An endowment by veteran UGA turfgrass researcher Wayne Hanna and his wife, Barbara, allowed Tifton Campus senior biological science major Lolita Muñoz (right) to present her research on root-knot nematode resistance in grain sorghum at a professional conference in April.
D uring my sophomore year as an undergraduate, I had the opportunity to work in a physiology research laboratory. Early on, I was trusted only to wash glassware.

I learned that, while a somewhat menial task, washing the glassware properly was essential for the lab. Leaving residues or contaminants could derail weeks of research and cost thousands of dollars.

Once I had proven myself responsible in the “little things,” I had the chance to actively participate in the research. From that experience, I became a coauthor on a refereed journal article as an undergraduate. That is somewhat common now, but in the 1970s, it was a big deal.

Looking back, my time in undergraduate research put me on a path that shaped my career. It was a great experience, and we want all University of Georgia College of Agricultural and Environmental Sciences students to have the opportunity to pursue.

Experiential learning has long been a hallmark of land-grant universities, from our youngest students in 4-H who “learn by doing” to our graduate students who are actively teaching and conducting research. I know from personal experience the value of these opportunities in shaping career choices.

I hope you will join me in supporting this important effort by sharing your expertise, offering internship possibilities and giving your financial support to the college.

One way we create that experience for our students is through the Deans’ Promise, our pledge to support all of our students’ participation in out-of-classroom experiences. Whether students choose to seek undergraduate research opportunities, study abroad or pursue other experiences, these will enhance their overall student experience, increase the value of their education and help them develop and practice needed skills for their futures.

A recent student survey showed that what our students value most about the college are the strong relationships they build with faculty, staff, alumni and industry leaders. That network of support will help us stay at the forefront of cutting-edge research, nationally renowned Cooperative Extension programs and outstanding education for our students, who will go on to lead our agricultural industry.

“Looking back, my time in undergraduate research put me on a path that shaped my career.”

SAM PARDOE
Dean and Director
College of Agricultural and Environmental Sciences

Sam Pardue
**Hands-on Learning Gives CAES Students an Edge**

This fall’s freshman class will be the first for which experiential learning becomes a universitywide graduation requirement.

Experiential learning helps students connect their academic foundations with their professional aspirations, and opportunities like study abroad programs, internships, research and service learning fulfill the requirement. It’s “hands-on learning in settings beyond the classroom,” according to Linda Bachman, director of the University of Georgia’s Office of Undergraduate Experiential Learning.

“By providing students with tailored experiential opportunities and the kind of personalized mentoring more often found at small, private colleges, UGA is ensuring that all of our undergraduates have a competitive advantage in graduate or professional school and the workplace,” Bachman said. “Experiential learning is a distinctive feature of UGA education, and the requirement ensures that all of our students will benefit.”

Courses and noncredit activities that satisfy the requirement have been identified by each of the university’s colleges. In the College of Agricultural and Environmental Sciences alone, there are more than 70 experiential course options already offered across all majors.

Hands-on learning gives CAES students an edge.

In the College of Agricultural and Environmental Sciences alone, there are more than 70 experiential course options already offered across all majors. With congressmen in D.C., teaching fourth-grade science in Clarke County, Georgia, or conducting research with one of our world-renowned scientists,

Nine CAES study abroad programs are available worldwide, and CAES students ventured outside those programs to travel to a total of 22 countries between 2015 and 2016. In 2016, 44 students presented faculty mentored research projects in the CAES Undergraduate Research Symposium.

Countless CAES students have obtained internships that allow them to test their skills and create networks in professional settings. Since 2001, UGA students have participated in the college’s ULead Certificate in Leadership and Service program and, currently, about 70 students are completing the coursework and service-learning projects associated with the certificate. About a quarter of those are CAES students.

“Most students who engage in an experiential opportunity tend to come back for more, so the real transformative impact of UGA’s experiential learning initiative will be in the ways we help students integrate multiple experiential activities, along with their studies in the traditional classroom,” Bachman said. “CAES is well-positioned to support students in making those connections and making a positive impact in their chosen fields immediately upon graduation.”

Contact Director of Student and Employer Engagement Brice Nelson at bricen@uga.edu with internship opportunities, and Amanda Stephens at amanda10@uga.edu with inquiries about other experiential learning opportunities. – Kathryn Schiavo
Icing on the Cake

College of Agricultural and Environmental Sciences student-athlete Karl Saluri came in at No. 23 in the decathlon for his home country, Estonia, at the Olympics in Rio this year. The third-year food industry marketing and administration major tallied 7,223 points in the decathlon after taking 11th in the 100-meter dash, 15th in the 1500-meter run, 18th in the discus throw, 20th in both the pole vault and the shot put, 24th in both the long jump and the 400-meter dash, 25th in the javelin throw, 27th in the 110-meter hurdles and 28th in the high jump. His experience at Rio was “hard to describe,” especially since he was newly recovered from a broken bone in his leg. “My goal was just to finish the meet,” he said.

He spent his birthday participating in the opening ceremony with his Estonian teammates. The countries in the Parade of Nations were alphabetized in Portuguese, Brazil’s official language, which put Estonia right after the U.S., or Estados Unidos de América. “We walked in right behind the U.S. basketball team,” Saluri said. “I’ve been following those guys for the last 10 years, and now they were walking in front of me.”

Saluri was drawn to the University of Georgia by the reputation of the university’s track and field program, as well as by a childhood friend and now-teammate at UGA and for Estonia, Maicel Uibo. He came to CAES to fulfill a dream of opening his own restaurant – one in Estonia, for his mom, and one in the U.S. “That’s my dream: to have my own restaurant and for it to be successful,” Saluri said. “I know how hard it is to have a successful one.”

In 2015, he didn’t compete due to injury. Instead he practiced cooking and baking, sometimes two cakes a week or “whenever somebody had a birthday,” he said. The greatest lessons he’s learned through his major are “how to get customers, to make sure they still come to your place, and how expensive it is to get new customers,” he said.

Being a student-athlete and keeping up with coursework is challenging. Luckily, being a decathlete keeps Saluri practiced in multitasking. “It’s hard to mentally get ready after a hard workout to study or go to a tutoring session,” he said. “But I do decathlon. I do 10 events, so I’m used to a lot. It’s like you have 10 jobs.”

After graduation, he plans on traveling and preparing for Tokyo in 2020. “My goal for Rio was just to go; in Tokyo, it’s to do something big,” Saluri said. “I’m going to work to get a medal. If not, at least I tried.”

Kathryn Schiliro

UGA decathlete, skilled baker and Estonian CAES student Karl Saluri competes in Rio Olympics
Student-athletes in the College of Agricultural and Environmental Sciences learn to balance challenging coursework with the sports they love, but it’s not always an easy task. They have to study and complete assignments while juggling workouts, team meetings, practices, mentor meetings, classes and tutoring sessions. Their academic progress during their first year determines their tutoring schedules and whether they need academic mentoring.

Aulden Bynum, a senior from Valdosta, Georgia, double-majoring in agribusiness and agricultural and applied economics, said having a jampacked schedule – starting at 7 a.m. and ending as late as 10 p.m. during the football season – can feel overwhelming at times. Student-athletes are required to sign in at each class and tutoring sessions. Any late or missed appointments lead to extra miles run during practice.

“You can’t try to fight the system,” Bynum said. “It’s a lot of responsibility, but it’s all worth it.”

Torri Allen (BSA – Biological Science, ’13) came to the University of Georgia from her hometown of Stafford, Virginia. She arrived at UGA with plans to play soccer, earn her bachelor’s degree and then attend the UGA College of Veterinary Medicine, where she is currently enrolled. She grew up playing soccer, but found college sports to be particularly demanding. “In veterinary school, we sometimes have three or four tests in one week, so learning to prioritize has helped a lot,” Allen said.

Heath Holder (BSA – Agribusiness, ’16) from Loganville, Georgia, now plays baseball for the Colorado Rockies. While at UGA, he played baseball for five seasons and described it as a year-round sport. The UGA team practices are two to three hours long, with scrimmages throughout the fall semester. The regular season starts in February and games are played on Tuesdays, Fridays, Saturdays and Sundays until May.

“You have to stay on top of things because if you get behind, it’s hard to catch up,” Holder said.

Kristin Schnake (BSA – Agricultural and Applied Economics, ’09; MS – Agricultural and Applied Economics, ’11), from Richview, Illinois, was a star softball player at UGA. She now works at Bunge North America, a global agribusiness and food ingredient company. Schnake recalls the tight scheduling and balancing of responsibilities that occur as a student-athlete. She said that she used practice and game time to release any stress.

“The time management and overall life skills I gained as a student-athlete definitely translated into my professional life,” she said. “A coach can be just as hard as a boss.”

Myria Shipman (BSA – Animal Science, ’04; MAL – Agricultural Leadership, ’06) teaches animal science, veterinary science and small animal care and management at Islands High School in her hometown of Savannah, Georgia. Equestrian became a varsity sport just before Shipman’s sophomore year. She remembers having team workouts at 5 a.m. on Wednesdays, individual workouts three days a week, practices twice a week and competitions on Fridays and Saturdays.

“I learned to keep lists and I still do now,” Shipman said. “You have to know what your long-term plan is and create short-term goals to help achieve that plan.”

Clockwise from top left: Aulden Bynum, current CAES student and Bulldog football offensive tackle and tight end, joins the ranks of former CAES student-athletes Kristin Schnake, Torri Allen and Heath Holder.

**Good Sports**

**CAES student-athletes put time-management skills into practice**

Clockwise from top: Photos courtesy of UGA Sports Communications, David Barnes
Dean Sam Pardue took the helm of the College of Agricultural and Environmental Sciences in March. Here, he shares with Southscapes what he sees for the future of CAES and agriculture.

Q: What do you see as the top three priorities for the college in the next decade?

A: Moving forward, I trust that we will honor our past and build upon that great tradition and history while embracing the emerging challenges in agriculture and the environment. Our priorities are numerous, but chief among them will be creating access to CAES degree programs at each of our three campuses, providing focused research and Extension initiatives that support Georgia agriculture and attracting the finest cohorts of students, faculty and staff. If you would allow me a fourth priority, that would be engaging our alumni and expanding our fundraising efforts to provide the best opportunities and experiences for our students and our college.

Q: What challenges do you see for the future of agriculture?

A: Just as was true for our priorities, our challenges and opportunities are also numerous. Major challenges facing agriculture in the future include access to water resources, labor and immigration policy, and regulatory issues. There are certainly many more and another list would likely be as relevant as these three.

Q: How is the college preparing to answer those challenges?

A: Many of these challenges will require that we develop interdisciplinary solutions. That will require working across departmental, college and university boundaries. CAES will strive to foster collaboration to seek the best answers to problems. To do so, we must bring the best minds into the agriculture arena. Our goal is to convince this generation of students that the field of agriculture can provide them with a meaningful and fulfilling career, a career that addresses some of the most fundamental challenges of our age.

Q: What does the growing interest in sustainability and urban agriculture mean for the college?

A: I think it is a great development. It connects us all to where and how our food is produced. For many from urban areas of the state, it is their introduction to food and agricultural issues. In the future, we will likely need to produce more food on less land, with less water and fewer inputs. To prepare for that scenario, we must begin to think of new and better ways to meet the global demand for food and fiber. Creativity and real change often comes from the periphery. So I hope we will encourage nontraditional agriculture students to engage with conventional producers to find viable alternatives. I am, however, reminded that the first word in sustainability is profitability. If it isn’t profitable, it is difficult to sustain.

Q: How do you expect undergraduate- and graduate-level enrollment to shift in the coming years, both in overall numbers and in terms of majors?

A: Enrollment trends are always difficult to predict. One factor that impacts our projections is the fact that CAES programs and units have given rise to six other colleges or schools at UGA. CAES is, in a very real sense, the “cradle of colleges.” The most recent example was the migration of CAES’ Department of Agricultural and Biological Engineering to form the College of Engineering in 2012. Assuming that we retain all current programs and departments, I anticipate that we will see modest growth at the undergraduate level and a more robust expansion of graduate opportunities. We currently have nine departments in the college. I expect that all will be nationally competitive in attracting students.

Q: What is the college doing to embrace the universitywide experiential learning requirement that started this fall?

A: This isn’t new to CAES. It has been our tradition and history since 1859, when the college was founded. We embraced experiential learning long before it was prominent in academic circles. Our Deans’ Promise states: “Every student in our college will have the opportunity to enrich their college experience beyond the classroom.” Whether it is through study abroad, service learning, internships, undergraduate research or leadership development, we want to make these experiences available to every CAES student. The Deans’ Promise is not only our commitment to students to provide these opportunities, but donors can have a direct impact on these experiences by supporting funding for the Deans’ Promise.

• Compiled by Faith Peppers
Trans-Atlantic cultivation
CAES and University of Padova create dual master's degree program

To promote collaboration on the global challenges facing agriculture, the College of Agricultural and Environmental Sciences is partnering with the University of Padova in Italy for a dual master's degree program in sustainable agriculture. Administrators and faculty from the University of Padova and the University of Georgia met in spring 2016 in Padova in northern Italy to create the dual-degree program. The first students enrolled this fall, and the first UGA participant will move to Padova in May 2017.

The University of Padova—the top-ranked agricultural university in Italy—and UGA are leaders in precision and sustainable agriculture.

“This innovative program will not only provide UGA graduate students with outstanding training, it will also provide them with a unique opportunity to learn about the challenges, opportunities and leading edges of their field on another continent,” said Suzanne Barbour, dean of the UGA Graduate School. “This experience will serve our students well when they enter the job market in our increasingly global economy.”

The dual-degree program, housed in the Department of Crop and Soil Sciences, is the first of its kind at CAES. Challenges facing agriculture in the 21st century are global and won’t be solved by scientists from a single country or continent, said George Vellidis, UGA professor of crop and soil sciences, who spearheaded the effort to develop the program.

“When agriculturalists from across the globe work together, we can better solve the constant problems that emerge and threaten food production and food security,” he said. “The dual degree is beneficial because it will train them in sustainable agriculture and global competence, a valuable portfolio in a globalized economy.”

The dual degree is the maturation of a 12-year partnership between UGA, the University of Padova and four other European and U.S. universities. These schools formed the Trans-Atlantic Precision Agriculture Consortium in 2004. To date, 45 undergraduates and eight graduate students have participated in the program.

“The dual degree is one of the important outcomes of a relationship cultivated over a decade between UGA and the University of Padova,” said Amrit Bart, director of the college’s Office of Global Programs. “Building and sustaining international partnerships such as this takes the backing of both universities and their stakeholders. While other universities and programs are talking and thinking about dual-degree programs, our college and our faculty are proudly making it happen.”

“Building and sustaining international partnerships such as this takes the backing of both universities and their stakeholders. While other universities and programs are talking and thinking about dual-degree programs, our college and our faculty are proudly making it happen.”

Merritt Melancon

Research team develops drought-hardy grass in TifTuf

The newest turfgrass variety released by the University of Georgia Tifton Campus withstands drought better than any other bermudagrass today, according to Brian Schwartz, turf breeder at UGA Tifton. Finding a highly drought-tolerant variety was one of Schwartz’s goals when he arrived at UGA in 2009. Sure enough, Schwartz’s first turf release fits that criterion; TifTuf can withstand up to 38 percent less water than other turfgrasses bred at UGA.

“TifTuf is at least as good as some of the other varieties, such as Tifway and TifGrand, when conditions are good. But when the stress happens, the others fail to some degree and this one hangs in there pretty well,” he said.

Schwartz emphasized that his team’s objective in researching different grasses was not to find the prettiest grass, but to find the toughest.

“That’s what we really try to do here at UGA Tifton – take away the fertilizer, take away the water, take away the pesticides and see which grasses remain. TifTuf was always at the top,” Schwartz said.

There are already 31 licensed farms growing TifTuf across the southern U.S., according to Schwartz.

“One Georgia-based company predicts they will have 1,600 acres of TifTuf available by next year,” Schwartz said. “To have a company that is growing so much, so fast is a real testament to the support of our program, and to the grass in how it’s a next-generation leap into drought tolerance.”

TifTuf is featured prominently on the UGA Tifton Campus. It surrounds the newly renovated Tift Building at the front of campus and can be seen at the future Farmstede, a program in energy efficiency and sustainability brought to life via a specially designed house located on campus.

Clint Thompson
Free to Bee

Beekeeping is not an easy skill to master when you are housed in one of the state’s correctional facilities. However, for the past two years, offenders at four of Georgia’s state prisons have been learning to work with bees through the University of Georgia’s Georgia Master Beekeeper Program, which is associated with the College of Agricultural and Environmental Sciences entomology department and UGA Cooperative Extension.

“At first I thought, ‘Are you kidding me? Inmates, smokers, hive tools; this is a horrible idea,’” said Jennifer Berry, Georgia Master Beekeeper instructor and UGA Honey Bee Lab research coordinator. “But after meeting and talking with the inmates, it was obvious that having something to take care of was a privilege for these guys. You could see how protective they were of the bees, and how they wanted to learn anything they could to help keep them alive.”

Hives have been popping up in prisons across the country in the hopes that inmates can develop new vocational skills and success in an endeavor that takes patience, hard work and a lot of new knowledge. While Georgia’s Master Beekeeper Prison Program started in 2015 with 15 inmates at Smith State Prison in Glennville, Georgia, it has now spread to three other locations and has produced more than 30 Certified Beekeepers, with more about to join the ranks.

It all started when one inmate, who had been a beekeeper before he was incarcerated, wanted to start a beekeeping program at Smith State Prison. He developed a curriculum to teach the inmates about the science and methods of beekeeping and asked the prison’s administration to reach out to the Ogeechee Area Beekeepers Association, a branch of the Georgia Beekeepers Association, to help present the idea to his fellow inmates.

With support from the Georgia Department of Corrections (GDC), the Georgia Beekeepers Association, the Ogeechee Area Beekeepers Association and equipment donations from Brushy Mountain Bee Farm, the prison’s new apiary was up and running. Soon, the prison would have an entire class of Certified Beekeepers to manage it.

In spring 2015, Berry traveled to Smith State Prison along with Bear Kelley, a past president of Georgia Beekeepers Association, to teach the inmates the practical skills they needed to become Certified Beekeepers. A few months later, Berry, accompanied by the entire UGA Bee Lab crew, administered the exams and certified the first batch of inmates. Not only did every inmate who took the test – and two GDC employees – pass the Certified Beekeeper exam, their average scores were well above scores attained on the statewide test given at Young Harris College.

“I could tell how excited they were not only to be learning something, but to be recognized for their accomplishments,” Berry said. “Some of these guys had not had that experience before.”

This fall, close to 60 additional inmates will go through the Georgia Master Beekeeper Program at Arrendale State Prison, a women’s facility near Alto, Georgia; Dooly State Prison, a men’s facility in Unadilla, Georgia; and Ware State Prison, a men’s facility in Waycross, Georgia. Having trained beekeepers and apiaries at multiple locations across the state will enable the beekeeping program to become, and hopefully remain, self-sustaining.

Inmates at Smith State Prison, as the program’s pilot facility, will focus on rearing queen bees so that they and the other prisons can continue to start new hives. Inmates at Ware State Prison will work on the manufacture of hives because they have a large wood shop, and inmates at Arrendale State Prison will supply the bees.

“Hands-on experience engages inmates, making them eager to study and succeed,” said Buster Evans, assistant commissioner of inmate services for the GDC. “The vocational certification the offenders will receive will ensure that they will not come back to prison once released.”

While beekeeping may seem like a niche industry to some, it’s becoming big business in Georgia. The production of honey, bee removal, queen and bee production, pollination services and apiary supplies are valued at $367 million across the state. UGA supports Georgia’s bee industry through groundbreaking research into honeybee health and by providing continuing education to Georgia’s beekeepers. Since the beginning of the Georgia Master Beekeeper Program, more than 450 people have been certified.

“It is truly amazing to see the vision of one of our offenders develop into a program that is now offered to offenders across the state of Georgia,” said GDC Commissioner Homer Bryson. “We are excited about our partnership with the University of Georgia, which will allow these offenders to become Certified Beekeepers.”

Inmates learn apiary care through Georgia Master Beekeeper Program

At first I thought, ‘Are you kidding me? Inmates, smokers, hive tools; this is a horrible idea,’” said Jennifer Berry, Georgia Master Beekeeper instructor and UGA Honey Bee Lab research coordinator. “But after meeting and talking with the inmates, it was obvious that having something to take care of was a privilege for these guys. You could see how protective they were of the bees, and how they wanted to learn anything they could to help keep them alive.”

Top: Researcher Nicholas Weaver (center) quizzes inmates for the Georgia Master Beekeeper Program exam at Smith State Prison in Glennville, Georgia. Above: Georgia Master Beekeeper instructor and UGA Honey Bee Lab research coordinator Jennifer Berry explains subject matter for the exam. Opposite page: Weaver and an inmate inspect a frame.
Diez to lead Center for Food Safety

For years, food scientist Francisco Diez studied and admired the work of University of Georgia Regents’ Professor Mike Doyle. Over the next year, they will work together as Diez transitions into Doyle’s role as director of the UGA Center for Food Safety in Griffin, Georgia.  

Doyle, a leading authority on foodborne pathogens, came to the College of Agricultural and Environmental Sciences in 1991 to establish the center. As director, he developed a research program that promotes collaboration among the food industry, the university and federal and state agencies.  

A native of Mexico, Diez earned a bachelor’s degree in food technology from the Monterrey Institute of Technology and Higher Education and completed his master’s and doctoral degrees in food science at Cornell University. He comes to UGA from the University of Minnesota, where he was a faculty member and head of the Department of Food Science and Nutrition. His research focuses on a variety of pathogens that include salmonella, enterohemorrhagic E. coli and Listeria monocytogenes, leading causes of foodborne illness.  

While transitioning into retirement, Doyle will introduce Diez to the network he has built with the food industry, consumer groups and government agencies, like the Centers for Disease Control and Prevention, the World Health Organization, the U.S. Food and Drug Administration and the U.S. Department of Agriculture.  

“I can’t even imagine walking into the door without his help,” Diez said. “Close working relationships like the ones Mike has built require trust and they are critical to the success of the center.”  

Diez plans to reach out to the center’s network of stakeholders in the food industry for advice and recommendations. “I want to know what their hopes and expectations are for the Center for Food Safety at UGA,” he said.  

As the new center director, Diez will also be rebuilding the center’s faculty by replacing current vacancies in virology, epidemiology and microbiology.  

“The college is committed to refilling these open positions, and our facilities and laboratories are in good shape,” Diez said. “Then we will develop a long-term strategy to expand our center to the international level. We are already known across the United States. I see the center making a huge impact on solving the problems related to foodborne pathogens contamination around the world. The opportunities are endless.”  

• Sharon Dowdy Cruse

Pay it Forward

Schimmel family creates endowment for CAES students

Throughout the 25 years of Centurion Poultry, the Schimmels have leaned on University of Georgia Cooperative Extension and the CAES Department of Poultry Science for advice.  

“I had a lot of contact with the Extension service, with the University of Georgia,” Gjis said. “I had a lot of knowledge, but I didn’t feel that I knew enough to do everything on my own.”  

Last year, the Schimmels decided to create an endowment with the college. The family previously contributed to CAES; they set up a scholarship about 10 years ago and provide internships to students in the poultry science department.  

“We have a warm spot in our hearts for the University of Georgia, for the poultry science program, and we strongly believe that when you make money in the industry, it is good to give back,” Gjis said. “What is a better way of giving back than giving to education? That’s why we have given this endowment... Hopefully there will be many young people benefitting from it, getting a college education, getting to know more about poultry. This industry is very vibrant… We see so many opportunities.”
ExTEND leaders travel to Ecuador to share knowledge and learn

In April, participants and leaders of the ExTEND Advanced Leadership Training Program, all of whom are part of University of Georgia Cooperative Extension, traveled to Ecuador to learn about Ecuadorian agriculture to better serve stakeholders here in Georgia and to share some of UGA Extension’s best practices with their Ecuadorian counterparts.

The 16-member cohort of College of Agricultural and Environmental Sciences staff and UGA Extension agents and specialists met representatives of the Ecuadorian Ministry of Agriculture, Livestock, Aquaculture and Fisheries, Fundación Maquipucuna, a not-for-profit organization working toward biodiversity conservation in Ecuador, and Reserva Yunguilla, a 300-person collective working to preserve the environment through community-based tourism, whose residents sought information on food safety, organic gardening and cattle production. Over the course of the trip, the group visited various agricultural operations – including a research and experiment station, a vegetable production facility, a coffee farm, a sugarcane plantation, a chocolate factory and a horticulture operation run by a CAES alumna – to observe agricultural practices, build relationships and immerse themselves in Ecuadorian culture.

To start the trip, the UGA Extension group visited the U.S. Embassy in Quito, Ecuador, where Agricultural Specialist Henny Vega, who works at the American Embassy, welcomed and briefed the group on agriculture in Ecuador and trade with the U.S.

“The briefing helped us understand the economic situation in Ecuador and the role of agriculture,” said Andrea Scarrow, Southwest District Family and Consumer Sciences program development coordinator. “This equipped us to interact with professors and students at the university and gave us the big picture of some of the challenges and natural resources that Ecuador has.”

At Central University of Ecuador, Associate Dean for Extension Laura Perry Johnson provided an overview of UGA Extension before Extension agents and specialists spoke about successful UGA programs in cattle production, Vidalia onion research, Extension youth development and Family and Consumer Sciences programming, and online learning.

“It was so rewarding for the agents and the specialists who went to present workshops on very practical topics that make a difference in everyday lives,” Scarrow said. “We all felt like we received a lot culturally and we were able to put our expertise to work.”

Because the Ecuadorian agriculture ministry is looking to partner with UGA Extension to learn methods of reaching local communities with research-based education, members of ExTEND sought to share as much knowledge as possible.

“It was amazing to see agents share their knowledge and expertise with the people of Ecuador,” Johnson said.

The trip was led by Johnson, Scarrow and UGA Extension Director of Leadership Programs Tony Tyson, and helped pave the way for collaborations while providing ExTEND participants with opportunities to expand their cultural knowledge and understanding. Extension personnel are presently developing bilingual tools – like posters in English and Spanish – to train food-service workers at Maquipucuna and Yunguilla in food safety, as well as tools to help those at Yunguilla with composting, according to Scarrow. College Program and Staff Development Specialist Todd Hurt is working with the agriculture ministry to translate UGA Extension’s “Plant Diseases and Disorders” online classroom to Spanish and to adapt it to Ecuador’s needs. Tammy Cheely, Extension county coordinator for Glascock, Hancock and Warren counties, is working with Ecuadorian beef and dairy cattle producers to grow and improve the genetics of their herds. Eventually, Cheely hopes to organize a trip for Ecuadorian producers to come to the U.S. to shadow Georgia producers. She’s also developing rations to boost cows’ nutrition and productivity, and testing forage varieties to grow in Ecuador. Georgia 4-H faculty members Sonya Jones, Susan Yearwood and Melanie Biersmith presented healthy living, leadership and environmental education information and led several activities for students at the Yunguilla school. Students enjoyed migratory bird hopscotch, which provided an opportunity to talk about protecting the migration pathways of birds who travel between the U.S. and Ecuador, and a version of Pictionary to practice English vocabulary words. These 4-H faculty members are gathering school supplies and creating English flash cards for the students’ English lessons. “The idea is that we’re going to be providing them with tools that they can use to continue to develop their projects and livelihoods,” Scarrow said.

The ExTEND program, which is an offshoot of UGA Extension’s professional development program, the Extension Academy for Professional Excellence, provides opportunities for Extension Academy graduates interested in broadening their professional leadership development and making an impact within Extension. The 18-month ExTEND program includes professional development sessions and self-directed assignments based on individuals’ interests and goals. It fosters leaders who are ready to serve the organization in roles of greater responsibility as Extension agents, program managers and staff directors.

Laura Perry Johnson

“It was amazing to see agents share their knowledge and expertise with the people of Ecuador.”

Kathryn Schiliro and Samantha White

noteworthy
Learning Environment

In Forsyth County, Georgia, a group of citizen scientists wearing matching collared shirts heads to the woods at dusk. They listen for frog calls and chart the sounds they can identify. They check polyvinyl chloride, or PVC, pipe shelters for the specimens, record their findings, release the frogs, and return home.

Georgia Master Naturalist Program trains citizens to be environmental educators and ecosystems as well as the impacts humans have on these environments. Extension agents host the program, which includes 48 hours of instruction through lectures and hands-on field classes.

“What makes the Master Naturalist Program especially unique is that the classes are organized by the local site coordinators – usually a county agent – and they can tailor the classes to the individual needs of their area or county,” Mengak said.

All workshops must cover ecology, wildlife management, agriculture management and identification of trees, plants, birds, mammals, frogs, turtles, salamanders and snakes, he said. But even these topics are uniquely different across Georgia.

“In Effingham County, Georgia, they studied plant identification and went to Fort Stewart (Army installation near Hinesville, Georgia) to learn how fire affects endangered species like the red-cockaded woodpecker and gopher tortoise,” Mengak said. “In Union County in north Georgia, they cover topics related to the mountains, black bears and national forest management.”

Human impact is also covered, and in Athens, Georgia, UGA Extension agent Amanda Tedrow takes her participants to the local landfill, a commercial composting facility, recycling facility, drinking water treatment plant and the sewer water treatment plant.

In 2008, nature centers, like the Elachee Nature Science Center in Gainesville, Georgia, the Phinizy Center for Water Sciences in Augusta, Georgia, and the Chattahoochee Nature Center in Roswell, Georgia, began to offer the program.

“Our hope is that [Georgia Master Naturalist Program graduates] will share this information with others by volunteering at the Extension office or teaching at a nature center,” Mengak said. That’s the case with the group back in Forsyth County. In 2010, the first graduating class of Forsyth County Master Naturalists installed 20 bluebird houses – quickly occupied by nesting pairs – along the Big Creek Greenway.

Since then, the citizen-scientist volunteers have placed educational native plant and wildlife signs along the trails.

“Not every one of our Master Naturalists became volunteers, but we do have about 25 active members,” said Extension agent Heather Kolich of her frog-counting group. “They are monitoring stream quality, which is very important because we are so close to Lake Lanier.”

The Georgia program has attracted 1,322 participants over the past 10 years. “It’s not a large number of people – 124 people per year – but we aim to keep the classes at 20 or fewer so it’s manageable for field trips,” Mengak said.

Six Master Naturalist workshops were scheduled across Georgia this year, and new programs are scheduled for some of the same locations in 2017. • Sharon Dowdy-Crusoe

Does Your Private Water Supply Meet Environmental Protection Agency Standards? According to Uttam Saha, resident water expert at the University of Georgia Agricultural and Environmental Services Laboratories (AESL), about 1.7 million Georgians rely on 640,000 private wells for their drinking water.

The Georgia Department of Natural Resources’ Environmental Protection Division regulates only public water supplies.

Whether you want to check on cloudy well water or learn why your tap water smells like rotten eggs, UGA Cooperative Extension can help. Through water sample analysis, the AESL provide an objective, analytical service to agricultural producers, agrichemists and homeowners.

In the last five years, the AESL have conducted mineral analyses on around 15,100 drinking water samples and microbiology analyses (total coliform and E. coli) on 13,000 water samples.

If you are a private well owner, test your well water annually. To provide information to the public, university faculty members author UGA Extension bulletins and circulars for Georgia residents, supplying research-based, peer-reviewed information and recommendations. To learn when and why to test the safety of your well water, check out the following titles at extension.uga.edu/publications.

Your Household Water Quality: Odors in Your Water (Circular 1016)

Homeowners sometimes experience unpleasant odors in their household water. In many cases, the exact cause of the odor is difficult to determine by water testing. This publication provides guidelines as to the probable causes for common household water odors and recommends appropriate treatments.

Water Quality and Common Treatments for Private Drinking Water Systems (Bulletin 939)

Private water sources aren’t held to Environmental Protection Agency standards by any state or federal agencies, but homeowners are encouraged to follow those standards to ensure the safety of their drinking water. Some wells may contain disease-causing organisms that make water unsafe to drink. Some well water may be corrosive, and can deteriorate and damage plumbing, stain clothing and fixtures, cause objectionable tastes or create human health hazards.

Testing for Water Quality (Circular 858-2)

Private well users are responsible for the safety and quality of their well water. Private water systems may contain dissolved minerals, organic compounds or even live organisms, all of which could be at harmful concentrations. This publication identifies situation-specific water testing processes and testing types. • Erin Yates
A highly prolific, invasive species, feral swine are living life high on the hog—pun intended—wreaking havoc on land in Georgia and throughout most of the country. Wildlife and agricultural professionals agree that population control methods for feral swine must change. Nationally, at last count in 2007, there were an estimated 3 million feral swine creating at least $1.5 billion in damage and control costs each year, according to a report by Cornell University’s David Pimentel, “Environmental and Economic Costs of Vertebrate Species Invasions into the United States,” for the U.S. Department of Agriculture National Wildlife Research Center Symposia.

Across Georgia, feral swine damage is estimated at more than $130 million for 2014—nearly $99 million in crop damage and more than $31 million in noncrop damage, according to a 2015 survey by Michael Mengak, University of Georgia Cooperative Extension wildlife specialist. Of the more than 1,100 farmers and landowners who responded to Mengak’s survey, which was funded by UGA Extension and the Warnall School of Forestry and Natural Resources, 29 percent said that they had feral swine on their land and, of those, 63 percent reported damage to their land caused by feral swine, including damage to crops, fences, roads, irrigation equipment, tree and row crop plantings and more.

Feral swine destroy corn, hay, soybeans and wheat in hunting crops or bugs, grubs, worms, acorns and peanuts as a food source. They’ll also root up turfgrass in backyards and golf courses—anywhere there’s healthy grass being watered—because that’s a good habitat for the bugs, grubs and worms that feral swine eat.

“Shortly after planting, when you’ve got pigs in a field, it looks like a plow went straight down a row,” said Jay Porter, UGA Extension agent in Dooly County.

Some farmers worry about damage to crops favored by feral swine to the point that they will plant a crop of lesser value. This may cause a farmer to make up to $14,450 less a year, according to the 2015 survey. “It shows that pigs are forcing farmers to do other things,” Mengak said. “They (farmers) may be getting a cotton crop, but might’ve gotten more money with a peanut crop.”

Feral swine compete with native wildlife for food; consume the eggs of ground-nesting birds and turtles; contaminate water and can carry 30 diseases and 48 parasites, some of which can affect humans, companion animals and livestock.

While classical swine fever has been eradicated from the U.S., brucellosis and pseudorabies are still endemic to the Southeast, said Matt Ondovchik, wildlife biologist and feral swine coordinator for the Wildlife Services division of the USDA Animal and Plant Health Inspection Service (APHIS). Georgia’s feral swine population has been growing in the past three to five years, according to those surveyed, and more than half of those surveyed believe that’s due to a lack of hunting pressure and natural causes. They have no natural predators and one of the highest reproduction rates of all mammals. They can have a litter of up to six piglets twice a year.

Traditionally, hunting was thought to be enough to keep the feral swine population in check. However, as hunting the animals became popular, feral swine were illegally transported across state lines. In the early 1980s, feral swine were concentrated in the South, with populations in California and Nevada, according to APHIS. As of 2010, they exist throughout 35-plus states.

“We have found that all types of hunting are ineffective,” Porter said about the use of hunting as population control for the past 10 to 15 years. “The amount of animals present in the ecosystems, along with the fact that these animals are prolific breeders, [means] you cannot get in the field and shoot enough pigs to make a major impact on populations.”

In the past, small box traps—in which the pig trips the wire and the gate drops—have also been used to catch individual pigs. But feral swine travel in family groups, and they’re smart; seeing another member of the group get trapped often makes the rest of the group “trap shy.” With the small cage traps, you’d catch one to two juvenile, naïve pigs, but the rest of the family would get the education of a lifetime,” Ondovchik said.

Currently, UGA Extension, APHIS Wildlife Services and other agencies recommend large-scale, corral-style traps, which can capture a family of pigs at once. These traps are installed after a feeder or bait site is set up and the travel patterns of a family group of feral swine are established. Once the traps are set up, the gate can be triggered to close via a remote control. Through $20 million in federal funding, APHIS National Feral Swine Damage Management Program was established in 2014, enabling Wildlife Services to work with state and local agencies, like UGA Extension, on a local level to curb the feral swine population. Part of this program allows Wildlife Services to work directly with landowners to set up these large-scale, corral-style traps; the APHIS program funds the travel, equipment and bait expenses associated with trapping efforts, and the landowner pays for Wildlife Services personnel’s time on site. In some Georgia counties, UGA Extension is partnering with Wildlife Services in offering this service.

And by large, those surveyed agreed that feral swine are a nuisance that damage the environment and should be eliminated.

“I always like to compare feral pigs to pigweed,” Porter said. “We had tremendous issues with pigweed. In 1996, we sprayed them with Roundup and went about our business. They became [Roundup] resistant and now we use deep tillage, cover crops, hand weeding and multiple herbicides (to control pigweed). With wild pigs, we have hunted them and hunted them and hunted them; it’s the only method we’ve consistently used for 20 or 25 years. We need to take that pigweed approach and use every tool in our toolbox to reduce the feral pig population.”

• Kathryn Schilke

Feral swine will hunt crops or destroy them, including corn (above), while in search of bugs, grubs and worms. The invasive species caused about $199 million in crop damage in Georgia in 2014.
Southscape’s Fall 2016 issue features the “New Associate State 4-H Leader Has Roots in UGA Extension” story on page 24.

NEW ASSOCIATE STATE 4-H LEADER SUE CHAPMAN believes in 4-H and all that it has to offer to the youth of Georgia. Chapman grew up just north of Atlanta in Cherokee County, Georgia, and received her bachelor’s degree in psychology from the University of Georgia. She completed her master’s degree in industrial organizational psychology at Valdosta State University before returning to UGA to get her doctorate in adult education.

Chapman initially started working with UGA Cooperative Extension as the family and Consumer Sciences Extension state coordinator for nine years. She has spent the last seven years working for UGA’s public service and outreach unit, Archway Partnership, connecting communities with higher education resources to address locally identified community and economic development needs.

In her current role, she assists in the day-to-day operations of the 4-H Youth Development program throughout the state, working with both state office faculty and UGA Extension agents.

Chapman’s first weeks involved an intense familiarization process, learning all about Georgia 4-H.

In the midst of gearing up for State Council, State Congress and other large events related to Georgia 4-H, Chapman said her biggest challenge was getting a handle on the many programs and activities that make up Georgia 4-H.

The greatest potentials that we have to capitalize on the great work that we already do,” Chapman said.

• Samantha White
Service learning helps more than just our students.

“Since my freshman year, I have been involved with service learning through UGArden – a sustainable, student-run farm that provides produce to the food-insecure community in Athens. Interacting with faculty, students and community members at UGArden has empowered me with knowledge and experience to solve real-life problems now and postgraduation.”

— Teri Rakusin, BSA - Horticulture, ‘18

UGArden provides produce to Campus Kitchen, a student-powered hunger relief program. Carson Dann, an agriscience and environmental systems student (left), volunteers at Campus Kitchen, while Teri Rakusin (right) pitches in at UGArden.

Ensure that future students have experiential learning opportunities, like education abroad, internships, research and leadership programs, by giving to CAES today.

Give online at caes.uga.edu/alumni/gifts or by mailing in the attached envelope.
Olita Muñoz's scientific exploits involve breeding root-knot nematode resistance into grain sorghum alongside U.S. Department of Agriculture scientists.

Muñoz is a senior biological science major on the University of Georgia Tifton Campus, and this experiential learning, coupled with her fascination with scientific research, fuels her pursuit of a career in genetics. "The process of not knowing and trying to find out, it's a mystery. That's really what I like about it," Muñoz said.

Muñoz works under Karen Harris-Shultz, a research geneticist at the USDA. Her research, in collaboration with USDA Agricultural Research Service nematologist Richard Davis, centers on sorghum and root-knot nematodes, microscopic worms that feed on the roots of many crops. Root-knot nematodes are distributed worldwide and parasitize thousands of plant species, causing economic losses in high-value Georgia crops such as cotton, tomatoes, bell peppers, watermelon and soybeans. The cultivars of many of these crops have limited genetic resistance, and management treatments are important for root-knot nematode control.

Sorghum is a popular crop in the U.S. It is used in syrup production, as livestock feed and has recently come into the consumer food market as an ingredient in more than 350 U.S. product lines. Davis identified that a sweet sorghum cultivar, 'Honey Drip', has root-knot nematode resistance. Resistant sorghum can be used in crop rotation with susceptible crops to drive down the population of root-knot nematodes in the soil. However, 'Honey Drip' is a tall, sweet sorghum, and most of the sorghum grown in the U.S. is grain sorghum.

In 'Honey Drip', the scientists identified that a single, dominant gene on sorghum chromosome 3 prevents nematode reproduction. With this knowledge, they can move this gene from 'Honey Drip' to grain sorghum lines by crossing and selecting progeny that contain the chromosome 3 region of interest.

Muñoz, a student worker in Harris-Shultz's lab, helped move the gene from 'Honey Drip' into susceptible types of grain sorghum. She helped to make crosses and backcrosses, and to genotype progeny to see whether they contain the region of interest.

In April, Muñoz presented her findings to fellow students, scientists and judges at the Association of Southeastern Biologists conference in Concord, North Carolina, thanks to an endowment established by UGA veteran scientist Wayne Hanna and his wife, Barbara, following his retirement from the USDA Agricultural Research Service office in Tifton, Georgia. “Even though I was nervous, I was really excited and eager to present what I’d done,” Muñoz said. “The research made me think, ‘I really like this… This is what I want to pursue as a career.’”

“We are pleased that she was able to use it (the endowment) to help her with her experiences,” Hanna said. “We want recipients of this endowment to have an enriching experience.”

Muñoz’s mentors on the UGA Tifton Campus believe her experience will serve her well as she pursues a career in research. “Having students present their research is very important as it organizes their thoughts and leads to new conclusions. It also prepares them to give a two-minute elevator speech about their research,” Harris-Shultz said.

Being able to talk about research and discovering new ideas help to broaden a researcher’s point of view.

“It’s extremely valuable, for a student and for a scientist, to go out and interact with other scientists, interact with programs that are different than yours because a lot of times, in our own program, we have a narrow vision. But when we go out and talk to other people, our vision is broadened,” Hanna said. “We see other opportunities that we never dreamed of. You see how other people do things that you never dreamed.”

- Clint Thompson
Two College of Agricultural and Environmental Sciences students each received one of only 10 grants from the University of Georgia Office of Sustainability’s 2016 Campus Sustainability Grants Program. The program funds student-initiated projects that further the university’s sustainability goals.

One of the projects, “Greek Goes Green,” was awarded $5,000 to reduce waste in fraternity houses. It was created by Anna Trakhman, a fourth-year systems major in the Terry College of Business, both from Marietta, Georgia. Siegel, a management information systems major in CAES, and Matt Thomson, a third-year environmental economics and policy major in CAES, found that bacteria concentrations in the tributaries were very high during storms and exceeded the state water quality standard. Between storms, the concentrations were much lower and usually met the standard. This indicates that the sources of bacteria are likely runoff from the urban and forested areas. Bacteria concentrations leaving the lake were low and met the water quality standard. Saintil plans to repeat her sampling and analysis process with different tributaries.

CAES faculty Terence Centner and Matt Siegel, a management information systems major in the Terry College of Business, both from Marietta, Georgia.

The duo recruited six fraternities to participate in the waste reduction initiative and worked with Joe Dunlop, from Athens-Clarke County’s Recycling Division, to ensure that those fraternities could obtain the appropriate recycling bins. Educational materials on recycling techniques were also provided.

“We want all Greek houses to naturally want to recycle and to do so consistently,” Trakhman said.

Graduate student Thalika Saintil, from Port-au-Prince, Haiti, focused on fecal bacteria source tracking and nutrient analysis in Lake Herrick, part of UGA’s Athens Campus. She was awarded $4,978 to help identify potential sources for the lake’s pollution. Saintil collected water samples from below the Lake Herrick dam and the lake’s two inflow tributaries: Birdsong, which drains the forested area, and Armadillo, which drains part of the Five Points neighborhood.

“There are other faculty and students working on the lake itself, but not assessing the surrounding streams,” Saintil said. “I wanted to determine what is coming into the lake and how much pollution the lake is contributing to the Oconee River.”

Saintil, who is studying crop and soil sciences at CAES, found that bacteria concentrations in the tributaries were very high during storms and exceeded the state water quality standard. Between storms, the concentrations were much lower and usually met the standard. This indicates that the sources of bacteria are likely runoff from the urban and forested areas. Bacteria concentrations
In Georgia classrooms, science activities like Oreo moon phases and fazing Jupiters made of baking soda are making Project FOCUS, or “Fostering Our Community’s Understanding of Science,” a success. Dr. Burke challenges her students, including me and many other students, to critically think about the research, about how it fits into the field and about science in general,” Mayfield wrote in his nomination letter.

“My time at the University of Georgia, I want to emulate her success and pursue a career in research and science education,” he added. Burke is not alone in her dedication to undergraduate research.

Each year, dozens of CAES faculty open up their labs to curious, driven undergraduates like Mayfield. This April, CAES undergraduate students participated in the college’s Undergraduate Research Symposium. That was a record number, and it would not have been possible without the support of Burke’s lab. Burke currently works with three undergraduates, one doctoral student and two recent graduates. They study the relationship between parasitic wasps, their host caterpillars and an immune-suppressing virus that helps the wasps colonize the caterpillars. The wasps carry a virus that suppresses the caterpillars’ immune systems, allowing the wasps to lay eggs in the caterpillars without them being destroyed by the host’s immune system.

Fourth-year entomology and biology double major Johnathan Mayfield, graduate student Sherilyn Harper all work in Burke’s entomology lab.

Entomology graduate student Tyler Simmonds (back, left to right), undergraduate students Johnathan Mayfield, graduate student Kelsey Coffman, (front) lab manager Hannah Boomgardner, Assistant Professor Gaileen Burke and undergraduate student Sherilyn Harper all work in Burke’s entomology lab.

Environments graduate student Tyler Simmonds (back, left to right), undergraduate students Johnathan Mayfield, graduate student Kelsey Coffman, front lab manager Hannah Boomgardner, Assistant Professor Gaileen Burke and undergraduate student Sherilyn Harper all work in Burke’s entomology lab.

FIRST PLACE, POSTER PRESENTATION
“Creating an Entomological Geodatabase to Understand the Effects of Biophysical Context on Arthropod Distributions” by Aaron Bruce, fourth-year agriscience and environmental systems major at UGA Tifton.

FIRST PLACE, ORAL PRESENTATION
“The Actions of a Hemipteran Active Baculovirus Thrombocytopenia Toxin in Tarnished Plant Bug, Lygus lineolaris” by Darrin Bruce, fourth-year applied biotechnology major.

Effects of Biophysical Geodatabase
“Creating an Entomo- Currently, Burke and students are working on new projects that aim to understand how biophysical factors influence the distribution of arthropods. Burke encourages students to be creative and think critically when approaching scientific questions. “If you’reAssistant Professor Gaileen Burke, you do it with a 10-pound bag of Starburst,” Burke said.

One day in 2015, Burke sat down with her laboratory’s team of undergraduate researchers and asked them to build a genome from its requisite, fruit-flavored parts. It is important for the student workers to know the basics of how genomes work in order to help her in the lab, but it also important for them to know for their future endeavors and coursework.

When you take on first-year students as lab partners, you may have to provide more explanation, but the payoff is worth it, Burke said. That extra effort has earned her the admiration and friendship of many of her undergraduate researchers and the 2016 College of Agricultural and Environmental Sciences Undergraduate Research Mentor of the Year Award.

“I enjoy working with undergraduates because of their energy, enthusiasm and fresh perspectives on research questions,” Burke said. “In the last two years, I have been lucky enough to have several exceptional students join my lab to work on their own research projects, some of which have resulted in peer-reviewed publications. It is very rewarding to see them mature as they gain hands-on experience with the scientific process.”

Burke currently works with three undergraduates, one doctoral student and two recent graduates. They study the relationship between parasitic wasps, their host caterpillars and an immune-suppressing virus that helps the wasps colonize the caterpillars. The wasps carry a virus that suppresses the caterpillars’ immune systems, allowing the wasps to lay eggs in the caterpillars without them being destroyed by the host’s immune systems.

Fourth-year entomology and biology double major Johnathan Mayfield, who nominated Burke for the award, has presented his part of this research each year since joining Burke’s lab in 2014.

While science and research can seem unapproachable and daunting at first, Dr. Burke challenges her students, including me and many other undergraduates, to critically think about the research, about how it fits into the field and about science in general,” Mayfield wrote in his nomination letter.

“Because of the immense influence Dr. Burke has had on me during my time at the University of Georgia, I want to emulate her success and pursue a career in research and science education,” he added. Burke is not alone in her dedication to undergraduate research.

Each year, dozens of CAES faculty open up their labs to curious, driven undergraduates like Mayfield. This April, CAES undergraduate students participated in the college’s Undergraduate Research Symposium. That was a record number, and it would not have been possible without dedicated mentors like Burke and her colleagues.

Additional efforts rewarded
A RECORD NUMBER OF STUDENTS PARTICIPATED IN THIS YEAR’S CAES UNDERGRADUATE RESEARCH SYMPOSIUM on April 11 in Conner Hall on UGA’s Athens Campus. About 30 students presented their research findings and others developed research posters. A team of veteran faculty members chose winners in both the oral and poster presentation categories.

“I am honored to be included among the many first-generation students in the UGA Agriscience Department who have been lucky enough to work in Dr. Burke’s lab,” Mayfield said.

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CAES student Jordan DuPont helped to prepare Fenway Park, home of the Boston Red Sox, for games this summer.

PHOTOS CONTRIBUTED

“Most golf courses use a moisture meter, but this golf course is unique. We actually learn how to feel for the desirable amount of moisture. It’s a good way to understand how grass grows,” said Heath, a junior turfgrass management major in the College of Agricultural and Environmental Sciences.

While the University of Georgia implemented its experiential learning initiative this fall, CAES students have long been engaging in experiences that position them for career success.

Internships have become an integral component of the turfgrass management major, said Associate Professor Gerald Henry, Athletic Association Endowed Professor. “They provide students with hands-on training, real-world experience and insight into job opportunities within their profession.”

In sports turf management internships, students can expect to mow, irrigate and aerate turf, apply chemicals, lay sod and fertilize, but they may also manage a budget or a crew.

“We talk about things a lot in school, but doing the day-to-day work and planning to maintain a golf course is something that a classroom just cannot provide,” said senior turfgrass management major Silas Ledford, who interned alongside Heath this summer.

There are many advantages to experiential learning for a turfgrass management student, said Professor William Vencill. “They have to apply the coursework they complete on campus to solve everyday issues … as well as seeing the business side of the industry.”

From the golf course to a major league baseball field, senior turfgrass management major Chad Austin landed an internship with the Boston Red Sox this summer. As a former baseball player and aspiring sports turf manager, Austin hopes this well-known reference will help him launch his career.

At Fenway Park, Austin moved the grass, watered the infield, patched the mound, repaired the bullpen and cleaned up sunflower seeds.

While Austin once had an opportunity with the UGA Athletic Association to paint the field at Sanford Stadium before a football game, he said he had “no clue about the level of detail it takes to maintain a major league field.”

Another aspiring sports field manager, junior turfgrass management major Kaulin Andric learned how to manage field “playability” through his internship with the Altoona Curve, a minor league baseball team in Altoona, Pennsylvania.

“We talk a lot about the level of detail it takes to maintain a major league field,” said Andric. “Players like it moist.”

Andric connected with his Altoona Curve boss at the Sports Turf Managers Association conference in San Diego last winter. He already completed an internship with the Louisiana Bats the previous summer, and had heard positive reviews about working for the Altoona Curve’s assistant superintendent.

“Building industry connections is one of the most valuable aspects of experiential learning. Junior Caleb Harker and senior Jordan DuPont, both turfgrass management majors, credited their boss at the UGA Golf Course, Superintendent Scott Griffith, with helping them land summer internships at Sea Island Golf Club on St. Simons Island, Georgia.

There, the interns learned how to maintain golf courses at a five-star resort. The students learned how to transition from cool-season ryegrass to warm-season bermudagrass by overseeding rather than killing the dormant grass with chemicals. Harker said most golf courses cannot afford to overseed and that it’s a “huge challenge.”

“It’s tough being on an island,” said Harker. “Mother nature controls what you do, when and how you do it.”

While nature may ultimately rule the game, these CAES interns also learned how to play it. “I believe that CAES is a college that requires more hands-on experience than any other college at the university. The experience I gained cannot be replicated in a classroom,” said Ledford. “The relationships I create will be something I cherish and rely on – as mentors and references – as I enter the golf course maintenance industry.”

Ramsey Nix
THE HAPPIEST INTERNSHIP ON EARTH

WORKING AT WALT DISNEY WORLD isn’t out of character for College of Agricultural and Environmental Sciences students. Horticulture students – trained in the classroom by CAES’s world-renowned professors – receive valuable field experience at the Orlando, Florida-based theme park.

Mary Lewis (pictured), a fourth-year horticulture major, interned at Disney World’s Epcot this summer and produced all the plant materials for “show” greenhouses. When a crop was ready for harvest or needed to be replaced in the greenhouse that’s part of the “Living with the Land” ride, Lewis made sure those plants were ready to rotate between greenhouses. “UGA made sure I spent ample time in the greenhouses so I was comfortable growing and working in them,” said Lewis.

Paul Thomas, one of her professors, believes word of mouth between classmates and faculty members connects CAES and Disney World.

“Experiential learning opportunities like this are essential. By being away from the university bubble, joining a major entity like Disney World and having to adjust to corporate expectations and the 7 a.m. to 6 p.m. workday routines, students learn how the real world works,” Thomas said. “I see dramatic shifts in personal responsibility, work efficiency and that ever-increasing understanding of personal behavior when a student returns from Disney World.”

Tracy Anderson (BSA – Horticulture, ’08) worked with Disney for three years after graduating from CAES and interned following a Disney professional internship program. Anderson’s employment followed a Disney professional internship program that included maintaining flowers and shrubs, weedering and working with topiaries.

“I think the excellence that the University of Georgia expects, when you get to Disney, they expect the same thing,” Anderson said.

Hannah Quenn (BSA – Agricultural Education, ’16), a graduate of the UGA Tifton Campus, completed her Disney World professional internship this past June. She worked with the Epcot International Flower and Garden Festival.

“One of the main things I took away is that better way to decide if a Cooperative Extension county agent job is for you than to work with an Extension agent? For the past nine years, University of Georgia Extension has offered paid internships to 12 college students annually who aspire to be county agents. UGA Extension and the UGA College of Agricultural and Environmental Sciences Office of Academic Affairs fund the internships.

“For three months, they do everything an agent does. This gives us good insight into whether they will make good agents and they determine whether they truly want to be agents,” said UGA Extension Director of County Operations Greg Price.

Former intern Ty Torrance (BSA – Horticulture, ’13), MPPPM – Plant Protection and Pest Management, ’15), currently the UGA Extension agent in Decatur County, comes from a long line of agents that includes his father, uncle, grandfather and grandfather’s sister. As a CAES horticulture major, Torrance worked with Bob Waldoff, Banks County Extension coordinator, as part of this initiative.

“Watching Mr. Bob interact in his county and help the people in the community only confirmed my decision to pursue a career in Extension,” Torrance said. “I believe I learned more that summer than I did in two years in the classroom.”

Most, but not all, of the interns are CAES students. Students have come from other universities and from out of the state, according to Price. The internships are offered year-round, but 90 percent of students choose to work in the summer.

Then-University of Tennessee graduate student Sarah Brodl worked in DeKalb County, Georgia, where she now serves as an Agriculture and Natural Resources (ANR) agent. She worked in DeKalb County with ANR agents Gary Peiffer and Lynwood Blackmon, and 4-H agent Marie Thir.

Brodl highly recommends the program to other agriculture students. “Even if they decide a job in Extension is not for them, [the internship] looks great on a resume for future jobs and you make a lot of contacts during the internship,” she said.

Torrance agrees. “If you are thinking about a career in UGA Extension or any other part of Georgia agriculture, this internship will allow you to see how that industry works in reality,” he said.

“Torrance interned me to become an Extension agent. I went with Mr. Bob on house calls and farm calls, to 4-H events and livestock shows. There is no better way to learn the ins and outs of an Extension career than to step into the shoes of an agent, which is what this internship allows you to do.”

On a spring break trip like no other, 36 College of Agricultural and Environmental Sciences students spent a week traveling Georgia’s highways in an effort to experience the diversity of the state’s top industry – agriculture.

“I was exposed to familiar things, unfamiliar things and even strange things, but all things Georgia,” said third-year poultry science major Kaitlyn Heerlein, in a paper written following the trip. “I was pushed from my comfort zone and asked to visit places and do things that I never imagined myself doing. Outside of your comfort zone is where growing begins.”

Students visited 20 Georgia agribusinesses, like Mercer Orchards in Blue Ridge, the Georgia Poultry Laboratory in Gainesville and Glass Alligator Farms in Adairsville. “We had two goals with this internship: to learn something about Georgia agriculture and the other was for them to learn about career opportunities,” said Assistant Dean for Academic Affairs Jean Bertrand. “Their eyes were opened to the diversity of agriculture that most people don’t realize exists. They know about cotton, peanuts, pecans and poultry, but they don’t know about olives or the alligator farm.”

Part of the experience included visiting all three University of Georgia CAES campuses. The group started at the Athens Campus, then went to the Tifton and Griffin campuses.

On the Griffin Campus, students visited a germplasm laboratory as well as the Food Product Innovation and Commercialization Center. The students’ Tifton Campus visit included a tour of the on-campus dairy farm and the Future Farmstead. Students also visited the Lewis Taylor Farm, one of the largest private vegetable and greenhouse operations in the Southeast, owned by longtime CAES supporter Bill Binn; Rutland Farms in Tifton, a thriving agritourism business operated by CAES graduate Ryan Rutland (BSA – Agriculture, ’08), and Pike Creek Turf sod farm in Adel.

“This trip was an awesome experience to see large-scale production, small niche markets and everything in between. It helped me see many new jobs and opportunities as well as to connect the different sectors of agriculture,” said fourth-year agricultural education major Megan Powell.

“My favorite part was the chance to meet these farmers, receive positive advice and learn about their desire to have us, college graduates, take over the future of agriculture,” said then-student Michelle Sheffield (BSA – Animal Science, ’16).
any college students babysit to help make ends meet, but Kayla Alward, a fourth-year animal science and dairy science double major, spent most of her junior year calfsitting.

Alward started as the calf caretaker at the University of Georgia Teaching Dairy during the 2015-2016 school year and is continuing in her position this fall.

Her job—making sure the dairy’s dozens of calves are safe and healthy—sometimes runs 24 hours a day, and her dedication to her charges earned her this year’s Student Employee of the Year award from the UGA Career Center. In spring 2016, she also won the Southern Association of Student Employment Administrators (SASEA) Student Employee Award, part of the SASEA regional competition, which covers student employees from 12 states. This is the first time a UGA student has won the regional award.

"Working at the dairy, I’ve learned that my responsibilities go above and beyond what is expected at other jobs because the calves depend directly on me to thrive and grow into happy and healthy cows," Alward said. "It’s a job that has taught me dedication to my work until the job is done, whether that is staying up with a sick calf or making sure all of the animals are settled down for the night before going to bed. I’ve learned more about how to care for these calves and their importance to dairy farmers and agriculture as a whole.”

As a student worker at the teaching dairy, Alward oversees the daily care of the calves, creates the schedules for other students who work at the dairy and develops treatment protocols for ailing calves.

“As a student employee on these operations, you have an additional level of responsibility. Your responsibility is not only to your supervisor, but also to the animals that depend on you daily for their food, health and welfare.”

JILLIAN FAIN BOHLEN

Alward, who lives on the dairy farm full time, fills in for other students who miss their calf-care shifts. As the resident caretaker, she is responsible for checking on cows in the early mornings and late at night during calving season.

"Working on a livestock production unit while you’re a full-time student poses challenges," said Bohlen. "Animals do not know when class time is, if you have a big exam the next day or that smelling like a farm is difficult to explain on the campus bus. As a student employee on these operations, you have an additional level of responsibility. Your responsibility is not only to your supervisor, but also to the animals that depend on you daily for their food, health and welfare. Kayla has never let her supervisors or the animals down.""
AGRIBUSINESS STUDENT GAINS INSIGHT DURING INTERNSHIP ABROAD

Jake Willis’ decision to intern abroad came from a desire to round out his College of Agricultural and Environmental Sciences education. The agribusiness major, now a senior, wanted an agricultural internship in a Spanish-speaking country. After falling in love with Argentina while on a family vacation, Willis decided to reach out to Argentine agricultural company Aceitera General Deheza (AGD). One email was all it took. Willis stayed in Argentina for two-and-a-half months. “They were like, ‘Sure, come on down’,” he said. “It happened in three weeks.”

A $4 billion company, AGD is the largest producer of cooking oil in Argentina, according to Willis. The company produces everything from soybean, sunflower and peanut cooking oils; to sunflower, soybean, maize and olive refined oils; to peanut butter, mayonnaise and ketchup; and biodiesel. Willis worked with the company’s agronomy department, which provided perspective beyond his classroom agribusiness experience. “I had experience on the business side of things, but the agronomy side, I didn’t know a whole lot about,” he said. “We’d come in the morning, check email, then go out in the fields to test plots and run tests of different chemicals … to find out what kills weeds best, what’s the fertilizer, herbicide, pesticide. There are no (Cooperative) Extension services there. The (AGD) agronomy department is basically their extension service.”

After a three-hour nap from 1 p.m. to about 4 p.m. – an Argentine cultural norm – Willis and colleagues would go back to work until 8 p.m. Sometimes they would return to the test plots, sometimes they would stay in the office. “Being in the office all day really helped my Spanish,” Willis said. “I speak it fluently now.”

From the Spanish to the practical knowledge Willis gleaned from working in test plots, the internship will help him in the future, both in the classroom and in the field. “I feel like in any industry you work in, you need to know the business up and down. If you know the process behind the agriculture, you can potentially cut costs in the future,” he said. “You can implement it in any way you see fit, given you know the ins and outs of growing the actual crop and the process behind it.”

Willis interned at The J.M. Smucker Company in Ohio this summer, working on brand marketing and with commodities, trade futures and options in an effort to learn more about the process of procuring commodities. After graduation, he sees himself as the leader of an agricultural company or working on the shelling side of peanuts.

The course, one of the first of its kind for the department, was launched to help agricultural communication students tell the story of farmers from different areas of the world in a way that empowers those farmers. Borron launched a domestic version of the course to help her students deconstruct biases and assumptions around hunger, poverty and food insecurity in order to help them become better communicators, advocates and journalists. During the spring semester, students worked with local food pantry clients to give voice to the clients’ food insecurity-related experiences. During the May term class, a new team of students partnered with students from Babes-Bolyai University in Cluj-Napoca, Romania, and Open Fields Romania – formerly a branch of Heifer International – to document the lives of Romanian farmers who are beneficiaries of Open Fields Romania’s dairy project, “Chance for All.”

They created a web communications strategy to boost tourism in a rural community in northwest Transylvania. Along the way, students met dozens of farmers and community members. “I learned about agriculture programs to help the less fortunate in Romania, but I also learned what it is like to be welcomed into the homes of those who don’t know you,” Fortner wrote. “I experienced the love that surrounds these communities and saw the passion within the people who are working to make their lives better as they receive hives of honeybees and dairy cows with milking equipment.”

Open Fields, which gives farmers grants of livestock and equipment to improve their farms’ profitability, will use the students’ work to raise funds and awareness in and out of the country. Danone, the Swiss Agency for Development and Cooperation, Norway Grants, Heifer International and Bóthar Ireland support the Open Fields Foundation.

Any Georgians take pride in the degree to which their communities are rural. They swap stories about how far they have to drive to dump trash or how hard it is to get a cell phone signal. But, as one group of students from the College of Agricultural and Environmental Sciences Department of Agricultural Leadership, Education and Communication found out this May, the term “rural” is relative.

For two weeks, students from Assistant Professor Abigail Borron’s “Culture-Centered Communication and Engagement” course traveled around Romania, meeting farmers and community leaders who want to preserve rural culture and traditions. “This journey halfway across the globe taught me that there are good people everywhere trying to achieve a better way of life,” recent alumna Allison Fortner (BSA – Agricultural Communication, ’16) wrote in her travel blog. “If I can, I would like to use what I’ve learned over the past four years to help them reach this goal. And that’s what I’ll take with me as I move forward.”

The students from the College of Agricultural and Environmental Sciences department, which provided perspective on the rural lives of Romanian farmers, worked with Open Fields Romania to improve the farms’ profitability and make them more self-sustaining through a new dairy project. Students created a web communications strategy, batched with local food pantry clients to give voice to the clients’ food insecurity-related experiences. During the May term class, a new team of students partnered with students from Babes-Bolyai University in Cluj-Napoca, Romania, and Open Fields Romania – formerly a branch of Heifer International – to document the lives of Romanian farmers who are beneficiaries of Open Fields Romania’s dairy project, “Chance for All.”

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Twenty-seven years after joining the faculty as a fledgling researcher, University of Georgia Professor Kris Braman became the head of the university’s Department of Entomology in June. Braman sees the entomology program, part of the College of Agricultural and Environmental Sciences, continuing to address current and emerging priorities in the discipline to meet the needs of agricultural, urban and industrial clientele.

After earning degrees from the State University of New York and the University of Kentucky, Braman joined the CAES faculty in 1989, working on the college’s campus in Griffin, Georgia. Since then she has conducted research on pests and beneficial insects of turfgrasses and ornamentals in urban settings. Her research ensures that turfgrasses stay lush and aren’t destroyed by insect pests like chinch bugs, two-lined spittlebugs, mole crickets, grubs and a variety of caterpillars. By studying the biology and behavior pests and their predators, Braman has developed control methods using natural enemies, pest-resistant plant varieties, alternative control technologies and insect scouting.

She will continue her research, focusing on conservation issues, as it keeps her “cognizant of issues faculty face,” she said. “My research projects have contributed to the development of decision-making guidelines that provide support to the green industry. I am proud of the students and staff who made these projects possible, and I enjoy celebrating their successful careers.”

In 2011, Braman was named director of the university’s Georgia Center for Urban Agriculture, located at UGA Griffin. There, she worked closely with Georgia’s green industry – which includes landscaping, lawn management, agriculture, horticulture and the like – and UGA Cooperative Extension agents in urban areas. She also teaches general entomology and biological control classes for UGA undergraduate and graduate students.

Braman has served as president of both the Georgia Entomological Society and the Southern Branch of the Entomological Society of America. Her numerous honors include being presented the branch’s Distinguished Achievement Award in Horticultural Entomology, the Georgia Green Industry Association’s Environmental Friend of the Industry Award and being named a “Distinguished Alumnus” of the University of Kentucky’s Department of Entomology. She was also given the 2016 University of Georgia Collection Costa Rica Adelante Award “because of his commitment to growing education abroad, developing his coffee program into a successful program,” according to John K. Bernard, UGA Costa Rica director.

**Department of Horticulture**

Marc van Iersel, professor, received the 2016 Outstanding Graduate Educator Award from the American Society for Horticultural Science in recognition of the mentoring he has provided to his own graduate students as well as the Leadership from he has provided to the horticulture department’s graduate program.

Marc van Iersel, professor, along with laboratory member Sue Dove and Ruhanito Ferrarezi, received the 2016 AmericanHort Alex Van Lenteren Award for Recognition of the most significant, floriculture-related applied research paper published in an American Society for Horticultural Science journal. Van Iersel, Dove and Ferrarezi received the award for a paper describing the design, construction and performance of multiple fruit and vegetable automatic irrigation controllers that use soil moisture sensors to turn irrigation on and off.

Suzanne O’Connell, assistant professor, was given the Krones Award for Excellence in Doctoral Research and Writing from the Southern Regional Branch of the American Society for Horticultural Science.

Tim Smalley, associate professor, was awarded a Meigs Distinguished Teaching Professorship by the University of Georgia’s Office of the Senior Vice President for Academic Affairs and Provost. The Meigs Professorship is the university’s highest recognition for excellence in instruction.

**Department of Plant Pathology**

Phillip Brannen, professor, was awarded the University of Georgia Cooperative Extension Specialist, recognizing outstanding contributions to the improvement of the quality of life in Georgia and beyond. Brannen serves as the extension fruit pathologist, conducting research and technology transfer programs on multiple fruit commodities. His efforts are directed toward developing integrated pest management practices to solve disease issues and technology transfer of disease-management techniques to commercial fruit producers.
Leader of the path

Harald Scherm

After nearly two decades helping farmers combat diseases impacting Georgia's most prominent fruit crops, Professor Harald Scherm has been appointed head of the College of Agricultural and Environmental Sciences Department of Plant Pathology.

Scherm, who has served as CAES assistant dean for research for the last six years and as graduate studies coordinator in the department, came to the University of Georgia in 1996 after graduating from the University of California, Davis, with his doctorate in plant pathology and completing two years of postdoctoral work in soybeans at Iowa State University.

He's worked mostly with blueberry and peach crops during his career, and considers his support of Georgia's blueberry industry and mentoring of successful graduate and postdoctoral students among his greatest professional achievements.

The CAES plant pathology department offers one of the largest plant pathology graduate programs in the country. An integrative discipline encompassing the plant, microbial and environmental sciences, the department takes a holistic approach to the study of plant pathology, and similar departments have lost disciplinary breadth, according to Scherm.

Researchers and Cooperative Extension faculty in the Department of Plant Pathology have broad interests in terms of the crops that they study and in problem-solving. This diversity is something that Scherm would like to maintain and foster.

He will also work to expand research funding opportunities for faculty and graduate students, recruit more high-level researchers to the department and foster collaboration within the department and across CAES and UGA.

"Plant pathology is a discipline with a strong tradition, but it is also evolving in terms of the types of students we attract, the jobs our graduates take on, the funding sources that enable research and Extension and, of course, in the science itself," Scherm said.

“One of the most important tasks of departmental leadership is to anticipate change and to help the department embrace it. "One of the most important tasks of departmental leadership is to anticipate change and to help the department embrace it," said Scherm.

As head of the College of Agricultural and Environmental Sciences Department of Plant Pathology, Scherm is focused on mentoring of successful graduate students and fostering collaboration among researchers to the department and in the science itself.

Professor Harald Scherm, head of the College of Agricultural and Environmental Sciences Department of Plant Pathology.

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Scherm replaces John Sherwood, and will continue acting as interim assistant dean for research until his replacement is hired.

• Admit Melancon and Kathryn Scholino

FACULTY NOTES

Department of Plant Pathology

Robert Kemerait, professor and University of Georgia Cooperative Extension specialist on the UGA Tifton Campus, received the annual Peanut Research and Education Award from the American Peanut Council, the Peanut Foundation and Bayer Crop Science.

Kemerait was recognized for his significant contributions in the fields of peanut education and applied research.

Harald Scherm, professor and department head, was recognized with the 2016 University of Georgia Graduate School Outstanding Mentoring Award in the area of Professional and Applied Sciences. The award is presented to a graduate faculty member at the university who have demonstrated excellence in mentoring graduate students; it recognizes innovation and effectiveness in mentoring graduate students individually and as a group in their academic, research and professional development.

Deputy of Poultry Science

Sammy Gregory, professor, was awarded a Carnegie African Diaspora Fellowship and is currently working with the University of Nairobi and International Livestock Research Institute in Kenya to develop the study of genomics for those institutions and throughout Africa.

Drew Benson, assistant professor, joined the poultry science faculty in January. His research program focuses on the underlying mechanisms affecting reproductive fitness in poultry. He also teaches three foundational courses in the department, and presented his work on incorporation of innovative laboratory exercises as a recruiting mechanism at the Poultry Science Association’s annual meeting.

Nick Dale, interim professor, was inducted as a Fellow of the Poultry Science Association at the organization’s 2016 meeting. Dale helped to found the Journal of Applied Poultry Research, serving as general editor from 1992 until 2003. His research is internationally renowned for exploring the role of poultry in converting proteins, not generally consumed by humans, into highly nutritious meat and eggs.

Taking care of business

Alumni celebrate the golden anniversary of the Georgia Agribusiness Council

In 1965, William A. “Bill” Sutton (BS – Agriculture, ’27) envisioned a Chamber of Commerce-type organization to increase awareness and create a unified voice for agribusinesses in Georgia.

Sutton, a former University of Georgia Cooperative Extension director and agribusiness vice president at Citizens and Southern (C&S) National Bank, was also a former president of the CAES Alumni Association. He called on fellow College of Agricultural and Environmental Sciences alumni to bring together Georgia’s agribusiness council, which celebrates its 50th anniversary this year.

“At that time you had production agriculture and finished products, but there was not an agribusiness link,” said Fred Greer (BSA – Agricultural Economics, ’62; MS – Agricultural Economics, ’64), a board member who also worked for Sutton at C&S Bank. “You didn’t have an umbrella, a bring-us-all-together group. There was a big gap in the need for coordination and unity from the producer to the consumer.”

A diverse group of 15 industry leaders formed the board of directors. The Georgia Agribusiness Council was officially incorporated on Jan. 17, 1966.

Today, the organization is the largest of its kind in the U.S.

“Things have changed so much and so fast, it takes fresh [graduates] to come on board and exercise their minds,” said Jonathan Harding (BSA – Agricultural Economics, ’74), a former board chairman. “How else are we going to continue what’s been started so long ago and what’s been so successful?”

In addition to Tolar, two other alumni currently work at Ga. Anna Strickland (Mchnty) (BSA – Agricultural Communication, ’12) is director of events and member relations, and Jonathan Harding (BSA – Agricultural Education, ’13) is the public affairs coordinator.

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“I’ve said so many times that Mr. Sutton is absolutely smiling down from his place in heaven as he would have been so pleased to be so what’s he’s developed in the form of the council and what its meaning is to the people in this state,” Greer said. • Jake Paine

compensation insurance program available exclusively to GAC members. “There’s value in having a broad-based group to serve as a platform for networking, but also where many different issues can be addressed. We can all work together to provide a very bright beacon for the breadth of the industry.”

As the state’s largest economic sector, there are constantly new state and national issues, regulations and policies to consider.

“It’s been rewarding and challenging,” said Bryan Tolak (BSA – Agribusiness, ’92), who has worked for GAC for nearly two decades and served as president since 2011. “There are no simple solutions for the complexity of the problems that lie ahead. As invested as everyone has been in our organization and others, including UGA, we have more work to do. Let’s celebrate the victories, but never lose sight of what work lies ahead.”

There are currently 32 people who serve on the board of directors, representing all facets of the industry. Nine of them are CAES alumni.

Chip Blalock (BSA – Animal Science, ’87), the executive director of the Sunbelt Agricultural Expo, has served as GAC’s annual Harvest Celebration chairman for several years. Harvest Celebration is the organization’s signature fundraising event.

“It’s gratifying to see the Georgia agricultural community come together each November to celebrate the blessings of the previous year,” said Blalock. A portion of proceeds from the event go to support agricultural education and outreach initiatives around the state, including the college’s Congressional Agricultural Fellowship in Washington and Georgia’s Leaders in Agriculture and Forestry program.

“We’re very proud to be able to say we were a part of those systems from day one,” said Tolak. “We invest in other educational institutions as well, but you have to find the best bang for your dollar, and student development and CAES have provided that year in and year out.”

One board member, Robert Kemerait (BSA – Agricultural Economics, ’74) has watched the Congressional Agricultural Fellowship program strengthen as he’s worked at his law firm in Washington. “It’s grown from one (student) to seven (students) each year, and those seven (students) each year, and those seven (students) each year, there have taken prominent positions on congressional staffs and in government relations afterward.”

In addition to Tolar, two other alumni currently work at Ga. Anna Strickland (Mchnty) (BSA – Agricultural Communication, ’12) is director of events and member relations, and Jonathan Harding (BSA – Agricultural Education, ’13) is the public affairs coordinator.

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FROM FOUR TOWERS

Learning outside the classroom is one of the things that is special about the College of Agricultural and Environmental Sciences—it’s not just an educational experience. CAES faculty provide students with study abroad programs to destinations such as Costa Rica, Europe, Romania and Scotland. These opportunities enable students to receive hands-on experience and course credit.

Students are able to participate in service-learning opportunities in and out of the classroom. These valuable experiences will allow them to impact their communities.

Internships are a great opportunity for future graduates to experience the workforce and learn about the industry that they will be working for in the near future. These internships range from University of Georgia employment, to Disney World, to major agricultural industries and to international companies. Many of these internships are supported by you, our alumni.

One of the new opportunities for students is a spring break tour of Georgia’s largest industry. I had an opportunity to visit with these students during graduate school at the University of Arkansas. A student tour was organized in 2016. The students were impressed with the diversity of what agriculture and food science professors are doing in the state. It is interacting with the next generation of agricultural professionals. We are able to draw in younger students to the profession. The tour was a huge success and will be a regular part of the college’s programming.

The power of our UGA education multiplies as the things that is special about our college is not just educational. The College is a place that delivers a great educational experience, but it also provides a great career opportunity. This is a place where you can begin your career and continue to grow in the future.

CLASS NOTES

1950s

Doug Worsham (BSA – Agronomy, ’50; MS – Agronomy/Plant Science, ’57) was recently honored by the newly organized weed science program at North Carolina State University’s College of Agriculture and Life Sciences. To enhance collaboration among weed scientists and aligned disciplines at NC State, the program has established a lecture series, named in honor of Worsham, that will be open to anyone involved in the theory and practice of understanding and managing weeds, both within and external to the university. The series will include two to four lectures annually on a range of weed science-related topics.

Worsham began his career at NC State in 1960 as a Cooperative Extension weed specialist after receiving his doctorate. In 1967, he moved into weed science research and teaching. He retired in 1993, moved to the mountains in western North Carolina and continued part-time work in weed management for burley tobacco and no-till crop production.

James Casey (BSA – Dairy Science, ’58) served for 50 years as Polk County Farm Bureau (PCFB) president. He was honored by Gov. Nathan Deal at the 78th annual Georgia Farm Bureau convention and was presented with a plaque commemorating the occasion. In February, Georgia Sen. Bill Heath recognized Casey with a resolution commending his 50 years at the helm of the PCFB. Casey began his term as PCFB president in 1965.

1960s

John Callaway (BSA – Animal Science, ’63) was appointed to his second three-year term on the Georgia Agricultural Commodity Commission for Beef. Georgia’s agricultural commissioner and chairman of the board and president of Georgia Farm Bureau made the appointment. Callaway was also appointed to a second four-year term on the Georgia Agricultural Exposition Authority by Gov. Nathan Deal.

He has a beef farm spanning Georgia’s Coweta, Troup and Heard counties.

1970s

Bob Pohlod (Ph.D. – Plant Pathology, ’76), professor at Virginia’s Ferrum College, received the 2016 Eugene F. Odum Award for Excellence in Teaching Ecology jointly with Carolyn Thomas, a University of Georgia zoology and ecology alumnus. The award, given by the Ecological Society of America, recognizes ecologists for outstanding work in ecology education.

Pohlod resides in Ferrum, Virginia.

Robert Williams (BSA – Poultry Science, ’78), a veterinarian, has retired. He resides in Elberta, Alabama.

1980s

Thomas “Tom” Stovall (BSA – Dairy Science, ’80) is the human resources manager for Pace's MeatPack, LLC. He resides in Suwanee, Georgia.

Glenn E. Smith (BSA – Agricultural Economics, ’82) was named chief operating officer of Church Home Rehabilitation and Healthcare, Inc. Previously, Smith was president of Palmetto Pharmaceuticals, and he served as executive vice president of the Georgia Cattlemen’s Association for 14 years. He resides in Macon, Georgia.

Willard “Lee” Booth (BSA – Poultry Science, ’83) is the supervisor for research for Alexius Pharmaceuticals. He resides in Nicholson, Georgia.

Dennis Epps (BSA – Agricultural Journalism, ’93) is serving as the interim chancellor of Louisiana Delta Community College. He resides in Zachary, Louisiana.


William Shivor (MS – Food Science, ’78) received a promotion to commercial and quick service restaurants national accounts director of business development at Paramount Foods. He resides in Dallas, Georgia.

1990s

Laura Foxworth (Lance) (BS – Biochemistry, ’92) is the quality and food safety manager at Bimson’s Bakery. She resides in Athens, Georgia.

Alumni Joy Carter Crosby (BSA – Agricultural Communication, ’97) is the public relations officer at the University of Georgia College of Agriculture and Environmental Sciences. She resides in Fannin and Forsyth counties, Georgia.

Jessie Bland (BS – Agricultural Business Management, ’01; MS – Agricultural Business Management, ’07) and Jessie Bland won a third place 2016 American Agricultural Editors’ Associations’ Communication Award for their work on the October/November 2015 issue of the Southeastern Peanut Farmer magazine and the Southeastern Peanut Farmer media kit.

Andres Villegas (BSA – Biological Science, ’96) was named a University of Georgia Alumni Association 2016 40 Under 40 honoree. He is the president and CEO of the Georgia Forestry Association. A native of Colombia, he now resides in Macon, Georgia.

Insect-borne diseases could greatly impact the health of U.S. Navy sailors and Marines, and delay Navy operations. It’s UI. Cmtd. Toby Wayne Palmer’s job to research and mitigate the negative impact of pathogens spread by arthropods and other animals.

Palmer (BSA – Poultry Science, ’01; BSA – Entomology, ’01) is one of only 38 active-duty entomologists in the U.S. Navy. One of the military branch’s rarest jobs. As an entomologist, his job is to prevent the spread of new diseases by any bug or pest problem that lurks where troops are traveling.

“My job is to look at the different countries, see what common diseases are present or endemic to the country, then balance those against what insects or animal species could pose a medical threat, or harbor or vector the pathogen,” Palmer said. “I also instruct military and civilian personnel on strategies to mitigate threats to lessen the chance of troops getting sick.”

Such instruction could include cutting down grass, removing a water source or prescribing pesticide application. Navy entomologists work in a variety of locations in the U.S. and abroad, and assist with humanitarian missions and disaster response.

In his 12 years with the Navy, he served in Operation Iraqi Freedom in 2006, and has lived or worked in Iraq, Italy, Japan, Thailand, South Korea and Australia.

Palmer returned to his native state in east Georgia and was impressed with the diversity of what majors and hometowns of these participants. I look forward to seeing how this experience continues to grow in the future.

The College of Agricultural and Environmental Sciences offers more than 30 degree programs in diverse areas of teaching, research and extension. This year, we welcome more than 14,000 students at the campuses in Griffin, Athens, Tifton and Glennville.

The College of Agriculture and Environmental Sciences is the agricultural and environmental sciences program of the University of Georgia, a land-grant, sea-grant and space-grant university that is one of the nation’s top public research universities.

For more information, contact the College of Agricultural and Environmental Sciences, 270 J.W. Williams Hall, College of Agricultural and Environmental Sciences, University of Georgia, Athens, GA 30602, (706) 542-2161, or www.caes.uga.edu

Lead Dog: Toby Palmer Entomologist on watch
Lead Dog: Javier Mantilla

Business is blooming

Javier Mantilla (MS – Horticulture, ’10), a native of Quito, Ecuador, grew up with close ties to agriculture. Raised watching his father and family’s involvement in the agricultural export business, Mantilla sought to learn about the worldwide structure of the agricultural industry and how other countries feed the world.

Mantilla studied agricultural engineering at Zamorano University in Honduras before attending the University of Georgia to complete his master’s degree in horticulture. Currently, Mantilla works as sales manager of Muchflowers Group, Ecuador’s largest exporter of baby’s breath. The company manages sales from four flower farms, employing more than 700 people who export fresh-cut flowers daily to markets all over the world, including those in the U.S., Canada, Europe, Russia, China and United Arab Emirates.

With the ever-changing nature of the industry, Mantilla believes there is a constant need for the business to evolve. “Cut flowers are one of the most perishable products I’ve ever known,” said Mantilla. “The time margin to close a sale is limited, therefore we need an aggressive sales plan and close relationship with our clients.”

In addition to providing consumers throughout the world with vibrant, fresh-cut flowers, Muchflowers has improved lives in the rural sector by providing workers with stable jobs. “If our workers are happy with their jobs and trust in our company, my business is blooming,” Mantilla said. "The time margin to close a sale is limited, therefore we need an aggressive sales plan and close relationship with our clients." Mantilla provides guidance and his experience with the production team and evaluates the production status. While his career keeps him busy, Mantilla remains passionate about his work and the people he is able to reach through beautiful, fresh flowers.

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CLASS NOTES

2000s

Eric Cohen (BSA – Agricultural Economics, ’00) was named a University of Georgia Alumni Association 2016 40 Under 40 honoree. He is the co-owner of Pecan Ridge Plantation and RAE Pecans, and the owner of Cohen Crop Consulting. He resides in Whigham, Georgia.

Elliott Marsh (BSA – Agricultural Economics, ’02; MAL – Agricultural Leadership, ’11) was named a University of Georgia Alumni Association 2016 40 Under 40 honoree. He is the precision agriculture coordinator for Southern States Cooperative. He resides in Statesboro, Georgia.

Thomás Harroll (BSA – Animal Science, ’01) and his wife, Alicia, were finalists for the Georgia Farm Bureau Young Farmer Achievement Award. They reside in Madison County, Georgia.

Anna Lacey (Yeager) (BSA – Horticulture, ’05) is a horticulturist at the Augusta National Golf Club. She resides in Martinez, Georgia.

Troy Windham (BSA – Horticulture, ’05) was a finalist for the Georgia Farm Bureau Young Farmer Excellence Award in Agriculture. He resides in Laurens County, Georgia.

Susannah Lanier (Martin) (BSA – Agricultural Business, ’09; MAL – Agricultural Leadership, ’12) is the marketing coordinator for Shuman Produce in Redsville, Georgia.

Lauren Pittenger (Ph.D. – Food Science, ’07) was named a University of Georgia Alumni Association 2016 40 Under 40 honoree. She also has a bachelor’s degree and two master’s degrees—one in microbiology and an MBA—from UGA. Pittenger is a senior associate at Booz Allen Hamilton. She resides in Atlanta.

Cross Doster (BSA – Food Science, ’08) is the general dentist at Doster Dental. He resides in Chattanooga, Tennessee.

Matthew London (BSA – Animal Science, ’08; MS – Dairy Science, ’10) and his wife, Kimberly, were finalists for the Georgia Farm Bureau Young Farmer Excellence in Agriculture Award. They reside in White County, Georgia.

Will Cobb (BSA – Agricultural Education, ’09) and his wife, Heather, were elected to chair the 2016 Georgia Farm Bureau Young Farmer Committee. He serves on the Georgia Farm Bureau board of directors.

Zachary Murphy (BSA – Agribusiness, ’09) is a relationship manager at AgSouth Farm Credit. He resides in Brooklet, Georgia.

Rachel Patrick (BSA – Animal Science, ’09; MAL – Agricultural Leadership, ’11) was a finalist in the Georgia Farm Bureau Young Farmer Discussion Meet, held at the Young Farmer Leadership Conference in July. She teaches agriculture at Morgan County High School and resides in Madison, Georgia.

Elliott Marsh (BSA – Horticulture, ’02; MAL – Agricultural Leadership, ’11) was a finalist in the Georgia Farm Bureau Young Farmer Discussion Meet, held at the Young Farmer Leadership Conference in July. She teaches agriculture at Morgan County High School and resides in Madison, Georgia.

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Lead Dog: Philip Gentry

Fairing quite well

Following a decade in agricultural education, Philip Gentry Jr. (BSA – Agricultural Education, ’06) has moved out of the classroom and onto the fairgrounds. After 10 years as an agriculture teacher at Perry High School and still do. We have laid down some things that are going to make that program successful for a while,” Gentry said. “This, though, was one of those jobs that, when you’re out here as an agriculture teacher or somebody using the fairgrounds, you’d think, ‘Man, that’d be a neat job to do.’ I am passionate about this Junior Livestock Program. When the job came open, I saw a real opportunity to influence the Junior Livestock Program in an even greater way than having students out here showing livestock.”

As director, Gentry is in charge of all livestock and horse show events that are held at the fairgrounds. His office is charged with enabling shows and providing support for events that occur every weekend at the fairgrounds, except Thanksgiving and Christmas. “Even living in town, I had no idea this place was this busy,” Gentry said. “There are many different types of people that use this facility and it’s been neat to work with them.”

Showing livestock has been a lifelong passion for Gentry, who grew up in Houston County, Georgia. He attended Perry High School, which was involved in the local FFA chapter and showed livestock at the fairgrounds every year. Even when Gentry started teaching in Perry, his classes were, on average, responsible for 45 head of cattle and between 60 to 80 head of hogs.

Now, Gentry interacts with students and teachers every weekend, and provides guidance and his experience to a thriving program in Georgia. “It’s been an eye-opening experience for me. I have enjoyed getting to learn some of the parts of this position and getting to know the people out here,” Gentry said. “It’s been interesting to get to work with these people and learn what they do every day.”

• Clint Thompson
The renewal of the University of Georgia Tifton Campus that began in 2013 peaked in May, when the Tift Building was completed and ready for occupying. “The renovation of the Tift Building is an important time for our campus and the University of Georgia. We are closing in on our centennial celebration in 2018, so preserving this building’s heritage while celebrating the research conducted here is significant for our campus,” said Joe West, UGA Tifton Campus assistant dean.

Sixteen UGA faculty and staff members from the offices of the assistant dean, communications, academic affairs, business, statistical consulting, external relations, information technology and the Department of Agricultural and Applied Economics occupy the building. Many of the students who use the building’s workspace, along with other UGA students who will take classes in the first-floor classroom, which is equipped with the latest communication technology to enable better video and conference call meetings.

While the renovated Tift Building brings a new, vibrant look to the front of campus, it also provides easier access for prospective students who wish to meet with student recruiter Breanna Coursey. UGA Tifton, which began offering an academic program in 2004, is experiencing a growing number of students on campus. This fall, enrollment exceeded 80 students; just three years ago, enrollment was less than half of that. Coursey believes that number will continue to grow in the future.

“Having a presence in the Tift Building, which sits at the front entrance to the campus, is a huge step toward growing our program,” Coursey said. “We have potential students visiting every day, and I can’t imagine a better way for students to begin touring the campus than with this state-of-the-art facility.”

Constructed in 1922, the Tift Building was the first structure built on the Tifton Campus. It’s one of two major renovation projects in place for the front of campus, thanks to the support of the state Legislature and campus administration. Renovations to the Animal and Dairy Science Building, adjacent to the Tift Building, are projected to begin in October and are slated to conclude late in 2017.
In 2011, Martina Buchholz (MS – Food Science, ’16) was traveling in India with her family when she took the picture, “Indian Mustard Field,” which won first place in the College of Agricultural and Environmental Sciences 2016 Agriculture Abroad Photo Contest.

The girl in the picture is Buchholz’s niece, Ashi, and she is wearing hand-embroidered, traditional Indian children’s clothing. Buchholz and her family had already visited farms in New Delhi when they discovered the mustard field just outside the city of Agra. “I think the photo really captures diversity, from the clothing to the tractor decorated with garland and the cow in the background, roaming without constraint,” Buchholz said.

After earning her undergraduate degree, Buchholz spent six months traveling to countries in Europe and Asia.

She grew up in the Midwest and was unaccustomed to seeing a variety of crops. For Buchholz, it was a unique experience to see any crops other than corn or soybeans.

When Buchholz decided to participate in the contest, she debated between two photos. The photo she decided not to submit showed a man working barefoot in a nearby field. His only tool was a hoe. “People often think of hardship when they think about farming in other countries,” Buchholz said. “I wanted to make sure the photo I submitted represented beauty and not just hardship.”

Buchholz wants to work in production and development for the food industry. She believes that her experience traveling abroad will help in her career.

The Agriculture Abroad Photo Contest was started in 2011 in conjunction with the CAES Office of Global Programs annual International Agriculture Day. CAES students submit agriculture-related photos from around the world. Then, the top five photos are chosen by a selection committee and the winning photo is chosen by vote at the International Agriculture Day event. • April Bailey