

Dean Lee

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1. Accession 0220852	Agency Identification No. 2. NIFA 3. LA.B	5. Work Unit/Project No. LAB94016	6. Status Final Report
7. Title Genetic Considerations for Beef Cattle Production in Challenging Environments			sent via BITNET/INTERNET electronic mail systems
12. Investigator Name(s) (Last Name and Initials) DeRouen, S. M.; Wyatt, W. E.; Garcia, M. D.			Date: 6/11/12
20. Termination Date 09/30/2014 6/30/12		40. Period Covered (mo/da/year): 10/01/2009 TO 09/30/2014	
Outputs: An AFRI proposal was submitted in 2009 in cooperation with Texas A&M University, University of Arkansas and Mississippi State University for research associated with Bovine Respiratory Disease. A proposal was submitted by Louisiana participants to the Louisiana Beef Industry Council in 2010 for partial funding of research for this project. An AFRI proposal was submitted in 2010 by Louisiana participants in cooperation with Mississippi State University for research associated with the development of a beef cattle genomic database. Presentations were delivered by Louisiana participants of the project on results at the Dean Lee Research & Extension Center's Annual Field Day in 2010. Another AFRI proposal was submitted in 2011 by Louisiana participants in cooperation with Mississippi State University and Texas A&M University for research associated with the development of a beef cattle genomic database addressing a small objective. Final results from the multi-state project (S-1013) related to internal parasitism and hair coat characteristics were presented at the Iberia Research Station's Annual Field Day in 2011. Preliminary results of production trait associations with cattle hair luster and hair length scores were presented at the Dean Lee Research & Extension Center's Annual Field Day in 2011.			
Outcomes/Impacts: A total of 372 calves from the Hill Farm and Iberia Research Stations were evaluated in 2009 to access genetic variation for Bovine Respiratory Disease (BRD) Complex. All calves were vaccinated with either a killed or a modified-live vaccine at weaning. Phenotypic measurements, including body weights, rectal temperatures, subjective evaluations for attitude, gut fill, nasal discharges and ocular discharges, showed genetic variation for BRD Complex and possible response differences by vaccine type. Evaluation of hair length, hair luster and respiration rate were collected at weaning on 28 replacement heifers at the Hill Farm Research Station in 2009. Both male (n=82) and female (n=84) calves were similarly measured at weaning for respiration rate and scored for hair length and luster at the Iberia Research Station in 2009. A total of 909 females (replacement heifers and cows) and 705 calves from Central, Dean Lee and Iberia Research Stations were evaluated in 2010. A total of 1,000 females and 760 calves from these same research stations were evaluated in 2011 for traits evaluating reproductive and maternal performances of heifers and cows. Ear notches per calf with production data were collected in 2010 and 2011 for DNA analyses and discovery and characterization of molecular markers. Evaluations of hair length and hair luster were collected in the spring of 2010 and 2011 just prior to breeding on replacement heifers and cows in the fall at weaning. Results indicate some important associations between hair length and hair luster with cow-calf production, particularly with calf weaning weight. Ultimately, findings from this study will result in the identification of cattle that are more adaptive and productive to the southern region of the United States.			
Publications: Thomas, M. L., A. H. Brown, Z. B. Johnson, S. W. Coleman, M. A. Elzo, S. M. DeRouen, D. E. Franke, W. E. Wyatt, R. C. Vann, G. R. Hansen, and D. G. Riley. 2012. Breed group effects for chute exit velocity as an indicator trait for temperament in weaner cattle. J. Anim. Sci. Vol. 90, E-Suppl. 1: 10 (Abstr).			
Participants: Louisiana's participants in this project are: S.M. DeRouen (PI), M.D. Garcia, W.E. Wyatt, LSU AgCenter.			
Target Audiences: Beef Cattle Producers and Consultants, Veterinarians, and Animal Science/Veterinary students.			
Project Modifications:			

Nothing significant to report during this reporting period.

Approved (Signature)	Title	Date
		