

Govind Kannan, B.V.Sc., Ph.D.

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EDUCATION

- 1996 **Ph. D. (Poultry Science)**
University of Maryland, College Park, MD.
 Research Focus: Animal Welfare and Product Quality
- 1988 **M. V. Sc. (Master of Veterinary Science)**
Madras Veterinary College, Tamilnadu Agricultural University, India.
- 1986 **B. V. Sc. (Bachelor of Veterinary Science, Equivalent to D.V.M.)**
Madras Veterinary College, Tamilnadu Agricultural University, India.

PROFESSIONAL EXPERIENCE

- 2024-present **Professor and Head & Executive Director, Charles C. Miller, Jr. Poultry Research and Education Center**
Department of Poultry Science, Auburn University, Auburn, AL
- 2019-2024 **Vice President for Land-Grant Affairs and Economic Development**
- 2010-2018 **Dean and Director, College of Agriculture, Family Sciences and Technology (CAFST), FVSU**
 (Jan-June 2014 - **Interim Provost and Vice President for Academic Affairs, FVSU**)
- 2008-2024 **Professor of Animal Science, FVSU**
- 2008-2010 **Assistant Dean for Research, FVSU**
- 2003-2007 **Associate Professor of Animal Science, FVSU**
- 2003-2007 **Director, Georgia Small Ruminant Research and Extension Center**
- 2003-2009 **Coordinator, Animal Science Undergraduate and Graduate Programs**
- 1997-2002 **Assistant Professor of Animal Science, FVSU**
Fort Valley State University (FVSU), Fort Valley, GA
- 1996-1997 **Postdoctoral Research Associate**
Department of Animal Science, University of California at Davis, CA

Professor and Head & Executive Director, Charles C. Miller, Jr. Poultry Research and Education Center, Auburn University

- Led efforts to implement service center costs for services provided at the Miller Center.

- Provided leadership in developing and submitting the Department of Poultry Science's self-study report for Academic Program Review.
- Initiated a digital campaign to increase prospective student outreach and undergraduate enrollment.
- Played a key role with the College of Agriculture's Director of Development in securing industry support for adding new feed bins and hatchery machines at the Miller Center.
- Completed the process of hiring two research faculty members.
- Led a working group to develop action items and KPIs for one of the strategic goals of the College of Agriculture.
- Appointed to serve on the Search Advisory Committee for the Dean of the College of Agriculture and Director of the Alabama Agricultural Experiment Station.
- Appointed to serve on the Search Committee for the Head of the Department of Pathobiology, College of Veterinary Medicine.

Vice President for Land-Grant Affairs and Economic Development, FVSU

- Secured \$800K to establish a mobile precision agriculture lab from 21st Century Partnership (funded by EDA).
- Played a lead role in securing \$500K funding from Chevron and MIT Fab Foundation to establish a FabLab to train students on digital fabrication, innovation, and entrepreneurship.
- Led efforts to secure more than \$8M in Congressionally Directed Spending (CDS) funds in 2021 to support FVSU's academic and outreach programs.
- Led efforts to establish a poultry instructional program at FVSU in partnership with the University of Georgia. Secured \$2M CDS funding in partnership with the University of Georgia.
- Played a key role in securing a \$3M NTIA grant to enhance digital equity in Fort Valley and surrounding communities in partnership with Microsoft.
- Served on FVSU Strategic Planning Taskforce. Provided leadership to the Engagement and Collaboration Strategic Priority Subcommittee and is currently chairing an Implementation Leaders Group.

- Established the FVSU Economic Development Taskforce and is chairing this group.
- Secured funding and completed the groundwork for USG-BOR's Integrated Project Review for renovating a historic building to establish the proposed FVSU Center for Agricultural Innovation and Entrepreneurship.
- Played a key role in establishing the Center for Ultrastructure Research (comprises TEM and SEM Labs).
- Led student innovation entrepreneurship efforts and mentored a team of inventors that participated in the Georgia InVenture Prize Competition 2019 (won first prize in the state and the InVenture Cup).
- Led the institution's efforts in establishing several partnerships with industry, NGOs, and USDA-ARS Labs that resulted in multiple funding, research collaboration, and student training opportunities.
- Provided overall leadership for the FVSU Office of Sponsored Program and brought about several changes to enhance its efficiency. Increased the institution's sponsored research funding by 25%.
- Secured budget for establishing the basic infrastructure for handling intellectual property and technology transfer issues to encourage and facilitate faculty innovation and entrepreneurship activities.
- Participated actively in the Middle Georgia Innovation Project to promote STEM student development opportunities, technology partnerships, and regional economic development.
- Led the Academic Affairs Workgroup in developing policies and procedures for campus reopening during the pandemic.

Dean and Research Director, College of Agriculture, Family Sciences and Technology, FVSU

- Secured (collaboratively) more than \$17 M in grants to improve/renovate existing facilities and construct new buildings.
- Successfully completed two construction projects that enhance FVSU's teaching, research, and extension programs totaling approx. \$7.5 M.
- Managed the College's annual research, instruction, and cooperative extension budget of more than \$20M efficiently.
- Significantly contributed to the institution's fundraising efforts by showcasing the

College's accomplishments and capabilities, and the impacts created by applied agricultural research and cooperative extension in the state and region.

- Significantly increased the College's funding by securing a dollar-to-dollar state match for the federal formula funds received and encouraging faculty members to seek grant opportunities in addition to the 1890 Capacity Building Grants.
- Established the Office of International Agriculture to streamline and facilitate international educational, research, and outreach activities of faculties and enhance funding for international programs (see examples below). Created the position of the Director for managing the Office of International Agriculture.
 - The College conducted educational and outreach activities in several countries, including Myanmar, Haiti, the Dominican Republic, Peru, Argentina, Mexico, Mongolia, South Korea, and the Philippines.
 - The College established a study abroad program and student exchange program with Universidad Nacional de Agricultura, Catacamas, Honduras. The College received a USDA-NIFA grant for this project.
 - The College established collaboration with Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, Bangladesh, to assist subsistence farmers in Bangladesh with a soybean-incorporated cropping system, a project supported by a USDA-FAS grant.
 - The College implemented the International Summer Experience in Agricultural and Related Sciences Program with the Federal University of Roraima and the National Institute of Amazonia Research in Brazil for undergraduate students.
 - The College secured funding from USDA-APHIS to establish an experiential learning program for veterinary science students in Botswana and South Africa.
 - The College secured an external grant for student exchange and research collaboration with the National Institute of Science and Technology for Tropical Fruits (INCT-Frutas Tropicais), Brazil.
 - The College hosted faculty members from the Philippines, Kenya, South Africa, and Bulgaria under the Cochran Fellowship Program.
 - Enhanced international collaborations at the Georgia Small Ruminant Research and Extension Center with countries in Africa, Asia, Europe, and Central and South America.

- Played a key role in establishing several formal Articulation Agreements/Memoranda of Understanding/Partnerships with institutions abroad:
 - Federal University of Technology, Akure, Nigeria
 - University of West Indies, Trinidad and Tobago
 - University of Guyana, Guyana
 - Universidad Nacional de Agricultura, Catacamas, Honduras
 - Bangabandhu Sheikh Mujibur Rahman Agricultural University, Bangladesh
 - University of Pretoria, South Africa
 - Barbados Community College, Barbados (in progress)
 - Mongolia Huree University (in progress)
 - Botswana University of Agriculture and Natural Resources (in progress)
- Established the Peace Corps Prep Program in partnership with the National Peace Corps to better prepare graduates for becoming Peace Corps Volunteers.
- Played a key role in establishing formal Articulation Agreements/Memoranda of Understanding/Partnerships with several institutions within the state:
 - Central Georgia Technical College, Macon, Georgia
 - Albany Technical College, Albany, Georgia
 - Georgia Military College, Georgia
 - Abraham Baldwin Agricultural College, Tifton, Georgia (in progress)
- Provided leadership to secure reaccreditation of the College's academic programs by the American Association of Family and Consumer Sciences (AAFCS), American Veterinary Medical Association (AVMA), Accreditation Board for Engineering and Technology (ABET), National Council for Accreditation of Teacher Education (NCATE), in addition to Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).
- Provided leadership to secure accreditation of the College's Master of Public Health Program by the Environmental Health Accreditation Council.
- Reorganized the College to improve the efficiency of academic, research, and outreach programs.
- Conducted a comprehensive program review for the College.
- Installed graduate student research assistantships through Evans-Allen Projects to enhance graduate student enrollment and retention.
- Provided leadership in developing four academic program proposals, including two Ph.D. proposals.

- Implemented the Bachelor of Science in Food Science Program.
- Recruited several high-quality faculty and staff members.
- Provided overall leadership to the College's research, outreach, and academic programs.
- Appointed the members of the Council for Agricultural Research, Extension, and Teaching (CARET) every year to represent FVSU.
- FVSU's national ranking in graduating African American students in Ag disciplines advanced from 25th to 6th under my leadership.
- FVSU ranked first among the 1890 Land-Grant Institutions in 2014 in acquiring intellectual property rights (by Ag faculty). FVSU received an APLU award.
- Increased the College of Ag student enrollment to ~600 students in Fall 2015, a 25% increase from Fall 2014.
- Developed a three-year recruitment plan for the College to achieve enrollment goals.

Interim Provost and Vice President for Academic Affairs, FVSU

- Initiated and supervised FVSU's eMajor Affiliation, which was approved by the Board of Regents. Program implementation began in Fall 2014.
- Followed a shared governance model and worked closely with the Faculty Senate.
- Reorganized the Counseling Department.
- Reorganized the College of Graduate Studies and Extended Education.
- Established and charged Search Committees for two dean positions (Dean, College of Arts and Sciences & Dean, College of Graduate Studies and Extended Education). The searches were successfully completed, and the new deans came on board in July-August 2014.
- Named an interim head for the Department of History, Geography, Political Science, and Criminal Justice.
- Successfully completed review of low-producing academic programs. At the end of the process, one undergraduate program was terminated, and a few graduate and undergraduate programs were deactivated. Proposal development was begun for new programs and reengineering of selected underperforming programs.

- Completed promotion and tenure process successfully. Implemented the electronic (SharePoint) portfolio submission process.
- Revised the faculty summer teaching compensation formula.
- Visited Guyana and Trinidad with FVSU President to establish collaborations in academic, research, and extension areas. MOUs have been signed subsequently with the University of Guyana and the University of West Indies, Trinidad and Tobago.
- Played a lead role in FVSU's signing an MOU with Georgia Military College (GMC) that allows the transfer of students from GMC to FVSU after two years.
- Established the Academic Advisement Center.
- Completed the FY15 Budget Reduction Plan for Academic Affairs.
- Conducted searches to fill faculty positions identified as critical needs for the Academic Affairs Division.
- Completed part-time faculty cost estimates for Spring 2014.
- Continued to revise faculty contracts to be in line with Board of Regents policies.
- Interacted (both as Interim Provost and VPAA and as the Dean, College of Ag) with US and State legislators, community leaders, mayors, city council members, county commissioners, officials from the Department of Corrections and local law enforcement offices, leaders of chambers of commerce, Commander of Robins Air Force Base, and industry leaders to build partnerships and promote FVSU's academic, research, and outreach programs.

Interim Assistant Dean for Research, CAFST, FVSU

- Established a Scanning Electron Microscopy Lab at the Agricultural Research Station.
- Initiated the Agricultural Research Seminar Series.
- Revised and re-established an Evans-Allen Proposal Review Committee and processed several research proposals for funding.
- Participated in an economic development exploratory trip to Cuba in collaboration with the Georgia Department of Agriculture.

- Coordinated scientist/student participation at the Association of 1890 Research Directors (ARD) Biennial Symposium and established a quality control process for abstract submission.
- Served as ARD Biennial Symposium Steering Committee Member.
- Selected by ARD to serve on ESCOP (Experiment Station Committee on Organization and Policy).
- Started publishing the FVSU Ag Research Report.
- Refurbished the research facilities, offices, and labs.
- Hired several research assistants to provide enough assistance in the labs for all scientists.
- Coordinated project renewals and submission of annual and terminal CRIS reports for scientists.

Coordinator, Animal Science Undergraduate and Graduate Programs, FVSU

- Provided leadership to the Animal Science instruction program.
- Participated in student recruitment activities.
- Conducted a Program Review and compiled a document for the Animal Science Graduate Program for the review period 2000-2005.
- Conducted a Program Review and compiled a document for the Animal Science Undergraduate Program for the review period 1999-2004.

Director, Georgia Small Ruminant Research and Extension Center (GSRREC), FVSU

- Allocated resources for researchers and facilitated the research and extension activities of 10 scientists associated with GSRREC.
- Supervised the GSRREC staff members who managed the multi-million-dollar FVSU Slaughter and Meat Processing Facility, Dairy Technology Facility, indoor animal facilities, and pastures for goats and sheep.
- Significantly enhanced the Center's international engagement through student training, research collaborations, and outreach activities. Examples include collaborations with institutions in Belgium, Denmark, France, Afghanistan, Ethiopia, Honduras, Armenia, and Romania.

- Advised the Farm Manager on maintaining federal and state standards/requirements such as brucellosis and tuberculosis certifications, quarantine arrangements for new animals, and Grade A licensure for the dairy plant.
- Advised the Meat Plant Manager on maintaining federal and state standards/requirements such as the BSE monitoring program, *E. coli* monitoring of carcasses for at least 13 consecutive weeks in a year, and updating HACCP plans and SSOPs as needed.

Faculty Member, FVSU

- Collaboratively secured more than \$3.5M in external grants for research, education, and outreach activities.
- Advised 16 graduate students and supervised their thesis projects and served on thesis committees of numerous graduate students.
- Mentored three postdoctoral research professionals (Drs. Jung Lee, Ajit Mahapatra, Zaira Estrada-Reyes).
- Currently advising two graduate students. The following projects are currently active in my lab:
 - Effects of habituation to livestock trailer on the welfare of goats during long-distance transportation.
 - Effects of high-condensed tannin-containing diet and stress on physiological responses, antioxidant status, gastrointestinal tract microbial population, and meat quality in goats.
 - Exploring the transcriptome of preslaughter stress and meat quality in goats.
- Participated in the College's international educational and outreach activities. For example,
 - Trained an animal science intern from France in 2005 for 6 months. Supervised the intern's work, conducted monthly evaluations, and sent reports to INRA, France.
 - Participated in the Bourlog Fellowship Program and hosted two visiting scientists from Armenia.
 - Hosted 15 individuals from Belgium under the Bourlog Fellowship Program.

- Visited Ethiopia to participate in a collaborative research project to study the incidences of elevated stress levels and dark-cutting meat in small ruminants raised in highlands.
- Taught the following undergraduate and graduate courses:
 - ANSC 1801 Social Interaction and Behavior of Animals
 - ANSC 1811 Introduction to Animal Agriculture
 - ANSC 3891 Cooperative Education in Animal Science
 - ANSC 3813 Principles of Meat Science
 - ANSC 4841 Animal Science Seminar
 - ANSC 5203 Experimental Design
 - ANSC 6363 Structure and Biochemistry of Muscle as Food
 - ANSC 6421 Graduate Seminar
 - ANSC 6436 Research and Thesis
- Served as the Chair of the Institutional Animal Care and Use Committee for ten years.
- Earned tenure in 2003.

1996-1997

Postdoctoral Research Associate*Department of Animal Science, University of California, Davis, CA*

- Trained undergraduate students in laboratory procedures to assess stress in chickens.
- Lectured on humane handling of animals to undergraduates.
- Conducted research on pre-harvest stress in poultry.

1993-1996

Graduate Research/Teaching Assistant*Department of Poultry Science, University of Maryland, College Park, MD*

- Investigated the effects of stress in broiler chickens.
- Devised experimental gaseous stunning equipment for stunning broilers in transport crates.
- Assisted in food microbiology experiments.
- Assisted in statistical analysis of data.

1989-1992

Assistant Professor*Madras Veterinary College, India.*

- Taught several courses to veterinary (B.V.Sc.) students.
- Participated in an Indo-UK collaborative research project sponsored by the Overseas Development Agency, United Kingdom. Attended a training program conducted by scientists from the University of Belfast, Northern Ireland, and the University of Bristol, England.
- Participated in a research project funded by the Indian Council of Agricultural Research (ICAR). Compiled the final report of the project.
- Coordinated an in-service training program for field veterinarians, public health personnel, and district extension officers.

1986

Veterinary Officer*Southern Hatcheries Pvt. Ltd., Deejay Group, Bangalore, India.*

- Lectured on poultry management during training sessions for unit supervisors.
- Managed poultry breeding stocks.
- Trained unit supervisors in poultry disease diagnostic procedures and hatchery operations.
- Visited commercial poultry farms to solve poultry health problems.

AWARDS AND RECOGNITIONS

- Selected for the Americas Exchange Program (ACE) Class of 2019. Attended the 12th ACE Program in Santiago de Chile, in October 2019.
- 2017 1890 Leadership Award.
- 2017 Outstanding Leadership Award, Association of 1890 Research Directors [ARD; comprising of 19 land-grant institutions in the southeastern US; one of the Regional Associations of the Association of Public and Land-Grant Universities' (APLU) Board on Agriculture Assembly (BAA)].
- 2017 Champion of Research Excellence Award, Seventh Annual Research Day, FVSU.
- 2014 Appointed by the US Secretary of Agriculture Tom Vilsack to serve on the National Agricultural Research, Extension, Education, and Economics (NAREEE) Advisory Committee representing the National Food Animal Science Society constituency.

- 2014 Twentieth Century Agriculturalist Award, Agriculture Alumni Association, FVSU.
- 2012 Recognized by the White House as “Strengthening Food Security Champion of Change.” Served on the Strengthening Global Food Security Panel. Received a letter of appreciation from President Barak Obama.
- 2012 Invited by the Undersecretary of Agriculture and USDA Chief Scientist, Dr. Catherine Woteki, to attend a Mini-Summit on Agricultural Research in Qingdao, China.

PROFESSIONAL ACTIVITIES (Selected)

- Member of the Poultry Science Association
- Member of the World Poultry Science Association
- Member of the American Society of Animal Science (25 years)
- Member of the International Goat Association (~20 years)
- ASAS Membership and Growth Subcommittee (past)
- Editorial Board Member for the journal *Frontiers in Animal Science*
- Editor-in-chief for the journal *Animals – Small Ruminant Section*
- Reviewer for
 - *Journal of Animal Science*
 - *Small Ruminant Research*
 - *Frontiers in Animal Science*
 - *Animal Research*
 - *Livestock Science*
 - *Animals*
 - *Heliyon*
 - *PLOS One*
 - *Molecules*
 - *USDA Grant Proposals*
 - *USDA/Agriculture Marketing Service Grant Proposals*
- Served as Co-Chair of the Executive Committee for the USDA/1890 Task Force.
- Served on the National Agricultural Research, Extension, Education, and Economics (NAREEE) Advisory Board’s

- Member of the Executive Committee
 - Data Management Working Group
 - Science Advisory Council
 - Relevance and Advocacy Committee
 - Climate Change Working Group
- Served on the APLU's BAA Futuring Task Force representing the 1890 Institutions.
 - Served as Chair of ARD, one of the regional associations of BAA, a component of APLU.
 - Provided leadership in establishing the ARD Foundation Board of Directors and appointed Board members.
 - Provided leadership in establishing three 1890 Centers of Excellence:
 - Center for International Development and Engagement
 - Center for Innovative and Sustainable Small Farms, Ranches and Forestlands
 - Center to Motivate and Educate for Achievement
 - Served as Chair of the 1890 ARD Consortium Committee for Integrated Production Systems.
 - Served on the Experiment Station Section 2018 (national) Fall Conference Planning Committee.
 - Served on Experiment Station Section 2017 (national) Fall Conference Planning Committee and coordinated a session on Big Data.
 - Served the International Goat Association's Scientific Committee for the 2016 International Conference on Goats held in Turkey.
 - Appointed by the International Goat Association in 2015 to serve as a Country Representative.
 - Served as Chairperson of Poster Sessions at the XI International Conference on Goats, Canary Islands, Spain.
 - Served as the Chair of the American Society of Animal Science (ASAS) Small Ruminant Program Committee for the year 2012-2013. Organized a symposium on "Sustainable Meat Goat Production" at the ASAS/ADSA Joint Annual Meetings in Indianapolis, IN, in July 2013. Secured sponsorship from Southern SARE.
 - Served as a member of the American Society of Animal Science - Food Safety Program

Committee for the year 2011-2012.

- Served as the Vice-Chair of the American Society of Animal Science - Food Safety JT Program Committee for the year 2007-2008.
- Served as a member of the American Society of Animal Science - Food Safety JT Program Committee for the year 2006-2007.
- Served as the Chair of the Institutional Animal Care and Use Committee, FVSU for 10 years.

PROFESSIONAL MEMBERSHIPS

- American Society of Animal Science
- Poultry Science Association
- World Poultry Science Association
- International Goat Association

As an administrator, actively associated with

- 1890 Deans' Council
- Association of 1890 Research Directors, Inc.
- Association of Public and Land-Grant Universities

GRANTSMANSHIP EFFORTS (Selected, funded proposals)

As Administrator

- **G. Kannan**, 2022. Establishment of a Mobile Precision Agriculture Lab. 21st Century Partnership.
Amount: \$800,000.00
- **G. Kannan**, 2021. FVSU Fab Lab. Chevron and MIT Fab Foundation.
Amount: \$430,000.00/year.
- **G. Kannan** and M. Latimore, 2018. Establishment of the FVSU Center for Agricultural Innovation and Entrepreneurship. USDA-1890 Facilities Grant Program.
Amount: \$5,000,000.00
- **G. Kannan** and M. Latimore, Jr., J. Bentley, 2013. Enhancing Facilities for Agricultural Research, Teaching and Extension Programs. USDA-1890 Facilities Grant Program.
Amount: \$5,500,000.00

- M. Latimore, Jr., T. Harris, J. Bentley, L. Johnson, **G. Kannan**, 2008. 1890 Facilities Grant Program at Fort Valley State University. USDA-1890 Facilities Grant Program. Amount: \$7,500,000.00

As Faculty Member

- **G. Kannan**, T. H. Terrill, and B. Kouakou, 2022. Integrated Small Ruminant Production Systems. USDA-ARS. Amount: \$430,000/year for 5 years
- **G. Kannan** and R. C. Noble, 2021. Targeted outreach for underserved livestock producers. USDA-NRCS. Amount: \$34,826.00
- B. Kouakou and **G. Kannan**, 2018. Product Development and Student Entrepreneurship at the Agricultural Research Station. USDA-NIFA. Amount: \$710,000.00
- N. Joshee and **G. Kannan**, 2017. Building on the Success of STEM Graduate Disciplines Achieved Through the DoE Project. Department of Education. Amount: \$400,000.00
- N. Joshee and **G. Kannan**, 2013. Ag Discovery – Summer Enrichment Program. USDA-APHIS. Amount: \$47,487.00
- S. Wildeus, T. Nartea, J. H. Lee, and **G. Kannan**, 2013. Strategies to raise hair sheep lambs for specialty markets on pasture. USDA-NIFA CBG. Amount: \$299,305.
- **G. Kannan**, 2013. Sustainable Meat Goat Production – Mini-grant from Southern SARE to conduct a symposium at the ASAS/ADSA Joint Annual Meetings in Indianapolis, IN, July 2013. Amount: \$5,000.00
- **G. Kannan**, A. K. Mahapatra, S. Sharma, J. H. Lee, and M. Ibrahim, 2011. Cost-effective pathogen reduction strategies and food safety training for small and very small meat processors in Georgia. National Integrated Food Safety Research Initiative Program, USDA-NIFA. Amount: \$100,000.00
- Y. W. Park and **G. Kannan**, 2010. Strengthening Food Technology Program at Fort Valley

State University. USDA 1890 Capacity Building Grants Program.
Amount: \$140,639.00

- K. W. McMillin (PI, Louisiana State University, Baton Rouge, LA) et al., 2010. Enhanced economic benefits for meat goat producers through production, meat yield and palatability, and consumer information. Submitted by K. W. McMillin *et al* to AFRI and was recommended for funding. **G. Kannan** (Co-PD) received a subcontract for the research work to be conducted at FVSU.
Amount: \$8,333.65
- W. R. Getz, T. H. Terrill, S. Mobini, **G. Kannan** (Fort Valley State University), J. E. Miller (Louisiana State University), J. Mosjidis (Auburn University), N. Whitley (University of Maryland Eastern Shore), and J. Burke (USDA-ARS, Booneville, AR), 2007. Development and field testing of natural (non-chemical) systems for controlling gastrointestinal nematodes in sheep and goats in the southern USA. USDA 1890 Capacity Building Grants Program.
Amount: \$460,867.00
- C. Nguyen, **G. Kannan**, A. K. Mahapatra. Control of *E. coli* O157:H7 on beef surfaces using electric pulse and thin-film electrolyte solution. USDA 1890 Capacity Building Grants Program.
Amount: \$287,707.00
- **G. Kannan**, 2006. Pre-harvest management methods to reduce bacterial loads on goat skin and carcass surfaces. USDA/CSREES (Station Project).
Amount: \$60,000.00
- **G. Kannan**, B. Kouakou, and T. H. Terrill (Fort Valley State University), 2004. Prevention of *E. coli* contamination of goat carcasses by reducing fecal pathogen counts on skin. USDA/FSIS.
Amount: \$27,000.00
- **G. Kannan** and B. Kouakou (Fort Valley State University), 2003. Pathogen reduction in goat carcasses by controlling pre-slaughter gut-fill and fecal contamination of skin/hair. USDA/FSIS.
Amount: \$25,000.00
- **G. Kannan**, S. Gelaye, L. Johnson, W. R. Getz, T. E. Hollis, and C. Johnson (Fort Valley State University), 2001. Food safety education at retail: an outreach program for small and disadvantaged meat and poultry establishments. USDA/FSIS.
Amount: \$46,000.00
- **G. Kannan** (PI), Y. W. Park, S. Gelaye, B. Kouakou (Fort Valley State University), B. W.

Berry (USDA ARS, Beltsville, MD), K. W. McMillin (LSU), and T. D. Pringle (UGA), C. B. Chawan (Alabama A&M), 2000. Development of value-added products using chevon. USDA 1890 Capacity Building Grants Program.
Amount: \$298,878.00

- S. Gelaye, **G. Kannan**, B. Kouakou, T. H. Terrill, W. R. Getz, and S. Mobini (Fort Valley State University), 1999. Very small meat processing plant HACCP model outreach program. USDA/FSIS.
Amount: \$28,000.00
- **G. Kannan**, Y. W. Park, and S. Gelaye (Fort Valley State University), 1998. Enhancement of chevon palatability using postmortem methodologies. USDA/CSREES in 1998.
Amount: \$15,000.00

PUBLICATIONS

Refereed Articles

- Shaik, A*, P. Batchu, A. Naldurtiker, P. Gurrapu, P., B. Kouakou, T. H. Terrill, and **G. Kannan**, 2024. Influence of epinephrine reactivity to stress on meat quality in goats. *Translational Animal Science* May 28;8:txae078. doi: 10.1093/tas/txae078.
- Neha, A., A. Shaik, S. C. Chelkapally, R. S. Kolikapongu, S. C. Namani, T. Erukulla, P. Batchu, N. Mendez, Y. Smith, D. Brown, N. C. Whitley, A. A. Pech-Cervantes, G. S. Dykes, V. R. Owen, **G. Kannan**, J. E. Miller, A. Siddique, T. H. Terrill, 2024. Effect of feeding a blackseed meal-sericea lespedeza leaf meal pellet on gastrointestinal nematode and coccidia infection and animal performance in young goats. *Veterinary Parasitology* 331:110253. doi: 10.1016/j.vetpar.2024.110253
- Naldurtiker*, P. Batchu*, B. Kouakou, T. H. Terrill, G. W. McCommon, and **G. Kannan**, 2023. Differentially expressed genes analysis using RNA-seq in the blood of goats exposed to acute stress. *Scientific Reports* 13:1984. <https://doi.org/10.1038/s41598-023-29224-5>
- **G. Kannan**, P. Batchu*, A. Naldurtiker*, G. S. Dykes, P. Gurrapu*, B. Kouakou, T. H. Terrill, and G. W. McCommon, 2023. Habituation to livestock trailer and its influence on stress responses during transportation in goats. *Animals* 13:1191. <https://doi.org/10.3390/ani13071191>
- P. Batchu*, A. Naldurtiker*, B. Kouakou, T. H. Terrill, G. W. McCommon, and **G. Kannan**, 2022. Metabolomic exploration of the effects of habituation to livestock trailer and extended transportation in goats. *Frontiers in Molecular Biosciences* 9:1027069. doi: 10.3389/fmolb.2022.1027069
- Naldurtiker*, P. Batchu*, B. Kouakou, T. H. Terrill, A. Shaik*, and **G. Kannan**, 2022. RNA-Seq exploration of the influence of stress on meat quality in Spanish goats. *Scientific Reports* 12:20573 <https://doi.org/10.1038/s41598-022-23269-8>.
- **G. Kannan**, P. Batchu*, A. Naldurtiker*, G. S. Dykes, B. Kouakou, T. H. Terrill, and P. Gurrapu*, 2022. Influence of excitability rate on physiological responses to stress in goats. *Animals* 12: 1023. <https://doi.org/10.3390/ani12081023>
- B. B. Lemma, J. H. Lee, **G. Kannan**, and B. Kouakou, 2022. Natural preservative properties of raisins in restructured goat meat (chevon) jerky. *Journal of International Food Properties* 25:1, 1736-1752, DOI: 10.1080/10942912.2022.2104869.
- P. Batchu*, T. H. Terrill, B. Kouakou, Z. M. Estrada-Reyes, and **G. Kannan**. 2021.

Plasma metabolomic profiles as affected by diet and stress in Spanish goats. *Scientific Reports* 11:12607. <https://doi.org/10.1038/s41598-021-91893-x>

- **G. Kannan**, Z. M. Estrada-Reyes, P. Batchu, B. Kouakou, T. H. Terrill, and A. Naldurtiker, 2021. Social isolation of goats: significance of visual contact with conspecifics on behavioral and physiological responses. *Journal of Animal Science* 99:1-13. doi:10.1093/jas/skab150.
- P. Batchu, T. Hazard, J. H. Lee, T. H. Terrill, B. Kouakou, and **G. Kannan**, 2021. High-condensed tannin diet and transportation stress in goats: effects on physiological responses, gut microbial counts and meat quality. *Animals* 2021, 11, 2857. <https://doi.org/10.3390/ani1102857>
- **G. Kannan**, A. K. Mahapatra, and H. L. Degala, 2021. Preharvest management and postharvest intervention strategies to reduce *Escherichia coli* contamination in goat meat: a review. *Animals* 2021, 11, 2943. <https://doi.org/10.3390/ani1102943>
- Mechineni*, D. S. Kommuru, T. H. Terrill, B. Kouakou, J. H. Lee, S. Gujja, J. M. Burke, and **G. Kannan**, 2020. Forage Type and Transportation Stress Effects on Gut Microbial Counts and Meat Quality in Goats. *Canadian Journal of Animal Science* 101:126-133. dx.doi.org/10.1139/cjas-2019-0145.
- M. T., Bryant, H. L. Degala, A. K. Mahapatra, R. M. Gosukonda, and **G. Kannan**, 2020. Inactivation of *Escherichia coli* K12 by pulsed UV light on goat meat and beef: microbial responses and modelling. *International Journal of Food Science and Technology* doi:10.1111/ijfs.14733.
- **G. Kannan**, R. Gosukonda, and A. K. Mahapatra, 2020. Prediction of stress responses in goats: comparison of artificial neural network and multiple regression models. *Canadian Journal of Animal Science* 100:102-110.
- **G. Kannan**, J. H. Lee, B. Bouakou, and T. H. Terrill, 2019. Reduction of microbial contamination of goat meat using dietary brown seaweed (*Ascophyllum nodosum*) supplementation and chlorinated wash. *Canadian Journal of Animal Science* 99:570-577.
- H. L. Degala, J. R. Scott, Espinoza, F.I.R., A. K. Mahapatra, and **G. Kannan**, 2019. Synergistic effect of ozonated and electrolyzed water on the inactivation kinetics of *Escherichia coli* on goat meat. *Journal of Food Safety* 40:ei2740.
- J. H. Lee, **G. Kannan**, and B. Kouakou, 2018. Tenderness and flavor of leg cuts from meat goats influenced by calcium chloride injection. *International Journal of Food Properties* 21:357-363. <https://doi.org/10.1080/10942912.2017.1414840>

- Arya, R. M., M. Bryant, H. L. Degala, A. K. Mahapatra, and **G. Kannan**, 2018. Effectiveness of a low-cost household electrolyzed water generator in reducing the populations of *Escherichia coli* on inoculated beef, chevon, and pork surfaces. *Journal of Food Processing and Preservation*. <https://doi.org/10.1111/jfpp.13636>.
- H. L. Degala, A. K. Mahapatra, A. Demirci, and **G. Kannan**, 2018. Evaluation of non-thermal hurdle technology for ultraviolet-light to inactivate *Escherichia coli* K12 on goat meat surfaces. *Food Control* 90:113-120.
- J. H. Lee, L. Alford*, **G. Kannan**, and Brou Kouakou, 2016. Curing properties of sodium nitrite in restructured goat meat jerky. *International Journal of Food Properties* 20(3): 526-537. DOI:10.1080/10942912.2016.1168833.
- R. Gosukonda, A.K. Mahapatra, X. Liu, and **G. Kannan**, 2015. Application of artificial neural network to predict *Escherichia coli* O157:H7 inactivation on beef surfaces. *Food Control* 47:606-614.
- **G. Kannan**, V. R. Gutta, J. H. Lee, B. Kouakou, W. R. Getz, and G. W. McCommon, 2014. Pre-slaughter diet management in sheep and goats: effects on physiological responses and microbial loads on skin and carcass. *Journal of Animal Science and Biotechnology* 5:42 (1-10). <http://www.jasbsci.com/content/5/1/42>
- **G. Kannan**, J. H. Lee, and B. Kouakou, 2014. Chevon quality enhancement: trends in pre- and post-slaughter techniques. *Small Ruminant Research* 121:80-88.
- A. Mechineni*, D. S. Kommuru, S. Gujja, J. A. Mosjidis, J. E. Miller, J. M. Burke, A. Ramsay, I. Mueller-Harvey, **G. Kannan**, J. H. Lee, B. Kouakou, and T. H. Terrill, 2014. Effect of fall-grazed sericea lespedeza (*Lespedeza cuneata*) on gastrointestinal nematode infections of growing goats. *Veterinary Parasitology* 204:221-228.
- J. H. Lee, M. Vanguru*, D. A. Moore, **G. Kannan**, T. H. Terrill, and B. Kouakou, 2012. Flavor compounds and quality parameters of chevon as influenced by sericea lespedeza hay. *Journal of Agricultural and Food Chemistry* 60:3934-3939.
- A. K. Carmichael, B. Kouakou, S. Gelaye, **G. Kannan**, J. H. Lee, and T. H. Terrill, 2012. Organ mass and composition in growing dairy goat wethers fed different levels of poultry fat and protein. *Small Ruminant Research* 104:104-113.
- D. L. Harris, A. K. Mahapatra, B. L. Jones, and **G. Kannan**, 2011. Efficacy of low-voltage ac for inactivating surface adherence *Escherichia coli* O157:H7 on beef. *International Journal of Food Safety, Nutrition and Public Health* 4 (2/3/4): 214-224.
- M. Singh, X. Ma, E. A. Amoah, and **G. Kannan**, 2011. In vitro culture of fibroblast-like

cells from postmortem skin of Katahdin sheep stored at 4 C for different time intervals. *In Vitro Cell and Developmental Biology – Animal* 47(4): 290-293.

- A. K. Mahapatra, D. L. Harris, C. N. Nguyen, and **G. Kannan**. 2011. Reduction of *Escherichia coli* O157:H7 on beef surfaces using low-voltage direct electric current and the impact on sensory properties. *Journal of Electrostatics* 69: 30-35.
- G. Abebe, **G. Kannan**, and A. L. Goetsch, 2010. Effects of small ruminant species and origin (highland and lowland) and length of rest and feeding period on harvest measurements in Ethiopia. *African Journal of Agricultural Research* 5(9):834-847.
- A. K. Mahapatra, D. L. Harris, D. L. Durham, S. Lucas, T. H. Terrill, B. Kouakou, and **G. Kannan**, 2010. Effects of moisture change on the physical and thermal properties of sericea lespedeza pellets. *International Agricultural Engineering Journal* 19 (3):23-29.
- A.K. Mahapatra, B. L. Jones, C. N. Nguyen, and **G. Kannan**, 2009. An experimental determination of the electrical resistivity of beef. *Agricultural Engineering International: The CIGR J.* 12(3):1-6.
- T. H. Terrill, G. S. Dykes, S. A. Shaik, J. E. Miller, B. Kouakou, **G. Kannan**, J. M. Burke, and J. A. Mosjidis, 2009. Efficacy of sericea lespedeza hay as a natural dewormer in goats: dose titration study. *Veterinary Parasitology* 163:52-56.
- A. K. Mahapatra, D. L. Harris, C. N. Nguyen, and **G. Kannan**, 2009. Evaluation of an IUL Flash & Go Automated Colony Counter. *Agricultural Engineering International: the CIGR EJournal XI* (1368): 1-6.
- J. H. Lee, M. Vanguru*, **G. Kannan**, D. A. Moore, T. H. Terrill, and B. Kouakou, 2009. Influence of dietary condensed tannins from sericea lespedeza on bacterial loads in gastrointestinal tracts of meat goats. *Livestock Science* 126:314-317.
- J. H. Lee, B. Kouakou, and **G. Kannan**, 2009. Influences of dietary regimens on microbial content in gastrointestinal tracts of meat goats. *Livestock Science* 125:249-253.
- M. Vanguru*, J. H. Lee, B. Kouakou, T. H. Terrill, and **G. Kannan**, 2009. Effect of feed deprivation time on bacterial contamination of skin and carcass in meat goats. *Tropical and Subtropical Agroecosystems* 11:259-261.
- B. Kouakou, J. H. Lee, and **G. Kannan**, 2009. Effects of high soybean oil for goats in late lactation on intake, milk composition and fatty acid profile. *Tropical and Subtropical Agroecosystems* 11:233-236.
- V. R. Gutta*, **G. Kannan**, J. H. Lee, B. Kouakou, and W. R. Getz, 2009. Influences of

short-term pre-slaughter dietary manipulation in sheep and goats on pH and microbial loads of gastrointestinal tract. *Small Ruminant Research* 81:21-28.

- D. A. Moore, T. H. Terrill, B. Kouakou, S. A. Shaik, J. A. Mosjidis, J. E. Miller, M. Vanguru*, **G. Kannan**, and J. M. Burke, 2008. The effects of feeding sericea lespedeza hay on growth rate of goats naturally infected with gastrointestinal nematodes. *Journal of Animal Science* 86:2328-2337.
- K. M. Gadiyaram*, **G. Kannan**, T. D. Pringle, B. Kouakou, K. W. McMillin, and Y. W. Park, 2008. Effects of postmortem carcass electrical stimulation on goat meat quality characteristics. *Small Ruminant Research* 78:106-114.
- J. H. Lee, B. Kouakou, **G. Kannan**, 2008. Chemical composition and quality characteristics of chevon from goats fed three different post-weaning diets. *Small Ruminant Research* 75:177-184.
- J. H. Lee, **G. Kannan**, K. R. Eega*, and W. R. Getz, 2008. Nutritional and quality characteristics of meat from goats and lambs finished under identical dietary regimen. *Small Ruminant Research* 74:255-259.
- B. Kouakou, O. S. Gazal, T. H. Terrill, **G. Kannan**, S. Gelaye, and E. A. Amoah, 2007. Digestibility, hormones and blood metabolites in dairy bucks subjected to underfeeding and refeeding. *Small Ruminant Research* 75:171-176.
- **G. Kannan**, T. H. Terrill, B. Kouakou, and S. Galipalli*, 2007. Blood metabolite changes and live weight loss following brown seaweed extract supplementation in goats subjected to stress. *Small Ruminant Research* 73:228-234.
- **G. Kannan**, K. E. Saker, T. H. Terrill, B. Kouakou, S. Galipalli*, and S. Gelaye, 2007. Effect of seaweed extract supplementation in goats exposed to simulated pre-slaughter stress. *Small Ruminant Research* 73:221-227.
- **G. Kannan**, A. K. Jenkins*, K. R. Eega*, B. Kouakou, and G. W. McCommon, 2007. Pre-harvest spray washing effects on physiological stress responses and skin and carcass microbial counts in goats. *Small Ruminant Research* 67:14-19.
- S. A. Shaik, T. H. Terrill, J. E. Miller, B. Kouakou, **G. Kannan**, R. M. Kaplan, J. M. Burke, and J. A. Mosjidis, 2006. Sericea lespedeza hay as a natural deworming agent against *Haemonchus contortus* infection in goats. *Veterinary Parasitology* 139:150-157.
- J. H. Lee, **G. Kannan** and B. Kouakou, 2006. Concentration and distribution of conjugated linoleic acids (CLA) and trans-fatty acids in small ruminant milk and meat lipids. *J. Food Lipids* 13:100-111.

- **G. Kannan**, G. M. Gadiyaram*, S. Galipalli*, A. K. Carmichael, B. Kouakou, T. D. Pringle, K. W. McMillin, and S. Gelaye, 2004. Meat quality in goats as influenced by dietary protein and energy levels and postmortem aging. *Small Ruminant Research* 61:45-52.
- B. Kouakou, S. Gelaye, **G. Kannan**, T. D. Pringle, and E. A. Amoah, 2004. Blood metabolites, meat quality and muscle calpain-calpastatin activities in goats treated with low doses of recombinant bovine somatotropin. *Small Ruminant Research* 57:203-212.
- S. A. Shaik, T. H. Terrill, J. E. Miller, B. Kouakou, **G. Kannan**, R. K. Kallu, and J. A. Mosjidis, 2004. Effects of feeding sericea lespedeza hay to goats infected with *Haemonchus contortus*. *South African Journal of Animal Science* 34(1):234-236.
- S. Galipalli*, K. M. Gadiyaram*, B. Kouakou, T. H. Terrill, and **G. Kannan**, 2004. Physiological responses to pre-slaughter transportation stress in Tasco-supplemented Boer goats. *South African Journal of Animal Science* 34(1):92-94.
- K. M. Gadiyaram* and **G. Kannan**, 2004. Comparison of textural properties of low-fat chevon, beef, pork, and mixed-meat sausages. *South African Journal of Animal Science* 34(1):168-170.
- S. Galipalli*, K. M. Gadiyaram, B. Kouakou, T. D. Pringle, and **G. Kannan**, 2004. Oxidative stability of chevon as influenced by dietary Tasco supplementation in Boer goats. *South African Journal of Animal Science* 34(1):171-173.
- **G. Kannan**, B. Kouakou, T. H. Terrill, and S. Gelaye, 2003. Endocrine, blood metabolite, and meat quality changes in goats as influenced by short-term, pre-slaughter stress. *Journal of Animal Science* 81:1499-1507.
- **G. Kannan**, T. H. Terrill, B. Kouakou, S. Gelaye, and E. A. Amoah, 2002. Simulated pre-slaughter holding and isolation effects on stress responses and live weight shrinkage in meat goats. *Journal of Animal Science* 80:1771-1780.
- **G. Kannan**, C. B. Chawan, B. Kouakou, and S. Gelaye, 2002. Influence of packaging method and storage time on shear value and mechanical strength of intramuscular connective tissue of chevon. *Journal of Animal Science* 80:2383-2389.
- **G. Kannan**, B. Kouakou, and S. Gelaye, 2001. Color changes reflecting myoglobin and lipid oxidation in chevon cuts during refrigerated display. *Small Ruminant Research* 42:67-75.
- **G. Kannan**, T. H. Terrill, B. Kouakou, O. S. Gazal, S. Gelaye, E. A. Amoah, and S.

Samake, 2000. Transportation of goats: effects on physiological stress responses and live weight loss. *Journal of Animal Science* 78:1450-1457.

- **G. Kannan**, J. L. Heath, C. J. Wabeck, S. L. Owens and J. A. Mench, 1998. Elevated plasma corticosterone concentrations influence the onset of rigor mortis and meat color in broilers. *Poultry Science* 77:322-328.
- **G. Kannan** and J. A. Mench, 1997. Prior handling does not significantly reduce the stress response to pre-slaughter handling in broiler chickens. *Applied Animal Behaviour Science* 51:87-99.
- **G. Kannan**, J. L. Heath, C. J. Wabeck and J. A. Mench, 1997. Shackling of broilers: effects on stress and meat quality characteristics. *British Poultry Science* 38:325-334.
- **G. Kannan**, J. L. Heath, C. J. Wabeck, M. C. P. Souza, J. C. Howe and J. A. Mench, 1997. Effects of crating and transport on stress and meat quality characteristics in broilers. *Poultry Science* 76:523-529.
- **G. Kannan** and J. A. Mench, 1996. Influence of different handling methods and crating periods on plasma corticosterone levels in broilers. *British Poultry Science* 37:21-31.
- M. Ramaswami, I. A. Jayaprasad, K. T. Radhakrishnan, and **G. Kannan** (1992). Influence of slaughter weight on fibre diameter, sarcomere length, shear force value, and tenderness score in Large White Yorkshire barrows. *Indian Journal of Animal Research* 26(2):67-74.
- **G. Kannan**, K. T. Radhakrishnan and A. M. Shanmugam, 1991. Effect of electrical stimulation on pH, water holding capacity, fiber diameter and sarcomere length of spent chicken carcasses. *Indian Veterinary Journal* 68:455-459.
- M. Ramaswami, I. A. Jayaprasad, A. M. Shanmugam, **G. Kannan**, 1991. Influence of slaughter weight on composition of *Longissimus dorsi* muscle in Large White Yorkshire barrows. *Journal of Veterinary and Animal Sciences* 22(2):21-24.

*Graduate students

Editor of Special Issues

- **G. Kannan** and G. C. Miranda-de la Lama, 2022. Special Topic: “Management Methods to Enhance Animal Welfare and Product Quality.” *Frontiers in Animal Science*.
- **G. Kannan** and Joan Burke, 2022. Special Topic: “Meat Goats vs. Hair Sheep vs. Wool Sheep – Which One Do You Want to Raise.” *Animals*.

Editorial

- **G. Kannan** and G. C. Miranda-de la Lama, 2023. Editorial: Management methods to enhance animal welfare and product quality. *Frontiers in Animal Science* 4:1215348. doi: 10.3389/fanim.2023.1215348

Book

- **G. Kannan** (Editor), 2025. *Small Ruminant Welfare, Production and Sustainability*. Elsevier, Inc., Cambridge, MA, ISBN 978-0-443-22201-6 (in production).

Book Chapters

- **G. Kannan**, 2025. Welfare issues related to small ruminant production and sustainability: An overview. In: *Small Ruminant Welfare Production and Sustainability*, G. Kannan (editor), Elsevier, Academic Press, Cambridge, MA. (in press)
- **G. Kannan** and Phaneendra Batchu, 2025. Omics approach for stress assessment in sheep and goats: A focus on metabolomics. In: *Small Ruminant Welfare Production and Sustainability*, G. Kannan (editor), Elsevier, Academic Press, Cambridge, MA. (in press)
- **G. Kannan**, P. Batchu, P. Gurrapu, and A. Shaik, 2025. *Staphylococcus aureus*. In: *The One Health Model as Applied to Zoonotic Diseases*, O. Samples, L. L. Stose, G. W. McCommon, T. H. Terrill (editors), John Wiley and Sons, Hoboken, NJ. (in press).
- **G. Kannan**, P. Batchu, A. Shaik, and P. Gurrapu, 2025. Campylobacteriosis. In: *The One Health Model as Applied to Zoonotic Diseases*, O. Samples, L. L. Stose, G. W. McCommon, T. H. Terrill (editors), John Wiley and Sons, Hoboken, NJ. (in press).
- P. Gurrapu, P. Batchu, A. Shaik, and **G. Kannan**, 2025. Tuberculosis. In: *The One Health Model as Applied to Zoonotic Diseases*, O. Samples, L. L. Stose, G. W. McCommon, T. H. Terrill (editors), John Wiley and Sons, Hoboken, NJ. (in press).
- P. Batchu, A. Shaik, P. Gurrapu, and **G. Kannan**, 2025. Anthrax. In: *The One Health Model as Applied to Zoonotic Diseases*, O. Samples, L. L. Stose, G. W. McCommon, T. H. Terrill (editors), John Wiley and Sons, Hoboken, NJ. (in press).
- Arshad Shaik, Priyanka Gurrapu, Phaneendra Batchu, and **Govind Kannan**, 2025. Hydatidosis. In: *The One Health Model as Applied to Zoonotic Diseases*, O. Samples, L. L. Stose, G. W. McCommon, T. H. Terrill (editors), John Wiley and Sons, Hoboken, NJ. (in press).
- **G. Kannan** and N. Whitley, 2022. Impact of COVID-19 on Meat Goat Operations in the

Southeastern US. In: *Goats of the World and World of Goats – Emerging from the Shadow of COVID-19*, Sandor Kukovics (Editor), IGA Virtual Conference, November 16, 2021, ISBN 978-615-01-3419-2, Published by Hungarian Sheep and Goat Dairying Public Utility Association, Herceghalom, Hungary, pp 19-23.

- **G. Kannan**, T. H. Terrill, B. Kouakou, and J. H. Lee, 2019. Dietary brown seaweed extract supplementation in small ruminants. In: *Medicinal Plants: Farm to Pharmacy*, N. Joshee, S. Dhekney, and P. Parajuli (Editors), Springer Publishing Company, New York, NY, pp 291-312.
- J. H. Lee and **G. Kannan**, 2012. Influence of diet on fatty acid composition of edible tissues of meat goat. In: *Goat Meat Production and Quality*, Osman Mahgoub, Isam Kadim, Edward Webb (ed.), CABI, Oxfordshire, UK, pp 250-259.
- **G. Kannan**, 2004. Goats: behavior, stress and management. *Encyclopedia of Animal Science*. W. G. Pond and N. Bell (ed.), Marcel Dekker, Inc., New York, NY, pp 482-485.

Proceedings

- H. L., Degala, J. R., Scott, P. Nakkiran, A. K. Mahapatra, and **G. Kannan**, 2016. Inactivation of *E. coli* O157:H7 on goat meat surface using ozonated water alone and in combination with electrolyzed oxidizing water. *ASABE* (Paper Number: 162462209):2-8. DOI: 10.13031/aim.20162462209
- G. S. Dykes, T. H. Terrill, S. A. Shaik, J. E. Miller, B. Kouakou, **G. Kannan**, J. M. Burke, R. M. Kaplan, and J. A. Mosjidis, 2006. Effect of sericea lespedeza hay on gastrointestinal nematode infection in goats. *Proceedings of the American Forage and Grassland Council Annual Meeting*, 10-14 March 2006, San Antonio, TX.
- S. A. Shaik, T. H. Terrill, J. E. Miller, B. Kouakou, **G. Kannan**, R. M. Kaplan, J. M. Burke, and J. A. Mosjidis, 2005. Anthelmintic effects of sericea lespedeza hay fed to goats infected with *Haemonchus contortus*. *Proceedings of the XX International Grassland Congress*, 26 June – 6 July 2005, Dublin, Ireland, page 223.
- **G. Kannan**, B. Kouakou, T. H. Terrill, and S. Gelaye, 2003. Pre-slaughter management and meat quality in goats. *Proceedings of the Scientific Conference on Goats*, Prairie View, TX, Pages 172-184.
- T. H. Terrill, B. Kouakou, **G. Kannan**, J. McBain, and S. Gelaye, 2000. Effect of weeds on forage preferences of goats. *Proceedings of the American Grassland Council 2000*, page 218.

Abstracts and Presentations

- T. H. Terrill, A. Siddique, T. T., Erukulla, P. Batchu, S. Chelkapally, D. Brown, K. Stegall, **G. Kannan**, A. Mahapatra, S. S. Panda, E. Morgan, and J. van Wyk, 2024. Evaluating the efficacy of bioelectrical impedance analysis using machine learning models for the classification of parasitized goats. *Journal Animal Science* 102 (Suppl. 3):458-459. doi:10.1093/jas/skaf234.518
- A. Naldurtiker*, A. Shaik*, P. Batchu*, B. Kouakou, T. H. Terrill, **G. Kannan**, 2022. Acute stress effects on physiological responses and meat quality changes in goats. *Journal of Animal Science* 100(3):301.
- P. Batchu*, A. Naldurtiker*, B. Kouakou, T. H. Terrill, and **G. Kannan**, 2022. Effects of habituation to livestock trailer and extended transportation on plasma metabolomic profiles in goats. *Journal of Animal Science* 100(3):309.
- P. Batchu*, A. Naldurtiker*, G. S. Dykes, B. Kouakou, T. H. Terrill, G. W. McCommon, **G. Kannan**, 2022. Conditioning of goats to livestock trailer: effects on physiological stress responses during long-distance transportation. *Journal of Animal Science* 100(3):301-302.
- P. Gurrapu*, P. Batchu*, A. Naldurtiker*, B. Kouakou, T. H. Terrill, and **G. Kannan**, 2022. Blood catecholamine profiling of transportation stress in goats previously habituated to livestock trailer. *Journal of Animal Science* 100(3):302.
- P. Gurrapu, P. Batchu, A. Naldurtiker, B. Kouakou, T. H. Terrill, and **G. Kannan**, 2022. Blood catecholamine profiling of transportation stress in goats previously habituated to livestock trailer. *2022 ASAS-CSAS Annual Meeting and Trade Show*, June 26-30, 2022, Oklahoma City, OK.
- A. Naldurtiker, A. Shaik, P. Batchu, B. Kouakou, T. H. Terrill, **G. Kannan**, 2022. Physiological and meat quality changes in response to acute stress in goats. Abstracts of the *20th ARD Biennial Research Symposium*, April 2-5, 2022, page 13.
- P. Batchu, A. Naldurtiker, G. S. Dykes, B. Kouakou, T. H. Terrill, G. W. McCommon, **G. Kannan**, 2022. Effects of habituation to livestock trailer on transportation stress in goats. Abstracts of the *20th ARD Biennial Research Symposium*, April 2-5, 2022, page 48.
- P. Gurrapu, P. Batchu, A. Naldurtiker, G. S. Dykes, B. Kouakou, T. H. Terrill, and **G. Kannan**, 2022. Excitable temperament influences physiological responses to stress in goats. Abstracts of the *20th ARD Biennial Research Symposium*, April 2-5, 2022, page 37.
- V. Bryant, M. Odowu, T. H. Terrill, Z. M. Estrada-Reyes, **G. Kannan**, B. Kouakou, I. Ogunade, and A. A. Pech-Cervantes, 2021. Effect of pre-slaughter transport stress on

carcass weight, rumen fermentation and bacterial community of goats. *Journal of Animal Science* 99(3): 484.

- A. Naldurtiker, P. Batchu, Z.M. Estrada-Reyes, B. Kouakou, T.H. Terrill, **G. Kannan**, 2020. Duration of preslaughter stress in winter on physiological responses and meat quality in goats. *American Society of Animal Science Annual Meetings*, Virtual, July 19-23, 2020.
- **G. Kannan**, P. Batchu, B. Kouakou, T.H. Terrill, and Z.M. Estrada-Reyes, 2020. Behavior of goats subjected to different social isolation treatments. *American Society of Animal Science Annual Meetings*, Virtual, July 19-23, 2020.
- **G. Kannan**, 2019. Brown seaweed extract supplementation in goats. *Abstracts of the American Society for Medicinally Active Plants Conference*, Dehradun, India.
- P. Batchu, T.M. Hazard, T. H. Terrill, B. Kouakou, J. H. Lee, and **G. Kannan**, 2019. Diet and preslaughter stress effects on gut microbial populations and meat quality characteristics in goats. *American Society of Animal Science Annual Meetings*, Austin, Texas, July 8–11, 2019.
- P. Batchu, T.M. Hazard, T. H. Terrill, B. Kouakou, J. H. Lee, and **G. Kannan**, 2019. Effects of diet and stress on gut microbial counts and meat quality in goats. *Abstracts of the Asian Regional Conference on Goats*. Chitwan, Nepal, October 20-23, 2019.
- **G. Kannan**, R. Gosukonda, and A. Mahapatra, 2018. Application of Artificial Neural Network to predict physiological stress responses in goats due to transportation. Abstract No. 468486. *American Society of Animal Science Annual Meetings*, Vancouver, Canada, July 8–12, 2018.
- R. Gosukonda, A. K. Mahapatra, H. L. Degala, and **G. Kannan**, 2018. Development of artificial neural network models to predict inactivation of *Escherichia coli* K12 on chevon due to non-thermal hurdle technologies. *American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting*, Detroit, MI, July 29-August 1.
- R. Arya, M. Bryant, H. L. Degala, and A. K. Mahapatra, and **G. Kannan**, 2018. Efficacy of pulsed UV-light in reducing *Escherichia coli* K12 on the surface of chevon. *American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting*, Detroit, MI, July 29-August 1.
- Arya, R., A. K. Mahapatra and **G. Kannan**, 2018. Pulsed ultraviolet-light (UV-light) to inactivate *Escherichia coli* (E. coli) K12 on goat meat surfaces. *Second Annual 1890 Association of Research Directors and U.S. Department of Agriculture's Agricultural Research Center Food Safety Consortium Symposium*, Beltsville, MD, April 23-25, 2018.

- R. Arya, A. K. Mahapatra, and **G. Kannan**, 2017. Comparing the Efficacy of Ultraviolet Light and Electrolyzed Acidic Water for Inactivating *Escherichia coli* O157:H7 on Goat Meat and Beef Surfaces. *Eighteenth Biennial ARD Research Symposium*, Atlanta, GA, April 1-4, 2017.
- M. Bryant, A. K. Mahapatra, and **G. Kannan**. 2017. Inactivation of *Escherichia coli* O157:H7 Using Electrolyzed Alkaline Water and Ultraviolet Light on Pork and Goat Meat. *Eighteenth Biennial ARD Research Symposium*, Atlanta, GA, April 1-4, 2017.
- H. L. Degala, A. K. Mahapatra, and **G. Kannan**. 2017. Combined Efficacy of Lemongrass Oil and UV-Light in Inactivating *Escherichia coli* O157:H7 on Goat Meat. *Eighteenth Biennial ARD Research Symposium*, Atlanta, GA, April 1-4, 2017.
- F. I., Rico Espinoza, X. Ma, H. L. Degala, A. K. Mahapatra, and **G. Kannan**. 2017. Antimicrobial Activity of Electrolyzed Alkaline Water Alone and in Combination with Ozonated Water on *Escherichia coli* O157:H7 on Goat Meat. *Eighteenth Biennial ARD Research Symposium*, Atlanta, GA, April 1-4, 2017.
- H. L. Degala, M. Bryant, R. Arya, A. K. Mahapatra, and **G. Kannan**. 2017. Activity of Electrolyzed Oxidizing Water against *E. coli* O157:H7 on Goat Meat. *Eighteenth Biennial ARD Research Symposium*, Atlanta, GA, April 1 - 4, 2017.
- H. L. Degala, A. K. Mahapatra, and **G. Kannan**, 2016. Ultraviolet light as a novel non-thermal approach for inactivation of foodborne pathogens in food industry: a review. ASABE Abstract No. 2461675. *American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting*, July 17-20, 2016, Orlando, FL.
- H. L. Degala, A. K. Mahapatra, and **G. Kannan**, 2016. Synergistic effects of UV-light and essential oil for inactivating *Escherichia coli* O157:H7 on goat meat. ASABE Abstract No. 2462401. *American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting*, July 17-20, 2016, Orlando, FL.
- H. L. Degala, J. R. Scott, P. Nakkiran, A. K. Mahapatra, and **G. Kannan**, 2016. Inactivation of *E. coli* O157:H7 on goat meat surface using ozonated water alone and in combination with electrolyzed oxidizing water. *American Society of Agricultural and Biological Engineers (ASABE) Paper No. 2462209*, St. Joseph, Michigan, 2016.
- J. H. Lee, C. Alfred, T. Witherspoon, B. B. Lemma, B. R. Min, **G. Kannan**, and B. Kouakou, 2015. Fatty acid composition of different fat depots from meat goats supplemented with either tannin-rich pine bark and sericea lespedeza alone or in combination. *Journal of Animal Science* 93 (Suppl. S3):169.

- T. Witherspoon, J. H. Lee, B. B. Lemma, B. R. Min, **G. Kannan**, and B. Kouakou, 2015. Influence of dietary condensed tannins from pine bark and/or sericea lespedeza on chemical composition and quality of goat meat. *Journal of Animal Science* 93 (Suppl. S3):169.
- B. B. Lemma, J. H. Lee, B. R. Min, **G. Kannan**, and B. Kouakou, 2015. Fatty acid composition of different fat depots from meat goats supplemented with tannin-rich pine bark. *Journal of Animal Science* 93 (Suppl. S3):169.
- B. B. Lemma, J. H. Lee, S. A. Wildeus, **G. Kannan**, and B. Kouakou, 2015. Chemical composition and quality of fresh lamb from rationally grazed hair and wool x hair sheep lambs as influenced by soy hull supplementation. *Journal of Animal Science* 93 (Suppl. S3):168.
- B. B. Lemma, J. H. Lee, S. A. Wildeus, B. Kouakou, and **G. Kannan**, 2015. Fatty acid composition of different fat depots from hair and wool x hair sheep supplemented with soy hull on pasture. *Journal of Animal Science* 93 (Suppl. S3):791.
- J. O. Jones, J. H. Lee, B. R. Min, **G. Kannan**, and B. Kouakou, 2015. Quality parameters of goat meat as influenced by dietary condensed tannins from pine bark. *Journal of Animal Science* 93 (Suppl. S3):791.
- S. L. Konkayala, A. K. Mahapatra, P. N. Bumpus, S. A. Ibrahim, and **G. Kannan**, 2015. Effectiveness of copper and organic acids in reducing *E. coli* O157:H7 on goat meat. *ARD Food Safety Symposium*, USDA-ARS-Beltsville Ag Research Center, March 24-26, 2015.
- S. L. Konkayala, A. K. Mahapatra, P. N. Bumpus, S. A. Ibrahim, and **G. Kannan**, 2015. Inactivation of *Escherichia coli* O157:H7 on the surface of goat meat using copper and organic acids alone and in binary combination. *2015 ASABE Annual International Meeting* in New Orleans, LA, July 26-29, 2015.
- C. Harris*, A. K. Mahapatra, **G. Kannan**, and J. H. Lee, 2013. Impact of spray washing of goats and goat carcasses on microbial counts. Abstracts of the ADSA-ASAS Joint Annual Meetings, Indianapolis, IN. *Journal of Animal Science* (Suppl. 1), Abstract No. TH395.
- B. B. Lemma, J. H. Lee, **G. Kannan**, B. Kouakou, B. Min, and R. Pace, 2013. Volatile compounds and fatty acid profiles of restructured chevon jerky as influenced by sodium nitrite. *IFT Annual Meeting & Food Expo*, Chicago, IL, July 2013.
- B. B. Lemma, C. Felton, J. H. Lee, **G. Kannan**, and B. Kouakou, 2013. Monitoring physicochemical properties of restructured chevon jerky processed under non-commercial condition. *Seventeenth Biennial ARD Research Symposium*, Jacksonville, FL, April 7-10,

2013, page 185.

- L. Hill, A. K. Mahapatra, and **G. Kannan**, 2013. Use of ultraviolet light for inactivation of foodborne microorganisms: a review. *Seventeenth Biennial ARD Research Symposium*, Jacksonville, FL, April 7-10, 2013, page 64.
- C. Harris*, A. K. Mahapatra, **G. Kannan**, J. H. Lee, and B. Kouakou, 2013. Surface decontamination of goat skin and carcasses using innovative pre-slaughter spray-washing. *Seventeenth Biennial ARD Research Symposium*, Jacksonville, FL, April 7-10, 2013, page 64.
- B. Kouakou, D. R. Marable, **G. Kannan**, 2012. Assessment of cortisol and thyroid hormones (T3 and T4) in mature and young dairy and meat goats. Abstracts of the *XI International Conference on Goats*, Gran Canaria, Spain, Page 56.
- W. R. Getz, T. Waldrop, T. Harris, R. Silcox, H. K. Shultz, and **G. Kannan**, 2012. Growth and educational role of 4-H and FFA youth market goat projects: a case study from Georgia, USA. Abstracts of the *XI International Conference on Goats*, Gran Canaria, Spain, page 56.
- L. Alford, J. H. Lee, **G. Kannan**, and B. Kouakou, 2012. Quality characteristics of restructured chevon jerky as influenced by addition of sodium nitrite. Abstracts of the *XI International Conference on Goats*, Gran Canaria, Spain, page 231.
- **G. Kannan**, J. H. Lee, and B. Kouakou, 2012. Chevon quality enhancement: trends in pre- and post-slaughter methodologies to enhance goat meat quality. (Invited Presentation) Abstracts of the *XI International Conference on Goats*, Gran Canaria, Spain, page 17.
- A. Mechineni, S. Gujja, D. S. Kommuru, T. H. Terrill, **G. Kannan**, B. Kouakou, and J. H. Lee, 2011. Influence of type of pasture and transport stress on microbial loads in meat goats. *Journal of Animal Science* 89 (E - Supplement 1):398-399.
- L. J. Alford*, A. K. Mahapatra, D. L. Harris, and **G. Kannan**, 2011. Reduction of E. coli O157:H7 on beef surfaces using a household steam cleaner. *Sixteenth Biennial ARD Research Symposium*, Atlanta, GA, April 9-13, 2011.
- A. K. Mahapatra, D. L. Harris, T. H. Terrill, B. Kouakou, and **G. Kannan**, 2011. Physical and thermal properties of sericea lespedeza pellets. *Sixteenth Biennial ARD Research Symposium*, Atlanta, GA, April 9-13, 2011.
- M. Singh, X. Ma, S. Richardson, E. A. Amoah, and **G. Kannan**, 2011. Recovery of live fibroblast-like cells in sheep at different times postmortem. *Sixteenth Biennial ARD Research Symposium*, Atlanta, GA, April 9-13, 2011.

- **G. Kannan**, J. H. Lee, T. D. Pringle, B. Kouakou, and K. W. McMillin, 2011. Effects of calcium chloride injection on tenderness and flavor of chevon cuts. Presented at the 10th *International Conference on Goats*, Recife, Brazil, September 2010.
- M. Singh, A. Sharma, X. Ma, E. A. Amoah and **G. Kannan**, 2010. Construction of a goat myostatin gene promoter-GFP translational fusion to study promoter regulation. *Journal of Animal Science* 88 (E-Suppl. 3): 8.
- M. Singh, E. A. Amoah, **G. Kannan**, S. L. Stice, and D. M. Donovan, 2009. Genome walk of an unknown upstream region of myostatin gene in Spanish goats. Presented at the *Keystone Symposia on Molecular and Cellular Biology*, Santa Fe, NM, Abstract No. 219, page 65.
- B. L. Jones, A. K. Mahapatra, C. N. Nguyen, and **G. Kannan**, 2009. The use of low voltage alternating current for controlling E. coli on beef. *ARD Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009, page 224.
- A. K. Mahapatra, C. N. Nguyen, and **G. Kannan**, 2009. Reduction of E. coli O157:H7 on beef surfaces using low voltage direct current. *Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009, page 214.
- A. K. Mahapatra, D. Harris, R. Drake, C. N. Nguyen, and **G. Kannan**, 2009. Evaluation of an IUL Flash & Go Automated Colony Counter. *Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009, page 214.
- **G. Kannan**, J. H. Lee, B. Kouakou, and T. H. Terrill, 2009. Influence of feeding sericea lespedeza hay on nutritional and flavor profile of chevon. *Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009, page 213.
- W. R. Getz, S. Mobini, S. Gelaye, **G. Kannan**, R. Vann, and T. Hollis, 2009. Influence of breed and year on average daily gain, scrotal circumference, and ultrasound ribeye area among bucks in the Georgia and Southeast Meat Goat Buck Performance Evaluation Program. *Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009, page 202.
- M. Singh, E. A. Amoah, **G. Kannan**, T. H. Terrill, 2009. Cloning and partial characterization of the upstream promoter region of the myostatin gene in Spanish goats. *Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009, page 107.
- H. Williams, B. Kouakou, J. H. Lee, and **G. Kannan**, 2009. High dietary soybean oil for goats in late lactation on intake, to improve milk fatty acid profile. *Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009, page 85.

- M. Vanguru*, **G. Kannan**, J. H. Lee, T. H. Terrill, and B. Kouakou, 2009. Influence of feed deprivation time on physiological responses and microbial loads in meat goats. *Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009, page 71.
- T. Broussard, B. Kouakou, J. H. Lee, T. H. Terrill, and **G. Kannan**, 2009. The effects of replacing alfalfa hay by sericea lespedeza on goat milk fat composition. *Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009, page 64.
- W. Nourira, J. H. Lee, T. H. Terrill, **G. Kannan**, and Y. W. Park, 2009. Evaluation of characteristics of total fatty acid profiles of reduced-fat and whole goat milk cheeses during three months aging. *World Dairy Summit* hosted by International Dairy Federation, Berlin, Germany, September 20-25, 2009.
- M. Vanguru*, J. H. Lee, **G. Kannan**, T. H. Terrill, and B. Kouakou. 2009. Influence of feed deprivation time on physiological responses and microbial loads in meat goats. *Journal of Animal Science* 87 (Suppl. 2):482. (Abstr.).
- W. Nourira, Z. Guler, J. H. Lee, T. H. Terrill, **G. Kannan**, and Y. W. Park. 2009. Comparison of mono- and poly-unsaturated fatty acid compositions between reduced-fat and full-fat goat milk cheeses during three months aging. Abstract #438. *Journal of Dairy Science* Vol. 92. E-Suppl. page 364.
- A. K. Mahapatra, C. N. Nguyen, and **G. Kannan**, 2008. Reduction of E. coli O157:H7 on beef surface with pulsed de square wave signal. Submitted to the *American Society of Agricultural & Biological Engineers (ASABE)* International Meeting (Providence, Rhode Island, June 29-July 2, 2008).
- J. H. Lee, D. A. Moore, M. Vanguru*, B. Kouakou, T. H. Terrill, and **G. Kannan**. Influence of dietary condensed tannins on gastrointestinal tract, skin, and carcass bacterial counts in meat goats. Abstracts of the ADSA/ASAS/PSA Joint meeting, July 2007, San Antonio, TX. *Journal of Animal Science* 85(1):505.
- M. Vanguru*, J. H. Lee, D. A. Moore, B. Kouakou, T. H. Terrill, and **G. Kannan**. Chemical composition and quality of chevon as influenced by a diet high in condensed tannins. Abstracts of the ADSA/ASAS/PSA Joint meeting, July 2007, San Antonio, TX. *Journal of Animal Science* 85(1):504.
- K. R. Eega*, J. H. Lee, M. B. Solomon, T. D. Pringle, K. W. McMillin, and **G. Kannan**. Quality characteristics of jerky made from Hydrodynamic Pressure processed (HDP) chevon and beef. Abstracts of the ADSA/ASAS/PSA Joint meeting, July 2007, San Antonio, TX. *Journal of Animal Science* 85(1):504.

- K. R. Eega*, J. H. Lee, M. B. Solomon, T. D. Pringle, K. W. McMillin, and **G. Kannan**. Effect of Hydrodynamic Pressure Processing on chevon quality characteristics. Abstracts of the ADSA/ASAS/PSA Joint meeting, July 2007, San Antonio, TX. *Journal of Animal Science* 85(1):504.
- J. H. Lee, B. Kouakou, and **G. Kannan**. Dietary regimen and gastrointestinal tract microbial loads in meat goats. Abstracts of the ADSA/ASAS/PSA Joint meeting, July 2007, San Antonio, TX. *Journal of Animal Science* 85(1):505-506.
- B. Kouakou, **G. Kannan**, J. H. Lee and T. H. Terrill. Effects of Alfalfa Hay and/or Concentrate Diets on Growth, Organ Mass, Blood and Muscle Metabolites, and Volatile Fatty Acids in Boer x Spanish Male kids. Abstracts of the ADSA/ASAS/PSA Joint meeting, July 2007, San Antonio, TX. *Journal of Animal Science* 85(1):294.
- J. H. Lee, **G. Kannan**, T. D. Pringle, B. Kouakou, and K. W. McMillin, 2007. Tenderness and flavor of goat meat cuts injected with calcium chloride solution. Abstract submitted to the *IFT Meetings*, Chicago, IL, July 28-August 1, 2007.
- K. Mahapatra, C. N. Nguyen, and **G. Kannan**. Electrical Resistivity of Beef. Abstract presented at the *American Society of Agricultural and Biological Engineers (ASABE) Annual International Meeting*, Minneapolis, MN, June 17-20, 2007.
- M. Marshall, B. Kouakou, **G. Kannan**, J. H. Lee and T. H. Terrill, 2006. Effects of hay and/or concentrate diets on growth, and rumen, liver, and muscle metabolites in Boer x Spanish male kids. *Proceedings of the Biennial ARD Research Symposium*, Atlanta, GA.
- **G. Kannan**, K. R. Eega*, J. H. Lee, B. Kouakou and T. H. Terrill, 2006. Effects of dietary brown seaweed extract supplementation and chlorinated wash on skin and carcass *E. coli* contamination in goats. *Proceedings of the Biennial ARD Research Symposium*, Atlanta, GA., page 291.
- K. R. Eega*, J. H. Lee, **G. Kannan**, B. Kouakou and W. R. Getz, 2006. Chevon quality characteristics compared to lamb. *Abstracts of the Biennial ARD Research Symposium*, Atlanta, GA., page 72.
- D. V. Marable, J. H. Lee, **G. Kannan**, K. R. Eega*, B. Kouakou and W. R. Getz, 2006. Fatty acid composition of chevon compared to lamb. *Proceedings of the Biennial ARD Research Symposium*, Atlanta, GA., page 51.
- **G. Kannan**, K. R. Eega*, J. H. Lee, B. Kouakou, and T. H. Terrill, 2006. Reduction of skin and carcass *E. coli* contamination in goats by dietary brown seaweed extract supplementation and chlorinated wash. ASAS Meetings, Minneapolis, MN, July 7-12, 2006. *Journal of Animal Science* 84(1):325.

- J. H. Lee, B. Kouakou, K. R. Eega*, and **G. Kannan**, 2006. Effects of diet on chemical composition and meat quality in goats. ASAS Meetings, Minneapolis, MN, July 7-12, 2006. *Journal of Animal Science* 84(1):325.
- K. R. Eega*, J. H. Lee, **G. Kannan**, B. Kouakou and W. R. Getz, 2006. Comparison of quality characteristics of chevon and lamb. ASAS Meetings, Minneapolis, MN, July 7-12, 2006. *Journal of Animal Science* 84(1):324.
- S. A. Shaik, T. H. Terrill, J. E. Miller, B. Kouakou, **G. Kannan**, R. M. Kaplan, J. M. Burke, and J. A. Mosjidis, 2005. Effects of feeding sericea lespedeza hay to goats infected with *Haemonchus contortus*. *4th International Conference on Novel Approaches to the Control of Helminth Parasites of Livestock*, 10-12 January, 2005, Merida, Yucatan, Mexico, page 37.
- J. H. Lee, **G. Kannan**, K. R. Eega*, B. Kouakou, W. R. Getz, and Y. W. Park, 2005. Distribution of conjugated linoleic acids and trans-fatty acids in sheep and goat longissimus muscles. *Journal of Animal Science* 83(1):151.
- S. A. Shaik, T. H. Terrill, J. E. Miller, B. Kouakou, **G. Kannan**, R. M. Kaplan, J. M. Burke, and J. A. Mosjidis, 2005. Effects of feeding sericea lespedeza hay to goats infected with *Haemonchus contortus*. *Abstracts of the ASAS Southern Section Meetings*, Little Rock, AR, page 3.
- K. R. Eega*, K. M. Gadiyaram*, **G. Kannan**, V. R. Gutta*, T. D. Pringle, K. W. McMillin, 2005. Objective and subjective evaluations of value-added chevon and beef products. *Abstracts of the ASAS Southern Section Meetings*, Little Rock, AR, page 17.
- **G. Kannan**, M. C. Nelson, T. E. Hollis, T. D. Pringle, K. W. McMillin, 2005. Demographic factors influencing consumer preference of chevon products. *Abstracts of the ASAS Southern Section Meetings*, Little Rock, AR, page 16.
- K. M. Gadiyaram*, **G. Kannan**, S. Galipalli*, T. D. Pringle, and K. W. McMillin, 2005. Effects of breed and carcass electrical stimulation on meat quality characteristics in goats. *Abstracts of the ASAS Southern Section Meetings*, Little Rock, AR, page 16.
- J. Hagerman*, **G. Kannan**, K. R. Eega*, B. Kouakou, and G. W. McCommon, 2005. Pre-harvest spray washing of goats: effects on stress responses and bacterial counts on skin and carcass surfaces. *Abstracts of the ASAS Southern Section Meetings*, Little Rock, AR, page 16.

- V. R. Gutta*, **G. Kannan**, B. Kouakou, K. M. Gadiyaram*, W. R. Getz, G. W. McCommon, and Y. Lan, 2004. Influence of diet and gutfill on blood metabolites and fecal shedding of *E. coli* in sheep and goats. *Journal of Animal Science* 82(1):354.
- S. A. Shaik, T. H. Terrill, J. E. Miller, B. Kouakou, **G. Kannan**, R. K. Kallu, and J. A. Mosjidis, 2004. Effects of feeding sericea lespedeza hay to goats infected with *Haemonchus contortus*. *Abstracts of the Eighth International Conference on Goats*, Pretoria, South Africa, page 80.
- S. Galipalli*, K. M. Gadiyaram*, B. Kouakou, T. H. Terrill, and **G. Kannan**, 2004. Physiological responses to pre-slaughter transportation stress in Tasco-supplemented Boer goats. *Abstracts of the Eighth International Conference on Goats*, Pretoria, South Africa, page 136.
- K. M. Gadiyaram* and **G. Kannan**, 2004. Comparison of textural properties of low-fat chevon, beef, pork, and mixed-meat sausages. *Abstracts of the Eighth International Conference on Goats*, Pretoria, South Africa, page 43.
- S. Galipalli*, K. M. Gadiyaram, B. Kouakou, T. D. Pringle, and **G. Kannan**, 2004. Oxidative stability of chevon as influenced by dietary Tasco supplementation in Boer goats. *Abstracts of the Eighth International Conference on Goats*, Pretoria, South Africa, page 43.
- **G. Kannan** and K. M. Gadiyaram*, 2003. Texture profile analysis of low-fat chevon, beef, and pork sausages. *Proceedings of the Thirteenth Biennial ARD Research Symposium*, Atlanta, GA, page 177.
- A. K. Carmichael, B. Kouakou, S. Gelaye, **G. Kannan**, and T. H. Terrill, 2003. Blood metabolites and visceral organ composition in growing castrated dairy goats. *Proceedings of the Thirteenth Biennial ARD Research Symposium*, Atlanta, GA, page 60.
- S. Galipalli*, **G. Kannan**, K. E. Saker, T. H. Terrill, B. Kouakou, S. Gelaye, and K. M. Gadiyaram*, 2003. Tasco seaweed extract supplementation increases antioxidant status in stressed goats. *Proceedings of the Thirteenth Biennial ARD Research Symposium*, Atlanta, GA, page 46.
- K. M. Gadiyaram*, S. Galipalli*, **G. Kannan**, A. Carmichael, B. Kouakou, T. D. Pringle, K. W. McMillin, and S. Gelaye, 2003. Influence of diet and postmortem aging time on meat quality in goats. *Proceedings of the Thirteenth Biennial ARD Research Symposium*, Atlanta, GA, page 46.

- C. Mweemba, R. Eckhart, **G. Kannan**, R. A. Kircher, and T. H. Terrill, 2003. Effect of gastrointestinal nematode infection on stress responses in goats. *Proceedings of the Thirteenth Biennial ARD Research Symposium*, Atlanta, GA, page 43.
- A. K. Carmichael, B. Kouakou, S. Gelaye, **G. Kannan** and T. H. Terrill, 2003. Performance, blood metabolites and visceral organ mass and composition in growing castrated dairy goats. *Abstracts of the Southern Section ASAS Meetings*, Mobile, AL, page 29.
- S. Galipalli*, **G. Kannan**, K. E. Saker, T. H. Terrill, B. Kouakou, S. Gelaye and K. M. Gadiyaram*, 2003. Effect of Tasco seaweed extract supplementation on plasma cortisol and antioxidant enzyme activities in goats subjected to transportation stress. *Abstracts of the Southern Section ASAS Meetings*, Mobile, AL, page 25.
- K. M. Gadiyaram*, S. Galipalli*, **G. Kannan**, A. K. Carmichael, B. Kouakou, T. D. Pringle, K. W. McMillin, S. Gelaye and T. H. Terrill, 2003. Goat meat quality characteristics as influenced by diet and postmortem aging time. *Abstracts of the Southern Section ASAS Meetings*, Mobile, AL, page 24.
- **G. Kannan**, B. Kouakou, T. H. Terrill, and S. Gelaye, 2002. Pre-slaughter management and meat quality in goats. *Scientific Conference on Goats*, Prairie View A&M University, Prairie View, TX, page 171.
- **G. Kannan**, T. H. Terrill, B. Kouakou, S. Galipalli*, K. E. Saker, R. A. Kircher, S. Gelaye, and K. M. Gadiyaram*, 2002. Physiological responses, immune function, and live weight shrinkage due to simulated pre-slaughter stress in goats fed a diet (Tasco) containing seaweed extract. *Journal of Animal Science* 80(1):293.
- B. Kouakou, S. Gelaye, **G. Kannan**, T. D. Pringle, T. H. Terrill, and E. A. Amoah, 2002. Blood metabolites, visceral organ mass, meat quality, and calpain system in goats treated with low doses of bovine somatotropin hormone. *Journal of Animal Science* 80(1):291.
- **G. Kannan**, T. H. Terrill, B. Kouakou, S. Miller, S. Gelaye, and E. A. Amoah, 2001. Effects of simulated pre-slaughter holding and isolation on stress responses and live weight shrinkage in goats. *Journal of Animal Science* 79(1):279.
- B. Kouakou, S. Gelaye, **G. Kannan**, T. H. Terrill, E. A. Amoah, and S. Miller, 2001. The effect of hay and/or concentrate on performance, organ mass, blood metabolites and hormones in weaned kids. *Journal of Animal Science* 79(1):446.
- **G. Kannan**, B. Kouakou, T. H. Terrill, S. Gelaye, and E. A. Amoah, 2001. Pre-slaughter stress effects on physiological responses and meat quality characteristics in goats. *Journal of Animal Science* 79(1):447.

- T. H. Terrill, B. Kouakou, **G. Kannan**, J. McBain, and S. Gelaye, 2000. Effect of weeds on forage preferences of goats. *Proceedings of the American Grassland Council 2000*, page 218.
- D. R. Marable, B. Kouakou, O. S. Gazal, T. H. Terrill, **G. Kannan**, S. Gelaye, and E. A. Amoah, 2000. Plane of nutrition and blood metabolite concentration in goats. *Proceedings of the Twelfth Biennial ARD Research Symposium*, Washington, D. C., page 34.
- B. Kouakou, S. Gelaye, O. S. Gazal, **G. Kannan**, T. H. Terrill, and E. A. Amoah, 2000. Effects of physiological status and energy intake on cortisol and thyroid hormones and blood metabolites in dairy goats. *Journal of Animal Science* 78(1):128.
- U. L. Marable, **G. Kannan**, B. Kouakou, G. Gelaye, and T. H. Terrill, 2000. Oxidative stability of fresh and processed chevon. *Proceedings of the Twelfth Biennial ARD Research Symposium*, Washington, D. C., page 34.
- **G. Kannan**, C. B. Chawan, B. Kouakou, and S. Gelaye, 2000. Changes in Warner-Bratzler shear values and mechanical strength of intramuscular connective tissue of chevon due to storage condition. *Journal of Animal Science* 78(1):128.
- B. Kouakou, O. S. Gazal, T. H. Terrill, **G. Kannan**, S. Gelaye, and E. A. Amoah, 1999. Effects of plane of nutrition on blood metabolites and hormone concentration in goats. *Journal of Animal Science* 77(1):267.
- **G. Kannan**, T. H. Terrill, B. Kouakou, O. Gazal, S. Gelaye, E. A. Amoah, S. Miller, and W. R. Getz, 1999. Physiological stress responses in Spanish goats due to transportation and holding. *Journal of Animal Science* 77(1):25.
- **G. Kannan**, B. Kouakou, S. Gelaye and T. H. Terrill, 1999. Color and tenderness of case-ready chevon cuts as influenced by storage time. *Journal of Animal Science* 77(1):170.
- **G. Kannan** and J. A. Mench, 1995. Welfare aspects of shackling in broilers. Presented at the *North American Symposium on Poultry Welfare*, University of Alberta, Edmonton, Alberta, Canada.
- **G. Kannan** and J. A. Mench, 1995. Effects of regular handling on stress in broilers. *Poultry Science* 74(1):93.
- **G. Kannan**, J. A. Mench and J. L. Heath, 1995. Transportation effects on stress and meat quality in broilers. *Poultry Science* 74(1):32.
- **G. Kannan**, J. A. Mench and J. L. Heath, 1994. Effect of holding time on stress and meat

quality in broilers. Presented at the *North American Symposium on Applied Ethology*, University of Guelph, Ontario, Canada.

- **G. Kannan**, J. A. Mench and J. L. Heath, 1994. Effect of holding time on stress and meat quality characteristics in broilers. *Poultry Science* 73(1):85.

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Creative Contributions Other Than Formal Publications

- A. Naldurtiker, P. Batchu, B. Kouakou, T. H. Terrill, A. Shaik, and **G. Kannan**, 2022. RNA-Seq exploration of the influence of stress on meat quality in Spanish goats. *Gene Expression Omnibus (GEO) Accession Number: GSE210823*.
- A. Naldurtiker, P. Batchu, B. Kouakou, T. H. Terrill, G. W. McCommon, and **G. Kannan**, 2022. Transcriptomic analysis of acute stress in goats. *Gene Expression Omnibus (GEO) Accession Number: GSE210841*.
- S. Daley-Laursen, A. Campa, **G. Kannan**, D. Villwock, J. Goodman, M. Oltrogge, and R. Gaussoin, 2017. *NAREEE Advisory Board Report: Relevance and Adequacy Review – Responding to Climate Variability*.
- M. R. McLellan, P. Brannon, A. Campa, C. Castille, S. Daley-Laursen, R. Gaussoin, **G. Kannan**, M. Lawrence, and D. Thilmany, 2017. *NAREEE Advisory Board – Science Advisory Council Report: Use of Gene Editing in USDA Research*.
- S. Daley-Laursen, C. Castille, **G. Kannan**, M. McLellan, and D. Thilmany, 2014. *NAREEE Advisory Board – Data Management Working Group Report: Recommendations on Open Data, Big Data, and Data Management within USDA and Between USDA and its Partners*.
- **G. Kannan**, 2017. White Paper – FVSU Center for Agricultural Innovation and Entrepreneurship.
- W. R. Getz and **G. Kannan**, 2009. Goat meat grades and carcass value. *GSRREC Newsletter*, Spring 2009.
- **G. Kannan**, 2009. Seaweed extract supplementation can improve food safety and profitability in goats and sheep. *GSRREC Newsletter*, Spring 2009.
- M. Singh, E. A. Amoah, **G. Kannan**, S. Stice, D. Donovan, 2009. Title: Capra Hircus upstream genome sequence region of myostatin gene. *NIH GenBank Accession Number: GQ121039*.

- **G. Kannan**, B. Kouakou, and T. H. Terrill, 2006. Final Report: Prevention of *E. coli* contamination of goat carcasses by reducing fecal pathogen counts on skin. Submitted to USDA/FSIS.
- **G. Kannan** and B. Kouakou, 2005. Final Report: Pathogen reduction in goat carcasses by controlling pre-slaughter gut-fill and fecal contamination of skin/hair. Submitted to USDA/FSIS.
- **G. Kannan**, V. R. Gutta, B. Kouakou, and W. R. Getz, 2004. Pre-harvest diet management can reduce bacterial shedding in sheep and goats. *GSRREC Newsletter, Spring 2005*.
- **G. Kannan**, 1999. Transportation stress affects profitability and product quality. *GSRREC Newsletter*, Vol.10, No.2.
- **G. Kannan**, 1999. Sanitation Standard Operating Procedures (SSOPs) and Good Manufacturing Procedures (GMPs) for FVSU Slaughter and Meat Processing Facility.
- **G. Kannan**, 1999. Hazard Analysis and Critical Control Points (HACCP) Plans for FVSU Slaughter and Meat Processing Facility.

INVITED PRESENTATIONS (Selected)

- **G. Kannan**, 2019. Management of goats prior to processing to minimize animal stress and meat quality defects. *Nepal Agricultural Research Council*, Kathmandu, Nepal.
- **G. Kannan**, 2019. Brown seaweed extract supplementation in goats. Keynote presentation at the *American Society for Medicinally Active Plants Conference* in Dehradun, India.
- **G. Kannan**, 2012. Sustainable agriculture initiatives at FVSU. Keynote presentation at the *Mini-Summit on Agricultural Research*, Qingdao, China.
- **G. Kannan**, 2012. Chevon quality enhancement: pre- and post-slaughter methodologies. *XI International Conference on Goats*, Canary Islands, Spain.
- **G. Kannan**, 2009. “Multi-Institutional Research on Small Ruminants: A Success Story.” Plenary Session Speaker at the *Fifteenth Biennial ARD Research Symposium*, March 28-April 1, 2009.
- **G. Kannan**, 2008. Pre-slaughter management of goats in high-land regions of Ethiopia. Debra Zeit, Ethiopia.

- **G. Kannan**, 2002. Pre-slaughter management and meat quality in goats. *Scientific Goat Conference on Goats 2002*, Prairie View, TX.
- **G. Kannan**, 1999. The impact of HACCP system on very small meat operations. *Ag Showcase'99*, Georgia.
- **G. Kannan**, 1999. Goat meat quality as influenced by breed, age and sex. *Washington County Goatarama Festival 1999*, Georgia.

WORKSHOPS AND TRAININGS (Selected)

Conducted

- Co-Organized 3 workshops of meat goat producers in 2020-2021.
- Conducted a national workshop in Mojo, Ethiopia, on Goat Meat Quality Assessment and Food Safety under the USAID Sheep and Goat Productivity Improvement Program (Lead Institution: Langston University), March 2008.
- Conducted a workshop entitled “Food Safety at Retail” sponsored by FVSU and USDA/FSIS, August 27-28, 2002.
- Conducted a workshop entitled “HACCP System: An Update” sponsored by FVSU and USDA/CSREES, January 23-24, 2001.
- Conducted a HACCP Workshop sponsored by Georgia Small Ruminant Research and Extension Center, FVSU and USDA/FSIS, November 23-24, 1999.
- Coordinated a Hazard Analysis and Critical Control Points (HACCP) Workshop under the Small Plant Demonstration Project, sponsored by College of Agriculture, Home Economics and Allied Programs, FVSU and USDA/FSIS, September 1-2, 1998.

Attended

- Unified AV System’s Smart Training Program, February 15, 2013, FVSU.
- New Dean’s Orientation Program, Washington DC, 2009.
- IACUC 101 Training at San Diego, CA, 2007.
- USDA/CSREES Grantsmanship Workshop, USDA/CSREES, September 6, 2006, Washington, DC.

- Writing Winning Grants – Workshop, USDA/CSREES, September 7, 2006, Washington DC.
- Faculty Web Training, December 7, 2006, FVSU.
- GC-MS – Training at FVSU, September 18-20, 2006.
- Compusense – Sensory Analysis Workshop, 2004, FVSU.
- IACUC Training conducted by USDA/APHIS, December 1, 2004, FVSU.
- SAS Mixed Model Workshop, Annual American Society of Animal Science meetings, July 24-28, 2000, Baltimore, MD.
- Workshop on Keeping Your PC Fine Tuned, Fall Faculty Institute 2000, FVSU.
- Multimedia Workshops I and II on PowerPoint Presentations, 1999, FVSU.
- Workshop on Frontpage, Online Courses, and Eudora, Fall Faculty Institute 1999, FVSU.
- Basic Hazardous Material - Right To Know, April 1999, FVSU.
- Dairy Goat Workshop, December 1999, FVSU.

SERVICE

Service to the Department/Major (Selected)

- Undergraduate Program Coordinator
- Graduate Program Coordinator
- Member of Graduate Advisory Council.
- Developed two white papers on Food Safety Education and Poultry Research Program.
- Advised one high school student every year from the Summer Research Apprenticeship Program.
- Advised one student every year from the Bridges Program.
- Several undergraduate and graduate students won awards at professional society

conferences.

- Served as faculty advisor for Animal Science Student Club.

Recruitment Efforts (Selected)

- Traveled to several universities and high schools for recruitment purposes.
- Participated in FVSU Preview Days and Open Houses.
- Attended several student club meetings and urged students to be engaged in recruitment efforts.
- Contacted prospective students by mail, e-mail, and phone.
- Conducted tours of facilities for several prospective students.

University Service (Selected)

- Co-Chair, Screening Committee for FVSU Provost and Vice President for Academic Affairs.
- Chair, Implementation Leaders Group, FVSU Strategic Plan Priority 4: Engagement and Collaboration.
- Member of the FVSU Strategic Planning Committee for 2020-2025.
- Chair, Engagement and Collaboration Workgroup of the Strategic Planning Committee.
- Chair, FVSU Master Planning Committee.
- Chair, Agricultural and Laboratory Animal Care and Use Committee.
- Chair, Biotechnology Building Final Planning Committee.
- Key Note Speaker at 2011 AgriDemic Forum Awards Banquet.
- Appointed by the Chancellor, University System of Georgia, to serve on FVSU Presidential Search Committee – 2005.
- Member of the University Curriculum Committee.

- Member of the College Curriculum Committee.
- Member of the University SAFE Committee.
- Member of the Biosafety Committee.
- Member of the Graduate College Recruitment Committee.
- Member of the College of Agriculture Recruitment Committee.
- Member of Graduate Council.
- Member of Ag Council.
- Appointed by the VPAA to serve on the Feeder Program Committee.
- Member of the Honors Program Council.
- Faculty Senator
- Member of Strategic Planning Committee, College of Graduate Studies and Extended Education.
- Member of Curriculum Committee, College of Agriculture, Home Economics and Allied Programs.
- Member of Ad Hoc Graduate Grievance Committee, College of Graduate Studies and Extended Education.
- Member of the Pre-Tenure Review Committee, College of Graduate Studies and Extended Education.
- Member of Tenure Review Committee, Department of Veterinary Science.
- Participated in all university-sponsored activities.
- Served on several other committees-

Examples:

- Chair, Search Committee for Dean, College of Agriculture, Home Economics and Allied Programs
- Member of Search Committee for Dean, College of Graduate Studies and Extended

Education

- Member of Search Committee for Associate Dean for Research, CAHEAP
- Chair, Search Committee for MPH Chair.

Service within the discipline (Selected)

- International Goat Association Country Representative.
- Appointed by the Georgia Commissioner of Agriculture to serve on the Search Committee for Director of Food Safety, Georgia Department of Agriculture, 2013.
- Appointed as the Chair of the Small Ruminant Program Committee, American Society of Animal Science, 2012-2013.
- Appointed as a member of the Small Ruminant Program Committee, American Society of Animal Science, 2011-2012.
- Chaired a Small Ruminant Oral Session during the 2011 ASAS Meetings in New Orleans, LA.
- Served on the Strategic Planning Committee for the Georgia Department of Agriculture, in 2011.
- Served as a panelist during the UGA's Sustainable Agriculture Consortium Kick-Off Panel Discussion, Athens, Georgia, 2011.
- Appointed as the Vice-Chair of the ASAS-ADSA Joint Food Safety Program Committee, 2007-2008.
- Appointed as a member of the Food Safety Committee, American Society of Animal Science, 2006-2007.

Service in the general community (Selected)

- Board of Directors, Georgia Budget and Policy Institute (GBPI).
- Rotary Club, Warner Robins, Georgia.
- Served as a resource person for Georgia Meat Goat Producers Association on issues related to meat goat production and processing. Participated in panel discussions during association meetings.
- Assisted the writer in publishing an article in DIVERSE Issues in Higher Education,

Volume 24, No. 23, December 27, 2007.

- Participated in several television station and newspaper interviews and promoted the College's programs.
- Participated in "rebuilding the community" project and helped repair and paint a house in Fort Valley.
- Participated as a keynote speaker in Washington County Goatarama Festival.
- Streamlined meat plant activities at GSRREC such that the producers, processors, and community members were benefited by the services provided by the Center.
- Visited local goat producers and processors along with FVSU Extension Specialists and provided technical advice on meat goat production, processing, fabrication, and packaging.
- Answered farmer/producer questions on goat production.
- Interacted regularly with Black Farmers Association President and provided technical advice when needed.
- Conducted tour of GSRREC facilities and talked about our small ruminant program to numerous visitors, including international visitors.