NEW DEAN *p.3* | **FUTURE FARMSTEAD** *p.4* | **FANTASTIC PLASTIC** *p.7* | **POLLINATOR PARADISE** *p.17*

southscapes

UGA College of Agricultural & Environmental Sciences

Spring 2016

WOMEN AT WORK

FROM FIELD TO FIRM,

THE WOMEN OF CAES LEAD, INNOVATE AND INSPIRE

No stranger to fieldwork, CAES alumna Joanna Davis, the U.S. Department of Agriculture Animal and Plant Health Inspection Service emergency coordinator for Georgia and Florida, prepares to inspect feral swine for foreign animal diseases.

contents

COVER PHOTO BY DENNIS MCDANIEL

WOMEN AT WORK

FROM FIELD TO FIRM, THE WOMEN OF CAES LEAD, INNOVATE AND INSPIRE

26 **Erin Cescutti // Always Looking on the Brightside**
27 **Jaclyn Dixon Ford // In High Cotton**
28 **Joanna Davis // Tough and Ready**
30 **Meghan Cline // Meet the Press Secretary**
31 **Tracey Troutman // Agriculture Champion**
32 **Ashley Clack Eason // What the Doctor Ordered**
32 **Betts Berry // Corral to the Classroom**
34 **Caroline Hofland // Solutions Spanning Continents**
35 **Lucy Branch Reid // Thirst for Success**
37 **Dixie Truelove // True Love for Homegrown Dairy**
36 **UGA Extension Helps Female Farmers Hone Skills**

departments

2 **By the Numbers**
3 **From the Dean**
4 **Noteworthy**
38 **Faculty Notes**
43 **Class Notes**
43 **From Four Towers**
49 **Then & Now**

Hey Readers!

A **Southscapes** magazine survey is coming this summer!
Watch for an announcement and survey link that will come to you via email and social media this summer. Take note as you read this issue and browse recent issues online at **caes.uga.edu/alumni/news/archive.html**, then share your thoughts in our survey. We want to better serve you and cover what you want to read. Thanks for your help!

UGA CAES Alumni Association
UGA CAES Alumni
@UGA_CAES_Alumni

MEET OUR NEW DEAN! SEE PG. 3

ONLINE EXCLUSIVES

Susan Varlamoff, director of the CAES Office of Environmental Sciences, authors a new book, "Sustainable Gardening for the Southeast"

South Campus' **Hoke Smith Building** gets a landscape update thanks to the Georgia Green Industry Association

CAES students attend **The World Food Prize's Borlaug Dialogue,** "the premier conference in the world on global agriculture"

Soybeans were introduced to North America by colonial Georgia farmer Henry Yonge in 1765

Meet the new faces of the **CAES Office of External Relations**

New 4-H Club inspires youth and fills a need in Atlanta's Buckhead area

FOR THESE STORIES AND MORE, VISIT

caes.uga.edu/alumni/news.

southscapes

MANAGING EDITOR
Kathryn Schiliro

DESIGNER
Katie Walker

COPY EDITORS
Andrea Gonzalez, Kathryn Schiliro

CONTRIBUTING WRITERS
David Allen, Charlene Betourney, Whitney Dixon, Sharon Dowdy, Keith Farner, Andrea Gonzalez, Denise Horton, Merritt Melancon, Ramsey Nix, Kathryn Schiliro, Stephanie Schupska, Clint Thompson, Samantha White

CONTRIBUTING ARTISTS AND PHOTOGRAPHERS
John Amis, Bruce Boyajian, Hannah Burrack, Branch Carter, Lanie Coulter, Bruce Cross, Sheri Dorn, Sharon Dowdy, Dallas Anne Duncan, Peter Frey, Jena Johnson, Caitlin LeMoine, Blane Marable, Dennis McDaniel, Merritt Melancon, Shannah Montgomery, Corey Nolen, Elliott P., Dot Paul, Bodie Pennisi, Cal Powell, Angela Rowell, Kathryn Schiliro, Forest and Kim Starr, Paul Thomas, Clint Thompson, Andrew Tucker, Katie Walker

DIRECTOR
Angela Rowell
Office of Communications and Creative Services

DEAN AND DIRECTOR
Sam Pardue
College of Agricultural and Environmental Sciences

INTERIM DEAN AND DIRECTOR
Josef Broder
College of Agricultural and Environmental Sciences

ASSISTANT TO THE DEAN FOR EXTERNAL RELATIONS
Robert Cooper
Office of External Relations

DIRECTOR OF ALUMNI ENGAGEMENT
Suzanne Griffeth
Office of External Relations

SUGGESTIONS? QUESTIONS?
schiliro@uga.edu

THE UNIVERSITY OF GEORGIA
COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES

Southscapes is published semiannually for alumni, friends and supporters of the University of Georgia College of Agricultural and Environmental Sciences by the CAES Office of External Relations and produced by the CAES Office of Communications and Creative Services.

UGA College of Agricultural and Environmental Sciences
@UGA_CollegeofAg

student feedback

In this issue, we focus on Women in Agriculture by highlighting some of the industry's brightest leaders. With female student enrollment in the College of Agricultural and Environmental Sciences at 63 percent, **we asked some of tomorrow's alumnae about their goals.** For more responses, turn to page 28.

"Growing up in Haiti, I was exposed to the detrimental consequences of environmental degradation on a daily basis. The lack of infrastructure, often shackled by natural disasters and poor leadership, has caused numerous problems when it comes to soil erosion, waste management, agriculture and water quality. Underneath all of this devastation, I found the inspiration to learn more about ways to help improve the environment. I had to leave Haiti after the earthquake in 2010, and I grew interested in water quality during my undergraduate years in the United States. I hope to learn more about the water quality of urban streams given that I will be working on Lake Herrick on campus and Trail Creek in downtown Athens for my thesis. Although I am not sure of where I want to work after graduating, I am a humanitarian at heart … I see myself working actively with a community by being a project leader. I see myself teaching farmers basic knowledge of water quality and best agricultural practices to reduce erosion and nutrient losses. No matter what the scenario happens to be, I think that being in the field of agricultural and environmental sciences will give me so many opportunities to better the lives of others around the world."

*– **Thalika Saintil,** graduate student in crop and soil sciences from Port-au-Prince, Haiti*

"Upon graduation, I hope to either teach high school agriculture or work with Extension services in north Georgia. I am very excited to complete my degree at UGA Tifton and teach in an area of study I am so passionate about!"

*– **Christina Garner,** third-year agricultural education major from Taylorsville, Georgia*

"One day, I would like to have a farm and raise cattle. My hope is for a future career that enables me to be directly involved in agriculture while connecting people to where their food comes from, promoting agricultural literacy. I either see myself as an ANR (Agriculture and Natural Resources) Extension agent for a land-grant institution or working with an ag company like SUDIA (Southeast United Dairy Industry Association, Inc.) to bridge farmers/agriculturists with the vast majority not involved in agriculture and food production. In doing so, I would like to see more people having faith in their food and appreciating the farmers, so a child will say their food comes from a farm, and not a grocery store or a fast-food restaurant."

*– **Sarah Jane Thomsen,** third-year animal science and dairy science double major from Salem, Virginia*

SOURCES: THE USDA 2012 CENSUS OF AGRICULTURE, BUREAU OF LABOR STATISTICS AND THE NATIONAL SCIENCE FOUNDATION, 2008A

46.1%

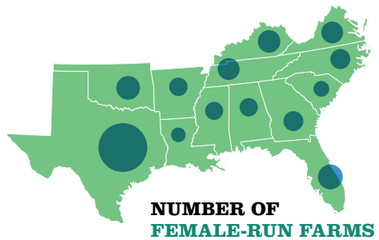
of the nation's **1.3 million agricultural and food scientists** are women.

"We need everyone who has a passion for the land, a passion for feeding people to think about a career in agriculture. **It's not just women, but it certainly has to include women.** We want to make sure they recognize that their contributions are valued."

KRYSTA HARDEN, FORMER U.S. DEPARTMENT OF AGRICULTURE DEPUTY SECRETARY, NOW DUPONT'S VICE PRESIDENT OF PUBLIC POLICY AND CHIEF SUSTAINABILITY OFFICER

30 PERCENT OF AMERICA'S FARMERS ARE WOMEN.

Women comprise **35 percent of the faculty positions** in the biological, agricultural, environmental life sciences and related fields at four-year universities across the United States.



NUMBER OF FEMALE-RUN FARMS IN THE SOUTHERN REGION

5,414	ALABAMA
5,485	ARKANSAS
9,995	FLORIDA
6,404	GEORGIA
8,200	KENTUCKY
3,457	LOUISIANA
5,282	MISSISSIPPI
6,453	NORTH CAROLINA
9,076	OKLAHOMA
4,009	SOUTH CAROLINA
7,770	TENNESSEE
38,452	TEXAS
7,653	VIRGINIA

SUMMIT UNITES WOMEN IN AG

MORE THAN 150 AGRICULTURAL LEADERS from 13 Southern states and Washington, D.C., converged on UGA's Athens Campus on Feb. 8 to discuss leadership roles for women in agriculture.

Women representing government agencies, farms, the Cooperative Extension System and industry participated in the UGA-led Southern Region Women's Agricultural Leadership Summit, sponsored by the UGA President's Venture Fund, the UGA Women's Leadership Initiative and the College of Agricultural and Environmental Sciences.

"The work [that summit delegates] are doing to shape policies and programs to promote gender equity and women's leadership development will have a positive impact on an industry that is crucial to our nation's food security and economic vitality," said UGA President Jere W. Morehead.

Agriculture is slightly behind the curve in cultivating female leaders, said Krysta Harden, Georgia native, UGA alumna and then-U.S. Department of Agriculture deputy secretary – the third female USDA deputy secretary in 150 years. Harden is now the vice president of public policy and chief sustainability officer at DuPont.

"How many bright, talented women have been passed over [through] the years? That's why we're here," she said. "Young women need to hear, 'You can do it; don't wait to be asked. Step up and be counted and make a difference.' This is our responsibility and our obligation."

Harden moderated a panel of female agricultural leaders who urged women to step out of their traditional roles. They touched on the need for today's leaders to support young women and for professional women to support one another. Facilitators from the university's J.W. Fanning Institute for Leadership Development recorded the results of delegate discussion about barriers and support for women in agriculture and are compiling a formal, public report to be released later this year. ▪ *Merritt Melancon*

from the dean

The college must recognize and embrace the widest range of talents across our state and beyond. Over my career, CAES has become more diverse in the students we teach, the clients we serve and the subject matter we explore. Our undergraduate program is predominately female (63 percent) and diversity enrollments match the larger campus. One-third of CAES students will participate in an international experience.

I am pleased that we are celebrating women in agriculture in this issue of Southscapes and through several notable events at UGA. This past year, the college recognized Peggy Ozias-Akins as our first female D.W. Brooks Distinguished Professor. We are proud to have hosted the first Southern Region Women's Agricultural Leadership Summit at UGA, and to have had then-U.S. Department of Agriculture Deputy Secretary Krysta Harden serve as our featured guest and speaker.

The next green revolution in agriculture will be a revolution in human capital. We will engage and enlist a new, diverse team of scientists to face the grand challenges before us.

JOSEF BRODER

I am also pleased and honored to have served as your interim dean and director. I would be remiss if I did not thank Bob Shulstad and Laura Perry Johnson for their wise counsel and leadership during this time. Bob is among the most effective leaders of our research enterprise, while Laura has brought new energy and creativity to UGA Cooperative Extension. I especially want to thank Jean Bertrand for her fine leadership in the Office of Academic Affairs.

Former Dean Scott Angle's tireless efforts to make friends and build coalitions across the state set the stage for a successful budget year. Never before has the agricultural coalition of CAES, the Georgia Department of Agriculture, Georgia Farm Bureau, Georgia Poultry Federation and the Georgia Agribusiness Council been more effective. I want to personally thank Gary Black, Zippy Duvall, Abit Massey and Bryan Tolar for their steadfast support of CAES. I am indebted to President Morehead and Provost Whitten for their confidence in and support of the college and Georgia agriculture. We appreciate the strong support of key leaders in the Georgia General Assembly whose valuable leadership helps to ensure that UGA Extension and UGA Experiment Stations remain among the best in the nation.

Now, I want to welcome Dean Sam Pardue to the helm of the college. He comes to CAES from North Carolina State University's College of Agriculture and Life Sciences, where he was associate dean and director of academic programs. I wish him all the best and can't wait to see what the future has in store for CAES.

Josef Broder
Interim Dean and Director
College of Agricultural and Environmental Sciences

COREY NOLEN

Meet CAES' New Dean Sam Pardue

"I am honored to have the opportunity to work with UGA's outstanding administration, faculty, staff, students, alumni, friends and Georgia's dynamic agricultural community. The College of Agricultural and Environmental Sciences has played a significant role in growing Georgia's No. 1 economic sector. It's a college with a long and honored history. I look forward to an even brighter future for CAES."

SAM PARDUE, CAES DEAN AND DIRECTOR

FORMERLY

Associate dean and director of academic programs and Alumni Distinguished Undergraduate Professor at North Carolina State University's College of Agriculture and Life Sciences, Raleigh, North Carolina

EDUCATION

North Carolina State University
Bachelor's degree in poultry science, 1977
Master's degree in physiology, 1979
Doctoral degree in physiology, 1983

NOTABLE ACCOMPLISHMENTS

Helped double the number of poultry science majors at NCSU, grew distance education offerings and acquired external funding to modernize teaching laboratories

Invested in a biosafety level 2 facility to expand the NCSU poultry science department's research capabilities and supported development of a poultry processing laboratory to address the needs of that state's largest agribusiness

Helped secure a $10 million gift to the NCSU poultry science department, which was subsequently named the "Prestage Department of Poultry Science"

Craig Kvien (left to right), UGA Tifton Campus professor and brain behind the Future Farmstead, is joined by students Ben Richardson, Jessica Lovell, Hannah Queen, Will Burt and Emily Braswell in front of the Farmstead building.

Better Home and Garden

CAMPUS CLOSE-UP

UGA Tifton's Future Farmstead is built with energy-saving technology

Insulated by recycled blue jeans, covered in solar panels and surrounded by an edible landscape, the Future Farmstead on the UGA Tifton Campus exemplifies sustainability.

Completed in October 2015, the Farmstead accommodates research from more than 40 companies and enhances the daily living of its occupants through the latest technologies. Made possible by the College of Agricultural and Environmental Sciences, with labor funded by the U.S. Department of Agriculture and U.S. Department of Labor along with about $250,000 and materials contributed by 60 different companies, the Future Farmstead houses graduate students participating in research related to the Tifton Campus Farmstead.

PHOTOS BY KATE WALKER

"Things as simple as the water turning off while I am washing my hands or brushing my teeth are making me more aware of how wasteful I was in the past," said Amanda Miller, a UGA Tifton graduate student and resident of the Farmstead. "Each and every feature in this house was built with a purpose, and living in it really makes that evident."

Sensors are stationed throughout the home and used in research to discover how energy use can be reduced. In the kitchen, an induction cooktop heats food fast and more efficiently by heating the pan, not the stove. The washer and dryer are a single unit that completes a load in a two-hour cycle.

Furniture, mirrors, tables, chairs and wood flooring throughout the bedrooms, and the interior doors, consist of reused or recycled materials. The house is 3,400 square feet with an adjacent 600-square-foot carriage house that will be used for classroom activities.

The Farmstead operates on two separate water systems. Water from sinks and showers in the four-bedroom home flows through a greywater system and to trees on the home's landscape. The surrounding edible landscape also uses a drip-irrigation system to maximize water-use efficiency. Water from low-flush toilets goes into the city sewage system.

"Energy efficiency starts by designing something that doesn't need a lot of energy," said Craig Kvien, UGA Tifton professor and the brain behind the Farmstead. "You can build a net-zero energy house probably 10,000 different ways. There's not a single recipe. A lot of it is just like agriculture, which involves a lot of different things working together."

UGA plant-breeding teams contributed to the house's edible landscape with seedless lemon and tangerine trees. The landscape includes an aquaponics system developed, as a student project, by Miller and UGA aquaculturist Gary Burtle. It includes a small vegetable garden and a tank of fish, and it is designed to generate enough food to feed a small family.

Students in CAES Professor Jason Peake's fall 2015 "Sustainable Agriculture Production" class grew plants that added to the Farmstead's landscape.

"I was really interested in this house the whole time they were building it, so it's a privilege to get to experience it, especially as one of its first residents," said entomology graduate student and Farmstead resident Ian Knight.

▪ *Clint Thompson*

The house that **Dawgs** built

It only covers 150 square feet, but the impact of the student-run Tiny Dawg House construction project has been felt across UGA's Athens Campus and throughout the state.

Tapping into the growing popular interest in tiny houses, or homes with less than 400 square feet of living space, UGA students worked with Associate Professor David Berle in the College of Agricultural and Environmental Sciences and Assistant Professor Kim Skobba in the College of Family and Consumer Sciences in the fall of 2015 to explore the American housing landscape. In the process, 13 students, coming from CAES and other colleges, learned hands-on construction skills by building their own tiny house.


SHANNAH MONTGOMERY

George Wright, an Athens, Georgia-based contractor, worked with the students to make sure the tiny house was safe and up to code.

The students were responsible for making several decisions in planning the tiny house, which incorporated a working bathroom, kitchen, recreation space, sleeping loft and storage space on the back of a flatbed trailer.

"The big thing the tiny house taught us was patience," said Taylor Cotton, a third-year CAES horticulture student from Kennesaw, Georgia. "Most of us didn't realize how much work it was going to take to complete it."

Over the 16-week semester, Berle and Skobba presented students with different topics impacting housing in the U.S., from land planning, to energy efficiency, to green building. They saw how those issues impacted their own building project.

Cotton, for one, doesn't think he could build his own house from scratch, but he is more comfortable tackling construction projects and knows more about what he wants in a house.

"A semester isn't enough time to become an expert on roofing a home or installing flooring or cabinets, but I'm definitely more comfortable with the tools and with small projects," he said.

The final cost came out to about $25,000 and was covered by a grant from The Community Foundation for Greater Atlanta. Project partner Georgia Organics received the title for the property and will help with fundraising for the next tiny house.

The fall 2016 course will incorporate more housing issues specific to farmers nationwide: farm succession, workforce housing and barriers faced by new farmers, according to Skobba.

Read the class's blog at tinydawghouse.wordpress.com. ▪ *Merritt Melancon*

TINY DAWG HOUSE BY THE NUMBERS

16
WEEKS TO BUILD

150
SQUARE FEET

$25,000
FINAL COST

SEARCHING FOR THE **BEST AND THE BRIGHTEST**

THE FOOD, AGRICULTURE AND ENVIRONMENTAL SCIENCES CAREER AND INTERNSHIP FAIR, in conjunction with the UGA Career Center, is geared toward College of Agricultural and Environmental Sciences disciplines and provides an opportunity to recruit CAES talent for full-time and internship opportunities. Last year, 53 companies and more than 250 students and alumni participated in this event. The career and internship fair will be held **Thursday, Oct. 6,** from noon to 3 p.m. at the Tate Student Center Grand Hall (fifth floor), 45 Baxter Street, Athens, Georgia. The corporate registration fee is $200, nonprofit registration fee is $100 and the cost is $25 for additional representatives. To register, visit career.uga.edu/hireuga/faes_fair.

This page was printed at the UGA Science Library's MakerSpace on a LulzBot 3-D printer.

Fantastic PLASTIC

Researchers press 'print' for **prototype**

One of the newest additions to the UGA Tifton Campus is aiding scientists in their research to improve Georgia's agriculture.

Agricultural engineers Glen Rains and George Vellidis, of the College of Agricultural and Environmental Sciences, believe the 3-D printer they've been using over the past year is an asset in conducting research.

"It's been a tremendous help. Instead of just buying something that doesn't fit or may not do exactly what you want, you can custom-make a product so it's exactly the size and specifications you want," Rains said.

The printer allows scientists to print and refine prototypes.

"It cuts down on the developmental cycles tremendously. You think it through, make the design, hope that it will work and then you test it. You might find some fault in your design. Then you find out how you can improve it," Vellidis said.

> **"You think it through, make the design, hope that it will work and then you test it. You might find some fault in your design. Then you find out how you can improve it."**
>
> **GEORGE VELLIDIS**

Rains is currently studying different methods for detecting diseases in immature crops. He used the printer to develop an enclosure that covers the GPS receiver on an autonomous scouting machine in the field. It's meant to protect the receiver and house the associated electronics and radio antenna. It took four prototypes to perfect the design, he said.

"It really saves a lot of time. You don't have to order things, wait for it and modify that. You can custom-make it, and it's really up to your own imagination how you want to do that," Rains said. "You know you're not limited to looking something up in a catalog."

Vellidis, a precision agriculture expert, is using the 3-D printer to develop a sensor probe to measure soil moisture. The probe is inserted into the soil to measure moisture at several depths, providing scientists and farmers with the information needed to make a decision about irrigating the field. The printer allows Vellidis to prototype the exact dimensions, lengths and everything needed to design the probe for maximum response and accuracy.

Vellidis estimates that, with the addition of the 3-D printer, development time is reduced by 60 to 70 percent. Costs are also greatly reduced. Instead of paying top dollar to a machine shop to make and customize a prototype, Vellidis and Rains can produce that same product themselves.

"I think it's going to be an indispensable tool for anything we do from now on," Vellidis said.

▪ *Clint Thompson*

KATIE WALKER

Tiny insect, Big impact

A tiny fly is having a huge impact on American fruit farmers. Known as spotted wing drosophila, the insect is costing farmers more than $890 million a year in prevention costs and lost produce.

The U.S. Department of Agriculture's National Institute of Food and Agriculture (NIFA) tasked UGA researchers with developing a long-term management plan for the flies. Ashfaq Sial, a national leader in spotted wing drosophila management and an entomologist in the UGA College of Agricultural and Environmental Sciences, will lead the $2 million NIFA grant-funded plan.

PETER RYCY, TOP: HANNAH BURRACK, NORTH CAROLINA STATE UNIVERSITY, BUGWOOD.ORG

Ashfaq Sial, an entomologist at UGA, checks on a young crop of blueberries in a research field in Alma, Georgia. Above: The tiny, spotted wing drosophila perches on a raspberry.

The flies deposit eggs into ripe fruit, rendering the fruit unmarketable. Populations are so prevalent in some areas that the flies are pushing organic farmers back to using conventional pest control methods, according to recent farmer surveys, forcing them to sacrifice higher fruit prices and the environmental advantages that come with an "Organic" label.

Conventional farmers are losing out on profits as they spend ever-increasing amounts of money to prevent the damage caused by the fruit-ruining flies.

"Spotted wing drosophila has emerged as a major threat to small- and stone-fruit production industries, and its management is challenging, particularly in organic systems due to lack of organically approved control options," said Sial, who is an assistant professor of entomology. "I am glad to have the opportunity to lead this collaborative effort to help organic farmers develop effective management strategies to control this devastating pest in a more sustainable manner."

Spotted wing drosophila have the potential to attack all berries and stone fruit; in Georgia, the flies' major target is blueberries. In 2014, Georgia farmers grew about $335 million in blueberries on more than 28,000 acres, according to the 2014 Georgia Farm Gate Value Report.

Sial will build on his existing integrated pest management (IPM) work in blueberries to establish management strategies for organic growers. Tactics will include developing cultural practices to minimize the fly's impact on the fruit, developing specific attractants that will draw the flies away from blueberry fields and investigating organic insecticides to diminish fly populations before they cause major damage to fruit.

The grant will also cover outreach efforts to help farmers implement these new management practices. ▪ *Merritt Melancon*

URBAN INVADERS

ENTOMOLOGISTS TRAIN PEST CONTROL OPERATORS TO FIGHT HOUSEHOLD PESTS

SINCE 2000, UGA COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES ENTOMOLOGISTS have taught pest control operators across the Southeast how to control termites and other household pests at a training facility built on the UGA Griffin Campus by the college, the Georgia Department of Agriculture and the Environmental Protection Agency.

Now, the Georgia Structural Pest Control Training Center is growing to meet the needs of the industry, which has seen an increase in urban pests, such as bedbugs.

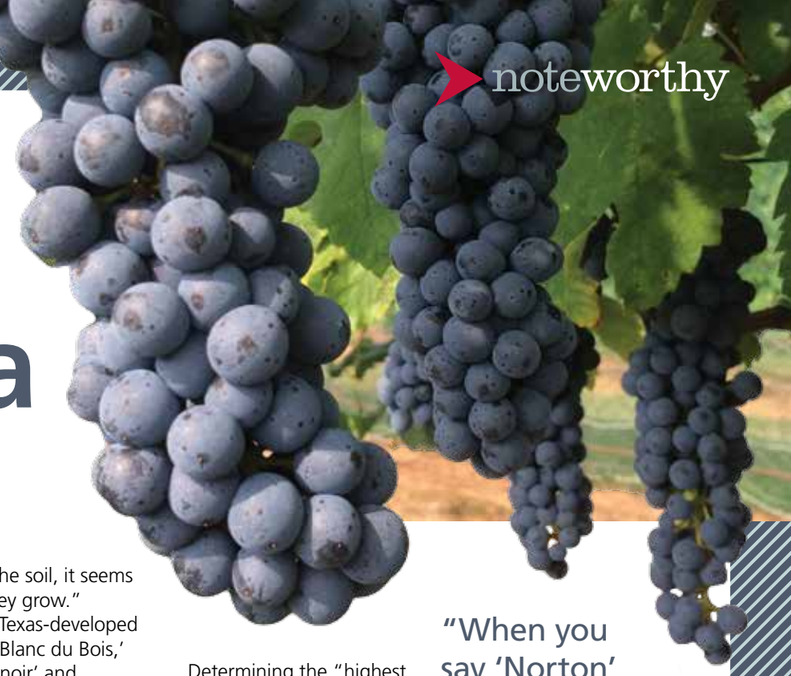
According to the National Pest Management Association, bedbugs date back to ancient Egypt some 3,300 years ago. In the U.S., they made a resurgence in the late 1990s, due in part to increased international travel.

The center will include a mock home kitchen and bedroom, school classroom and commercial kitchen. The new additions will allow researchers to teach operators how to control and detect indoor pests, such as bedbugs, cockroaches, mice and ants.

"Pest control companies have to go in and control cockroaches and rodents around food, so operators need to be trained," said Dan Suiter, the UGA Cooperative Extension specialist who directs the program. "We plan to start holding bedbug control workshops and trainings on controlling pests in schools and restaurants."

The workshops include lectures, hands-on insect identification and training demonstrations. More information is available at gabugs.uga.edu. ▪ *Sharon Dowdy*

CAITLIN LEMOINE



Seeking the great Georgia Grape

Georgia wines may not have the same reputation as California chardonnays or French Burgundies, but they're earning accolades thanks to dedicated grape growers and help from UGA Cooperative Extension.

Carroll County UGA Extension agent Paula Burke is working with the UGA Extension Agricultural and Environmental Services Laboratories (AESL), the Vineyard and Winery Association of West Georgia and Georgia wine growers to help produce better wines by perfecting growing methods.

According to the UGA Center for Agribusiness and Economic Development, the fledgling wine industry has an impact of $81.6 million on Georgia's economy each year, but there's been little research into growing wine grapes in Georgia until now.

Wine growers in west Georgia are using hybrid vines that incorporate the genetics of classic vinifera or European varieties and the genetics of American grapes to help combat disease.

"These hybrid grapes grow very vigorously," Burke said. "They seem to love poor soil, and they just seem to love this area of Georgia. The poorer the soil, it seems the faster they grow."

These are Texas-developed hybrids like 'Blanc du Bois,' 'Norton,' 'Lenoir' and 'Villard Blanc,' which can be treated like classic pinots and merlots in the wine barrel but are resistant to problems like Pierce's disease, which makes vine grape cultivation very difficult in Georgia.

"When you say 'Norton' or 'Blanc du Bois,' nobody knows those varieties, but they make fantastic wines," Burke said. "You can make sweet wines out of them; you can make dry wines out of them … They're great wines; they're just not the merlots or pinots that you see in the store."

Burke started working with a nearby Haralson County winery, Trillium Vineyard, in 2014. She took numerous soil samples to help the AESL develop soil-testing recommendations for grape wineries in Georgia, and started working with owners Bruce and Karen Cross to test varieties.

Their goal was to compare varieties of grapes and trellising systems to see which combination provided the best yields and the highest quality grapes.

BRUCE CROSS

Determining the "highest quality grapes" can be subjective, and that's where the team at the Crop and Environmental Quality Laboratory at the AESL came in.

Daniel Jackson, manager of the Crop and Environmental Quality Laboratory, is quantifying what makes a grape great for winemaking. Building on a testing system that he developed to chemically describe the sweetness of Vidalia onions, Jackson developed a battery of tests for the Cross' grapes.

His lab measures pH and titratable acidity, which are measures of the acidity of the grape juice, how quickly that acidity will mellow and meld with other flavors; the Brix and sugar profile, which characterize the potential alcohol content of the wine; and the overall sweetness of the juice.

"The information we're providing can help growers make informed decisions about which grapes to grow and which cultivation techniques to use to maximize yield and quality," Jackson said. "Winemakers should also be able to use our results to identify how to treat the grapes and the styles that would produce the best wines."

> "When you say 'Norton' or 'Blanc du Bois,' nobody knows those varieties, but they make fantastic wines."
>
> PAULA BURKE

Burke and Jackson's work with Trillium Vineyard is funded by a three-year grant from the U.S. Department of Agriculture and has received technical advice from Fritz Westover of Westover Vineyard Advising and Rachel Itle, a postdoctoral horticultural researcher on the UGA campus in Griffin, Georgia. Separately, Jackson's laboratory has started accepting grapes from other Georgia growers who want to know the chemical breakdown of their grapes and how to improve their quality. ▪ *Merritt Melancon*

Noblet plans to continue his work studying black flies after retirement. Below: Noblet collects black-fly larvae from a stream.

Triple-Dawg entomology head to retire

Noblet's **19-year tenure** marked by departmental awards and grants

Raymond Noblet will retire from leading the UGA College of Agricultural and Environmental Sciences Department of Entomology later this year. He took the helm of the department in 1997 and, counting his college career, has spent about 50 years in entomology. Noblet received his bachelor's, master's and doctoral degrees from CAES in entomology in 1965, 1967 and 1970, respectively.

"I really loved biology," he said. "I liked both field and lab work. Entomology is a great combination. It's a biological science, an agricultural science and a biomedical science. It gives you a lot of working room."

During the Vietnam War, UGA received a grant from the National Institutes of Health to study the transmission of malaria. At the time, the U.S. military was losing more man-days to the disease than to combat in the war, Noblet recalled.

The timing of the grant, received while he was enrolled in the department, was fortuitous for him: he was interested in studying disease transmission in humans and animals.

For 25 years before returning to UGA, Noblet worked at Clemson University as a professor of entomology and environmental toxicology.

During his 19-year tenure as department head at CAES, the faculty have won more professional awards than any other entomology department in the country, Noblet said, and faculty-won grants fund at least half of the department's budget. "Even through difficult economic times, this entomology department has remained one of the best in the country, and the future of the department looks exceptionally bright," he said.

Noblet's UGA laboratory – he has been studying black flies, the disease agents they transmit and their control for about 30 years – remains funded. He plans to keep an office at the Riverbend Research Lab South in Athens, Georgia.

UGA Griffin Campus' Kristine Braman, CAES entomology professor and director of the Center for Urban Agriculture, will take Noblet's place as entomology department head later this year. ▪ *Kathryn Schiliro*

CONTRIBUTED; TOP: JENA JOHNSON

SHERWOOD RETIRES AS HEAD OF PLANT PATHOLOGY

JOHN SHERWOOD, COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES PLANT PATHOLOGY department head and assistant dean for diversity relations and multicultural affairs, retired after nearly 19 years at UGA. He came to the college in 1997, after 16 years at Oklahoma State University.

At Oklahoma State, he worked on projects including the development of virus-resistant hard red winter wheat cultivars and the exploration of the molecular mechanisms of how plant-infecting viruses are transmitted and replicated in an arthropod vector, like the tomato spotted wilt virus (TSWV) and thrips.

JOHN SHERWOOD

In the 1990s, TSWV went from being rare to nearly wiping out the tobacco and peanut industries, he recalled. In 2004, Asiatic soybean rust arrived in the continental U.S. after traveling the globe. UGA faculty members were called upon to find or reallocate resources to address these and other issues. Over his tenure, the farm gate value of crops that the department has worked on increased from $3.6 billion to over $6.5 billion, he said.

"There are always new or emerging problems in plant health to be addressed," he said. "The research undertaken and the subsequent information plant pathologists provide make the difference in producers being profitable and, thus, being sustainable."

Sherwood was also part-time national program leader in the competitive programs at what is now the U.S. Department of Agriculture's National Institute of Food and Agriculture. He was named a Fellow on behalf of the American Phytopathological Society (APS) in the White House's Office of Science and Technology Policy and served as president of APS.

As assistant dean, Sherwood oversaw the Office of Diversity Relations and Multicultural Affairs, which is responsible for CAES recruitment and support programs for underrepresented students. The office facilitates the Young Scholars, Mentoring Among Peers and K-12 outreach programs, and sponsors the Minorities in Agriculture, Natural Resources and Related Sciences club, which provides career aid to students.

He is confident the plant pathology department will continue to better this centuries-old discipline and serve CAES' land-grant mission of teaching, research and extension. ▪ *Kathryn Schiliro*

CONTRIBUTED

Mike Lacy (far right), former poultry science department head, testified before the U.S. House Committee on Agriculture's biotechnology, horticulture and research subcommittee last fall.

Mr. Lacy goes to Washington

Then-department head testified about the importance of **land-grant universities, research**

At the request of Congressman Austin Scott, then-poultry science department head Mike Lacy represented the UGA College of Agricultural and Environmental Sciences as part of a panel recruited to speak to the U.S. House Committee on Agriculture's biotechnology, horticulture and research subcommittee about research at land-grant universities, the research community's policy and resource challenges as well as cooperation between institutions.

Lacy's presentation centered on his knowledge of poultry science, and he used the college's recent collaborations on avian influenza (AI) as an example.

"Because of the size and importance of poultry in Georgia, the leading producer of poultry in the U.S., a serious AI outbreak in our state would be devastating to our economy and impact the U.S. food supply," he said.

He cited research by UGA poultry scientists and veterinarians, the U.S. Department of Agriculture and other land-grant universities that strengthened poultry producers' biosecurity procedures as well as contributed to the development of response plans. He also spoke about the UGA Cooperative Extension 4-H Youth Development program's work with the Centers for Disease Control and Prevention to bring an understanding of biosecurity and zoonosis to youth.

Beyond AI, Lacy brought the subcommittee's attention to UGA and other land-grant universities' work on reducing foodborne pathogens during processing, protecting poultry from parasitic diseases and developing ventilation systems for poultry houses. The value of cooling technology developed at UGA is worth $15 million annually to Georgia producers alone.

He thanked the committee for extending Section 1433 of the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Act, which provides funding for animal health research at state veterinary and agricultural colleges, but he called for full funding of the program "to address the priorities of food security, animal health and environmental stewardship."

"They were grateful and supportive of what land-grants (universities) were doing for agriculture," he said. "Congress is aware of the huge impact agricultural research has on the U.S. economy, the cost and quality of our food, and on saving lives in developing countries." ▪ *Kathryn Schiliro*

AG LEADERS INDUCTED INTO HALL OF FAME

FORMER U.S. SEN. SAXBY CHAMBLISS AND GEORGIA DAIRYMAN, THE LATE THOMAS RICHARD BREEDLOVE SR. were inducted into the Georgia Agricultural Hall of Fame last September.

During 20 years in the U.S. Congress, Chambliss earned a reputation as an advocate for agriculture. He started his career as an attorney serving farmers in his hometown of Moultrie, Georgia. He was elected from Georgia's 8th Congressional District to the U.S. House of Representatives in 1994.

THOMAS RICHARD BREEDLOVE

SEN. SAXBY CHAMBLISS

Chambliss helped shape the nation's agriculture policy, assisting with authoring four farm bills during his tenure in the U.S. House, from 1995 to 2002, and in the Senate, 2003 to 2015, where he chaired the Senate Agriculture Committee from 2005 to 2007.

Breedlove, a dairy and beef farmer in Walton and Morgan counties, was the first executive director of Georgia's Agriculture Adjustment Administration, the precursor to the U.S. Department of Agriculture's Farm Service Agency. In the early 1950s, Breedlove also acted as regional director of the field service branch of the Federal Production Marketing Association. He was a founding board member and first president of Walton EMC and a founding vice president of what is now Georgia Farm Bureau.

▪ *Samantha White and Merritt Melancon*

Gardening is Elementary

Master Gardeners plant love of horticulture in youth

MG SPROUTS, a new gardening program for young children, has been created for Georgia Master Gardener Extension Volunteers (MGEVs) to use in teaching the littlest green thumbs – students in kindergarten through third grade.

"MG SPROUTS will allow our volunteers to meet their communities' needs for youth horticulture training without having to plant and maintain a permanent garden. It is designed for a community approach and can easily be presented at your local library," said Sheri Dorn, director of the Master Gardener program. "Since there are just six lessons, the MGEVs don't have to sign on for a long commitment."

The program is an easy-to-follow "project in a box" that includes directions, exercises and activities.

"The goal of MG SPROUTS is to share the joy and wonder of plants and gardening with young people, showing that our actions in our own gardens do impact our environment and our planet," said Dorn. When a lesson begins, MGEVs and children start by reading a garden-related story before exploring plants through hands-on horticulture activities, writing prompts and games.

SHERI DORN

MG SPROUTS Ella Blackstock (left) and Lydia Allen prepare to plant garlic cloves in recycled 2-liter bottles. Planting in these clear, plastic bottles allows children to see the formation of roots and shoots.

UGA Cooperative Extension agents and MGEVs learn about MG SPROUTS and how to share it in their communities by attending online trainings.

Last fall, Dorn shared the new MG SPROUTS lessons at the American Society for Horticultural Science's annual conference and with Master Gardeners from across the country at the International Master Gardener Conference. The fledgling program's guidebook was awarded a Blue Ribbon Communication Award by the Southern Region American Society for Horticultural Science at the annual conference in February 2016. ▪ *Sharon Dowdy*

THERE SHE IS, MISS FORMER 4-H'ER

GEORGIA 4-H ADDED A REIGNING MISS AMERICA to its alumni roster when the crown was awarded to Warner Robins, Georgia, native Betty Cantrell.

As a Houston County 4-H'er, Cantrell competed in two District Project Achievement events in the vocal category. "Being in 4-H helped me with my speaking abilities, and it helped me be comfortable in front of people," she said. "Competing allowed me to practice singing in front of people."

Cantrell, who hopes to perform on Broadway, won the talent portion of the Miss America competition.

She said that doing community service projects as a 4-H'er prepared her for the service responsibilities that come with being Miss America 2016. Through her platform – "Healthy Children, Strong America" – she is working to educate Americans about the benefits of eating fruits and vegetables and exercising. She said Georgia's ranking as the second most obese state in the U.S. prompted her topic selection. "Technology is taking over and kids just aren't exercising," she said. "We need to encourage children to put their phones down for at least an hour a day."

Addressing Georgia 4-H Juniors at last year's Fall Forum, Cantrell's take-home message was, "Do your best and be yourself." ▪ *Sharon Dowdy*

BRUCE BOVAJIAN, COURTESY OF THE MISS AMERICA ORGANIZATION

KATIE WALKER

EXTENSION IN PRINT

THERE'S A PUB FOR THAT

UNIVERSITY FACULTY WRITE UGA COOPERATIVE EXTENSION BULLETINS AND CIRCULARS for Georgia's farmers, landscapers, homeowners and families, providing research-based, peer-reviewed information and recommendations to the public. Approximately 750 numbered publications are available for free at extension.uga.edu/publications, and new publications are always being added. Consider the following titles:

Native Plants for Georgia Part I: Trees, Shrubs and Woody Vines, Bulletin 987
As demand for improving the biodiversity and sustainability of landscapes has increased, this has become one of the most popular publications. It covers how to establish native plants in the landscape and provides photos, characteristics and descriptions of more than 140 native trees, shrubs and vines that are suitable for growing in Georgia.

The Tawny Crazy Ant, *Nylanderia fulva*, in Georgia, Circular 1064
The tawny crazy ant is a growing economic, ecological and nuisance pest in the Southeast. Similar to the invasive Argentine ant, or sugar ant, the tawny crazy ant has only recently been detected in Georgia. This circular teaches readers how to identify the tawny crazy ant. It also provides information on control and why the ants are a problem.

Cow Behavior: A Critical Factor to Consider Under Heat Stress, Bulletin 1442
There are a few ways farmers can keep their cows comfortable in the summer heat. This bulletin focuses on the impact of environmental heat stress on cattle behavior and possibly related consequences. These practices aren't just good for animal welfare – happy cows ensure dairy operations are maximizing milk production. ▪ *Andrea Gonzalez*

AmeriCorps helps 4-H programs reach more Georgians

Peace Corps workers help people in developing countries. Here in Georgia, AmeriCorps VISTA, or Volunteers in Service to America, a national service program modeled after the Peace Corps, provides individuals to help Georgia 4-H reach children in low-income counties.

Georgia 4-H currently receives funding for two different AmeriCorps programs. AmeriCorps VISTA members provide indirect service focused on fund development and volunteer recruitment. AmeriCorps State members work directly with youth and volunteers.

Associate Dean for Extension Laura Perry Johnson was instrumental in bringing the AmeriCorps VISTA program to Georgia in August 2010, when she served as UGA Cooperative Extension's Southwest District 4-H program development coordinator. Then, AmeriCorps VISTA grants provided the Georgia 4-H state office and county agents with members to support their programs. In 2012, Jeff Buckley, state 4-H specialist, established the AmeriCorps State program in Georgia. Together, these two grant programs have provided funding for more than 120 yearlong terms of service. An equivalent number of traditional employees would have cost more than $4.4 million.

"AmeriCorps programs are designed to help organizations like Georgia 4-H serve more people by increasing organizational capacity. Because of this program, we have been able to develop new programs and reach more youth in 39 counties across the state," said Jennifer Cantwell, AmeriCorps program coordinator for Georgia 4-H.

CONTRIBUTED

Barrow County AmeriCorps State member Jonathan Page works on a bottle rocket during a National Science Day event.

Working with Georgia 4-H, AmeriCorps VISTA members – there are up to a dozen in the state – have raised more than $530,000, collected $60,495 in noncash resources, produced more than 1,400 4-H marketing pieces and recruited just over 1,400 Georgia 4-H volunteers. Now, 32 AmeriCorps State members are delivering programs to more than 13,000 youths per month. Since 2012, they have delivered programs to over 80,000 youths through in-school programs and helped over 14,000 Georgia 4-H'ers prepare their demonstrations for 4-H Project Achievement.

"You don't have to look very far to see the harsh realities of persistent poverty anywhere in Georgia," said Johnson. "Extension has worked to address these issues across the state. Our partnership with AmeriCorps strengthens our ability to deliver programming that strives to break that cycle." ▪ *Sharon Dowdy*

JOHN AMS

Hall County Master Gardener Extension Volunteer (MGEV) Dave Rusk answers gardening questions at the Garden Expo in Gainesville, Georgia. More than half of MGEV programs work with and offer their services to community gardens statewide.

It takes a Village

Community gardens teach gardening skills, bring communities together

The trend toward eating locally grown food is fueling more people's desire to garden. For this passion to lead to a successful, nutritious harvest, would-be gardeners need knowledge and a spot of earth to garden.

Community gardens are spread throughout Georgia. A recent UGA Cooperative Extension study found 245 community gardens, including almost 150 school gardens, in the state. A community garden can be one plot or many individual plots. Many of Georgia's community gardens are located in neighborhoods and at schools, hospitals, churches, homeless shelters, drug rehabilitation centers, senior centers and recreation departments.

"When I came to this job a year ago, we had a lot going on in the area of community and school gardens, but none of it was coordinated and that was limiting our impact," Associate Dean for Extension Laura Perry Johnson said. "During the past year, we have named Becky Griffin as the community and school garden coordinator and organized the Community and School Gardens Task Force so that we can get some synergy behind this effort. I have been beyond pleased at this effort and we will continue to support this important area."

Members of 'glo,' the Atlanta-based performance art group, weed the community greens patch at the Healthy Life Community Garden. In addition to providing area residents with a place to plant vegetables, the garden has become a catalyst for uniting the Fairmont community in Griffin, Georgia.

SHARON DOWDY

PHOTOS BY SHARON DOWDY

There are more than 240 community gardens in Georgia. These gardens, like Griffin, Georgia's Healthy Life Community Garden, teach residents how to grow their own fruits and vegetables and connect communities.

"Community gardens aren't just about **growing beautiful flowers and nutritious vegetables.** They pose unique challenges because they are intensive **gardening projects that promote communities** and bring people together."

BECKY GRIFFIN

COMMUNITY FINDS

A BATTERED BUILDING WITH SHATTERED WINDOWS is all that remains of what was once Spalding Vocational High School in Griffin, Georgia, one of more than 5,300 Rosenwald schools built in the early 20th century for African-American students in 15 Southern states. The schools were the brainchild of educator and civil rights activist Booker T. Washington and Julius Rosenwald of Sears, Roebuck and Co.

The building looks less ramshackle these days since becoming the site of the Healthy Life Community Garden, a project created as a joint effort thanks to input from leaders of Spalding County, the city of Griffin and the community.

Today, the school is surrounded by 20 raised-bed gardens, fruit trees, a large community garden plot, an herb garden, a butterfly garden, a makeshift greenhouse and picnic tables, where area retirees enjoy cups of morning coffee. Residents from the adjacent Fairmont Homes visit the site to grow vegetables and fellowship with their neighbors and, in the process, restore the community.

Children from the community have created a fairy garden, and they visit the garden for programs including the Summer in the Garden Reading Program, where the Ferst Foundation provides free books to the children and their parents, and an annual Halloween festival. This year, volunteers and gardeners gathered at the garden on Martin Luther King Jr. Day for a workday as part of the "A Day On, Not a Day Off!" service initiative.

The idea for the garden began in the spring of 2012, when Griffin and Spalding County residents and local elected officials contacted the Georgia Center for Urban Agriculture on the UGA Griffin Campus for help. Today, a UGA Spalding County Cooperative Extension program assistant is assigned to help local Extension agent Wade Hutcheson guide and support the garden and teach gardening classes.

"Children who aren't used to seeing, nonetheless eating, what we grow are surprised how much they love our fruits and veggies," said Patty Beckham, the program assistant assigned to the garden. "We had a girl whose mother made squash for the first time after coming to this garden. I got so excited when I found that out, because that's why we are here."

Gardeners enjoy learning to grow their own food, especially produce that is unavailable at neighboring stores. "With 21 percent of the population in poverty and limited public transportation, most of the city of Griffin and much of Spalding County is in an identified U.S. Department of Agriculture food desert," said Ellen Bauske, a program coordinator with the Georgia Center for Urban Agriculture. A food desert is an area where the nearest supermarket is more than a mile away and the area has at least a 20 percent poverty rate.

The garden is one of many Education Prosperity Initiative (EPI) endeavors in the Fairmont community. Other projects include the provision of scholarships to attend Young Scholars and other summer enrichment programs at the UGA Griffin Campus. The project is also supported by the Griffin Housing Authority, the Spalding County Collaborative Authority for Families and Children, the Griffin Branch of the NAACP, the Griffin-Spalding County School System and residents from the adjacent neighborhoods.

"This is the beginning of a long-range plan for a deprived and neglected area to be restored to its glory days," said Jewel Walker-Harps, chair of the EPI and president of the Griffin NAACP. She taught at Fairmont High School, previously Spalding Vocational High School.

▪ *Sharon Dowdy*

FERTILE GROUND FOR GROWTH IN FORGOTTEN SCHOOLYARD

Already working with UGA Extension in metro Atlanta, Griffin took her new post on July 1, 2015. She compiled Extension materials for community gardeners that are available at ugaurbanag.com/gardens/garden-resources. Then, she created a toolkit for agents to use in training community garden planners and gardeners, a UGA Community and School Gardens Facebook page and a blog (blog.extension.uga.edu/communitygardening). She also started the Pollinator Spaces Project to promote the use of plants that attract pollinating insects (ugaurbanag.com/gardens/pollinators/).

UGA Extension agents train community gardeners to put seed to soil, maintain the garden, preserve and prepare their harvest and more. UGA Extension Agriculture and Natural Resources agents answer gardening questions through workshops and, along with local Master Gardener Extension Volunteers, provide hands-on mentoring. UGA Extension Family and Consumer Sciences agents teach the gardeners about food safety and harvest preservation, using the latest, research-based information from the National Center for Home Food Preservation, a web-based informational resource housed at UGA (nchfp.uga.edu).

"Community gardens aren't just about growing beautiful flowers and nutritious vegetables. They pose unique challenges because they are intensive gardening projects that promote communities and bring people together," Griffin said.

"Gardening is the vehicle, and UGA Extension is the useful resource that assists in all aspects of these special garden spaces," she said.

▪ *Sharon Dowdy*

Cultivating Knowledge

School garden programs encourage teachers, students to dig into learning

Lessons tend to be more effective when they're combined with real experience. This is the case for classes on agriculture and the environment taught in conjunction with a school garden.

At W.R. Coile Middle School, in Athens, Georgia, English to Speakers of Other Languages teachers Kelli Bivins and Alicia Coughlan; FoodCorps service member – through Athens Land Trust – Bexx Merck; and Master Gardener Extension Volunteer and AmeriCorps Volunteers In Service To America (VISTA) member Brendan Nordgren coordinate a project-based learning club called "Coile Serves." The club focuses on sustainability. Students in the club have diligently researched, designed, installed and maintained a pollinator habitat.

"Our vision at Coile Serves is for young people to develop environmental awareness, global thinking and a lifelong commitment to local action and entrepreneurship," said Bivins. In October 2015, the school, thanks to Coile Serves, was presented one of 150 Commitments to Action awards by the White House Initiative on Educational Excellence for Hispanics.

Across town, students at Clarke Middle School (CMS) are operating a 6,000-square-foot, four-plot garden filled with vegetables.

KATIE WALKER

UGA students pitch in at the Clarke Middle School garden. Below: UGA Extension community and school garden coordinator Becky Griffin leads the school garden teacher training.

MERRITT MELANCON

"My role as a VISTA was to fight poverty through teaching students ag science and family and consumer science skills," said Wick Prichard, a former CMS VISTA who now supervises VISTAs at all four middle school gardens in Athens-Clarke County. The CMS garden is modeled after the university's UGArden, with one plot in production while the others are planted in cover crops. This crop rotation improves the soil and reduces insect and disease pressure. Horticulture Professor David Berle, who helped establish the CMS garden, and other UGArden personnel give expert advice and assist with transplant and soil amendments. The Clarke County UGA Cooperative Extension office and Keep Athens-Clarke County Beautiful help to secure seeds. In fact, they provide seeds to all teachers in the county who request them. Clarke County Extension Coordinator Amanda Tedrow also helps to connect Extension Master Gardener and Master Composter volunteers with CMS.

The Clarke County School District won the Georgia Organics 2014-2015 Outstanding District Golden Radish Award.

Statewide, given the increase in school gardens, there has become a greater need for resources that educators can use to successfully implement and incorporate gardens into their classrooms. Recognizing that need, Becky Griffin, UGA Extension community and school garden coordinator, and David Knauft, professor emeritus in the horticulture department, along with event coordinator Beth Horne, teamed up to develop their School Garden Teacher Training.

"The main resource that school gardens have is their [Extension] agent, and our job is to supplement agents and help them reach that audience," said Griffin.

Last summer, the trio, with help from UGA Extension agents, held three workshops in Athens, Atlanta and Griffin, Georgia, with representatives from 24 counties present. Teachers learned about topics such as school-year seasonal crops, soil testing and integrated pest management. For more information, visit ugaurbanag.com/gardens/teacher-training.

▪ *Whitney Dixon*

BUTTERFLIES: *Agastache* 'Black Adder,' ***Lantana*** **'Miss Huff'** and 'Mozelle,' *Verbena bonariensis* and *Buddleja*

THE CAES RESEARCHERS FOUND THE TOP INSECT ATTRACTORS TO BE:

SPIDERS: *Rudbeckia* 'Goldsturm,' *Amsonia hubrichtii, Belamcanda, Gaura* 'Passionate Blush,' *Nepeta* 'Walker's Low' and ***Chrysanthemum*** **'Cambodian Queen'**

Pollinator Paradise

UGA Griffin Campus researchers establish **Conservation Garden** to study beneficial insects, native plants

Saving pollinators like bees and butterflies and using fewer pesticides to control landscape pests top the list of environmentally friendly gardening tasks. Scientists on UGA's Griffin Campus have designed a new garden that benefits pollinators and fights weeds.

College of Agricultural and Environmental Sciences entomologist Kris Braman, horticulturist Bodie Pennisi and doctoral student Bethany Harris looked at 65 plant types to select the perfect ones for the new Conservation Garden at the UGA Research and Education Garden in Griffin, Georgia. Harris led the project as part of her master's thesis.

Exotic plants can negatively affect native insects and birds. When the insect population loses access to native plants, animals that eat these insects also suffer a loss in their food source.

Candidate plants were monitored for an hour twice weekly and data was collected on which beneficial and pollinating insects preferred them, which location in the garden the insects liked the best and the ecological classification of the insects that visited the garden. Students from the Griffin Campus Young Scholars Program, as well as Master Gardener Extension Volunteers, were trained to help the scientists monitor the plants and record insect activity.

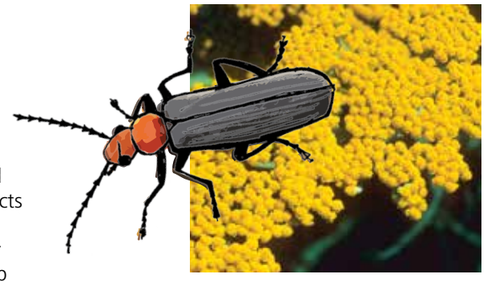
A list of "top 15 favorite plants" was created for each insect order, including Lepidoptera (butterflies and moths), Diptera (flies), Hymenoptera (bees, wasps and ants), Coleoptera (beetles), Araneae (spiders) and Hemiptera (true bugs, planthoppers, assassin bugs, stink bugs and others).

Data about the types of insects – pollinators, predators, parasitoids and plant feeders – that were attracted to particular plant species was also collected for ornamentals in the garden.

▪ *Sharon Dowdy*

CLOCKWISE FROM TOP LEFT: FOREST AND KIM STARR; STARR ENVIRONMENTAL; BUGWOOD.ORG; BODIE PENNISI; FLICKR.COM/PHOTOS/MOMENTSFORZEN; PAUL THOMAS; UNIVERSITY OF GEORGIA; BUGWOOD.ORG; BODIE PENNISI; BUTTERFLY AND BEETLE ILLUSTRATIONS BY KATIE WALKER

BEES: *Agastache* 'Acapulco' and 'Black Adder,' *Nepeta* 'Walker's Low,' ***Salvia*** **'Hot Lips'** and 'Mystic Spires,' and *Gaura* 'Passionate Blush'



BEETLES: ***Achillea*** **'Coronation Gold'** and 'Sunny Seduction,' *Coreopsis* 'Red Shift,' *Gaura* 'Passionate Blush' and *Rudbeckia triloba*

FLIES: *Foeniculum vulgare, Coreopsis* 'Red Shift,' ***Belamcanda,*** *Aster* 'Wood's Pink' and *Gaura* 'Passionate Blush'

Broiling Point

CAITLIN LEMOINE

CAES-developed **app** helps farmers regulate ventilation in chicken houses

With thousands of birds living in a single house, keeping the air warm and fresh without spending a fortune on fuel during the winter can be one of the toughest challenges for broiler producers.

UGA poultry housing experts have released a mobile app to help producers walk that thin line between overventilating and overheating broiler houses during cold weather.

Since its release in June 2015, more than 1,200 people have downloaded the app, called "CHKMINVENT," said Mike Czarick, poultry housing engineer in the College of Agricultural and Environmental Sciences Department of Poultry Science.

"In the summertime, ventilation is fairly straightforward. A producer knows that if they have older birds and it is hot, they are going to operate all of their tunnel fans. There really is no question about it. The more air they can move through the house, the better off their birds will be," he said. "In the winter, there is much more at stake. Ventilate too much, and you will have excessive energy costs and stressed birds. Ventilate too little, you will have poor air quality and wet litter, which can lead to poor performance and health. You really have to be much more thoughtful about how much you operate your fans."

The app allows farmers to enter variables, such as the outside temperature, the amount of water the chickens consume, the temperature inside the house, the desired level of relative humidity and the size of the poultry house's fans. It then calculates how long farmers need to run their fans in order to remove excess moisture from the house and keep the chickens at a comfortable temperature and relative humidity.

The programming that handles the calculations is based on years of research into poultry housing and on a series of spreadsheets that Czarick and fellow UGA Cooperative Extension poultry faculty members Brian Fairchild and John Worley developed to help farmers with these calculations.

Poultry scientists and engineers at UGA pioneered research on bird cooling, bird stress and poultry housing systems in the 1990s and continue to be experts in this field today. For more about poultry housing research and outreach, visit poultryventilation.com.

For more information about the CHKMINVENT app, search for it on Apple's app store. For now, the app is only available for iPhone, but the team may develop versions for other operating systems based on demand for this initial version. ▪ *Merritt Melancon*

APPLEGATE LEADS POULTRY SCIENCE DEPT.

TODD APPLEGATE, FORMERLY THE ASSOCIATE HEAD OF THE DEPARTMENT OF ANIMAL SCIENCES AT PURDUE UNIVERSITY, took charge of the UGA College of Agricultural and Environmental Sciences Department of Poultry Science in January.

Applegate, who has worked as a poultry researcher at Purdue since 2000, has a background in the Cooperative Extension System, research and instruction.

"UGA poultry science certainly is poised for some great opportunities, with an increasing trajectory of undergraduates, graduate students and two recent faculty additions in food safety (Harshavardha Thippareddi) and reproductive physiology (Drew Benson)," Applegate said. "Our department has a rich history of excellence in all three of our land-grant missions. We hope to reinforce that with some of our new faces and additions to the department in the coming years. My hope, as well, is to foster collaborations with the wealth of poultry resources and expertise at UGA, locally with the U.S. Department of Agriculture's Agricultural Research Service and with other poultry affiliates throughout the state. In particular, we are looking to grow our graduate student enrollment to fulfill an ever-growing need domestically and abroad."

TODD APPLEGATE

Applegate received his bachelor's and master's degrees in animal science from Iowa State University before pursuing his doctoral degree in animal science from Ohio State University and graduating in 1999.

He replaced Mike Lacy, who retired last year after 30 years at UGA.

▪ *Merritt Melancon*

Poultry industry leader creates student fund

Abit Massey was introduced to the poultry industry through his older brother, Henry (BSA – Poultry Science, '43; MS – Poultry Science, '60), who was a lifelong poultry scientist and enthusiast.

Abit grew familiar with the UGA College of Agricultural and Environmental Sciences poultry science department while helping Henry candle eggs and check on poultry houses. At that time, the poultry sheds used for housing chickens existed on the site of what's now the UGA Center for Continuing Education on the Athens, Georgia, campus, he recalled.

While Henry received his bachelor's and master's degrees in poultry science, was president of Ag Hill Council and became a UGA Cooperative Extension poultry specialist and district agent, not to mention "master of cooking and barbecuing chicken," Abit, who majored in business at UGA, would go on to become president of the Georgia Poultry Federation for nearly 50 years.

Now president emeritus of the federation – he continues to work with the current president, Mike Giles – Abit has established the Abit and Henry Massey Student Enhancement Fund through the college. He established the fund because of his "strong interest in the University of Georgia and the poultry industry, both very important to me and the entire state of Georgia," he said.

> "It has been said that one word describes a poultry graduate: employed."
>
> ABIT MASSEY

The fund will be used for scholarships and toward student opportunities, like travel to the annual International Poultry Expo in Atlanta. These scholarships and opportunities will build poultry science students' skill sets, knowledge and employability.

"It has been said that one word describes a poultry graduate: employed," Abit said. "There are a wide range of job opportunities in Georgia's gigantic and growing poultry industry."

He credits the poultry science department as being essential to the state's poultry industry – providing poultry personnel, conducting research and assisting companies and growers.

"The Georgia poultry industry is much better, larger and more viable because of the poultry department and the University of Georgia," he said. ▪ *Kathryn Schiliro*

Check out Henry's Chicken-Que recipe at caes.uga.edu/alumni/news.

CONTRIBUTED

Poultry scientist and enthusiast Henry Massey (left) instilled in his brother, Abit, a passion for the poultry industry. Abit went on to become president of the Georgia Poultry Federation. He's established a fund in the name of his brother and himself to support CAES poultry science students.

ABIT MASSEY: A LIVING LEGEND

MASSEY WAS ONE OF TWO 2016 RECIPIENTS of one of UGA's highest honors – the UGA President's Medal – in January. An opportunity to recognize individuals outside the university, the medal pays tribute to those who've "supported students and academic programs, advanced research and inspired community leaders to enhance Georgians' quality of life." He was also the speaker at UGA's 2014 Summer Commencement.

Massey administered what was the Georgia Department of Commerce and is now the Department of Economic Development – he created the tourist division and built the first welcome station – before moving to the poultry industry and heading the Georgia Poultry Federation from 1960 to 2009.

Throughout his career, Massey has received numerous awards from the university, the college and the poultry industry. He received the inaugural Medallion of Honor for Service to the College of Agricultural and Environmental Sciences. In fact, he was the first UGA graduate to receive the Presidential Citation from Georgia Tech. He serves on the board of directors of the Georgia Research Foundation and UGA Real Estate Foundation and is an emeritus trustee of the UGA Foundation and past president of the CAES Alumni Association board.

ANDREW TUCKER

Franklin West (left) and Steven Stice are members of a group that's produced chicken stem cells, which are pictured in the background, that will allow for efficient vaccine production.

RBC engineers stem cells for faster vaccine production

Research teams working with the Regenerative Bioscience Center (RBC) at UGA are hoping to develop an efficient use of avian stem cells for commercial vaccine production. The research follows earlier funding from the Bill and Melinda Gates Foundation.

In 2011, the foundation awarded nearly $1.6 million to the RBC for developing chickens made resistant to Newcastle virus through chicken stem cells. As a spinoff of this, induced pluripotent chicken cell lines, or stem cells produced from adult cells, were developed for vaccine production. Today, most vaccines are produced in disease-free chicken eggs. In developing countries, importing these eggs for vaccine production, tailored to specific needs, is expensive and not always available. New stem cell technologies could offer a sustainable, regional solution.

Franklin West, College of Agricultural and Environmental Sciences assistant professor, along with Claudio L. Afonso at the U.S. Department of Agriculture Agricultural Research Service's Southeast Poultry Research Laboratory and Steven Stice, a Georgia Research Alliance Eminent Scholar and CAES D.W. Brooks Distinguished Professor, have engineered cost-effective, versatile chicken stem cells and adapted them to simple conditions needed for efficient vaccine production.

> **"What sets this cell-based production system apart from the others is that it's quick, easy to use and versatile in that it can be applied to multiple vaccine types ..."**
>
> STEVEN STICE

The new findings, reported in the Journal of Biological Standardization, provide an innovative solution to overcoming bottlenecks and time constraints during current methods of vaccine production.

"What sets this cell-based production system apart from the others is that it's quick, easy to use and versatile in that it can be applied to multiple vaccine types; for example, Newcastle and, potentially, influenza vaccines, and both animal and human vaccines," said Stice, director of the RBC.

The use of cell lines for the manufacture of viral vaccines offers additional advantages in the event of a human flu pandemic. Currently, fertilized chicken eggs are used to host the flu virus. This more-than-60-year-old process is not only time consuming, but in the event of a pandemic, it could also place egg inventory in short supply. Beyond this process, additional time is needed for the Centers for Disease Control and Prevention to create a reference strain. With chicken cell-based production technology, demand quotas are achieved much faster with greater process control.

The team hopes to soon revolutionize the poultry vaccine industry for developing countries, where virus containment is needed the most.

"The best way to keep the avian flu from reaching the U.S. is to first prevent its spread across the world," Stice said.

▪ *Charlene Betourney*

Multiple factors

Study compares impatience and low math scores to high school dropout rate

"Would you rather be given $49 a month from now, or wait six months and get $98?"

College of Agricultural and Environmental Sciences agricultural economist Jeff Jordan and two colleagues from George Mason University asked 878 Spalding County, Georgia, eighth-graders this question in an effort to find out which students may decide to drop out of school.

Statistics show that a large percentage of students who drop out of high school do so around the time they turn 16, said Jordan, a scientist based on the UGA campus in Griffin, Georgia. Determining how long a child is willing to wait for a reward will help pinpoint when students make the decision to drop out of school. Researchers, like Jordan, hope to find ways to encourage students to stay in school.

The study began with a small starter grant for poverty research from the UGA Office of the Vice President for Public Service and Outreach.

Using $49 gift cards as rewards, the research team asked the students how much money it would take, from $50 to $98, for them to wait six months for their reward. "Knowing whether a student wants something today or will wait for more later is the essence of high school retention," Jordan said.

After collecting data in 2006, 2007 and 2008, the economists had to put the project on hold and wait for the students to graduate – or not. Then, the team cross-referenced factors, like how many days the student was absent, disciplinary referrals, standardized test scores in math and reading, whether they qualified for free or reduced lunch and whether they were in gifted or special education programs.

The results showed that males were more impatient than females; African-American students were more impatient than white students; African-American males were the most impatient; students with higher math scores were generally less impatient; and the students who were the most impatient had higher discipline and dropout rates.

When the researchers controlled for race and gender variables, impatient students with high math scores had a 90 percent probability of graduating. Impatient students with low math scores were 59 percent more likely to drop out.

With the knowledge that impatience and math scores are strongly linked to the dropout rate, the researchers are now using mobile apps and other tools to explore ways to help impatient students increase their math scores. "Generally, when a child isn't performing well in math, we offer tutoring or after-school help or more homework," Jordan said. "We are just giving them more of the same of what they don't do well in. We have to find other ways to improve their math skills and to help students understand that staying in school and reaching graduation is not only in their best interest but will pay off in the end. We need to find out whether that can be taught to 16-year-olds."

> "Knowing whether a student wants something today or will wait for more later is the essence of high school retention."
>
> JEFF JORDAN

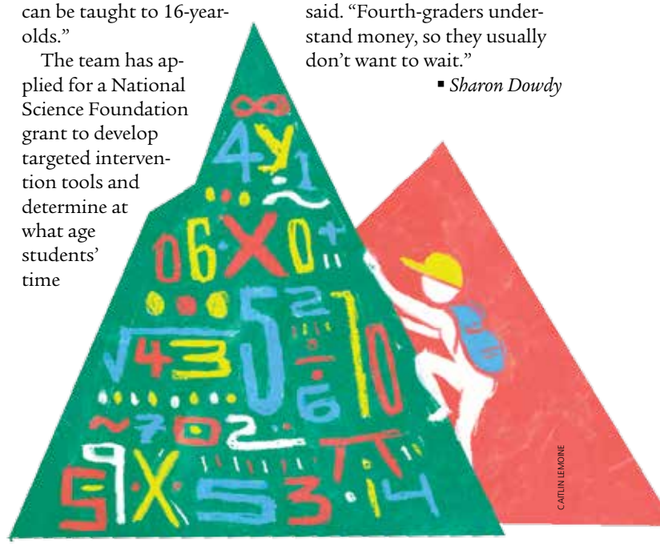
The team has applied for a National Science Foundation grant to develop targeted intervention tools and determine at what age students' time preferences (patience/impatience) form. The George Mason researchers are developing math game apps and other tools to encourage parent involvement and to teach parents how to help their children with math.

Jordan is leading a pilot program with kindergartners, first-, third- and fourth-graders at Jackson Road Elementary School in Griffin.

"We want to know at what age children understand the concept of money," he said. "With these younger kids, we used Hershey's chocolate KISSES and asked them if they wanted one today or if they would wait until next week and get four or more."

So far, the kindergartners tend to be more patient than the fourth-graders. "Most kindergartners don't understand money or time. They simply believe that getting more is better, so they were willing to wait," he said. "Fourth-graders understand money, so they usually don't want to wait."

▪ *Sharon Dowdy*



CAITLIN LEMOINE

Destination: Research

Doctoral students gain latitude in their research through travel grants

In 2015, for the first time, the College of Agricultural and Environmental Sciences Office of Global Programs (OGP) was able to offer travel grants to three graduate students to enhance their doctoral research and help them build a network of international scientists who share their interests. Previously, the office has only offered one Global Programs Graduate International Award a year.

"We had such a large number of excellent proposals that we couldn't narrow our decision to just one award," said Vicki McMaken, OGP associate director. "Fortunately, we were able to allocate funds for an additional award from our office, and a third was funded by the CAES Office of Academic Affairs."

The award allowed plant pathology doctoral student Stephanie Bolton to meet European scientists working on mycotoxins, or toxic compounds produced by fungi that may pose a risk to human or animal health if ingested.

Bolton's research focuses on the large number of *Fusarium* fungi that can produce harmful mycotoxins in grapes in the southeastern U.S. With her graduate travel grant, she attended the European *Fusarium* Seminar (EFS) in Puglia, Italy, in mid-May 2015. Following the conference, and with the help of these newfound relationships, Bolton discovered a unique *Fusarium fujikuroi* population.

"With the encouragement of the *Fusarium* researchers from the [EFS], I obtained *Fusarium* strains originally isolated from various plant hosts and from diverse geographical locations and tested those strains next to my fungal isolates to see if my isolates are unique – and they are!" she said. "Without the support of the people at EFS in Italy, I don't think that I would have known how unique this population of fungi I collected really is, and I definitely wouldn't have as much confidence in the caliber of my [doctoral] research."

Yi Gong, a doctoral student in the Department of Food Science and Technology, presented his research in China at multiple events in September last year, including marketing lectures to local media and presentations at the International Society for Nutraceuticals and Functional Foods annual conference and exhibition.

Gong's research focuses on the nutritional and health-promoting components of U.S. pecans. Gong's research has already benefited the U.S. and Georgia's economy, as China has reduced tariff rates on pecans from 24 to 10 percent.

Since the conference, he's been working on manuscripts comparing the phenolic composition and antioxidant capacities of U.S. pecans and Chinese hickory nuts, studying the antioxidant capacity of 20 commercial and emerging early-harvest pecan cultivars and studying the impacts of horticultural practices on pecan antioxidant levels.

Brad K. Hounkpati, a doctoral student in entomology, used his grant toward completing his research on ladybugs. He visited five different countries on two continents over 30 days to research the West African Coccinellidae (WAC), or ladybugs, and their potential for biocontrol programs in Africa.

Hounkpati collected 128 species in Benin, Ghana and Togo, West Africa. In Belgium, Germany and Senegal, he photographed ladybug specimens, which will allow him to make definitive identifications. "My knowledge about the taxonomy and biology of the WAC has increased dramatically as a result of my research in the field and in natural history museums," Hounkpati said. "I also established a strong network of collaborators in West Africa."

Hounkpati's research is part of a collaborative program that includes scientists in seven West African countries. The researchers hope that the insects might be used as pest control agents and could contribute to food security. Hounkpati hopes the work will increase the awareness of the potential consequences of misuse of synthetic pesticides. ▪ *Denise Horton*

Left: Plant pathology doctoral student Stephanie Bolton attended the European *Fusarium* Seminar in Italy last year. Her research focuses on *Fusarium* fungi that can produce harmful mycotoxins in grapes. Top: Doctoral entomology student Brad Hounkpati scouts for ladybugs on a cassava crop in Niger.

CONTRIBUTED

PROFESSOR'S GIFT FUNDS INTERNATIONAL TRAVEL FOR UNDERGRADS

WEN WILLIAMS SAW THE NEED FOR STUDENTS TO GAIN INTERNATIONAL EXPERIENCE while he was a member of the faculty and, later, administration of the UGA College of Agricultural and Environmental Sciences from the 1960s to the 1990s.

His opinion hasn't changed today. To that end, Williams established the Wen Williams International Travel Endowment to provide financial assistance for CAES undergraduate students traveling overseas to study.

"They (students) need to be aware of economic conditions and the conditions of people and agriculture in the world. The only way they can learn that is to go there and look at it and see what's going on," he said.

Williams came to CAES in 1968 as an associate professor before becoming associate dean of academic programs for the college, then retiring in 1997. While at CAES, he promoted global study to students. By the time he retired, 3 to 4 percent of CAES students were traveling to gain global perspective. Currently, about one-third of CAES students gain international experience by studying or interning abroad. There are presently 14 college endowments that support international study and travel.

"I do feel strongly about students having international experience," Williams said. "Most can afford it with financial assistance."

▪ *Kathryn Schiliro*

CONTRIBUTED

UGA alumni hosted a dinner for CAES representatives on Oct. 25, 2015, in Taipei City, Taiwan. Pictured are (standing, left to right) Ta-I Huang (Ph.D. – Entomology, '12), Tsu-Tan Fu (Ph.D. – Agricultural and Applied Economics, '87), Wei-Jeng Chang (MS – Animal Science, '88; Ph.D. – Animal Science, '92), Yin-Shin Chou, two special guests, Iris Chou, Fred Peng, Jimmy J.B. Sun (MS – Horticulture, '88; Ph.D. – Horticulture, '92), Thomas Ching-Peng, (sitting) Mei Ying Huang, Jen-Wen Huang (Ph.D. – Plant Pathology, '90), Taiwan UGA alumni group leader Robin Y.-Y. Chiou (Ph.D. – Food Science, '85), Associate Dean for Academic Affairs and then-CAES Interim Dean and Director Josef Broder, CAES Assistant Dean for Global Programs Amrit Bart, Wen-Feng Hasio and Jennie Lai.

Faculty, alumni meet during Taiwan trip

During a trip to Taiwan to attend the 2015 Mini-Summit on Food Safety, Policy and Sustainability last October, UGA College of Agricultural and Environmental Sciences administrators and faculty members visited with UGA alumni living on the island.

Josef Broder, CAES associate dean for academic affairs and then-interim dean and director, as well as Assistant Dean for Global Programs Amrit Bart and faculty members Fanbin Kong, Anand Mohan, Yen-Con Hung and Elizabeth Kramer represented CAES at the mini-summit.

The alumni hosted a dinner for the CAES delegation. There, they reminisced about their academic experiences – some had Broder as a professor during their time at UGA – and shared the ways in which their time in Georgia led them to success in their own countries.

At the mini-summit, Kong presented on radiofrequency heating to aid in the destruction of salmonella in packaged powders; Mohan, the Food and Drug Administration's Food Safety Modernization Act and the implications for food product import; Hung, ensuring produce safety through nonthermal treatments; and Kramer, opportunities for water and pest management services in linking landscape complexity with ecosystem services in agricultural landscapes.

"The goal [of the mini-summit] is to enhance sustainable global programs through strengthened collaboration among faculty members in teaching, research and service," Broder said.

▪ *Kathryn Schiliro*

CAES opportunities helped Erin expand her world.

"I have studied abroad in Uruguay, South Africa, Zimbabwe, Botswana and Costa Rica. These study abroad experiences have opened my mind and helped me reflect on my own cultural identity. They are some of the most valuable moments of education I have had in my time at CAES. There's no substitute for going and experiencing another culture."

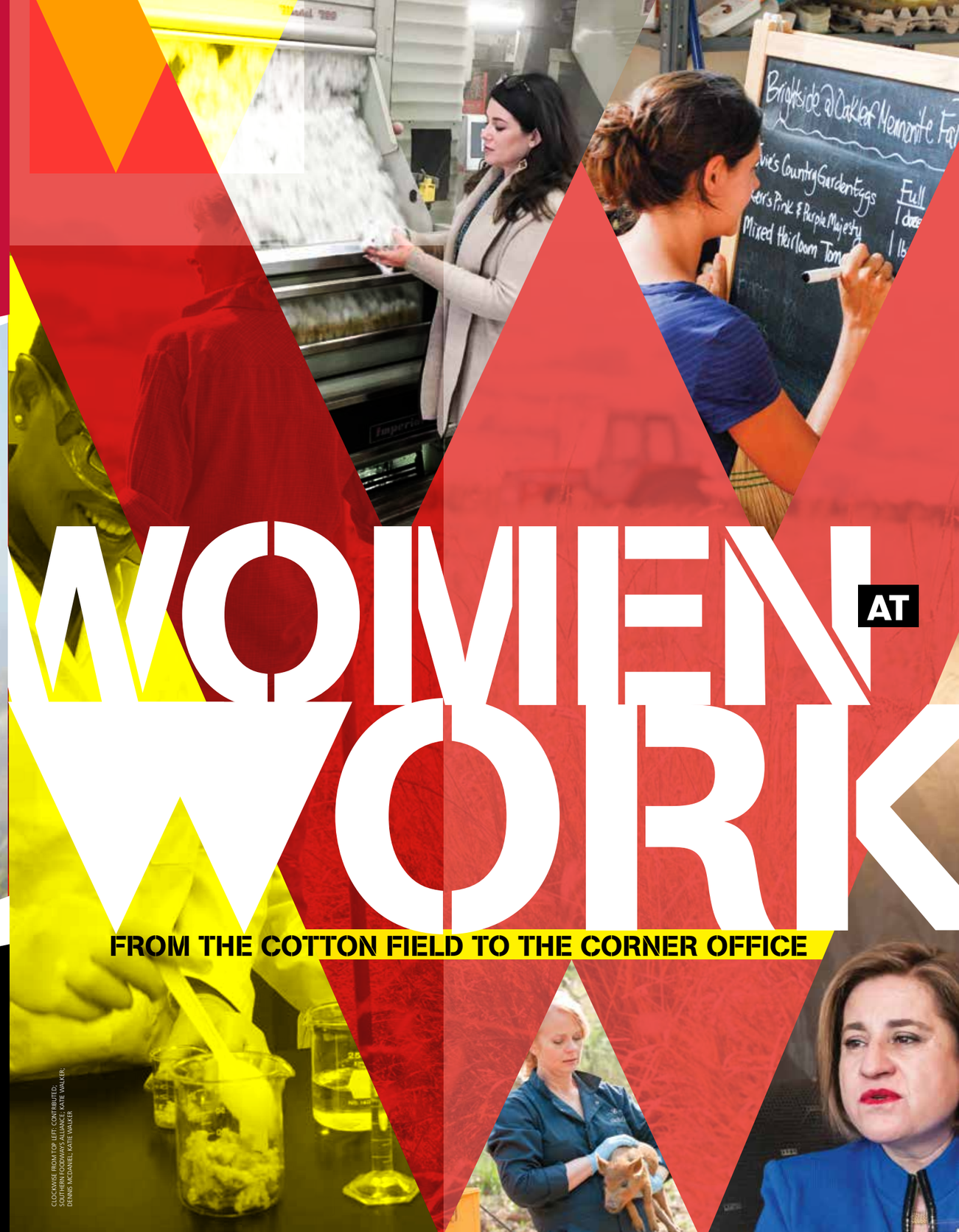
– Erin Burnett,
BSA – Agricultural Communication, '16
Sale City, Georgia

Erin Burnett is pictured in Costa Rica, where she is completing a six-month photojournalism internship.

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

Give online at **caes.uga.edu/alumni/gifts** or by mailing in the attached envelope.

THE UNIVERSITY OF GEORGIA
COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES



WOMEN AT WORK

FROM THE COTTON FIELD TO THE CORNER OFFICE

CLOCKWISE FROM TOP LEFT: CONTRIBUTED; CONTRIBUTED; JULIANNE KATE WALKER; DENNIS MCDANIEL; KATIE WALKER

TOP: CONTRIBUTED; SOUTHERN FOODWAYS ALLIANCE; BELOW: ANGELA ROWELL; CLINT THOMPSON

THE WOMEN OF

THE COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

ARE WORKING

TO BETTER THEIR INDUSTRIES AND THE WORLD.

Their arenas – barn, boardroom, classroom, pasture, press conference – may differ, but these mavens of modern agriculture and the environment have one thing in common:

They're very good at what they do.

"MY HOPE FOR THE FUTURE OF WOMEN IN AGRICULTURE IS THAT WE CONTINUE TO ENCOURAGE EACH OTHER AND [SHOW] YOUNGER GENERATIONS OF WOMEN THAT FARMING IS A VIABLE CAREER OPTION."

– ERIN CESCUTTI (BSA – HORTICULTURE, '04)

Erin Cescutti // Always Looking on the Brightside

When Erin Cescutti (BSA – Horticulture, '04) graduated from UGA, the term "urban farmer" still sounded like an oxymoron. The U.S. Department of Agriculture had only recently put into place its organic food regulations, and the local food movement was just catching on in the South.

A native of Rome, Georgia, Cescutti decided to major in horticulture after working for one summer at Barnsley Gardens in Adairsville, Georgia. "I consider myself really lucky to have been a part of the College of Agricultural and Environmental Sciences, more specifically the horticulture department, which had professors who are outstanding in their field. The partnerships they build with other organizations give students amazing opportunities," Cescutti said.

Cescutti took advantage of one such opportunity, interning at Planting Fields Arboretum State Historic Park in Oyster Bay, New York, her first summer out of college.

Six years later, after working at Love is Love Farm in the Atlanta area, Cescutti leased land at the nearby Oakleaf Mennonite Farm and established her own farm business, Brightside Farm.

In the dappled sunlight of a 1-acre tract in east Atlanta, Cescutti was able to cultivate enough fruits and vegetables to supply 25 Community Supported Agriculture (CSA) members, a few local restaurants and the Grant Park Farmers Market.

While selling handfuls of fresh produce under her tent at the markets, Cescutti is sometimes asked, "Are you the farmer?" However, she's never felt any less capable or respected than her male counterparts. "I know so many amazing female farmers that are so well respected that I often forget this is even an issue," she said.

CAES now offers an emphasis in sustainable food production and a Certificate Program in Organic Agriculture. Cescutti sees this as a positive development and hopes future growers join the established community of urban farmers.

"My hope for the future of women in agriculture is that we continue to encourage each other and [show] younger generations of women that farming is a viable career option," Cescutti said. ▪ *Ramsey Nix*

Jaclyn Dixon Ford // In High Cotton

The primary crop that Jaclyn Dixon Ford (BSA – Agricultural Communication, '00) produces provides an apt metaphor for the farmer herself. Cotton may appear soft and delicate, but it is strong. And just as the fiber clings tightly to its boll, Ford has embraced her family's farm.

"We need roots," she said. "Our farm is like a part of the family."

Ford always knew she wanted to return home to south Georgia, where she grew up cultivating tobacco on a third-generation farm. But when she graduated from the College of Agricultural and Environmental Sciences, the first job she found was far from the land that beckoned her.

Continued on next page

Jaclyn Dixon Ford // Continued

At Georgia Farm Bureau, she became familiar with the politics behind the farming industry. As much as Ford enjoyed lobbying at the state level, she missed the wide-open spaces of Berrien County, Georgia. Her father knew she didn't like working in an office, so when he bought a cotton gin, he invited Ford to oversee it.

Since September 2001, Ford has been running Dixon Gin Company in Enigma, Georgia. What she thought would provide a seasonal job conducive to raising children soon became a year-round commitment of ginning, shipping, pricing and contracting cotton. "Little did I know that [the] gin would be my first baby," she said.

She also markets cotton on behalf of her grower customers. In 2010, her family farm won Cotton Grower magazine's Cotton Marketer of the Year award.

Ford remains politically active as a Georgia Farm Service Agency (FSA) state committee member, a former producer-delegate of the National Cotton Council of America, a member of the U.S. Department of Agriculture Advisory Committee on Universal Cotton Standards, a trustee of Abraham Baldwin Agricultural College and an alternate member for The Cotton Board.

She serves on the board of directors of the Southern Southeastern Cotton Ginners Association. When asked about the struggles she has faced as a woman in her field, she said, "It's uncomfortable being a minority. But there were several women in that [association] meeting today, and that felt good. It's becoming more acceptable."

To balance family and career, Ford says she has learned how to prioritize and delegate. She credits her husband for his support and encouragement and says "a small army" of employees help the business run smoothly. Her family's farm also produces peanuts, corn and pecans, providing much-needed jobs in a rural economy.

Stimulating rural development is an issue that Ford cares deeply about. She cites the FSA' farm subsidies and low-interest loans as means to achieve that end, but also says that education is key. "The UGA Tifton Campus is great because it keeps more young people in our area," Ford said.

Ford wants her own two children to do what makes them happy, but her gut tells her that at least one of them will keep the family business running. At age 12, Ford's son already possesses a sense of pride and stewardship to the land his mother adores. ▪ *Ramsey Nix*

Joanna Davis // Tough and Ready

Joanna Davis (BSA – Animal Science, '92) has been preparing for a highly pathogenic avian influenza (HPAI) outbreak in Georgia or Florida for months.

As the U.S. Department of Agriculture Animal and Plant Health Inspection Service (APHIS) emergency coordinator for the two states, Davis has been laying out steps and planning measures to prevent the spread of HPAI. The last positive case came in Indiana in January 2016.

She's part of an HPAI planning group, involving state and federal agricultural, public health, natural resources and emergency management agencies, and the poultry industry. They have been meeting multiple times a month for nearly a year to assess the HPAI threat to the states and to develop guidelines for prevention and response should there be an outbreak, she said.

But Davis is no stranger to zoological epidemics.

The College of Agricultural and Environmental Sciences alumna, also a graduate of the UGA College of Veterinary Medicine, has traveled the globe dealing with animals and various epizootics. Most recently, she responded to the HPAI outbreak in Iowa. She traveled to the United Kingdom in 2001 to help with response efforts to eradicate foot-and-mouth disease. She's gone on veterinary mission trips to treat animals in India and in the Navajo Nation in Arizona.

"It was hard because we had to cull the animals, but that was the only way to control the spread of the disease," she said of her experience with foot-and-mouth disease.

After practicing veterinary medicine in Georgia for 11 years, which included five-plus years of owning a practice in Albany, she became a field veterinarian for the USDA in 2007.

"I needed a change of pace and a different challenge," she said.

As a field veterinarian, she was responsible for ensuring the health of food animals until the point of slaughter, investigating reportable infectious animal diseases, inspecting livestock markets and slaughter plants, and supervising animals that were imported and exported through Hartsfield-Jackson Atlanta International Airport.

"One of the big job risks is the diseases we're exposed to," she said.

Now, as an APHIS emergency coordinator – she's one of about 30 in the U.S. – she prepares for hypotheticals. She develops contingency plans with varied federal and state agencies for emergencies beyond HPAI and epizootics, like bioterror events and natural disasters. She has been working with the FBI to develop and deliver a course for law enforcement and agricultural employees on the identification of potential bioterror events in animals and plants, or "agroterrorism."

"We're beginning to train for radiological disasters, so if there's something like Fukushima (tsunami and nuclear disaster), we know what to do with the animals," she said.

She also teaches and contributes to local- and state-level discussions involving issues related to animal, human and environmental health, like rabies and disease control in the feral swine population. She continues to work in the field as well, inspecting feral swine for foreign animal diseases, like foot-and-mouth disease, or drawing blood to monitor for diseases, like classical swine fever, brucellosis and pseudorabies. Humans are susceptible to brucellosis infections, and are capable of spreading foot-and-mouth disease and classical swine fever. Discovery of these diseases in the feral swine population would have a devastating impact on agricultural trade and the U.S. economy.

"We want to minimize how animals are affected," she said. "Ultimately, we protect humans by protecting animal health." ▪ *Kathryn Schiliro*

"ULTIMATELY, WE PROTECT HUMANS BY PROTECTING ANIMAL HEALTH."

– JOANNA DAVIS (BSA – ANIMAL SCIENCE, '92)

With female student enrollment on the rise, we asked **future CAES alumnae about their goals.** Read their responses on the following pages.

"I plan to start with John Deere full time after graduating in the Marketing Representative Program." – **ALEXIS BARNES,** THIRD-YEAR FOOD INDUSTRY MARKETING AND ADMINISTRATION MAJOR FROM DECATUR, GEORGIA

"I am pursuing a career as a loan officer or credit analyst in the agricultural community." – **HALEY COOK,** FOURTH-YEAR AGRIBUSINESS MAJOR FROM FRANKLIN, GEORGIA

"I plan on working in Extension, either as an Agriculture and Natural Resources agent or on the side of 4-H Youth. I have a passion for agriculture and youth, and I want to work in those areas." – **MEGAN POWELL,** THIRD-YEAR AGRICULTURAL EDUCATION MAJOR FROM WRIGHTSVILLE, GEORGIA

"Marketing and sales representative for Dow AgroSciences" – **CHARICE STROUD,** FOURTH-YEAR AGRIBUSINESS AND FOOD INDUSTRY MARKETING AND ADMINISTRATION DOUBLE MAJOR FROM ATLANTA

"I hope to one day own a private veterinary practice that specializes in equine medicine, but also treats other small and large animals." – **KRISTEN PURVIS,** FOURTH-YEAR ANIMAL SCIENCE AND BIOLOGICAL SCIENCE DOUBLE MAJOR FROM GLENNVILLE, GEORGIA

TOP: USDA; COREY NOLEN; BELOW: CONTRIBUTED; ELLIOTT P., CREATIVE COMMONS, HTTP://TINYURL.COM/7CY2F5

"WE HAVE TO PUT OUR BEST LEADERS FORWARD AND CONTINUE TO MOTIVATE, ENCOURAGE AND DEVELOP FUTURE LEADERS, INCLUDING GIRLS AND INDIVIDUALS FROM OTHER NONTRADITIONAL GROUPS IN ORDER TO CONTINUE TO MAKE A DIFFERENCE IN THE WORLD OF AGRICULTURE."

– TRACEY TROUTMAN (BSA, AVIAN BIOLOGY, '07; MAL – AGRICULTURAL LEADERSHIP, '08)

Tracey Troutman // Agriculture Champion

For Department of Agricultural Leadership, Education, and Communication 2016 Distinguished Alumni award winner Tracey Troutman (BSA – Avian Biology, '07; MAL – Agricultural Leadership, '08), there is no such thing as a typical day. Currently the branch chief for the Office of Outreach, Diversity and Equal Opportunity at the U.S. Department of Agriculture's Agricultural Research Service, she and her team recruit the nation's best and brightest talent to the USDA and spearhead national partnerships to grow the number of individuals majoring in and pursuing careers in agriculture. Troutman stays busy and takes great pride in the ability she has to help others succeed.

She started as an intern for the USDA. Her hard work and dedication paid off, landing her the permanent position that she currently holds. While networking and teamwork are essential parts of her day, staying focused on the "bigger picture" of the organization's mission and getting things done to the best of her ability remain the most important, Troutman said.

Troutman's position offers many opportunities for improving the future of agriculture, but it also offers challenges. Those challenges include overcoming what can be a negative and outdated perception of agriculture by the public, changing the view of the role of women in agriculture and convincing a younger generation to pursue agricultural degrees.

"We don't always do a good job of telling our story, who we are, what we've accomplished and how valuable we are as an industry," said Troutman.

Issues that Troutman often sees and encounters as a young, female leader in agriculture surround the often unspoken, unwritten rules of the industry. When first starting her career, Troutman said it was easy to fall into the stereotypical roles and positions often given to women. "But there comes a point when you have to stop yourself and say, 'Why am I in the room? I have a voice, my opinion matters and I'm here to make sure folks like me make a difference for the communities we serve,'" said Troutman.

Women have made great strides, Troutman said, and notes examples such as former USDA Deputy Secretary Krysta Harden. In regard to nontraditional agricultural careers, Troutman believes that the areas of public service and agricultural education are vital to successful agricultural policy.

Working to develop women who study agriculture is important, but encouraging female leaders to pursue roles in public service allows women to give back to their communities and help others, according to Troutman.

"We have to put our best leaders forward and continue to motivate, encourage and develop future leaders, including girls and individuals from other nontraditional groups, in order to continue to make a difference in the world of agriculture," she said. ▪ *Samantha White*

Meghan Cline // Meet the Press Secretary

Despite growing up with no direct ties to agriculture, College of Agricultural and Environmental Sciences alumna Meghan Cline (BSA – Agricultural Communication, '09) landed her dream role in the industry as the press secretary for the U.S. Senate Agriculture, Nutrition and Forestry Committee just five and a half years after graduating from CAES.

Prior to attending UGA, Cline said that her background in agriculture was nonexistent.

"I never questioned where my food came from, and that's because I never had to," said Cline. "We live in a world where our farmers and ranchers are so efficient that most of us never have to worry where our next meal comes from."

It was during her time at UGA that Cline developed lifelong friendships as a member of Sigma Alpha, a professional agricultural sorority, and learned about the importance of agriculture.

"Being surrounded by women in agriculture definitely had a hand in my decision to make a career in agriculture," said Cline. Having changed her major several times within CAES, Cline said that learning about agriculture for the first time in a classroom setting gave her a unique perspective.

She spent the summer after graduation interning at the U.S. Grains Council. Cline then spent the next two years working towards a master's degree in agricultural communication from Oklahoma State University before moving to Washington, D.C., and working for the National Pork Producers Council.

During her time in Washington, Cline has worked hard and made connections that led to her current position. Even as a woman in the agriculture industry, Cline said that she, personally, has not had to face any challenges in agriculture that a man has not.

"Luckily, D.C. is a friendly atmosphere for women in agriculture. I have never felt that my opinion has been less valued than a man's opinion here," said Cline.

Though Cline notes that being a woman in agriculture isn't always easy, she emphasizes the importance of recognizing that there are broad career options for women in agriculture. "We live in a world that is increasingly more acquiescent to women in power ... We've got a long way to go, but there hasn't been a better time for women to explore any career field they wish," Cline said. "The opportunities are endless, and we need to take advantage of those opportunities."

▪ *Samantha White*

Ashley Clack Eason // What the Doctor Ordered

With a stethoscope dangling from her neck, Ashley Clack Eason (BSA – Biological Science, '08) bends over the desk of a medical student. He asks her questions. The teacher carefully crafts her answers in order to elicit more questions. It's a didactic dance – one that enriches both teacher and student.

Eight years after graduating from the College of Agricultural and Environmental Sciences, Eason is pediatric chief resident at the University of Virginia Children's Hospital. She uses many of the same methods of teaching and learning that she encountered at CAES.

"CAES provided me the perfect environment to develop a well-heeled foundation in basic sciences to build upon," Eason said. "My professors engaged me, took pride in creating stimulating learning environments and encouraged me to apply my new knowledge in the real world. The coursework demanded my very best every day, but their presence in the classroom minimized the fears of academic rigor and emphasized our potential impact beyond the Arch."

As a result, Eason says her transition from CAES to Mercer University's School of Medicine was relatively seamless. And during her third-year obstetrics and gynecology clerkship, her academic efforts gave way to discernment. While attending her first delivery, Eason had the opportunity to hand the newborn to his mother.

"I was smitten," Eason said. "I knew my future had revealed itself before me. I was going to take care of children."

Considering her myriad achievements thus far, this young woman, originally from Rochelle, Georgia, considers her greatest accomplishment to be the birth of her own daughter, Ellie, last August.

Motherhood has changed Eason's perspective and enabled her to connect with parents on a deeper level. She understands the pressure that new mothers face with short maternity leave and believes progress is still needed to improve support for women in their transition back to work.

Her initial passion for pediatrics endures, and Eason is grateful to those who broke down the gender barriers in medicine to make her career possible. In fact, at least 15 CAES students were accepted to medical school in 2015, and at least seven of those were women. When asked how CAES can best support women, Eason said she never felt hindered by her gender during college.

"The only limits a woman finds at CAES are those she defines; those she draws in setting the boundaries of her life; those she realizes are necessary to seek balance while leaning into the passions she pursues. And that's the way it should be," she said. ▪ *Ramsey Nix*

Betts Berry // Corral to the Classroom

Betts Berry is passionate about agriculture and educating students about Georgia's No. 1 industry.

She lives her dream every day while teaching agriculture to middle school students in Walker County, Georgia. Her work does not end when she departs from school, though, as Berry tends cattle on two farms.

It's a busy career choice for Berry, who wouldn't have it any other way.

"I feel like I have been greatly blessed to make a living out of something that I am passionate about. When I was president of the Georgia Cattlemen's Association, some folks wanted to make it an issue that a female was president of a men's association, but I never looked at it like that. I was a cattle producer, I just happened to be female," Berry said. "I didn't really look at it as a female in a male-dominated industry; we were all just a bunch of cattle producers."

Having that mindset has allowed Berry to establish herself as a major influence in the cattle and statewide agriculture industries. Berry is a member of the College of Agricultural and Environmental Sciences Dean's Advisory Council and has been for more than 15 years. She is also a trustee for The Daniel Ashley and Irene Houston Jewell Memorial Foundation, which funds 4-H programs and the June Hall Jewell Memorial Scholarship that supports CAES undergraduate recruitment activities. She was also part of the Agricultural Advisory Council for former Georgia Gov. Sonny Perdue.

"I feel very strongly that you need to be actively involved in giving back to the industry in which you make your living. I think it's important to be supportive of the agricultural industry as a whole, since that is our (cattle producers') industry," Berry said.

TOP: CONTRIBUTED; RIGHT: LANIE COULTER

"I FEEL VERY STRONGLY THAT YOU NEED TO BE ACTIVELY INVOLVED IN GIVING BACK TO THE INDUSTRY IN WHICH YOU MAKE YOUR LIVING."

– BETTS BERRY, CAES DEAN'S ADVISORY COUNCIL MEMBER

It is Berry's role with the Georgia Cattlemen's Association that allowed her to mentor young women aspiring to become more involved in agriculture.

"I guess being involved in the state association on that level opened up a lot of doors to give back to the industry. I also think it's important, when you've been involved in something like agriculture, to try to mentor others. In my case, I know there were other women involved in the cattle industry, but we were few and far between," Berry said. "I was beginning to see more young women were getting interested in agriculture, maybe not on the production end, but in a lot of other areas. I have been in the industry for 35 years; it's important to mentor those young women."

Berry was exposed to cattle farming as a young child but didn't become involved in the work until 1980. She bought a herd of cattle and quickly found the work fulfilling.

"There was just something about being around the cattle that I enjoyed. I enjoyed being outside and taking care of the land. I knew maybe at some point I would be responsible for those farms. I knew, if I was going to be responsible for the farms in the future, I would need to know how to take care of them," Berry said.

Berry manages between 135 and 160 brood cows every year and serves as the Walker County Young Farmer adviser, while teaching eighth-grade agriscience. It's a way to combine Berry's two passions: agriculture and teaching.

"It almost doesn't get much better than that," Berry said.

▪ *Clint Thompson*

"I plan to attend graduate school at UGA and continue working with the USDA." – **LOLITA MUNOZ,** FOURTH-YEAR BIOLOGICAL SCIENCE MAJOR FROM PELHAM, GEORGIA

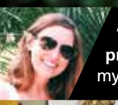
"I eventually want to work for the U.S. Department of Agriculture Foreign Agricultural Service." – **COURTNEY JACKSON,** FOURTH-YEAR AGRICULTURAL COMMUNICATION MAJOR FROM BARNESVILLE, GEORGIA

"I am leaning toward crop insurance because I've learned a lot about it this semester and it interests me." – **EMILY BRASWELL,** THIRD-YEAR AGRIBUSINESS MAJOR FROM DONALSONVILLE, GEORGIA

“IF YOU HAVE A DREAM AND FOLLOW YOUR INSTINCTS, YOU CAN DO WHATEVER YOU WANT.”

– CAROLINE HOFLAND (BSA – AGRICULTURAL ECONOMICS, ’83; MS – AGRICULTURAL ECONOMICS, ’86)

BLAKE MARABLE



“I’d like to take everything that I learn along this adventure and apply it to a wine research program at a leading viticulture and enology center where, as much as possible, a vineyard is my office.” – **STEPHANIE BOLTON,** DOCTORAL STUDENT IN PLANT PATHOLOGY FROM CAROLINA BEACH, NORTH CAROLINA

“My lifelong goal is to work for Monsanto Co., one of the leading seed companies in North America. I would like to hold the position of a lead research scientist or research associate.” – **SAFIRA SUTTON,** DOCTORAL STUDENT IN PLANT PATHOLOGY FROM WARNER ROBINS, GEORGIA

“I’m looking into work in a greenhouse, and hopefully putting some of my entomology (and horticulture) skills to use in that setting.” – **GISELLE FERNANDEZ,** FOURTH-YEAR ENTOMOLOGY AND THEATER DOUBLE MAJOR FROM ATLANTA

Caroline Hofland // Solutions Spanning Continents

A successful business owner, Caroline Hofland (BSA – Agricultural Economics, ’83; MS – Agricultural Economics, ’86) has nothing to prove.

The College of Agricultural and Environmental Sciences alumna established CBH International 26 years ago through knowledge, passion and sheer nerve.

CBH International is a distributor of equipment in Central and South America, especially in Ecuador, Chile, Panama, Peru and Bolivia. Most of the latest technology that her company connects with clients comes from the U.S., Brazil and Europe. Not only did she have to tackle gender issues to make the company work, she had to cross cultural and international divides.

“We represent manufacturers that produce equipment for the poultry and swine industries,” she said. “I would say, worldwide, we are one of the leading companies supplying these solutions to our customers.”

She’s gained lessons from every aspect of her career, which started at a hydroponic and ornamental plants business in Norcross, Georgia, then a company specializing in office furniture and supplies. “When one has a vision and the doors close, keep on pushing,” she said.

When Hofland elected to start what would become CBH International, she understood that she would have to learn everything she could about live production, processing, feed mill operations and environmental protection.

“We visit our customers and look at what their needs are,” she said. “We look at their companies and bring solutions for them to be able to produce, in the case of live production, more meat per square meter; or, in the case of feed mills, the efficiency of using ingredients to produce feed for the animals; and, in the case of the environment, to treat wastewater and reduce odor.”

Hofland wasn’t well received by producers or manufacturers initially.

“At the beginning, I was young; I was a girl; I am fortunate to have a very nice family. I would go back to Ecuador and, being in agriculture, in poultry and starting a company, people said, ‘OK, you’re a girl, you’re not an engineer,’ and tended to close the door,” she said. “You have to have the determination to push and prove you’re passionate about something. It worked, and then I was able to get enough knowledge to be dangerous ... It’s a triangle of success: commitment, honestly love what you do and show that passion.”

Over the years, Hofland proved her passion and know-how and is now a successful, respected business owner and leader.

“Twenty-six years later, when I sit on a board or in a meeting, I’m not a girl, I’m one of the members of the team,” she said. “In my market, which I’d say is a more ‘macho’ market, I feel respected. If you have a dream and follow your instincts, you can do whatever you want.”

Caroline’s daughter, Nicole, will carry on her mother’s tradition and start at UGA in the fall. She plans on pursuing an agricultural and applied economics degree from CAES.

▪ *Kathryn Schiliro*

RIGHT: KATIE WALKER; FAR RIGHT: C AL POWELL

Caroline Hofland’s daughter, Nicole, will attend UGA in the fall and plans to pursue an agricultural and applied economics degree from CAES.

Lucy Branch Reid // Thirst for Success

Like many Georgians, Lucy Branch Reid (MS – Food Science, ’84) drinks Coca-Cola products. Unlike the average person, she has scientific knowledge about the ingredients that go into products like Coke® and Powerade®.

As the director of global ingredient and product governance for The Coca-Cola Company, Reid and a team of chemists, food scientists and regulatory managers are responsible for providing governance to ensure that Coca-Cola products and ingredients comply with government regulations the world over, as well as the requirements of The Coca-Cola Company.

Reid’s early work with the company led to Coca-Cola selling the first national brand of orange juice with added vitamin D – Minute Maid®. “If people didn’t like milk or if they were lactose intolerant, fortified [orange juice] was another source of calcium,” she said. Reid knew to help with absorption, calcium needs vitamin D, but at the time vitamin D was only approved for limited use in foods, not juice beverages.

“Once we started looking at the regulations, we realized we would have to file a food additive petition with the FDA (Food and Drug Administration),” she said. It usually takes a few years for food additive petitions to go through the system. But after a year of consideration and research, the FDA approved the request.

As the group director for Coca-Cola North America Scientific and Regulatory Affairs, Reid worked on FDA requirements for the company. In 2010, she worked on “Clear on Calories,” an initiative started by the American Beverage Association in support of First Lady Michelle Obama’s “Let’s Move!” campaign addressing childhood obesity. “Clear on Calories” was a voluntary, industrywide effort that resulted in the placement of calorie labeling on the front of all beverages made by The Coca-Cola Company.

Reid’s interest in food began when she was a Mitchell County, Georgia, 4-H’er competing in dairy foods.

“I always knew I wanted to do something with food, but I didn’t know anything about food science,” she said. “4-H played a critical role in all of this.”

She continues to support the youth development organization at the local and state levels, and her children are active in their county club. In fact, she was recently named Outstanding 4-H Volunteer Leader in UGA Cooperative Extension’s Southwest District.

As a UGA undergraduate in experimental foods in the College of Family and Consumer Sciences, Reid decided to earn a graduate degree in food science after hearing UGA food science professor John Powers lecture in one of her experimental foods classes.

Today, Reid gives back to another generation of food scientists by lecturing in UGA food science graduate coordinator Mark Harrison’s food law class. “I tell my students when I meet with them for the first time that this is the most important class that they’ll take. If you don’t do something legally and get caught, you’ll be in trouble,” Harrison said. “Then all the other stuff doesn’t matter.”

Reid is also a member of the CAES Dean’s Advisory Council and the UGA Food Product Innovation and Commercialization Center Advisory Council and was named a 2011 CAES Alumni Association Award of Excellence winner.

▪ *Sharon Dowdy and Stephanie Schupska*

"My dream job title would be 'Chief Sustainability Officer' because I would love to work for a company that wants to do good things by improving their operations to create a lesser impact on the environment." – **ANNA TRAKHMAN,** THIRD-YEAR ENVIRONMENTAL ECONOMICS AND MANAGEMENT MAJOR FROM MARIETTA, GEORGIA

"I deeply admire and respect what [the Environmental Protection Agency and U.S. Department of Agriculture Natural Resources Conservation Service] do in the name of advocating for our environment, and to work alongside the people who accomplish this work would be extremely insightful and resonating." – **RACHEL EARWOOD,** THIRD-YEAR WATER AND SOIL RESOURCES MAJOR FROM MARIETTA, GEORGIA

TOP: KATHRYN SCHILBRO; BELOW: MERRITT MELANCON

"...IT SHOULDN'T BE, AND HOPEFULLY ISN'T, SURPRISING TO SEE WOMEN DOING ANYTHING, FROM DIGGING A DITCH TO BEING THE PRESIDENT OF THE UNITED STATES."

– DIXIE TRUELOVE (BSA – DAIRY SCIENCE PRODUCTION, '88)

Dixie Truelove // True Love for Homegrown Dairy

A farmer, alumna of the College of Agricultural and Environmental Sciences and CAES Alumni Association Awards and Recognition Committee co-chair, Dixie Truelove (BSA – Dairy Science Production, '88) operates Truelove Dairy, a 300-acre farming operation in Clermont, Georgia, with her brother, Jerry.

Truelove Dairy milks approximately 100 head of cattle twice daily, she said. The operation includes between 150 and 200 heifers and calves – they artificially inseminate their own cows – and has 175 acres devoted to corn.

A second-generation dairy farmer, Truelove has thrived in the male-dominated agricultural industry.

"I always liked the cows. I grew up on a dairy farm in northeast Georgia, and the animals having their own personality and being outdoors, I just always loved that," said Truelove, a 2009 recipient of the CAES Alumni Association Award of Excellence. "Growing up, I guess I didn't realize that there weren't a lot of females in the farming industry. My dad never made it a big deal."

Now, women make up 30 percent of all farming operators.

"I think that, as times continue to change and women are seen in every aspect of the job market, it shouldn't be, and hopefully isn't, surprising to see women doing anything, from digging a ditch to being the president of the United States," she said.

Truelove's professional career revolves around her time on the dairy and being an active member of the Hall County, Georgia, community. She serves as a spokesperson for the Atlanta-based Southeast United Dairy Industry Association. She's also served as president of the Junior League of Gainesville-Hall County, chairperson of the Greater Hall County Chamber of Commerce and past president of WomenSource, an educational organization she helped establish in Hall County.

While Truelove Dairy keeps her busy – she's up at 2 a.m. daily to milk her cows – she is adamant about staying involved in her local community and the CAES Alumni Association board.

"In the bigger scheme of things, it's really important that agriculture is represented – that people can put a face to some part of agriculture and know that it is the biggest industry in our state. I just feel it's important to be sure people know where their food comes from," Truelove said.

She is quick to credit her alma mater for the success she's found in her agricultural career.

"It's nice to be able to have that connection [to CAES] and to know I can pick up the phone to call and a professor is always more than willing to answer any questions or come out to the farm," she said. "It's very helpful to know your degree doesn't end once you walk off of that campus." ▪ *Clint Thompson*

UGA EXTENSION WORKSHOPS HELP FEMALE FARMERS HONE THEIR SKILLS

WOMEN MAKE UP ABOUT 30 PERCENT OF THE NATION'S FARMERS and run about 14 percent of the nation's farms. They need business and technical information to help their farms succeed. Many women simply feel more comfortable learning around other female farmers.

That's part of the motivation behind a series of female-centered classes offered by UGA Cooperative Extension. Started in fall 2015, the classes will expand this year. "Women in agriculture is such a hot topic, but in reality, women have always been vital to farm families and agriculture as a whole," said Associate Dean for Extension Laura Perry Johnson. "We are so excited to be able to deliver this targeted training and address the needs of this audience."

UGA Extension agents in Houston and Dougherty counties used the Annie's Project farm business curriculum to offer three-day workshops for female farmers in September 2015, and the classes have since been held at UGA Extension offices across the state. Annie's Project is a program named in honor of Annie Fleck, a woman who spent her life growing her farm management skills as a business partner with her husband in Illinois.

Deborah Murray, associate dean for extension and outreach in UGA's College of Family and Consumer Sciences, along with Martie Gillen from the University of Florida, secured funding for the project through the U.S. Department of Agriculture Risk Management Agency.

The workshops are a collaborative effort between Family and Consumer Sciences agents and Agriculture and Natural Resources (ANR) agents. They're capped at 40 women to ensure a small class size and welcoming, collaborative environment.

"Agriculture, in general, is a male-dominated industry," said Charlotte Meeks, workshop organizer and UGA Extension county coordinator and ANR agent for Houston County. "These sessions were designed to build up their knowledge, build up their confidence, kind of build up a bond between the women."

While one series of classes focused on the business end of the farm, a second group of agents created a program, called "Southern Women in Ag," around the hands-on skills that every farmer needs.

HANDS-ON CLASSES SPECIALIZE IN PRACTICAL KNOWLEDGE

Organized by Morgan County ANR agent Lucy Ray and Dade County agent Katie Hammond, these hands-on classes focus on practical skills to help the farmers become more comfortable handling cattle and equipment. Female ANR agents teach sessions, too, including Pam Sapp of Jefferson County; Carole Knight of Bulloch County; Tammy Cheely of Hancock, Glascock and Warren counties; and Stephanie Butcher of Coweta County.

"I think the coolest thing about this class is not that it's geared toward women, but that we're offering a hands-on chance to practice some really important skills," Ray said.

The women learned how to vaccinate their animals, change the oil on their tractors, drive newer model tractors and choose the correct trailers and field implements. For most women, it was that chance at the low-risk, hands-on practice of practical skills – like backing up a flatbed-truck or moving cattle – that drew them to the sold-out workshop.

"I came just to learn how to change the oil in my tractor," said Cyndi Ball, who runs an educational homestead farm in Statham, Georgia, and founded a growing national organization of skill-sharing chapters called the "National Ladies Homestead Gathering." "Even after all these years, I'm still taking my tractor in for that."

▪ *Merritt Melancon and Clint Thompson*

Stephanie Butcher, Coweta County UGA Extension coordinator and Agriculture and Natural Resources agent, leads a Southern Women in Ag workshop.

"Dr. Reyes has been one of my favorite professors here at the University of Georgia. He inspires students to follow their passions. I'm so thankful for everything you do in the food science department and CAES!"

HANNAH RULL, THIRD-YEAR AGRIBUSINESS MAJOR

"Flash back to senior year [of high school] when I was confused and almost went to Clemson. On one of my final visits to UGA, I met with Dr. Turner. It was her demeanor and the feeling I got from UGA's animal science program that made me feel like family already."

SARAH JANE THOMSEN, THIRD-YEAR ANIMAL SCIENCE AND DAIRY SCIENCE DOUBLE MAJOR

"Dr. Dove sparked my love for swine and research. He has taught me so much in class and in the lab, written countless letters of recommendation for me and guided me toward my career goal of becoming a swine veterinarian. Thanks, Dr. Dove!"

EMILY VERMILLION (BSA – ANIMAL SCIENCE, '15), FOOD ANIMAL MEDICINE GRADUATE STUDENT IN THE UGA COLLEGE OF VETERINARY MEDICINE

All Heart

Students celebrate their favorite classes during Love Your College Week

College of Agricultural and Environmental Sciences faculty and administrators shined a light on the highly accomplished educators who work in CAES classrooms and laboratories at the first Celebration of Teaching banquet, held Nov. 4, 2015, at the Graduate Athens hotel in Athens, Georgia.

CAES instructors routinely win teaching awards from outside academic and commodity associations. Administrators used the banquet as a chance to highlight those awards and to allow students to thank their favorite professors. CAES students nominated their favorite college classes as part of Love Your College Week, a social media-based celebration of the college, held in the spring. ADSC 2000: Practicum in Animal and Dairy Science, ADSC 3400: Physiology of Reproduction in Domestic Animals and AGED 4000: Animals in Education (now AGED 2001: Teaching with Animals) received the most student votes. Robert Dove and William Graves, of the animal and dairy science department, and Nick Fuhrman, of the agricultural leadership, education, and communication department, respectively, teach these courses. Many departments were well represented among the submissions, with 25 classes and 17 professors receiving student nominations.

▪ *David Allen*

FACULTY NOTES

Department of Agricultural and Applied Economics

Terence Centner, professor and agricultural lawyer, received the National Award for Excellence in College and University Teaching in the Food and Agricultural Sciences from the Association of Public and Land-grant Universities (APLU), the U.S. Department of Agriculture and the American Association of State Colleges and Universities at the APLU's annual meeting in November 2015. The award honors faculty for use of "innovative teaching methods and service to students." Centner was one of two to receive the award last year.

John McKissick, professor emeritus, received the 2015 Georgia Farm Bureau Commodity Award during the organization's commodity conference in August 2015. The award – one of Georgia Farm Bureau's highest honors – is given annually to a supporter and promoter of Georgia agriculture. McKissick was recognized for his 40 years of work providing economic information to Georgia farmers and those involved in agribusiness.

Travis Smith, assistant professor, was awarded Best Economics Paper, Food Safety and Nutrition Section, at the 2015 Agricultural and Applied Economics Association's annual meeting in July 2015. He also received the Outstanding Doctoral Dissertation award, the association's highest recognition for dissertation work.

Department of Agricultural Leadership, Education, and Communication

Amber Rice, assistant professor, began her employment with UGA in August 2015 and launched her research agenda, which is focused on the pedagogical content knowledge of agriculture teachers. Her work has resulted in two publications in the Journal of Agricultural Education, an accepted research paper and poster to the Southern Region American Association for Agricultural Education research conference, and curriculum rejuvenation of the "Agriscience for Teachers" course taught in fall 2015 to incorporate purposeful pedagogical content knowledge development in preservice agriculture teacher education.

Eric D. Rubenstein, assistant professor, was named the agricultural education undergraduate and program coordinator early this year. Since his appointment to this role, Rubenstein has led the revitalization of the teacher preparation curriculum, which has led to increased rigor of the department's agricultural education program. Rubenstein has also been instrumental in developing the department's recruitment plan. Since the start of the new recruitment plan, the number of freshmen and transfer agricultural education students admitted has increased.

Department of Animal and Dairy Science

Mike Azain, professor, delivered a presentation at the Feed Enzyme Academic and Technology Seminar in Guangzhou, China, in November 2015. The title of the presentation was "Lipid Nutrition in the Pig." The Animal Nutrition Branch of the Chinese Association of Animal Science and Veterinary Medicine sponsored the meeting. Speakers included scientists from various Chinese universities, biotechnology companies and international researchers working in the feed industry.

Jillian Bohlen, assistant professor, was elected as the national adviser to the American Dairy Science Association (ADSA) Student Affiliate Division. The division consists of student chapters from colleges and universities in the U.S. and Canada that offer courses pertaining to dairy production and dairy foods. The purpose of the division is to develop leadership and promote scholastic achievement among students interested in the dairy industry.

Franklin West, assistant professor, and Zoo Atlanta are moving forward with an exciting project to save the clouded leopard and Sumatran tiger utilizing a stem cell approach. Using a new stem cell technology, they will turn leopard and tiger skin cells into stem cells and, then, into sperm and egg. This approach will provide an endless source of material for genetic banking and can be used in breeding programs at zoos and preserves all over the world. "This is just the beginning," West said. "Soon we will, hopefully, be able to help numerous other endangered species that are in desperate need of help."

Department of Crop and Soil Sciences

Jerry Johnson, professor emeritus, received the UGA Research Foundation's 2015 Inventor's Award for his work breeding wheat varieties for farmers in Georgia and across the Southeast. All of the varieties released through Johnson's research program were bred to increase yields and decrease insect and disease pressure.

Donn Shilling, crop and soil sciences department head, received a Weed Science Society of America Fellow award in February during the society's meeting in Puerto Rico.

William Vencill, professor, received a Weed Science Society of America Fellow award in February during the society's meeting in Puerto Rico.

Department of Entomology

Kerry M. Oliver, associate professor, has established an internationally recognized research program in the field of symbiosis that has been supported by more than $2 million in several National Science Foundation (NSF) grants during his first five years. He currently serves as graduate coordinator, has served on several college and university committees and has served as major professor to two doctoral degree-seeking students and three master's degree-seeking students. Oliver has mentored 18 undergraduate researchers through internships (ENTO 3910), the research in entomology or biology course (ENTO/BIOL 4960), the UGA Center for Undergraduate Research Opportunities and the UGA Department of Microbiology's NSF-sponsored Research Experience for Undergraduates program.

David Riley, professor, was recently recognized by the Southeastern Branch of the Entomological Society of America as the 2016 recipient of the Career Achievement Award in Entomology for his work in vegetable insect pest management. Riley is recognized as a nationally leading vegetable crop entomologist. He is an excellent mentor and currently serves as the graduate program coordinator for the Master of Plant Protection and Pest Management (MPPPM) degree offered through the entomology, plant pathology and crop and soil sciences departments. Riley's leadership, in concert with college administrators, has resulted in phenomenal growth in the MPPPM program.

Marianne Shockley, academic professional, is the 2016 recipient of the Distinguished Achievement Award in Teaching from the Southeastern Branch of the Entomological Society of America. She has been highly successful in teaching and student recruitment for the entomology and applied biotechnology majors and currently serves as the undergraduate coordinator for the department. Her outreach program has been valuable to the department as it seeks innovative ways to inform youth of the importance of entomology and career opportunities.

Department of Food Science and Technology

Casimir C. Akoh, Distinguished Research Professor, received two new awards. The World Academy of Biocatalysis and Agricultural Biotechnology (WABAB) honored Akoh as Fellow/WABAB Academician. The International Society of Biocatalysis and Agricultural Biotechnology (ISBAB) elected him in recognition of his outstanding and innovative contributions to lipid biotechnology, structured lipids and functional and healthful lipids research at their 11th International Symposium on Biocatalysis and Agricultural Biotechnology, held in Banff, Alberta, Canada, on Sept. 14, 2015. Akoh also received the Alumni Achievement Award from the University of Nigeria (UNN) Alumni and Friends Association, USA, in recognition of his scholarly contributions in the fields of food chemistry and food biochemistry at their annual meeting held in Chicago on Sept. 19, 2015. The award honors UNN alumni who have made significant contributions to their professions.

Aaron Brody, adjunct professor, was honored by the Institute of Food Technologists (IFT) Food Packaging Division, which recently renamed the Riester-Davis Award to include Aaron Brody's name. The award, now the Riester-Davis-Brody Award, recognizes Brody's career achievements as an innovator in food packaging. Brody, the 1988 recipient of the award, has earned a distinguished reputation as a leading developer of new technologies, including modified atmosphere packaging, and is an original founder and active member of the Food Packaging Division. The Riester-Davis-Brody Award, recognizing lifetime achievement and top innovators in food packaging technology will be presented next at IFT16 in Chicago.


DOT PAUL

lead dog: peggy ozias-akins

Cream of the Crop

World-renowned peanut researcher Peggy Ozias-Akins, horticulture department professor and director of the UGA Institute of Plant Breeding, Genetics and Genomics, was named an inaugural class member of the UGA Women's Leadership Fellows Program last December.

The UGA College of Agricultural and Environmental Sciences scientist and recipient of the 2015 D.W. Brooks Distinguished Professorship was selected for the honor along with eight other UGA faculty members.

"It will be exciting to be involved in this (the Fellows program) to learn from others who are at the level I am in terms of having some administrative responsibility, all the way to other women who have progressed through the ranks at other institutions to very high leadership positions," Ozias-Akins said.

The program participants will attend monthly meetings to learn from UGA senior administrators as well as visiting speakers. ▪ *Clint Thompson*

FACULTY NOTES

Department of Food Science and Technology

Michael Doyle, Regents Professor of Food Microbiology and director of the UGA Center for Food Safety, was selected by the University of Wisconsin-Madison College of Agricultural and Life Sciences for the Distinguished Alumni Award. Introduced in 2009, the award recognizes individuals who have made significant contributions to their professions, their communities and the university. Doyle has an international reputation in the food science community for being an expert in food safety issues. He is responsible for several important developments in the food industry, is highly sought after for his expertise and has improved the safety of the world's food supply.

Department of Horticulture

John Ruter, Armitage Endowed Professor of Horticulture and director of the Trial Gardens at UGA, and his graduate student, Zhitong Li, spent the week of Oct. 10-18, 2015, visiting gardens and institutions in China for his ornamental breeding and tea-oil projects. While there, Ruter gave a presentation at the Shanghai Chenshan Botanical Gardens called "Ornamental Breeding and Evaluation Programs at the University of Georgia." He gave two presentations at the Central South University of Forestry and Technology in Hunan Province and the Research Institute of Subtropical Forestry in Zhejiang Province entitled "Development of tea-oil camellia as a new crop for the United States." They also spent time visiting with faculty, staff and growers to get the latest information on tea-oil production in China.

Department of Plant Pathology

Robert Kemerait, professor, was named a Fellow of the American Peanut Research and Education Society (APRES). This honor is bestowed on selected APRES members in recognition of distinguished contributions to the peanut industry and APRES.

Brian Kvitko, assistant professor with a focus area in molecular bacteriology, joined the department in August 2015. His program seeks to decode the mechanisms of plant immune action on bacterial pathogens in both model and crop plant species. In addition, he is initiating a new research project to characterize the virulence mechanisms of *Pantoea ananatis,* an important bacterial pathogen for Georgia's onion growers.

Shavannor Smith, associate professor, is the project director for a recently funded, $1 million U.S. Department of Agriculture National Institute of Food and Agriculture Plant Feedstock Genomics for Bioenergy grant to work on the parallel analysis of switchgrass rust pathogen isolates and switchgrass plant resistance phenotypes. The goal is to provide the knowledge base for the development of tools for rapidly assessing the host resistance genotypes (e.g., cultivars) of this bioenergy crop that will exhibit the optimal resistance to the field pathogen populations present at any given location.

Department of Poultry Science

Robert Beckstead, associate professor, received a Richard B. Russell Award for Excellence in Undergraduate Teaching, UGA's highest early career teaching honor. Since joining the faculty in 2007, he developed three courses, one of which explores the relationship between culture and agriculture and fits into the university's World Languages and Culture, Humanities and the Arts core curriculum.

Mike Lacy, former poultry science department head, was awarded a Lamplighter Award by the U.S. Poultry and Egg Association in January at the International Poultry Expo in Atlanta. The award pays tribute to individuals for "sustained and exemplary service" to the poultry and egg industry. Lacy recently retired from the department.

Kristen Navara, associate professor, received a National Science Foundation grant to continue her work on the influence of parental testosterone concentrations on the gender of the chick. Ultimately, the hope is to develop a method that poultry enterprises can use to alter the gender of offspring.


CLINT THOMPSON

lead dog: wayne hanna

Innovative Ideas

Internationally recognized UGA plant breeder Wayne Hanna added one more distinguished honor to his impressive resume in 2015. Hanna, a professor of crop and soil sciences on the UGA College of Agricultural and Environmental Sciences Tifton Campus, was one of two UGA faculty members named National Academy of Inventors Fellows.

"We have been able to be productive over the years because of excellent team efforts by scientists, support personnel and administration," Hanna said.

Hanna has been issued 16 patents for his research and three are pending, according to the UGA Innovation Gateway office. He also has 17 trademarks registered for plant cultivar names worldwide.

Within the college, Hanna and his wife, Barbara, made possible an endowment – the Tift Cultivar Study Abroad Scholarship – to support national and international study abroad opportunities for Tifton Campus students in the hopes that the knowledge gained will further the campus' success with grasses. Tift cultivars have impacted agriculture, recreation and food production worldwide. ▪ *Clint Thompson*


CONTRIBUTED

lead dog: kelsey fox

Status Update

Kelsey Fox (English) (BSA – Horticulture, '13) frequents Facebook World Headquarters in Menlo Park, California.

The Tunnel Hill, Georgia, native and UGA College of Agricultural and Environmental Sciences alumna manages and works on the landscaping of the social media company's two campuses, one of which includes a 9-acre rooftop garden.

"You wouldn't even know it's a roof," Fox said. "My favorite thing about the roof is explaining the installation. Every piece of material, from foam, to soil, to trees, was brought up by crane. It's hard for people to realize because it looks incredibly natural, just like the planting on ground level."

Fox is an account manager for ValleyCrest Landscape Maintenance, based in California. As the contact person for corporate real estate property managers, she connects the client and the crew. She hears clients' requests, walks through and evaluates sites, and relays information back to her team of professional gardeners.

"I loved being outside and wanted an unconventional career," she said. "I saw that the field [of horticulture] had a lot of varied opportunities and would allow me a lot of flexibility in my career path."

Fox came to work for ValleyCrest after being recruited by the company at a college career day. She was leaning toward work in a nursery or botanical garden, but her interaction with ValleyCrest and impression of the company's values and culture pushed her to move into corporate landscaping, she said.

Her final course at CAES was a month-long study abroad program, called "Europe: The Grand Tour – Art and Gardens," which takes students through some of Britain, France and Italy's most famed architecture and gardens. CAES scholarship funds enabled her to participate in the course. She said the opportunity was "an incredible experience and a great tool for me to use in talking to employers about my experiences."

After the Maymester course, she stayed in France to complete a three-month internship with the French Heritage Society that involved her working in the public gardens of three chateaus. Fox applied, interviewed and was hired by ValleyCrest while still overseas.

"[ValleyCrest's now-regional vice president] always brings up at our year-end and holiday events that she found me while I was pruning roses in France and that I am one of two people she's hired without meeting," she said. Fox credits the horticulture department – particularly professors Marc van Iersel, Allan Armitage, Matthew Chappell and Timothy Smalley – with equipping her with the tools, experience and advice needed to excel at the path she's chosen.

"My adviser, Dr. Smalley, literally changed my life by opening the door for the study abroad [trip] and French Heritage Society [internship]. Those two experiences led directly to my current position," she said. "I don't know where I would be without his advice and guidance." ▪ *Kathryn Schiliro*

CLASS NOTES

1960s

Benjamin G. Brackett, DVM, Ph.D., (BSA – Animal Science, '64) was named a 2015 Alumnus of Distinction by the UGA Graduate School. One of 12 alumni of the Graduate School to receive the award, Brackett, of Athens, Georgia, is a retired professor and department chair of physiology and pharmacology at UGA. His research ushered in a new era in reproductive biotechnology. Dr. Brackett pioneered the first repeatable in vitro fertilization (IVF) and led teams that produced the world's first IVF calf, the nation's first IVF goat kids and Georgia's first IVF babies. Today, cattle breeding involving the transfer of IVF embryos is employed globally for optimization of meat and milk production. Dr. Brackett also initiated the first successful application of IVF to overcome human infertility in Georgia. In 1983, he established Reproductive Biology Associates, an infertility clinic and, in 2013, joined in celebration of 30,000 babies on its 30th anniversary.

1970s

David Weaver (BSA – Agronomy, '74; MS – Agronomy, '76) received the 2015 Cotton Genetics Research Award at the U.S. cotton industry's 2016 Beltwide Cotton Improvement Conference in New Orleans in January. Weaver won the award for his cotton genetics research. He is a plant breeder and professor in the Department of Crop, Soil and Environmental Sciences at Auburn University's College of Agriculture.

Hiram Larew (BSA – Horticulture, '75) retired in February 2015 as director of the Center for International Programs in the U.S. Department of Agriculture's National Institute of Food and Agriculture. Since then, Montana State University and Oregon State University have offered him adjunct/affiliate faculty status. He has also been enrolled in the Woodrow Wilson Visiting Fellows program, which offers nonacademics, like Larew, weeklong visits to selected campuses. Poetry remains one of Larew's active interests.

1980s

Carol Evans (BSA – Animal Science, '80) is a wildlife biologist for the U.S. Department of the Interior's Bureau of Reclamation in Glendale, Arizona, and has been in the position for three years. She works as the biologist on large projects involving water and energy for the federal government and conducts Endangered Species Act, Section 7, consultations with the department's U.S. Fish and Wildlife Service. Prior to this position, Evans worked for the U.S. Fish and Wildlife Service and then U.S. Marine Corps Base Camp Pendleton. In all, she's worked for the federal government for 18 years. Evans received her master's degree in wildlife science from New Mexico State University in 1997.

Laura Meadows (BSA – Food Science, '81) was named a 2015 Alumna of Distinction by the UGA Graduate School. One of 12 alumni of the Graduate School to receive the award, Meadows is the director of UGA's Carl Vinson Institute of Government, which provides technical assistance, applied research, technology solutions, and training and development services to governments in Georgia and internationally. Prior to her work with UGA, Meadows was appointed as the first executive director of the OneGeorgia Authority. She also served as the commissioner of the Georgia Department of Community Affairs, assistant secretary of state, and state director of the U.S. Department of Agriculture's Rural Development program.

FROM FOUR TOWERS

In 1918, the College of Agricultural and Environmental Sciences was the first college at UGA to admit women. Today, 31 percent of the CAES Alumni Association is female, and CAES student enrollment is 63 percent female. This issue, featuring women in agriculture, profiles female alumnae and CAES offerings that highlight the college's commitment to its female – and male – students.


ELLIOTT MARSH

As a father of two daughters, I take comfort in knowing our college creates opportunities in the agricultural and environmental sciences for any student willing to seek those rewards, and that we, as alumni and friends of the college, are here to support students during their journey.

You are the volunteers who give of your time to attend CAES events and programs on campus and in Georgia. You are the leaders in your fields who use your talents to mentor students and young alumni, to recruit students and to provide employment opportunities for graduates. You are a resource to CAES, helping students to participate in life-changing experiences.

Meet the new faces of External Relations: caes.uga.edu/alumni/news.

I am humbled to serve as this year's CAES Alumni Association president and am excited to work with an outstanding group of volunteer board and committee members. CAES needs you to act. Please contact our alumni director, Suzanne Griffeth, at 706-542-5264 or send a note to asg@uga.edu and let her know how CAES can use your time, talents and treasures.

Elliott Marsh
BSA – Agricultural Economics, '02;
MAL – Agricultural Leadership, '11

FOLLOW CAES ALUMNI ASSOCIATION FOR MORE EVENTS AND NEWS

UGA CAES Alumni Association
UGA CAES Alumni
@UGA_CAES_Alumni


CONTRIBUTED

lead dog: dean kopsell

Eat your Veggies

UGA College of Agricultural and Environmental Sciences alumnus Dean Kopsell (MS – Horticulture, '95; Ph.D. – Horticulture, '99) is helping Americans to be healthier by improving the quality of their vegetable intake.

A professor at the University of Tennessee, Kopsell grows and researches vegetables. He is producing vegetables in new and different ways in the hope of making them more nutritious.

"The research area I'm in is really unique. Our work focuses on modifying the growing environment to maximize the nutritional values of vegetable crops. This approach does not pin me down to one crop. Instead, I can look at a variety of different crops to focus on ways to maximize nutritional quality traits shared by many vegetable types," Kopsell said.

Kopsell studies leafy vegetables, such as kale and spinach. He investigates the natural phytochemicals found in vegetables and their reactions to outside influences, their performance in varying environments and ways in which varieties with different genetic backgrounds react to similar environments.

Kopsell is an advocate for kale, calling it a "supernutritional powerhouse." It possesses an abundance of antioxidants and anti-cancer compounds, and kale offers consumers the most nutritional value for their buck, according to Kopsell.

"We don't consume nearly enough fruits and vegetables as a society. The work that I do will, hopefully, make a contribution to healthy eating. Since we don't eat enough vegetables, what we do eat can be grown to be more nutritious. It is our hope that you'll get more benefits if you eat enhanced vegetables in your diet," Kopsell said. "One of the things I really enjoy about my job is providing the consumer with choices of enhanced vegetables that may benefit them nutritionally. I also hope my research can help farmers deliver healthier produce to the market, so that they may someday get paid for higher nutritional quality rather than just the quantity they produce."

▪ *Clint Thompson*

CLASS NOTES

John Burton Hall (BSA – Animal Science, '82; MS – Animal Science, '84) received the Extension Award from the Western Section of the American Society for Animal Science during the organization's annual meeting in Ruidoso, New Mexico. The award recognizes Hall's beef cattle research application and Extension contributions. Hall is the superintendent of the University of Idaho's Nancy M. Cummings Research, Extension and Education Center.

William Gresham (BSA – Horticulture, '83) is the president of Gresham Planning and Development, Inc. He resides in Clarkesville, Georgia.

John Arnold (BSA – Agronomy, '84) worked for the last 20 years as the resettlement director for World Relief Atlanta, helping refugees from around the world begin a new life in the U.S. Prior to this position, he spent two years doing missions work in Mozambique, Africa, and before that worked for UGA Cooperative Extension in Dooly, DeKalb and Fulton counties.

Brad Cornelious (BSA – Agricultural Economics, '87) is the president and CEO of Cape Fear Farm Credit in Fayetteville, North Carolina. He started this role on Jan. 1.

1990s

Mark Bennett (BSA – Agricultural Communication, '91) is in community investments and public affairs for Gulfstream Aerospace. He resides in Savannah, Georgia.

Jason Morris (BSA – Agricultural and Applied Economics, '97) accepted the position of commercial banker, vice president with First Community Bank of Tifton, a division of Synovus Bank, in August 2015.

2000s

Lewis Webb (BSA – Agricultural and Applied Economics, '00; MS – Agricultural and Applied Economics, '03) was named one of Georgia Trend magazine's 2015 40 Under 40. Webb is the president and owner of The DGR Group Inc. Wealth Management (thedgrgroup.com), based in Americus, Georgia.

Stephanie Butcher (BSA – Animal Science, '03), of Coweta County, Georgia, was named the Georgia Farm Bureau Young Farmer Excellence in Agriculture Award winner at the July 2015 Georgia Farm Bureau Young Farmer Leadership Conference. The award is given to "young farmers who earn the majority of their income from something other than production agriculture." Butcher is the Coweta County coordinator and Agriculture and Natural Resources agent for UGA Cooperative Extension.

Vince Muia (BSA – Turfgrass Management, '03; MAL – Agricultural Leadership, '11) is a project development associate with Sports Turf. Muia began his career with Jack Nicklaus Golf Course Design and worked on iconic courses in Jupiter Island and Seminole, Florida, and Sea Island, Georgia. Most recently, he managed the athletic fields for the University of Miami in Coral Gables, Florida.

Will Sprague (BSA – Agricultural Education, '03) is the animal facilities supervisor at the UGA College of Veterinary Medicine's Veterinary Teaching Hospital. He started in this position last August.

Myria Shipman (BSA – Animal Science, '04; MAL – Agricultural Leadership, '06) was the subject of a Jan. 22 article, "Myria Shipman: One of a Kind Program, One of a Kind Teacher," in Chatham Isles Living magazine. Shipman teaches animal science, veterinary science and small animal

lead dog: randall copeland

Hanging with his Peeps

Influenced by a UGA Cooperative Extension county agent – he was an UGA agricultural economics major – Randall Copeland (BSA – Agricultural Economics, '77; MS – Agricultural Economics, '79) applied only to UGA and, when he got there, never changed his major.

"I was very interested in different subjects, and his description of what he learned in micro- and macroeconomics, commodity futures [and] policy just sounded like something I would enjoy," Copeland said.

This training resulted in a more-than-30-year career. He now oversees the operations of Just Born Quality Confections, the third-generation, family-owned company, based in Bethlehem, Pennsylvania, that makes PEEPS®, HOT TAMALES® and MIKE AND IKE®. As vice president of operations, Copeland oversees the development and implementation of operations plans. He's also excited to go to work where Marshmallow PEEPS® are made.

"It's always had a reputation as a wonderful company to work for, and a fun work environment," Copeland said. "It is a real manufacturing job. It has many ties to ag economics."


JUST BORN QUALITY CONFECTIONS

Copeland considers himself fortunate to work for a company that looks to improve the product but also cares about people. This is something he considers an ideal situation at Just Born, which also has "interesting and exciting growth plans."

In late 2015, Copeland joined Just Born from Manischewitz Company, where he served in the same role. Manischewitz is the country's largest manufacturer of kosher foods. Before Manischewitz, Copeland worked at Campbell Soup Company and Alpo Petfoods.

At Campbell Soup, Copeland said he learned about plant operations, maintenance and waste treatment. Run by a company of engineers and scientists, Copeland said everything was quantified.

He credits his former professor, Wen Williams, with lessons on commodity and futures trading that he still uses, like how to hedge, take risks and set goals. Part of Copeland's new role involves improving the fundamentals of the operation while maintaining efficiency and consistency. Copeland said he works in a 100 percent landfill-free factory, where 92 percent of the waste is recycled and the remaining 8 percent is incinerated and converted into electricity.

Throughout his career, the most notable change has been computerized controls on manufacturing lines, he recalls.

"Don't be afraid to take on challenging situations," he said. "Take on jobs that are difficult and learn how to succeed." ▪ *Keith Farner*

lead dog: eric cohen

Beyond Pecans

Eric Cohen (BSA – Agricultural Economics, '00) is nuts about Georgia pecans. Farming 1,250 acres with his brother, Rob (BSA – Plant Protection and Pest Management, '97), the UGA College of Agricultural and Environmental Sciences alumni are two of south Georgia's leading pecan growers.

Beyond pecans, Eric has taken to harvesting pecan truffles. After consulting with UGA plant pathologist Tim Brenneman, who has studied pecan truffles on the UGA Tifton Campus, Eric bought a truffle dog, named "Tate," to search for the truffles in the Cohens' orchards in Georgia's Thomas, Grady, Seminole and Decatur counties.

Tate was trained to sniff out the fungus, located just beneath the ground. In about two years, Eric has benefited from a market salivating for this hidden commodity.

CLINT THOMPSON

Truffle hunting with Tate provides an alternate source of entertainment for the whole family. "The reason I wanted to get in the truffle business was for my kids," Eric said. "It's something unique for them. They're not watching a TV or playing Nintendo. They're out in the pecan orchard. It's a scavenger hunt."

Eric is considering producing white truffle pecan oil by infusing the oil he and Rob already produce with Tate's found truffles. They have already started producing black truffle pecan oil using a black winter truffle extract.

"Out of 1,250 acres, I would say 20 percent has good populations of truffles," Eric said. "With truffles, it's all dependent on weather. When it's rainy and wet and hot, we've got a lot of truffles. When it gets dry like it did last September, it blanks them. They'll go away on you."

Eric also doubles as a crop consultant on row crops, including cotton, peanuts, corn and soybeans, and is a licensed real estate agent specializing in land sales. ▪ *Clint Thompson*

CLASS NOTES

care and management at Savannah, Georgia's Islands High School. The article showcased the school's Veterinary Science Specialty Program as well as Shipman's unique teaching style. She is also the adviser for the National FFA Organization at her school.

Mat Thompson (BSA – Agribusiness, '07), of Thomas County, Georgia, was named Soil Conservationist of the Year by the Middle South Georgia Soil and Water Conservation District of the Georgia Soil and Water Conservation Commission.

Ryne Brannen (BSA – Agribusiness, '08; MPPPM – Plant Protection and Pest Management, '11) is a member of the Cotton Incorporated board of directors. He and his wife, Heather Brannen (Savelle), an alumna, live on his family's row crop farm in Bulloch County, Georgia, where they grow cotton and peanuts and raise beef cattle.

Karl Halbig (BSA – Agriscience and Environmental Systems, '08) is a manager with Blackwater Cattle Company. He resides in Lake Park, Georgia.

Matt London (BSA – Animal Science, '08; MS – Dairy Science, '10) and wife, Kimberly, of Cleveland, Georgia, were finalists for the Georgia Farm Bureau Young Farmer Excellence in Agriculture Award, which was given in July 2015 at the Georgia Farm Bureau Young Farmer Leadership Conference. Matt is employed as a manager at the family farm, London Farms, Inc.

Heather Brannen (Savelle) (BSA – Animal Science, '09; BSA – Agricultural Education, '09; MPPPM – Plant Protection and Pest Management, '11), of Bulloch County, Georgia, was a finalist in the Georgia Farm Bureau Young Farmer Discussion Meet at the July 2015 Georgia Farm Bureau Young Farmer Leadership Conference. She is the agricultural education teacher and the National FFA Organization adviser at Metter High School in Metter, Georgia.

2010s

Kyle Dekle (BSA – Agricultural Education, '10), of Habersham County, Georgia, won the Georgia Farm Bureau Young Farmer Discussion Meet at the July 2015 Georgia Farm Bureau Young Farmer Leadership Conference. Dekle teaches agriculture at Habersham Central High School in Mount Airy, Georgia.

Patrick Rohling (BSES – Environmental Resource Science, '10) is a soil conservationist with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) in Andalusia, Alabama. Prior to the position in Alabama, Rohling worked for the NRCS in Montana and Louisiana.

Katie Thomason (BSA – Agribusiness, '10) is the economic development coordinator and deputy clerk for the government in Catoosa County, Georgia. She started working for the Catoosa County government in April 2015. She resides in Ringgold, Georgia.

Dallas Duncan (BSA – Animal Science, '11; BSA – Agricultural Communication, '11) recently launched agriCULTURE Magazine, a new publication focused on showcasing how Georgia agriculture and Southern culture are forever intertwined. The magazine offers monthly issues of stories featuring Georgia farms, gardens, restaurants, artisans, small businesses and travel destinations, plus a quarterly agSPROUTS mini-magazine geared toward students in fourth through ninth grades. It takes a science-based approach to agricultural stories, accompanied by vivid photography and illustrations by Georgia artists (agriCULTUREmagazine.net).

Caroline Lewallen (Black) (BSA – Agricultural Education, '11), of Hall County, Georgia, was a finalist in the Georgia Farm Bureau Young Farmer Discussion Meet at the July 2015 Georgia Farm Bureau Young Farmer Leadership Conference.

Taylor Sills (BSA – Agricultural and Applied Economics, '11) is the Georgia Farm Bureau Young Farmer coordinator. Before this position, he was a marketing specialist for Georgia Farm Bureau for more than two years.

Katie Gazda (BSA – Agricultural Communication, '12) recently accepted the position of executive director of the Georgia Farm Bureau Foundation for Agriculture.

Jamison Cruce (BSA – Agricultural Education, '13) recently accepted the position of director of program development for the American Farm Bureau Federation in Washington D.C., where he resides.

lead dog: gena perry

4-H Far Away

Gena Perry (BSA – Agribusiness, '11; MAB – Agribusiness, '14) studied abroad in Tanzania, Africa, during her time as an undergraduate. Africa stuck with her.

Fast forward through graduation, two years at an internship-turned-job at a St. Louis agricultural marketing agency and then a master's degree, the UGA College of Agricultural and Environmental Sciences alumna has returned to Africa as a liaison between AgriCorps and 4-H Ghana.

Perry works for AgriCorps, a non-governmental organization that serves the need for agricultural education in developing countries by providing American volunteers with agricultural backgrounds and experience. Part of what AgriCorps is contributing to in Ghana is the development of 4-H Ghana. AgriCorps volunteers have been in the country for about two years, according to Perry, and 4-H Ghana has been in place since 2000.

Fifteen volunteers in junior and senior high schools in three regions of Ghana act as agriculture and integrated science teachers, 4-H advisers and community Extension agents. "Being a farmer gives you some credibility and an ability to connect with them (Ghanaians)," she said. "Our biggest focus, as well as 4-H Ghana, is to promote agriculture as a business … Here, farming is a poor man's job, and I think it's helpful for them to see us [in these successful roles]."

A former 4-H'er herself, Perry works in an administrative role in the national 4-H Ghana office in Koforidua, Ghana. She works on funding and partnership building for 4-H Ghana, as well as training 4-H volunteers.

"We give teachers the tools and knowledge to use games and more interactive activities instead of them talking from a book or notes," she said. "[It gets] them (students) more involved … so they'll remember what you're teaching them."

CONTRIBUTED

Perry elected to go into agribusiness because she knew she wanted to work in agriculture and business seemed the best route. She believed economic development would pose an "interesting challenge," but to get into development, she said, requires experience. She recalled a friend texting her after an AgriCorps representative presented information to her CAES class. Perry met with the representative and was immediately sold on the organization.

"I really enjoyed this part of the world, so I knew I wanted to do something in it," she said. "[AgriCorps] is such an interesting program. [I] work on strategy, on the big picture. I knew this was my chance to come back to this part of the world, so I said, 'Why not take a chance? If I like it, I'll stay.'"

She's been in Ghana since last July and plans to continue to work for AgriCorps through June.

"We're very young, but I think, overall, we've seen some pretty cool results," she said.

▪ *Kathryn Schiliro*

BRANCH CARTER

Outstanding in their Fields

Five college alumni were honored for career achievements by the CAES Alumni Association at the association's ceremony in Athens, Georgia, last September

Young Alumni Awards

MEGAN GREEN (2)
(BSA – Animal Science, '03) has worked with some of the finest performance horses in the world and now manages equine and large animal veterinary services at Merial, a global animal health company.

TRAVIS MOORE (3)
(BSA – Food Science, '03) worked for Anheuser-Busch InBev in Cartersville, Georgia, for eight years before becoming senior brewmaster at the company's St. Louis brewery. He is responsible for the safety, quality and production of the brewing department in Anheuser-Busch's largest domestic brewery.

CARMEN BYCE (4)
(BSA – Agricultural Education, '09) is the program coordinator for Asia at the Borlaug Institute for International Agriculture at Texas A&M AgriLife Research and serves as curriculum writer and facilitator for Sigma Alpha and Alpha Gamma Rho chapters.

Awards of Excellence

JIMMY FORREST (1)
(BSA – Dairy Science, '72) is president of Ridge Spring, South Carolina's Dixie Belle Peaches, Inc., the fourth largest peach operation in the U.S. In 1974, Forrest started his nationally recognized peach business on 40 acres. Now, Dixie Belle Peaches operates on 2,600 acres in South Carolina, employs 300 people and sells to chains like Kroger, Wal-Mart, Ingles and Food Lion.

BO WARREN (5)
(BSA – Agribusiness, '95) served for 14 years as a government affairs coordinator, representing Fortune 500 companies in Georgia and Washington, D.C. In 2011, Warren was tasked with developing the Georgia Department of Agriculture's first business development division. He helped establish an agreement with the Georgia Department of Economic Development's International Trade Team to find new markets for Georgia's agricultural products. Currently the director of the Office of International Trade and Domestic Marketing at the Georgia Department of Agriculture, Warren fosters international trade, supports agritourism in Georgia and administers the Georgia Agriculture Tax Exemption program. He directs the Center of Innovation for Agribusiness. ▪ *Merritt Melancon, Clint Thompson and Samantha White*


MERRITT MELANCON

ANIMAL SCIENCE ALUMNUS NAMED GEORGIA FARMER OF THE YEAR

UGA College of Agricultural and Environmental Sciences alumnus and Sylvania, Georgia, corn, peanut and soybean farmer John McCormick (BSA – Animal Science, '72) was named 2016 Georgia Farmer of the Year at Gov. Nathan Deal's Ag Awareness Day at the state capitol in March. McCormick (center) and his wife, Paula, who has her bachelor's degree in home economics from UGA, received the award from Gov. Deal (left), while Screven County UGA Cooperative Extension Coordinator Ray Hicks (second from right), who nominated McCormick for the honor, and state Rep. Jon Burns, Georgia House Majority Leader, congratulated them. McCormick will represent Georgia in the Swisher Sweets/Sunbelt Expo Southeastern Farmer of the Year contest at the Sunbelt Ag Expo in Moultrie, Georgia, later this year.


KATIE WALKER

Savor the State

From cheese to chutney, craft chocolate to chorizo, the annual Flavor of Georgia Food Product Contest – hosted by the UGA Center for Agribusiness and Economic Development (CAED) – has been celebrating Georgians' culinary creativity for 10 years.

The state's premier food product contest has come a long way since the years that hand-labeled Mason jars and questionably contained meat spreads were dropped off or arrived by mail for judging. More prestigious, more professional and more impactful than ever, the 10th annual Flavor of Georgia contest, which culminated in March with 33 finalists, saw 135 of the best entries in its history.

Georgia's food manufacturing and processing industry, which has an annual impact of $11.5 billion, according to the Georgia Department of Economic Development, is made up of thousands of companies. Flavor of Georgia was envisioned as a showcase for all of them, said Sharon P. Kane, contest coordinator and economist for the CAED, which is housed in the College of Agricultural and Environmental Sciences Department of Agricultural and Applied Economics. Over the years, more than 1,000 food products have competed in the contest.

Clark Neal and his wife, Suzy, who own Unicoi Preserves, have participated in the contest since 2014. Their jams are now sold at Ingles Markets in Georgia, North Carolina, South Carolina and Tennessee.

"We learned a lot from the contacts we made through Georgia Grown and by meeting other [Flavor of Georgia] participants," Clark said. "The feedback we've received from the judging panel not only showed us things about our product that we needed to work on, but also showed us pathways we could use to break into larger retail markets."

Most contest finalists report increased interest in their products, and many benefit from increased sales, profits, publicity and website traffic, Kane said.

Finalists and winners participate in a number of high-profile industry showcases following each year's Flavor of Georgia contest. They also receive industry feedback and use of the "Flavor of Georgia finalist" logo for their branding and packaging.

Through the contest, grocery buyers get first crack at new products to build their store's repertoire of locally produced or Georgia-produced products, said Kent Wolfe, director of the CAED.

"Many buyers value the chance to meet with producers and see products that they have not seen before," he said. Support from Georgia Grown and the Georgia Department of Agriculture, Georgia Farm Bureau, the Georgia Center of Innovation for Agribusiness and CAES have grown the contest, Wolfe added.

For more information about the contest, visit flavorofga.com and follow @FlavorofGA on Twitter.

▪ *Merritt Melancon*

Flavor of Georgia celebrates 10 years of the finest food products made in the state

MERRITT MELANCON

The 2016 Flavor of Georgia grand prize winner Amanda Wilbanks, of Southern Baked Pie Company, poses for a photo with Gov. Nathan Deal (left to right), Sam Pardue, new CAES dean and director, and Gary Black, Georgia agriculture commissioner.

THE UNIVERSITY OF GEORGIA
COLLEGE OF AGRICULTURAL & ENVIRONMENTAL SCIENCES

Office of External Relations
117 Four Towers
University of Georgia
Athens, GA 30602-4352

Non-Profit Org.
U.S. Postage
PAID
Permit No. 11
Athens, Georgia

SPEAKING UP FOR AGRICULTURE

Agricultural communication and agricultural education double-major Abbey Gretsch is taking a year off of school to travel the country and beyond. She's already been to Japan and will stop in almost all 50 states before the year is out.

As the newly elected Southern Region vice president for the National FFA Organization, UGA sophomore Gretsch is laying aside her studies, involvement in UGA Cattlemen's Association and job as a College of Agricultural and Environmental Sciences student worker to visit FFA members and sponsors, give speeches to tens of thousands of FFA members, lead workshops and even advocate for agriculture and FFA in Washington, D.C.

"Our team of six [national FFA officers] will hit about 50 states, with the exception of Hawaii," Gretsch said. "Alaska, Texas, Nevada, Montana, New Jersey, New Hampshire – they do a really good job of placing us in every corner of the country."

There are more than 600,000 members of the organization in the U.S. In Georgia, there are 40,000 members. FFA is the largest student-led organization in the nation, Gretsch said.

Prior to being elected to her national post, Gretsch was involved in FFA in high school. She competed in agricultural communication and public speaking contests, showed Angus cattle, served as a chapter officer and was Georgia's North Region vice president. She received the American FFA Degree at the 2015 National FFA Convention, where she was also elected Southern Region vice president.

She learned of the news of the initial cut and final election with family, friends and even her CAES Department of Agricultural Leadership, Education, and Communication adviser, Eric Rubenstein, who stayed at the convention to hear election results.

"He set up all my classes knowing I was running [for FFA office]," she said. "While he was at the University of Florida, he saw their candidates run for office. He wanted to bring that to UGA and make sure the candidates from here were treated really well and that school wasn't a burden."

With Rubenstein's help, she loaded up on agricultural communication classes prior to becoming an FFA vice president. She will start on her agricultural education classes when she returns.

Missing out on the year of school is "definitely worth it," Gretsch said. "I'm paid in experience and connections." ▪ *Kathryn Schiliro*

DALLAS ANNE DUNCAN, AGRICULTURE MAGAZINE, AGRICULTUREMAGAZINE.NET