers in these industries are continually faced with economic questions that need answers based upon sound economic research. The most common of these questions is how much additional or reduced profit will be made if a specific technology, management practice, production system, or marketing option is used. Analyses will be conducted to determine the impact of changes in these strategies on farm profitability. Annual cost and return estimates will be made for major Louisiana livestock and aquaculture enterprises and published online. Results of analyses of the impact of technology, management practice, production system, and marketing options will be published in articles that will be accessible by the public. Producers will benefit as they are faced with decisions as to whether to enter into a new animal agricultural enterprise or alter their strategy for an existing enterprise by adopting technology.

24. Keywords

Livestock; Beef; Aquaculture; Dairy; Economics; Profit; Cost; Returns; Louisiana;

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

Signature	Title	Date
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