
State Funded Research Projects

**RESEARCH ANNUAL REPORT
STATE FUNDED RESEARCH PROJECTS**

PROJECT	RESEARCH AREA	RESEARCHER/INSTITUTION	DURATION/STATUS	TOTAL GRANT COOPERATORS
ARKANSAS				
Near-Infrared Spectroscopy to Predict Beef Tenderness of Several Muscles	Product Enhancement	J. Apple, Ph.D. University of Arkansas	Completed	\$86,299
Reduction of <i>E. coli</i> O157:H7 in Drinking Water of Beef Cattle	Beef Safety	J. Appel, Ph.D. University of Arkansas	Completed	\$114,200
Enhancing Lower-Valued Beef Cuts	Product Enhancement	F.W. Pohlman, Ph.D. University of Arkansas	Ongoing	\$122,125
Value-added Effects on Dark-Cutting Beef	Product Enhancement	J. Apple, Ph.D. University of Arkansas	Ongoing	\$56,600.00
Factors Influencing Vacuum-Packaged Beef	Product Enhancement	J. Apple, Ph.D. University of Arkansas	Ongoing	\$63,275.00
Enhancing Conjugated Linoleic Acid in Beef to Improve Healthfulness	Product Enhancement	F.W. Pohlman, Ph.D. University of Arkansas	Completed	\$122,950
FLORIDA				
Feeding Optaflexx 45 to Cull Cows II	Product Enhancement	J. Carter, Ph.D. University of Florida	Ongoing	\$12, 252
IDAHO				
Metabolism of Vaccenic Acid in Women: Impact on Fatty Acids in Circulation	Nutrition	M. McGuire, Ph.D. University of Idaho	Completed	\$35,663
Effect of Sire Progeny Difference for Percent Intramuscular Fat and Dam Parity on Intramuscular Fat Deposition of Offspring over Time	Product Enhancement	R. Hill, Ph.D., T.K. Skow, M.S. University of Idaho	Ongoing	\$37,941
Optimizing Meat Quality and Production Efficiency: Simultaneously Targeting Quality and Reducing Cost of Production	Product Enhancement	J. Ahola, Ph.D. University of Idaho	Ongoing	\$73,940
Novel Factors for Vaccine Development that Affect <i>E. coli</i> O157:H7 Attachment to the Bovine Intestinal Tract	Beef Safety	C. Hovde-Bohach, Ph.D., S.A. Minnich, Ph.D. University of Idaho	Ongoing	\$70,480
Biopreservation of Hot Dogs by Surface Application of Freeze-Dried Bacteriocin Preparations	Beef Safety	G.U. Yuksel, Ph.D. University of Idaho	Ongoing	\$38,175
Improving the Quality and Value of Dairy Market Cow Carcasses	Product Enhancement	J. Ahola, Ph.D. University of Idaho	Ongoing	\$24,566
KANSAS				
Decontamination of Injection Brine and Food Contact Surfaces for Non-Intact Beef during the Marination Process	Beef Safety	J.L. Marsden, Ph.D. Kansas State University	Completed	\$72,600
Development and Validation of Food Grade Sanitizer Processes to Address Beef Carcass Evisceration Defects	Beef Safety	J.L. Marsden, Ph.D. Kansas State University	Completed	\$69,600
Controlled Phase Carbon Dioxide as an Antimicrobial Treatment to Reduce Pathogens on Beef Trimings	Beef Safety	J.L. Marsden, Ph.D. Kansas State University	Completed	\$86,200
Determining Slaughter Cattle Age Using Lens Weight and/or Nitrogen versus Skeletal Maturity and/or Dentition	Product Enhancement	M. Dikeman, Ph.D., J.L. Marsden, Ph.D. Kansas State University	Completed	\$38,172
Antimicrobial Treatment of Beef Subprimals and Cuts Intended for Non-Intact (Blade Tenderized if Formed) Processes	Beef Safety	J.L. Marsden, Ph.D. Kansas State University	Ongoing	\$81,500

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KENTUCKY				
Understanding how Chlortetracycline Improves Carcass Quality of Finishing Cattle	Product Enhancement	J.C. Matthews, Ph.D., B.C. Lynn, Ph.D., K.R. McLeod, Ph.D., D.K. Bullock, Ph.D. University of Kentucky	Ongoing	\$20,000
Protecting against Atherosclerosis by Dietary Zinc	Nutrition	B. Hennig, Ph.D. University of Kentucky	Completed	\$20,000
MINNESOTA				
Evaluation Strategies to Remove Specific Risk Materials (SRMs) from Dorsal Root Ganglia to Improve Salvage Value of Market Cow & Bull Muscle Cuts	Beef Safety	D. Roeber, Ph.D., W. Hueston, Ph.D., S. Kennedy, Ph.D. University of Minnesota	Ongoing	\$24,250
Effect of a Starch-Limited Diet on Blood Glucose in Type 2 Diabetes	Nutrition	M. Gannon, Ph.D., F. Nuttal, Ph.D. VA Medical Center and University of Minnesota	Ongoing	\$15,000
The Role of Dietary Beef Tallow in Protection Against Low-Density Lipoprotein (Ldl) Oxidation, a Risk Factor for Heart Disease	Nutrition	S. Saari Csallany, Ph.D. University of Minnesota	Ongoing	\$35,260
MISSISSIPPI				
Utilization of Strategies to Enhance Growth Efficiency and Muscle Deposition while Improving Tenderness and Processing Characteristics of Beef Product Enhancement	Product Enhancement	J.M. Martin, Ph.D. Mississippi State University	Completed	\$20,000
Missouri				
Rapid Quantification of Culturable and Viable-but-Nonculturable <i>E. coli</i> O157:H7 in Beef Products using EMA-Real Time PCR	Beef Safety	A. Mustapha, Ph.D. University of Missouri-Columbia	Completed	\$30,383
Real-Time Monitoring of Cross-Contamination of <i>Listeria Monocytogenes</i> between Equipment and Ready-to-Eat Meat Products via a GFP Reporter	Beef Safety	A. Mustapha, Ph.D. University of Missouri-Columbia	Completed	\$30,583
NEBRASKA				
Prediction of Beef Tenderness using Hyperspectral Imaging	Product Enhancement	C. Calkins, Ph.D., J. Subbiah, Ph.D. University of Nebraska-Lincoln	Completed	\$43,928
Flavor Issues with the Beef Value Cuts	Product Enhancement	C. Calkins, Ph.D. University of Nebraska-Lincoln	Completed	\$44,944
<i>E. coli</i> O157:H7 Intervention Strategies	Beef Safety	R. Moxley, Ph.D., T. Klopfenstein, Ph.D. University of Nebraska-Lincoln	Completed	\$50,000
Further Studies on Off-Flavor Issues with the Beef Value Cuts	Product Enhancement	C. Calkins, Ph.D. University of Nebraska-Lincoln	Completed	\$42,569
Development of 3-D Digital Model of the Skeleton & Muscular Anatomy of the Beef Carcass including Several Learning Modules	Product Enhancement	S. Jones, Ph.D., V. Singh, Ph.D., A. Guru, Ph.D. University of Nebraska-Lincoln	Ongoing	\$37,000
Fatty Acid & Flavor Relationships with Ethanol Co-Products	Product Enhancement	C. Calkins, Ph.D. University of Nebraska-Lincoln	Ongoing	\$79,144
Muscle Specific Enzymes to Enhance Tenderness	Product Enhancement	C. Calkins, Ph.D. University of Nebraska-Lincoln	Ongoing	\$37,696

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SOUTH DAKOTA				
Effect of Moderate and High Selenium Diets on the Selenium Concentrations in Beef	Product Enhancement	C. Wright, Ph.D., D. Wulf, Ph.D., R. Maddock, Ph.D. South Dakota State University	Completed	\$14,250
Effect of Dosage Level of a Combined Trenbolone Acetate and Estradiol Implant on Circulating Level of Growth Factors	Product Enhancement	K. Burns, Ph.D., J. Clapper, Ph.D., R. Pritchard, Ph.D., D. Wulf, Ph.D. South Dakota State University	Completed	\$32,094
Determining if Altering Feeding Program Could Improve Marbling, Flavor and Tenderness	Product Enhancement	R. Pritchard, Ph.D., D. Wulf, Ph.D., T. Machado, Ph.D. South Dakota State University	Ongoing	\$39,200
Comparing Three Types of Beef Facilities and their Effect on Meat Quality	Product Enhancement	D. Wulf, Ph.D., R. Pritchard, Ph.D., T. Machado, Ph.D. South Dakota State University	Ongoing	\$38,660
Improving the Quality and Value of Beef using a Total Quality Management System	Product Enhancement	R. Maddock, Ph.D., D. Wulf, Ph.D., C. Wright, Ph.D., E. Loe, Ph.D. South Dakota State University	Ongoing	\$102,750
TEXAS				
Validation of Trichloromelamine as an Effective Hide Wash Technology	Beef Safety	J. Blanton, Ph.D. Texas Tech University	Ongoing	\$30,631
Validation of Texas Beef Jerky Processing	Beef Safety	J.W. Savell, Ph.D. Texas A&M University	Completed	\$24,750
In-Home Consumer Evaluations of Individual Muscles from Beef Rounds Subjected to Tenderization Treatments	Product Enhancement	J.W. Savell, Ph.D. Texas A&M University	Completed	\$15,708
Identifying Beef Muscles and Processing Treatments Suitable for use in Fajita Applications	Product Enhancement	J.W. Savell, Ph.D. Texas A&M University	Completed	\$21,510
Validation of Sampling Methods to Determine the Prevalence of <i>E. coli</i> O157:H7 in Beef Feedlot Cattle	Beef Safety	G. Loneragan, Ph.D. West Texas A&M University	Completed	\$19,375
Bovine Genome Sequencing	Product Enhancement	Baylor College of Medicine	Ongoing	\$300,000