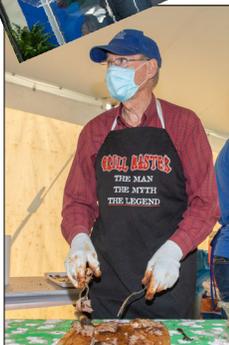


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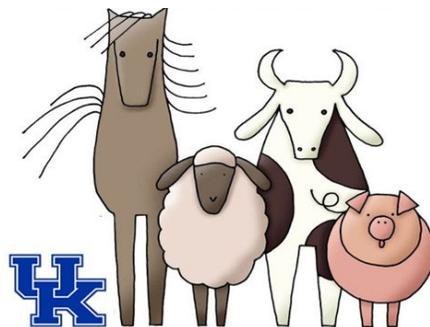
## On the web

<http://afs.ca.uky.edu>



<https://www.facebook.com/UKAnimalandFoodSciences>

# Did You Save the Date?



**Animal and Food Sciences Reunion**  
**October 7, 2022**

We hope you *saved the date* because you won't want to miss this year's reunion. We'll gather "under the tent" on Friday night, **October 7**, to reminisce with old friends and share some memories. It will also be your chance to reconnect with faculty and staff of the Department of Animal and Food Sciences.

Supper will be in the form of our traditional commodity tasting stations. You'll be able to graze your way through delicious smoked beef, lamb and pork prepared by the Block

and Bridle Club and served by some of your favorite faculty members. The culinary folks in the UK Meats Lab will also be serving one of their signature gastronomic surprises. In addition to the carnivore cuisine, we'll have mouth-watering dessert crepes served by the always entertaining poultry personnel and old-fashioned fruit cobblers topped with ice cream provided by the Dairy Club. In between grazing and socializing, you'll have the opportunity to bid on some great items in the **10<sup>th</sup> Annual Silent Auction** to benefit the AFS Undergraduate Scholarship Program.

Our guest speaker this year has a voice you are sure to recognize. **Carl Nathe** has been the public address announcer at UK football games since 1997. You've probably also heard him telling stories about people and programs during "UK at the Half," which airs during radio broadcasts of all UK football and basketball games, or you might have listened to his "Behind the Blue" podcasts over the years. Nathe is a native of Pleasantville, New York, and a graduate of the University of Maryland, College Park but he has been part of the Big Blue Nation for over 30 years, through retirement and beyond. He is a good friend of the College of Agriculture, Food and Environment, and you'll enjoy hearing him share some of his favorite moments and memories from "*behind the blue.*"



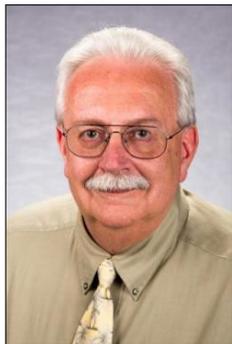
Carl Nathe

Before the night is over, the 2022 Distinguished Alumnus Award will be presented and the 2022 Animal and Food Sciences Hall of Fame member will be inducted.

So come join us "under the tent" for food, fellowship and fun. It won't be a reunion without YOU!

**Please RSVP your intention to attend - details on last page.**

# Department Update



Greetings from the Department of Animal and Food Sciences.

Since the AFS Reunion last year, we have undergone numerous changes. Most notably, Dr. Richard Coffey retired as Chair on June 30, 2022 after seven years of strong leadership. On July 1, I assumed the duties as Interim Chair. A national search is currently underway to fill the position for the long term.

As referenced in other parts of this newsletter, the Princeton Research and Education Center was destroyed by a tornado on December 10, 2021. While damage to physical structures was devastating, we are grateful there was no loss of life within the AFS family. Numerous rebuilding projects are already underway to replace the beef facilities that were lost due to the tornado.

Several projects at the C. Oran Little Research Center (LRC) in Woodford County are nearing completion or are in the planning stage. The Poultry Research Facility, which replaces the previous facility on Coldstream Farm, will be completed soon. A new house for the Assistant Beef Manager is also close to completion; this house replaces the one that burned 15 months ago. The USDA Animal Research Service has two facilities in the design phase, an office/laboratory building that will be built on campus near the E. S. Good Barn and an animal facility that will be built adjacent to the LRC Beef Unit. This new animal unit will increase the ability to study greenhouse gases. Plans for a dairy heifer barn and a

dairy calf barn at the LRC are in the design phase. These facilities will replace those displaced by the move off Coldstream Farm. Two other exciting projects at the LRC include the Agriculture Education Center and the Meat and Food Processing Workforce Development Center. Together, all these projects will enhance our ability to conduct research, provide outreach programming and enhance educational opportunities for students.

A welcome change has been the return to a more normal atmosphere on campus. Students and instructors are back in classrooms without social distancing and for the most part, maskless. This fall the University has a record freshman enrollment of 6,000 students. Fall '22 numbers indicate that we have a total of 272 undergraduates enrolled in Animal Sciences, 25 in Food Sciences and 330 in Equine Science and Management (for which AFS faculty provide the majority of the teaching load). Degree requirements for the Animal Sciences major are being reviewed and modified to improve our students' educational experience and to better prepare them for careers within animal agriculture. Similarly, Food Sciences faculty are revitalizing that major. Their goal is to provide three new tracks that allow students to tailor their plans of study to their career goals.

During next few years we anticipate additional changes in our programs and our facilities. One thing will remain unchanged: Our faculty and staff will continue to be dedicated to our missions of research, outreach and instruction.

*Anthony Pescatore*

## Previous Award Winners

Distinguished Alumni (left to right)

Dr. Jerry Spears, 2020

Dr. John Stika, 2021



Hall of Fame Inductees (left to right)

Robert Foree, 2020

Danny Joe Grigson, 2021



## Retirements

William (Luke) Boatright officially retired on December 31, 2021. Dr. Boatright was a professor in Food Science with a specialty and expertise in lipid chemistry and flavors. He joined the Animal and Food Sciences Department in 1995 after working in the food industry for several years. Luke taught food chemistry, food analysis, and food lipids and was a passionate advisor and mentor to numerous food science students. He is globally known for his discovery research, which was funded by USDA national competitive grant programs and private industries, to investigate the mechanism of free radical formation and its role in producing off-flavor of soy protein concentrates, isolates and products. Outside his professional work, Luke enjoys sports and is an avid golfer. He won several departmental as well as Bluegrass IFT golf tournaments over the past 25 years.



Dr. William Boatright

Roberta Dwyer earned her DVM from the Iowa State University College of Veterinary Medicine and later her M.S. in Infectious Disease Epidemiology from the University of Kentucky. She was a faculty member at UK for 33 years, first in the Maxwell H. Gluck Research Center and later within the Department of Animal and Food Sciences. She retired from the University in 2022.



Dr. Roberta Dwyer

Dr. Dwyer's contribution to the University of Kentucky was multifaceted. She was a dedicated instructor who maintained high expectations for her students, balanced by a ferocious care for their wellbeing. As a researcher and extension specialist, she focused on biosecurity and disaster preparedness. Dr. Dwyer was best known as Director of the Pre-Veterinary Advising Program. She developed, structured and directed this program, advising thousands of students throughout her tenure at UK. Many of Dr. Dwyer's advisees are now dedicated professionals, furthering her contribution to our community. Finally, Roberta was a dedicated mentor and friend. Over the course of her career, she helped many young professionals develop their potential by demonstrating honesty, compassion, generosity, strong ethics, hard-work and a healthy work-life balance.

## Awards

### 2022

**Dr. Bob Coleman** – American Association of Equine Affiliated Academics, Senior Faculty Educator Award; Kentucky Association of State Extension Professionals, M.D. Whiteker Award

**Dr. Suman Surendranath** – American Meat Science Association, Distinguished Research Award

**Dr. Merlin Lindemann** – University of Kentucky, University Research Professorship

**Dr. Leslie H. Anderson** – American Society of Animal Science, Extension Award

**Dr. Youling Xiong** – American Meat Science Association, International Lectureship Award

**Dr. Joaco Costa** – Lallemand Forward Award for Scientific Excellence in Dairy Nutrition

**Ron Trotta** – (Ph.D. Student with **Dr. David Harmon**) American Society of Animal Science, Wilson G. Pond Travel Scholarship Award

## University Service

### 2021

#### 5 Years

- ◆ Matthew Hamilton
- ◆ Colette Floyd Tebeau

#### 15 Years

- ◆ Shuting Li
- ◆ Yen-Chang Tseng
- ◆ Kirk Vanzant
- ◆ Dr. Phillip Bridges
- ◆ Dr. Gregg Rentfrow
- ◆ Dr. Surendranath Suman

#### 20 Years

- ◆ Joseph R. Richardson
- ◆ Dr. Kyle McLeod

#### 25 Years

- ◆ Larissa Tucker

#### 30 Years

- ◆ B. Kevin Hagan
- ◆ Kevin Laurent
- ◆ Dr. David L. Harmon

#### 35 Years

- ◆ Dr. Anthony Pescatore

# Around the Farms



Photos by Matt Barton, UK Agricultural Communications.

## Princeton Research and Education Center – Destroyed by Tornado

The Beef Unit, housed at the University of Kentucky Research and Education Center in Princeton, suffered significant damages following the December 10 tornado outbreak that impacted the region. Fortunately, losses to the herd were minimal and all AFS faculty and staff were safe. The offices and laboratory space, which had undergone a complete renovation and addition in 2019, were destroyed and most of the equipment and supplies that support AFS research and extension efforts were unsalvageable.

The tornado destroyed nearly 6 linear miles of fence throughout the Beef Unit, and to date only half of the fence has been replaced. All three of the iconic silos were either damaged or destroyed and will be replaced by a bagged silage system. The main cattle feeding barn

required a new roof and siding and there was additional damage to the pens that housed cattle. Unfortunately, a second weather event in late July resulted in the need to fully replace the roof for a second time. Additional repairs to this facility will be needed to make it fully functional to support research programs. The two original beef barns at the unit were damaged beyond repair. Lastly, all three working facilities at the unit were damaged or destroyed in the tornado. Due to the widespread impacts across the beef unit research has been severely impacted during 2022.

Despite the damage and destruction, plans are underway to re-start research efforts in 2023, and Beef Bash will be held at the unit on October 20, 2022!

# Undergraduate Programs

## UK Animal Sciences Instructors Use Creative Ways to Enhance Learning

Animal Sciences majors at UK experience unique learning opportunities in their classrooms and labs. Instructors are creative in designing hands-on experiential learning situations that supplement a science-based curriculum. A sampling of these are highlighted below.

### ASC 102



In **Introduction to Livestock and Poultry Production** (taught by Debra Aaron and Don Ely) first-year students have the opportunity to discover what's under the hides of market cattle and sheep in "fat vs lean" labs.

First, students discuss live animal and carcass evaluation in the classroom. Then, they travel to the Beef and Sheep Units at the C. Oran Little Research Center where they evaluate animals "on the hoof." Which animal is the fattest? Which has the most lean? How will the animals grade "on the rail?" The experience culminates the following week in the UK Meats Lab when they have the opportunity to evaluate the animals' carcasses. Students can see if they were correct in their live animal evaluation. For most of them, this is their only opportunity to evaluate animals first "on the hoof" at the farm and then "on the rail" in the processing room. Students learn to identify animals that meet the needs of the marketplace.

### ASC 310

**Equine Anatomy** (taught by Colette Tebeau) covers a wide variety of subjects including bones, muscles and other body systems. During connective tissue lectures, the focus is on structures vital to movement, emphasizing those found in the lower leg. These intricate structures are difficult to visualize. As a way of improve their visualization, students are given the task of artificially constructing a horse's lower leg using preserved bones and Play-Doh, the modeling compound from their childhoods. They begin the activity by



correctly assembling bones of the horse's lower leg. Then Play-Doh models of ligaments and tendons are created and layered onto the assembled bones. By the end of the activity, they have worked their way through the complex configuration of these tissues to create a physical model of the horse's lower leg. Using classroom knowledge and some imagination, learning occurs.

### ASC 362

In **Animal Breeding and Genetics** (taught by Debra Aaron) students learn to make informed and effective selection decisions in livestock breeding by playing CyberSheep, a web-based genetic simulation game. The genetic gains achieved in livestock breeding programs are permanent, cumulative and, in most cases, cost-effective. However, such gains require time to achieve. In the course of a semester, there is no opportunity for students to witness the consequences of breeding decisions in any of our livestock species. Thus, CyberSheep offers them a virtual opportunity to "see" the outcome of their decision-making, and to experience the random elements of a breeding program. Students are challenged to achieve one of two goals: 1) Improve market weight while alleviating a genetic disease or 2) Increase the market value of their flock. This instills a "friendly" competition among students. When the instructor plays along, it makes it even more fun. At the end of the game, the player who makes the most genetic gain and the one who makes the most money earn bonus points and receive plaques to commemorate their successes.

### ASC 404G

Students who take **Sheep Science** (taught by Don Ely) are assigned flocks of pregnant ewes at the UK Sheep Unit. Through the semester, they have the opportunity to apply principles of nutrition by balancing diets and feeding daily rations to their ewes. They also "lamb watch" and assist births as lambs are born. Docking tails, castrating ram lambs and



vaccinating lambs are realisms each student receives. Genetic and phenotypic selection of ewes and rams to replace culled animals puts the cap on the management of students' sheep flocks. Rather than just learning about it in the classroom, students experience the hands-on aspects of flock management. They learn by doing.

### ASC 406

The **Beef Cattle Science** class (taught by the team of Darrah Bullock, Jeff Lehmkuhler and Les Anderson) has implemented an innovative project that delivers educational programming for beef farmers and provides an educational experience for students. This final project gives students an opportunity to take information learned in the classroom and teach it to local beef producers. Teams of four are assigned a county to work with; each team member is responsible for one of four topics – genetics, nutrition, reproduction or health. Each team works with a local Agriculture and Natural Resources Extension Agent to develop a targeted program that best benefits that particular county, coordinate logistics and assist with advertising. Students work closely with instructors to develop content. Each team then makes their presentation and fields questions from the farmers in attendance. At least one instructor and the agent are at each presentation to assist with questions that are beyond the scope of the students. Students often go into the project with great apprehension, but most enjoy the exercise and feel it enhances their educational experience. Brandon Sears, the agent in Madison County, had this to say about the program: “presentations offered here have been very well received ... It is evident that they put a lot of thought and effort into their topics and attendees have always been impressed with their professionalism and knowledge. Our partnership has offered great educational programming while also showcasing the quality of our Animal Sciences students.”

### ASC 408

One of the lessons covered in **Swine Production** (taught by Ann Leed) is selection of replacement gilts. Many



ASC 406 students after a presentation to beef producers in Madison County.

students have never selected a replacement gilt or made decisions related to keeping or culling an animal. In order to get them thinking about establishing selection priorities and the decision making process, the first activity done in the lesson is evaluating and ranking four candy bars. Candy bars are an item students are familiar with, so they are able to outline the selection criteria used when deciding which candy bar to purchase. Once they have a placing on the candy bars they must explain to their classmates what compelled them to keep (purchase) one candy bar and what made them cull (reject) the one they placed last. Once students have a firm grasp of how to establish selection priorities they can apply that knowledge to outlining selection criteria for replacement gilts. An added bonus to the activity is eating the candy bars judged!



## Animal and Food Sciences Alumni Scholarship

Funds raised through the Animal and Food Sciences Reunion Silent Auction support the Animal and Food Sciences Alumni Scholarship. This year that scholarship was awarded to Tyler Purvis, a senior majoring in Animal Sciences from East Bernstadt, Kentucky. At a young age Tyler became fascinated with cattle. One of Tyler's earliest memories was helping his grandfather feed bottle calves before going to kindergarten for the day. Tyler's enthusiasm for animal agriculture grew throughout his high school career through his involvement in FFA. While a student at the University of Kentucky, Tyler has been involved in the Block and Bridle Club and Alpha Gamma Rho Fraternity. Upon graduation in May 2023 Tyler plans on attending graduate school focusing on animal reproduction. Eventually Tyler would like to own a cattle operation running both a commercial and a purebred herd.



Tyler Purvis

# 2022 Distinguished Alumnus

Kimberly K. Ragland began her agriculture career as an active 4-H and FFA member in LaRue County, Kentucky. She won the State 4-H Livestock Judging Contest as a high school junior. “Kim” earned a B.S. in Animal Sciences and a M.S. in Ruminant Nutrition at UK and her Ph.D. in Ruminant Nutrition at the University of Georgia. While at UK, she was selected as the Outstanding Freshman, Sophomore, Junior, Senior and Graduate Student in the College of Agriculture, Food and Environment. Concurrently, she served as Editor of Cow Country News (the monthly newspaper of the Kentucky Cattlemen’s Association) and as Superintendent of the North American Livestock Exposition (NAILE) Junior Heifer Show, the world’s largest junior heifer show.

Dr. Ragland returned to UK from the University of Georgia with a Ph.D. in hand. She worked in Distance Learning where she was responsible for “Introduction to Animal Science,” a satellite course taught to over 10,000 high school Ag students across the U.S. She produced three other courses, using the same model, which were taught to thousands of students by professors from UK, EKV, WKU, Morehead State, Murray State, KSU and Berea College.

She produced the CAFE Electronic Field Trip Series, in coordination with KET, so thousands of elementary and middle school students across the nation could watch live or recorded tours of farms, orchards, vet clinics and the NAILE. In addition, production of “Gee Whiz in Ag” taught a variety of subjects to over 100,000 elementary students throughout the

U.S. via live streaming or videotape.

Working on the cutting edge of Distance Learning at the beginning of the “internet age,” Kim was part of the team that created Agripedia, the first comprehensive, online agricultural education resource produced by any land grant institution. She also created “Feeds and Feeding,” the first fully online course offered by UK. Development of these programs earned Kim a Lifetime Career Achievement Award from the American Distance Education Consortium.



Dr. Kimberly K. Ragland

Motherhood (Landry) changed Kim’s career trajectory in 2003 when she became the Boyle County Extension Agent for Youth Development. She is now the longest-serving 4-H agent in the history of that county and brings her passion for education and agriculture to 3,000 4-Hers each year.

As America moves farther away from production agriculture, fewer and fewer young people have an awareness, much less understanding, of the impact of agriculture on society. Dr. Ragland has countered this void by teaching thousands of youth, through her creative educational programs, about the importance of today’s agriculture.

# 2022 Hall of Fame Induction

Dr. Barbara P. Glenn spent her entire career serving the agriculture community through research, advocacy, leadership and volunteer work. “Barb” was born in Lincoln, Nebraska and raised in Centerville, Ohio, where she discovered her passion for agriculture as a young 4-Her. That passion combined with an eagerness to learn led her to the University of Kentucky, where she earned a B.S. in Animal Sciences in 1975 and a Ph.D. in Ruminant Nutrition in 1980. Over the next 40 years Dr. Glenn’s professional career would advance in a logical stepwise progression from basic science through application of technology to government relations and agricultural trade.

The first step in Dr. Glenn’s illustrious career was as a “bench scientist” in dairy nutrition with the USDA. However, after almost 20 years as a researcher, she “... realized the most important thing we needed in animal agriculture was to have scientists get into the Washington, DC arena and affect Ag policy.” So she took on the role of Executive Vice President-Scientific Liaison for the Federation of Animal Science Societies. As a voice for science in agriculture, she was responsible for leading an exchange of scientific information with policy makers on Capitol Hill and other external and industry stakeholders. This role led to upper-level leadership positions with Crop Life America and the Biotechnology Industry Association. Her career culminated as CEO of the National Association of State Departments of Agriculture, a position she held from 2014 until her

retirement in 2021. Dr. Glenn’s unique combination of policy knowledge and scientific expertise brought a rich skillset to this role where she championed the work of state departments of agriculture and was a unifying voice, successfully interfacing between state and federal agriculture policymakers.

Barb was a pioneer throughout her career. In addition to her paid positions, she provided volunteer leadership through various boards and commissions. She was the first woman to be elected and serve as President of the American Society of Animal Science. She also served as Chair of the Coalition on Funding Agricultural Research Missions (Co-FARM) and was named a Fellow of the American Association for the Advancement of Science.

In the end, it was Dr. Glenn’s remarkable communication skills that allowed her to communicate scientific research results in a form that convinced policy makers to support agriculture. Today, she has come full circle, serving as a volunteer 4-H leader in Highland, Maryland, where she lives with her husband, Scott, and their three children.



Dr. Barbara P. Glenn

# Graduate Programs

## Sophia Newhuis, 2022 Outstanding MS Candidate

Sophia, a second year M.S. student under Dr. Rachel Schendel, is studying changes in cell wall composition of cool-season pasture forages and their rumen fermentation properties.

She obtained her B.S. in Food Science from UK in 2020. While an undergraduate, Sophia completed a research internship in Dr. Schendel's lab. This research — part of the Kentucky Integrated Biorefinery Project, — focused on releasing and quantifying feruloylated arabinoxylan oligosaccharides from bourbon spent grains and was funded by a 2019 UK Sustainability Challenge Grant.

It was during this time that Sophia realized she had a passion for research. Once Sophia completes her M.S. Degree she hopes to work in research and development for a food company.

Outside of the lab, Sophia enjoys spending time with her family, going to concerts, reading and attending Broadway shows.



Sophia Newhuis

## Ronald Trotta, 2022 Outstanding PhD Candidate

Ron, a native of Bayville, NJ, is working toward his Ph.D. under Dr. David Harmon. He completed a B.S. in Animal Science at UK in 2017 and worked as an undergraduate research assistant with Dr. James Klotz at the USDA-ARS Forage & Animal Production Research Unit. Ron completed his M.S. in ruminant nutritional physiology at North Dakota State University in 2019.

His current focus is on developing strategies to improve starch utilization in ruminants. Ron has been co-investigator on 6 research grants, has published 16 peer-reviewed journal articles, 6 conference proceedings and 11 abstracts. He has presented his research findings in 6 countries. Ron's numerous honors include receiving the National Young Scholar and Wilson Pond International Travel Awards from the American Society of Animal Science and the Certified Angus Beef Colvin Scholarship in the Graduate Student Category. He plans to continue conducting research and teaching in academia after completion of his degree.



Ronald Trotta



## Animal and Food Sciences Reunion

October 7, 2022

6:00 p.m. Registration

6:30 p.m. "Grazing" Begins

7:30 p.m. Awards Program

Purchase tickets at <https://alumni.ca.uky.edu/events/animal-food-sciences-reunion>

or RSVP by Friday, September 30, 2022 to Shawna Banks at 859-257-7508

or [AFSAlumni@uky.edu](mailto:AFSAlumni@uky.edu)

Tickets \$10 for adults, free for children under 12.