



## One Health Symposium for Sheep & Goat Production

August 24–25, 2018  
Perdido Beach Resort, Orange Beach, AL

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Presented by the Alabama Cooperative Extension System  
Support from Alabama A&M University, the United States  
Department of Agriculture and Tennessee State University



## One Health Symposium for Sheep & Goat Production



### Symposium Contacts

**Maria L. Leite-Browning, DVM**

Alabama Cooperative Extension System

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**Karnita Garner, PhD**

Alabama Cooperative Extension System

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Email: [kfg0003@aces.edu](mailto:kfg0003@aces.edu)

### About the Conference

The One Health Symposium for is designed to educate stakeholders on the basic principles of animal & environmental health, as well as forage and grazing management. It offers an integrative approach to attaining optimal health & environmental conditions.

### About SerPIE

SerPIE (Synergistic Efforts to Reduce Pharmaceuticals in the Environment) is an Alabama Cooperative Extension System initiative. The overall goal of SerPIE is to provide programming that addresses emerging safety issues in environmental, human, and animal health science as it relates to pharmaceuticals in the environment.

# WELCOME



Greetings from the Alabama  
Cooperative Extension System!

I would like to welcome you to the  
One Health Symposium for Sheep &  
Goat Production in Southern Alabama,  
and to congratulate Dr. Maria Leite-  
Browning, Dr. Karnita Garner and

research staff from Tennessee State University's College of  
Agriculture for their leadership in coordinating this event.

The One Health Symposium was designed to educate you  
about the basic principles of animal and environmental  
health, as well as how you can improve management  
systems in relation to sheep and goat production. Not only  
will you get to hear about best management practices  
to improve business or on-farm operations, but you'll  
learn about the one health approach to safely disposing  
of veterinary pharmaceutical waste that is harmful to  
natural resources and to human, plant, & animal life.

Once you leave the One Health Symposium, I hope you  
will put that knowledge to good use across America as  
we become vessels of sustainability whether in our own  
backyards or as advocates in protecting the environment.

Thanks for coming and enjoy this worthwhile event!

Allen Malone, Ed.D.  
1890 Extension Administrator  
Urban Affairs & New Nontraditional Programs  
Alabama Cooperative Extension System



Welcome to the One Health Symposium!

Alabama Extension's Urban Affairs & New Nontraditional  
Programs unit first explored the one health approach  
in eliminating pharmaceutical waste in June 2016.

Dr. Karnita Garner led that initiative. Two years later,  
she continues this great effort by joining forces with  
her colleague Dr. Maria Browning and staff at our  
partner institution, Tennessee State University. We  
are excited about the work this team is doing and  
know it is making a difference in our environment.

Thank you to the team for putting this event together.  
Thank you to our distinguished guests – researchers,  
scientists, and educators for sharing your knowledge.  
And thank you to our participants who continue to make  
Extension efforts in Alabama visible, viable and valuable.

Enjoy the training!

Celvia Stovall, Ph.D.  
Extension Associate Director  
Urban Affairs & New Nontraditional Programs  
Alabama Cooperative Extension System



# SYMPOSIUM SUPPORT

## Mistresses of Ceremony

Dr. Maria Leite-Browning  
Denise Heubach

## Coordinators

Dr. Maria Leite-Browning  
Dr. Karnita Garner  
Dr. Richard Browning

## Partners

Alabama A&M University  
United States Department of Agriculture  
Tennessee State University

## Planning Committee

Kimberly Neloms	Pam Jude
Phillip Carter	Jack Lecroy
James Childress	Dr. Paul Okweye
Larissia Crosby	Debra Scruggs
Dr. Sam Dennis	Allyson Shabel
Willie Durr	Shannon Schoeneweiss
Marcus Garner	Mia Smith
Juanesta Green	Tyrone Smith
Denise Heubach	Tommie Teacher
Dr. Sam Hopkinson	Eddie Wheeler
Roosevelt Robinson	Wendi Williams



## Contribution & Support

This Symposium was developed by Alabama Extension's Animal Science and Forages & Forestry, Wildlife & Natural Resource Management (i.e., Synergistic Efforts to Reduce Pharmaceuticals in the Environment Program) Teams.

Additional Symposium contributions by Tennessee State University's Meat Goat Production Research Program.

This work is supported by the Alabama Cooperative Extension System, the USDA National Institute of Food and Agriculture's (NIFA) Capacity Building Grant Program (#1012164 [AAMU]); the USDA NIFA Agriculture & Food Research Initiative Program (#2017-68006-26348 [TSU]), and the USDA Renewable Resources Extension Act Program (#1012197 [AAMU]).

# AGENDA

## Friday, August 24

Perdido Beach Resort, Ballroom FGH

3:00 pm - 5:00 pm **Hotel Check-in  
& Symposium Registration**

5:00 pm **Welcome**  
Greetings: **Dr. Celvia Stovall**,  
*Associate Director*, Alabama  
Cooperative Extension System  
(ACES), Alabama A&M University  
(AAMU), Normal, AL

5:00 pm - 6:30 pm **Reception**  
(Heavy hors d'oeuvres will  
be served and cocktails  
will be available for purchase)

### One Health Demonstration Workshop

Moderator: **Dr. Maria Leite-Browning**

6:30 pm - 7:15 pm **Tibor Horvath**, *State Agronomist*,  
United States Department  
of Agriculture (USDA), Natural  
Resources Conservation Service  
(NRCS), Auburn, AL

**Best Management Practices for  
Soil & Water Quality and  
Natural Resource Conservation:  
Soil Health Demonstration  
Trailer with Rainfall Simulation**

## Friday, August 24 continued

7:30 pm - 8:15 pm **Allyson Shabel & Phillip Carter**,  
*Urban Regional Extension Agents*,  
ACES, AMMU, Normal, AL

**Pharmaceuticals, Chemicals  
and Water Quality Demonstration**

8:15 pm - 9:00 pm Evening Keynote Speaker:  
**Dr. David Pugh**, DVM, DACT,  
DACVN, DACVM, Southern  
Traxx Farm, Auburn, AL

**Fetal Loss and Diagnosis**

9:00 pm **Adjourn**



For more information on the NRCS Soil Health Demonstration and SerPIE Water Quality Demonstration turn to page 22.

## Saturday, August 25

Perdido Beach Resort, Ballroom FGH

### General Session I

Moderator: Denise Heubach

8:00 am - 8:50 am **Symposium Registration  
& Morning Refreshments**

8:50am **Welcome**  
**Dr. Allen Malone,**  
*1890 Extension Administrator,*  
ACES, AAMU, Normal, AL

9:00 am - 9:45 am **Dr. Bisoondat Macoon,**  
*Associate Research Professor  
& Facilities Coordinator,*  
Morrison Brown Loam Branch  
Experiment Station, Mississippi  
State University, Raymond, MS

**Pasture and Grassland  
Management & Utilization:  
Practical Considerations in  
Designing a Grazing System.  
How to Incorporate Multi  
Species Grazing into the  
Grazing Management**

9:45am - 10:30am **Dr. Brad A. Freking, Research  
Geneticist,** USDA Agricultural  
Research Service (ARS), US Meat  
Animal Research Center,  
Clay Center, NV

**Managing Maternal Genetics  
for Successful Hair Sheep  
Production Under Pasture-Based  
Production Systems**

10:30am - 10:45am **Networking Break**

## Saturday, August 25 continued

10:45am - 11:30pm **Emily Hayes, MS, Research  
Assistant,** College of Agriculture,  
Tennessee State University (TSU),  
Nashville, TN

**Is Creep Feeding Economical?**

11:30 pm - 12:30pm **Introduction of Speaker**  
**Dr. Karnita Garner,**  
*Environmental Specialist,*  
ACES, AAMU, Normal, AL

**Luncheon Keynote Speaker:**  
**Dr. Will Sander, Assistant Professor,**  
University of Illinois College of  
Veterinary Medicine, Urbana, IL

**Drugs, Disposal, and Downstream  
Effects: A Small Ruminant  
Producer's Guide to The Lifecycle  
of Pharmaceuticals**

### General Session II

Moderator: Dr. Maria Leite-Browning

12:30pm - 1:30pm **Dr. David Pugh, DVM, DACT,  
DACVN, DACVM,** Southern  
Traxx Farm, Auburn, AL

**The Latest Developments  
& Recommendations Regarding  
Internal Parasite Management**

1:30pm - 2:15pm **Dr. Melissa Lenczewski,**  
*Professor/Director,* Institute for the  
Study of the Environment, Sustainability,  
and Energy of Geomicrobiology,  
Northern Illinois University, DeKalb, IL

**Antibiotics in the Environment**

### Saturday, August 25 continued

2:15pm – 3:00pm

**Dr. Richard Browning, Jr.,**  
*Professor, College of Agriculture,*  
TSU, Nashville, TN

**To Build a Profitable and  
Sustainable Commercial Meat  
Goat Herd Through Proper  
Breed Selection and Utilization**

**3:00pm – 3:15pm      Networking Break**

3:15pm - 4:00pm      **Summer Stidham**  
USDA, NRCS, NRCS

**Program Opportunities  
for Sheep and Goat Grazers**

4:00pm - 4:45pm **Dr. Maria Leite-Browning, DVM,**  
*Animal Scientist, ACES, AAMU,*  
Normal, AL

**How to Minimize the Spread,  
Occurrence and Presence of  
Zoonotic Diseases**

4:45pm **Dr. Karnita Garner,**  
*Environmental Specialist,*  
ACES, AAMU, Normal, AL

**Program Evaluation**

5:00pm **Closing Remarks**



# CONDENSED AGENDA

**Friday, August 24**  
Perdido Beach Resort, Ballroom FGH

- 3:00 pm - 5:00 pm    **Hotel Check-in  
& Symposium Registration**
- 5:00 pm                **Welcome**
- 5:00 pm - 6:30 pm    **Reception**
- One Health Demonstration Workshop**  
Moderator: Dr. Maria Leite-Browning
- 6:30 pm - 7:15 pm    **Soil Health Demonstration  
(Valet Lot)                Trailer with Rainfall Simulation**
- 7:30 pm - 8:15 pm    **Pharmaceuticals, Chemicals  
(Salon E)                and Water Quality Demonstration**
- 8:15 pm - 9 pm        Evening Keynote Speaker:  
Dr. David Pugh  
**Fetal Loss and Diagnosis**
- 9:00 pm                **Adjourn**

**Saturday, August 25**  
Perdido Beach Resort, Ballroom FGH

- General Session I**  
Moderator: Denise Heubach
- 8:00 am - 8:50 am    **Symposium Registration  
& Morning Refreshments**
- 8:50am                **Welcome**
- 9:00 am - 9:45 am    **Pasture and grassland  
management & utilization**
- 9:45am - 10:30am    **Managing Maternal Genetics**

- Saturday, August 25, continued**
- 10:30am - 10:45am    **Networking Break**
- 10:45am - 11:30pm    **Is Creep Feeding Economical?**
- 11:30 pm - 12:30pm    **Introduction of Speaker**
- Luncheon Keynote Speaker:  
Dr. Will Sander  
**Drugs, Disposal, & Downstream  
Effects : A Small Ruminant  
Producer’s Guide to The  
Lifecycle of Pharmaceuticals**

- General Session II**  
Moderator: Dr. Maria Leite-Browning
- 12:30pm - 1:30pm    **The Latest Developments  
Regarding Internal  
Parasite Management**
- 1:30pm - 2:15pm        **Antibiotics in the Environment**
- 2:15pm – 3:00pm        **To Build a Profitable &  
Sustainable Commercial Meat  
Goat Herd Through Proper Breed  
Selection and Utilization**
- 3:00pm – 3:15pm        **Networking Break**
- 3:15pm - 4:00pm        **NRCS Program Opportunities  
for Sheep and Goat Grazers**
- 4:00pm - 4:45pm        **How to Minimize the Spread,  
Occurrence and Presence  
of Zoonotic Diseases**
- 4:45pm                **Program Evaluation**
- 5:00pm                **Closing Remarks**





# SPEAKERS

**Dr. Richard Browning, Jr.**, *Professor of Animal Science*  
Department of Agricultural and Environmental Sciences  
College of Agriculture, Tennessee State University (TSU)

Dr. Richard Browning grew up raising and showing Red Brahman cattle in Southeast Texas. He earned a bachelor of science from Prairie View Agricultural and Mechanical University and a doctorate from Texas Agricultural and Mechanical University in animal reproduction and genetics with studies in tropical cattle. Dr. Browning has conducted extensive research on various meat goat breeds since 2002, particularly how specific breeds affect meat goat herd performance. Related outreach activities include teaching basic performance recording in meat goat herds and effective breed selection and utilization for commercial production. In 2015, Dr. Browning returned to the cattle arena by introducing heritage Dexter cattle to the TSU program. In association with his work with Spanish goats, myotonic goats, and Dexter cattle, Dr. Browning serves on the board of directors for the Livestock Conservancy located in Pittsboro, North Carolina. His work can be found online at [www.tnstate.edu/faculty/rbrowning/](http://www.tnstate.edu/faculty/rbrowning/).

**Emily Hayes**, *Research Assistant*  
Department of Agricultural and Environmental Sciences  
College of Agriculture, Tennessee State University (TSU)

Emily Hayes currently works at TSU as a research assistant under Dr. Richard Browning, Jr. She earned a Bachelor of Science in Agriculture with a focus in animal science from the University of Tennessee at Martin. At the end of the summer, she will receive a Master of Science in Animal Science from TSU. Hayes' graduate project involves creep feeding in goats, and she hopes the results of the study combined with the presentations at the One Health Symposium, will help farmers to raise profitable herds.

**Brad A. Freking**, *Research Geneticist*  
Genetics, Breeding & Animal Health Research Unit,  
USDA, Agricultural Research Service (ARS)  
US Meat Animal Research Center

Dr. Brad Freking has been with the USDA ARS US Meat Animal Research Center as a research geneticist since 1997. Dr. Freking's past accomplishments have spanned broad areas of genetic research including breed evaluation, genetic map construction, genome scans, candidate gene analysis, and selection line evaluations. He published the most comprehensive and conclusive research on the callipyge mutation in sheep and developed a collaboration with Duke University to investigate the function of this imprinted gene region. Dr. Freking also collaborated with North Carolina State University to investigate imprinted genes in swine and successfully produced the largest survey of imprinted genes in swine. In addition, he utilized his skills in quantitative and molecular genetics as well as surgical skills to explore highly relevant issues in the livestock industry and recently shifted his research focus from swine back to sheep. Currently, his breed evaluation work compares three maternal breeds under pasture lambing and low-input management systems.

**Dr. D.G. Pugh**, *Chief Bottle Washer & Wrangler*,  
Southern Traxx Farm

Dr. David Gartrell Pugh earned both a Doctorate in Veterinary Medicine (DVM) and a Master of Science in Nutritional Physiology from the University of Georgia in 1981, and a MAG in Agricultural Entomology from Auburn University in 2013. He received post-DVM training at Virginia Tech and Texas A&M University in theriogenology. He is a diplomate of the American

College of Theriogenology, the American College of Veterinary Nutrition, and the American College of Veterinary Microbiology. He held faculty positions at the University of Georgia and Auburn University, owned a large animal practice in Georgia, served as a consulting veterinarian for Fort Dodge Animal Health and Pfizer Animal Health, and served as a project veterinarian and the director of farm operations for the Auburn Equine Source Plasma Project. In June 2018, he formally retired as director of the Alabama Veterinary Diagnostic Laboratory System.

**Summer Stidham, USDA-Natural Resources Conservation Service (NRCS)**

Summer Stidham began her work with NRCS as a soil conservation technician four years ago, and in 2016 became a soil conservationist for Baldwin County. She graduated from Berea College in Berea, Kentucky with a Bachelor of Science in Agriculture and Natural Resources. She is originally from Hartselle, a small town in North Alabama where she raised Katahdin cross sheep and worked for the Morgan County Soil and Water Conservation District as an education coordinator.

**Dr. Basisoodat Macoon, Research Professor & Facilities Coordinator, E.G. (Gene) Morrison Brown Loam Branch Experiment Station, Mississippi State University**

Dr. Basisoodat “Mac” Macoon is a forage agronomist by training and currently is a research professor and facilities coordinator at MSU’s Brown Loam Branch Research Station near Raymond, MS. He has worked at this location since 2001 after completing his doctorate and working as a post-doctoral associate at the University of Florida. Macoon’s research has included grassland ecology, management, and utilization, including the use of grassland plants for bioenergy applications and ecosystem services. His most recent research focuses on grazing management of cool-season grass/legume pastures and utilization of diverse cool-season forage species, including grasses, legumes, and brassicas, as cover crops with emphasis on soil health as well as pasture productivity benefits.

**Tibor Horvath, Conservation Agronomist, USDA-Natural Resources Conservation Service**

Tibor Horvath is a native of Hungary where he received a Master of Science in Agricultural Engineering and managed a 1000 cow dairy for six years before moving to the United States. Since 2000, Horvath has worked as an agronomist for the USDA Natural Resources Conservation Service in six different states: Pennsylvania, New York, South Carolina, California, Kentucky and Alabama. Horvath loves to deliver presentations on soil health because he knows how much opportunity he has lost while managing a large dairy without this precious knowledge.

**Dr. Will Sander, Assistant Professor, University of Illinois College of Veterinary Medicine**

Dr. Will Sander is an assistant professor for preventive medicine and public health and the director of the dual degree DVM/MPH program at the University of Illinois College of Veterinary Medicine in Urbana, Illinois. Previously, he was deputy lead and veterinary specialist government contractor with Booz Allen Hamilton in Washington, DC supporting the Defense Threat Reduction Agency (DTRA), part of the Department of Defense. His work centered on supporting DTRA to identify gaps in and bolster support for biosurveillance for human and animal health systems around the world. From 2013 to 2015, he was an American Association for the Advancement of Science (AAAS) Science and Technology Policy Fellow at United States Environmental Protection Agency, Office of Water/Office of Science and Technology looking at potential human and animal health impacts from pharmaceuticals in water. As part of his work there, he helped lead the interagency Pharmaceuticals in Water interagency working group and worked to better inform the public about the risks of pharmaceuticals in the environment. Dr. Sander received a Bachelor of Arts in Biology at Colby College, a DVM from University of Wisconsin-Madison and a Master of Science in Public Health from Yale University. Sander is also a diplomate of the American College of Veterinary Preventive Medicine.

**Dr. Melissa Lenczewski**, *Director*, Institute for the Study of the Environment, Sustainability, and Energy, Northern Illinois University

Dr. Melissa Lenczewski currently serves as the director for the Institute for the Study of the Environment, Sustainability, and Energy at Northern Illinois University. As a contaminant hydrogeologist, her research focuses on organic pollution in groundwater around the world. Lenczewski's main research investigates the impacts of tourist activities on groundwater in Yucatan, Mexico and the fate and transport of antibiotics associated with tourism and concentrated animal feeding operations in Illinois.

**Dr. Maria L. Leite-Browning**, *Animal Scientist*, Alabama Cooperative Extension System, Alabama Agricultural and Mechanical University (AAMU)

Dr. Maria Browning is the former state Extension specialist for goats TSU and now serves in the same capacity as Extension animal scientist for the Alabama Cooperative Extension System. She is a veterinarian with extensive expertise in small ruminant health and disease management on two continents. Dr. Browning is often invited to speak and to conduct hands-on demonstrations at universities, producer organizations, and other institutions on internal parasitism management, general herd health management, biosecurity measures, and reproductive management of small ruminants. She has also organized and presented seminars featuring the latest genetics research findings with TSU and AAMU on collaborative projects. In addition, Dr. Browning has authored and co-authored several technical reports, peer review publications and presentations at international conferences.



# DEMONSTRATIONS

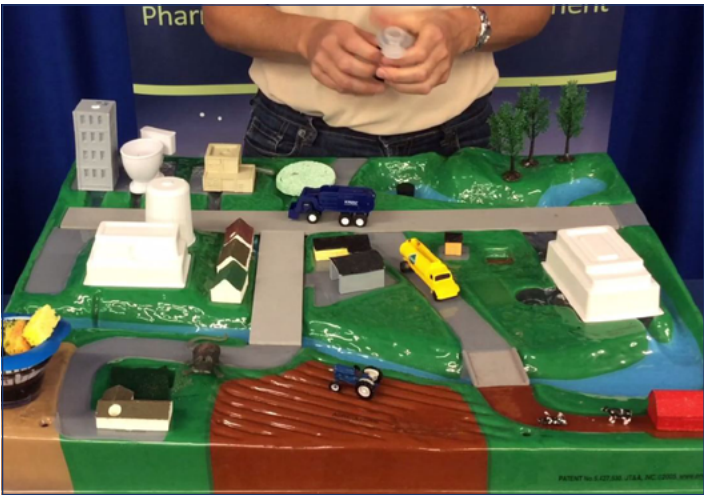
## SerPIE Demonstration:

*Enviroscape Drinking Water & Wastewater Treatment Model*  
Friday, August 14, 7:30 pm - 8:15 pm (Salon E)



In this demonstration, Urban Regional Extension Agents, Allyson Shabel & Phillip Carter, will provide a hands-on demonstration of the journey that drinking water takes from source to wastewater treatment. The Enviroscope demonstration tool is a great resource to describe the many elements that effect our water resources.

**SerPIE** (Synergistic Efforts to Reduce Pharmaceuticals in the Environment) is an Alabama Cooperative Extension System initiative. The overall goal of SerPIE is to provide programming that addresses emerging safety issues in environmental, human, and animal health science as it relates to pharmaceuticals in the environment.



## USDA, NRCS Demonstration:

*Soil Health Demonstration Trailer with Rainfall Simulation*  
Friday, August 14, 6:30 pm - 7:15 pm (Valet Lot)



In this demonstration, rainfall is simulated on five different land management systems. The rainfall simulator highlights different methods to reduce soil run off.

**USDA NRCS** (United States Department of Agriculture), (Natural Resources Conservation Service)







[www.aces.edu/urban](http://www.aces.edu/urban)

The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) is an equal opportunity educator and employer.  
Everyone is welcome!