

# CAFS

# MAGAZINE

SPRING 2019



## Changing Perspectives about Agriculture

### GLOBAL

- >> AAU AND FAMU
- >> AN INTERNATIONAL COLLABORATION

### OUTREACH

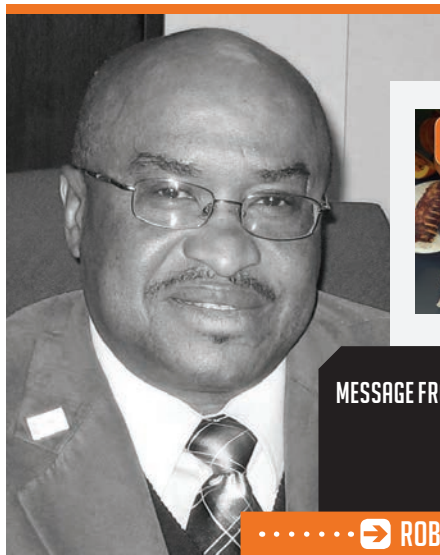
- >>> USDA-NIFA
- >>> CAFS EDUCATOR RECIEVES AWARD

### TECHNOLOGY

- >>> 4D PRINTING
- >>> THE NEXT LEVEL IN AGRICULTURAL MANUFACTURING

### STUDENT SUCCESS

- >>> JERMAINE PERIER
- >>> AWARDED SARE GRANT



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## MESSAGE FROM THE dean

ROBERT W. TAYLOR, PH.D.

### Greetings,

Welcome back for the start of a new year and a new semester. What an exciting year 2018 has been, with the fall semester ending on a high note for the college. I had the privilege once again to have seen another group of College of Agriculture and Food Sciences' (CAFS) graduates march across the stage to receive their diplomas. I have confidence that they will find gainful employment and live successful lives as responsible, productive and engaged citizens.

Our students, faculty, staff and alumni continue to make us proud and as we continue the course and vision of the college, we envision even greater things to come in the future. There are many remarkable stories and accomplishments, and I am often amazed by the various ways in which CAFS and its programs are making a positive and demonstrable difference in the world. After Hurricane Michael wreaked havoc and devastation in Tallahassee and the Big Bend region, the CAFS Cooperative Extension Program provided hot meals, water, clothing and personal hygiene items to the victims. So as we start the year inspired and energized, I hope you will too will be amazed as you read about some of the other highlights in this issue of the CAFS magazine.

Our research programs have crossed borders offering research and training expertise from Guyana in the Caribbean to Jordan in the Middle East. Our students have sought out and earned internship spots with entities such as the U.S. Navy in Bahrain and the Cheetah Conservation Fund in Namibia, Africa. Also, our Veterinary Technology Program has received full accreditation and our animal science program strengthened with the addition of a new faculty with emphasis on animal nutrition and microbiomics.

As dean, one of my top priorities is sustaining a college that enables students, faculty and staff to fulfill their potential. So as we strive to strengthen our academic programs to make our students more competitive for post-graduate study or the job market, we are developing alert minds that are able to think critically, analyze thoroughly and communicate effectively to serve in any ambition they choose to pursue.

"Great things happen in CAFS every day."

*Robert Taylor*  
Robert W. Taylor, Ph.D.



FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY

## CAFS Magazine Spring 2019

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# #10 MUST READ IN THIS ISSUE featured



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FLOURLESS CHOCOLATE CAKE

## Entomology Grad Student

### AWARDED SOUTHERN SARE GRANT

"The grant will permit me to study the use of more environmentally friendly and sustainable methods, such as biopesticides to control this pest, as the conventional methods use toxic chemicals, which can have a negative impact on our environment."

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## 4D Printing

### THE NEXT LEVEL FOR ADDITIVE MANUFACTURING IN AGRICULTURE

CAFS and FAMU-FSU joint College of Engineering, are working on a possible aerospace application of using 3D printers to build structurally and functionally adaptable Personal Food Computers (PFCs) that would produce food in space and/or in other planets like Mars.

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## featured Apathy

### CHANGING YOUTH PERCEPTION ABOUT AGRICULTURE

It is no secret that there is a common stereotype among the youth regarding agriculture. Their current image is that of people working in the field, an old man dressed in overalls with a plow, a job done by poor people with a low level of education, or a combination of all of the above. As a matter-of-fact, when I spoke with several non-agriculture major students on campus, they echoed basically the same sentiments.

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# Entomology Graduate Student Awarded Southern SARE Grant to Study Silverleaf Whitefly

by **Andrine Stanhope**

Silverleaf whitefly is a serious pest that greatly impacts tomato growers in Florida. Given the state's humid subtropical environment and warm average annual temperature, insect pest and diseases pressure are constant and can be intense at times. Unlike other more temperate tomato and pepper producing areas, the majority of Florida's growing regions do not experience hard freezes, a factor that helps to regulate pest populations. As a result, pest control for Florida growers surpass those, encountered in many other growing regions.

**Jermaine Perier**, entomology graduate student in the College of Agriculture and Food Sciences (CAFS) at Florida A&M University (FAMU), was awarded the 2018 Southern Sustainable Agriculture Research and Education grant in the amount of \$16,000 to evaluate the use of biopesticides to manage the silverleaf whitefly affecting tomatoes grown in Florida.

"The grant will permit me to study the use of more environmentally friendly and sustainable methods, such as biopesticides to control this pest, as the conventional methods use toxic chemicals, which can have a negative impact on our environment," Perier said. "The study will provide sustainable solutions to Florida's tomato growers to aid in increasing productivity and profitability by providing an effective pest management option."

Conventional pesticides are synthetic chemicals that generally work by killing or inactivating a pest. Biopesticides, on the other hand, are naturally occurring bioactive organisms or substances. Biopesticides may directly kill harmful organisms, or they may work directly by interfering with reproduction or simply repel pests with substances they don't like. They tend to decompose quickly and leave fewer residues on food and in the environment. Other benefits of using biopesticides over conventional chemicals are that they are less toxic, effective in small quantities and less likely for the crop to become resistant to its use.





# THE NEXT LEVEL FOR ADDITIVE MANUFACTURING IN AGRICULTURE

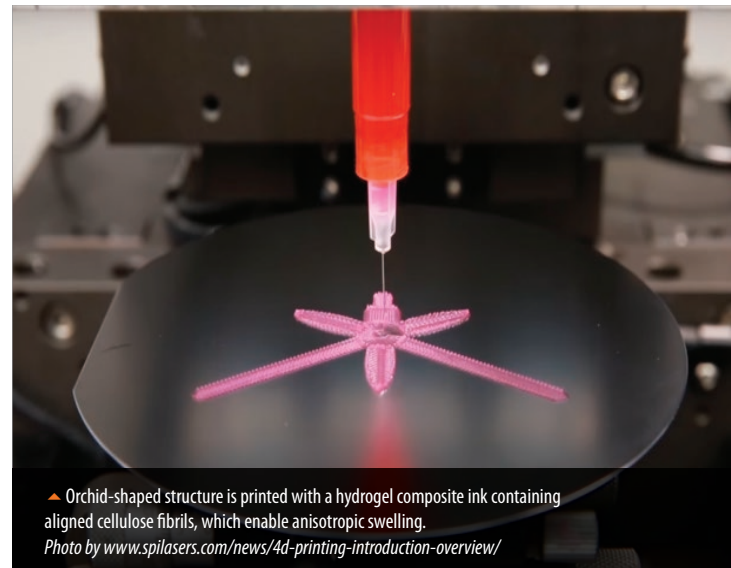
by Satyanarayan Dev

# U

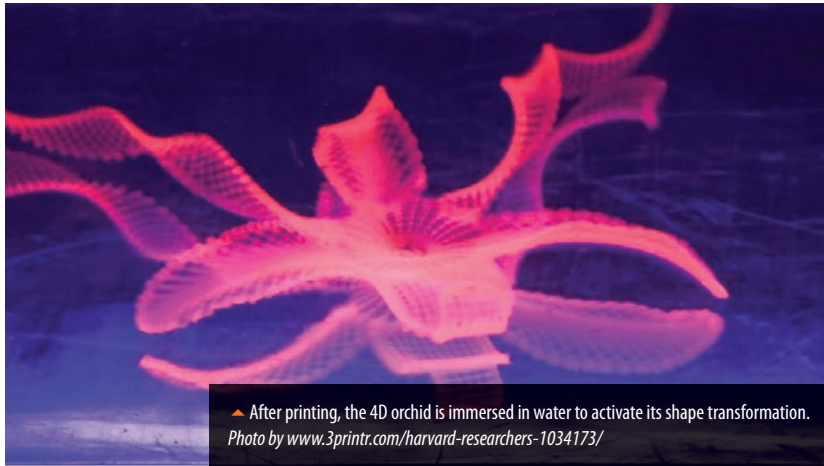
sing the principles of Einstein's theory of relativity, 3D printing technology has evolved to produce changing 3D shapes, based on electrical, chemical and thermal stimulation. Researchers at the Massachusetts Institute of Technology have successfully developed a process called "4D" printing. This process uses a "shape-memory" polymer fiber that responds to an applied voltage or heating and cooling to a specific temperature, resulting in a transformed 3D shape.

There is considerable design freedom for creating composites with interesting thermomechanical behaviors, based on fiber architecture, shape, size, and orientation, and even the spatial variation of these parameters. The 4D printing process, which uses custom engineered programmable material, is essentially a renovation of 3D printing, by adding time as a fourth dimension. In 4D printing, a solid 3D object is produced by a printer, but the composition of the building material is such that the printed object can change its shape in the course of time. Using special material (gel-like composites), 4D allows post production printed 3D objects to change its shape when a stimulus or a combination of stimuli is applied. The stimulus may be water, heat, wind or other forms of energy, like electrical currents.

Satyanarayan Dev, Ph.D., assistant professor in the Biological Systems Engineering Program at Florida A&M University (FAMU) along with a team of other scientists from chemical and biomedical engineering, as well as industrial and manufacturing engineering at the Florida A&M University-Florida State University (FAMU-FSU) Joint College of Engineering, has developed a patent pending technique for synthesizing and actuating active composites using biological materials. Dev is also a co-investigator in the recently established FAMU National Science Foundation Center of Research Excellence in Science and Technology for Advanced Manufacturing. Synthesized Active Composites (SACs) are soft materials consisting of glassy bio-polymer fibers that reinforce an elastomeric matrix. These fibers exhibit the shape-memory effect, which is a programmable component of the composite. The shape-memory effect will enable the composite to regain the programmed shape when exposed to the stimulus/stimuli. Therefore, the SACs can be thermo-bio-mechanically programmed to assume three-dimensional configurations such as bent, coiled, and twisted strips, folded shapes, or complex, contoured shapes with non-uniform curvatures. The shape change is controlled



▲ Orchid-shaped structure is printed with a hydrogel composite ink containing aligned cellulose fibrils, which enable anisotropic swelling.  
Photo by [www.spilasers.com/news/4d-printing-introduction-overview/](http://www.spilasers.com/news/4d-printing-introduction-overview/)



through the design of ordered material structures (e.g. cellulose crystals ranging only a few hundred nanometers in size, called nanocrystalline cellulose) or inhomogeneities at micrometer scale (e.g. naturally occurring hemp fibers). In conventional manufacturing processes, the inclusion of inhomogeneities is typically done randomly, as it is very difficult to control precisely where they can be placed. However, with advanced 3D printing, the desired properties can be achieved precisely, providing an ability to control the performance of the material.

This process results in a film that contains matrix and fiber material. The complete composite architecture is then realized by printing multiple film layers to create an individual lamina (2D). When multiple laminae are stacked, a 3D laminate is created. Using this technology, solid objects that successfully transform into predictable and precisely controllable different shapes can be created (e.g. Imagine a pizza box that originally comes as a flat piece of cardboard, which then folds itself into a box when an appropriate stimulus is applied).

Dev and collaborators at the FAMU-FSU joint College of Engineering are also doing research on using hydrogel ink for 4D printing. Hydrogel ink works by allowing the objects it prints on to change shape to form new structures. The 4D printing technology is inspired by the tissue microstructures and composites of different plants that change depending on their environment (e.g. a plant growing by the side of the window will slowly bend towards the window to capture the sunlight for photosynthesis. This is a typical example of a 3D structure changing over time based on a stimulus, which in this case is sunlight). The SACs can be programmed for precise swelling, allowing 3D-printed flowers to change shape when exposed to water and other environmental

changes. These composites containing specific cellulose fibrils derived from wood are capable of mimicking the changes that plant organs undergo in response to humidity, temperature, and other environmental stimuli. The structure of these composites resembles the same microstructures that allow plants to change shape.

Scientists are hoping to use 4D printing that will positively impact agriculture in the future. The ability to create shape-memory effects like folding, curling, stretching or twisting based on the orientation and location of particular fibers within composite materials opens up huge possibilities for product design. This technology has several applications in agriculture and food production, including an automated personal food computer or an autonomous greenhouse that maintains a certain luminosity, temperature and humidity inside a greenhouse by responding in a certain way when exposed to an external stimulus and "morph" into the predetermined shape.

Dev and collaborators in CAFS and FAMU-FSU joint College of Engineering, are working on a possible aerospace application of using 3D printers to build structurally and functionally adaptable Personal Food Computers (PFCs) that would produce food in space and/or in other planets like Mars. This would enable interstellar explorations possible while ensuring food security for the astronauts. This is vital research, as humans continue to explore space frontier, having regular food will be of importance to satisfying the sense to taste. The lack of conventional food that people are used to for extended periods of time (at least 600 days for a manned mission to Mars) would probably lead to psychological disorders. The PFC panels could be built flat and stored compactly during launch and then transformed to 3D in space.

As 3D printing technology continues to evolve with more complex, printable materials and higher resolutions at larger scales, it is very likely that 4D printing will provide new ways to create highly functional, complex surfaces that could revolutionize urban agriculture and biological engineering. Hopefully, 4D-bio printing will extend the applications of agriculture for food, fiber and fuel beyond the planet that we call home.

*4D printing and transforming video of the hydrogel orchid can be viewed at: <https://wyss.harvard.edu/media-post/4d-printing-shapeshifting-architectures>.*



# SUMMER PROGRAMS

**FAMU**

FLORIDA A&M UNIVERSITY  
**COOPERATIVE  
EXTENSION**  
COLLEGE OF AGRICULTURE AND FOOD SCIENCES



JULY 2019  
AGES 13 - 17  
**FREE**

## AGTECH CENTURY 21

This outreach program exposes middle and high school students to careers in animal science and veterinary medicine. Participants will learn through hands-on activities as well as work with a variety of animal species and attend field trips.

JULY 2019  
AGES 14 - 17  
**FREE**

## AGRISTEM RESIDENTIAL

The Agri-STEM Camp serves to provide open avenues for interdisciplinary communication, education, and enthusiasm among middle school students and their teachers. Students will engage in hands on discovery and exploration activities designed to foster an interest about agricultural sciences.

JUNE 2019  
AGES 14 - 17  
**FREE**

## AG-DISCOVERY

Opportunity for students to explore agricultural sciences and learn about careers in animal related disciplines including veterinary medicine. Students experience hands-on learning through workshops, laboratory and field exercises, as well as a variety of cultural and teambuilding activities.

JUNE 2019  
AGES 11 - 14  
**\$100**

## FOOD SCIENCE SUMMER ENRICHMENT

Program designed to assist students in experiential activities that will investigate the nature of foods, the basis of deterioration, the principles of food production and processing and the enhancement of foods for the consumer.

JUNE 2019  
AGES 13 - 17  
**TBA**

## FORESTRY/CONSERVATION EDUCATION

Program engages participants in experiential learning activities related to forestry and natural resources such as water, soils and wildlife. The program promotes environmental stewardship and conservation.

JUNE 2019  
AGES 8 - 11  
**\$115**

## INSECT SCIENCE CAMP

This camp will give students an opportunity to explore and investigate insect science by studying natural history, insect ecology and behavior and pest management. Students will have the opportunity to create their own insect collection box and explore entomophagy.

JUNE 2019  
AGES 13 - 18  
**FREE**

## RAISING AGRICULTURALLY AND TECHNOLOGICALLY LITERATE RATTTLERS

STEM-based program for rising 7th - 11th grade students that focuses on global issues in food and agricultural sciences. Students will participate in field trips, "hands-on" activities, and leadership development exercises. They will learn about college preparation, basic research, and presentation skills.

FOR MORE INFO  
[EXTENSION@FAMU.EDU](mailto:EXTENSION@FAMU.EDU)  
850.599.3546






Changing  
Perspectives  
about  
Agriculture

# APATHY

by Andrine Stanhope



There is a disconnect between our youth and their perception of agriculture. Misinformation and propaganda are shaping their opinions on an industry vital to our existence. United Nations Department of Economic and Social Affairs projects the world population to grow by a third from its current population of 7.3 billion to more than 9 billion by 2050. Now that is a lot of people to feed. The projection shows that feeding a world population of 9 billion in 2050 would require raising the overall food production by some 70 percent. It therefore means that the need for continued and new innovations in agriculture research and technology is as important as it has ever been. Science and technology might not be the first things that come to the minds of youths when they hear about agriculture, but in order to realize an increased food production on less land space, there must be advances in the agricultural systems to include scientific efficient-enhancing technological innovations. A sufficient number of students will need to be educated in agriculture and its related sciences to make this happen.

Agriculture in the 21st century shares a common relationship and is dependent on the sciences, business, engineering, technology and its software to provide food energy and consumer goods to the world. Farming, crop growing and animal rearing are terms conjured or used to describe agriculture by those who are not educated about the subject, but that is not how it is viewed in today's modern times. Today, the way we go about agriculture has changed dramatically, with the introduction of technology that has revolutionized production and distribution. However, most of the youth today are unaware of the role agriculture and its technology play in making their meals possible. Thanks to the remarkable research and innovations in agriculture over the past century, each acre of farmland can now support and yield two and a half more output/produce than it did just 50 years ago. Technology and the internet have vastly opened opportunities for agriculture, and urbanization, and changing diets have called for new ways to process, market and consume foods. The next generation will be the ones responsible and is expected to rise to the occasion and provide solutions for the challenges of a growing population, changing climate and less availability of arable lands.

It is no secret that there is a common stereotype among the youth regarding agriculture. Their current image is that of people working in the field, an old man dressed in overalls with a plow, a job done by poor people with a low level of education, or a combination of all of the above. As a matter-of-fact, when I spoke with several non-agriculture major students on campus, they echoed basically the same sentiments. While they all expressed that agriculture is important to their survival, they were unaware of the level of science and technology that is involved. The truth of the matter is that people just are not informed about the industry. One of the biggest issues facing the agriculture industry is not whether to produce organic versus non-organic food, or whether genetically modified organism is good for you or not, but a lack of education.

# APATHY

## CHANGING YOUTH PERCEPTION ABOUT AGRICULTURE

A study conducted by Iowa State University Extension, involving a focus group to check youth perceptions of agriculture, found some of the same sentiments as expressed above. The study found that (1) stereotypical views of agriculture still prevails among youth. They still believe agriculture is purely farming and were oblivious about the connection of the technical and research-intensive aspects of agriculture; (2) their image of a farmer is vaguely positive. A cohort of the youth (mostly urban) was not only ignorant about agriculture, but was unconvinced and wished to remain so. They had no interest in the topic and seemed to view a career in agriculture with disdain or at least apathy; (3) farmers were seen as important, which is a positive. They were generally aware of the importance of agriculture to food production and acknowledge that without agriculture (which they see as only farming) there would be no food; and (4) a career in agriculture (farming) appear to be unattractive. Many of the urban youth viewed agriculture/farming as hard, boring, physical labor and wanted nothing to do with careers in it. On the other hand, many of the rural youth took pride in agriculture, however, only few wanted to “farm.” Others were interested in agriculture-related careers such as a veterinarian.

This study lends evidentiary proof to the belief that there is a growing apathy toward youth and agriculture, as they equate agriculture with farming rather than the wider industry that includes technological and science/research base aspects. These perceptions, even among rural youth, more often match the stereotypical “hayseed” view of farming than the realities of a rapidly changing industry.

With a rapidly increasing population, the agriculture industry will exponentially need passionate youth, willing to make a commitment to agriculture. So how do we, or what must we do to get our youth informed, interested and engaged in the subject matter...and see agriculture as more than just farming, but a field that is highly science, research and technologically driven? Start educating at an early age. – It is important to target children at an early age, because by the time they reach the 6th grade, their perceptions of agriculture seem as if it has already been shaped. This will give them an opportunity to appreciate the industry and a desire to further learn and develop skills necessary for us to remain world leaders in agriculture. Evidently, these students will not all choose a career directly related to an agriculture discipline, but will be better able to respect and understand the industry. Another technique as recommended by the Iowa study is to link or tie agriculture to the interest of youth. They recommend that instead of discussing food, which seems to be of minor relevance in their lives, use scenarios that depict a topic of interest. For example, students who are ardent lovers of sports – a scenario such as, “leather comes from animals, which is used to make the tennis shoes you wear and the basketball you play with, etc.” may be a more effective way.

Because there is such a detachment from agriculture in their minds, it is important to help them make connections. Along with our educators, there is a role for scientists, policy-makers and businesses to play to help improve the education and awareness about the role and importance of agriculture in our daily lives, not just for food, shelter and clothing; but other basic needs such as pharmaceuticals and other healthcare needs and fuel. Agriculture also creates employment opportunities, which generates income and supports local economies and livelihoods.

The world needs our youth educated and intricately involved in agriculture to expand entrepreneurs, scientists, educators, innovators and leaders, locally, nationally and globally. They will become the next generation of agriculture industry leaders, who will perfect sustainable agriculture and grow sustainable communities. Their creativity will be needed to develop innovative and economically viable opportunities for the entire food, fiber and natural resource systems. Youth will be needed to play the lead role in reducing our nation’s carbon footprint and modern scientific developments. More than ever, agriculture has tied its future to science and has become an industry that uses and relies heavily on new technology, cutting-edge research and applications in order to continue to meet our needs in smart and efficient ways. To do so, we will need the injection of young professionals into the sector.



19TH BIENNIAL RESEARCH SYMPOSIUM



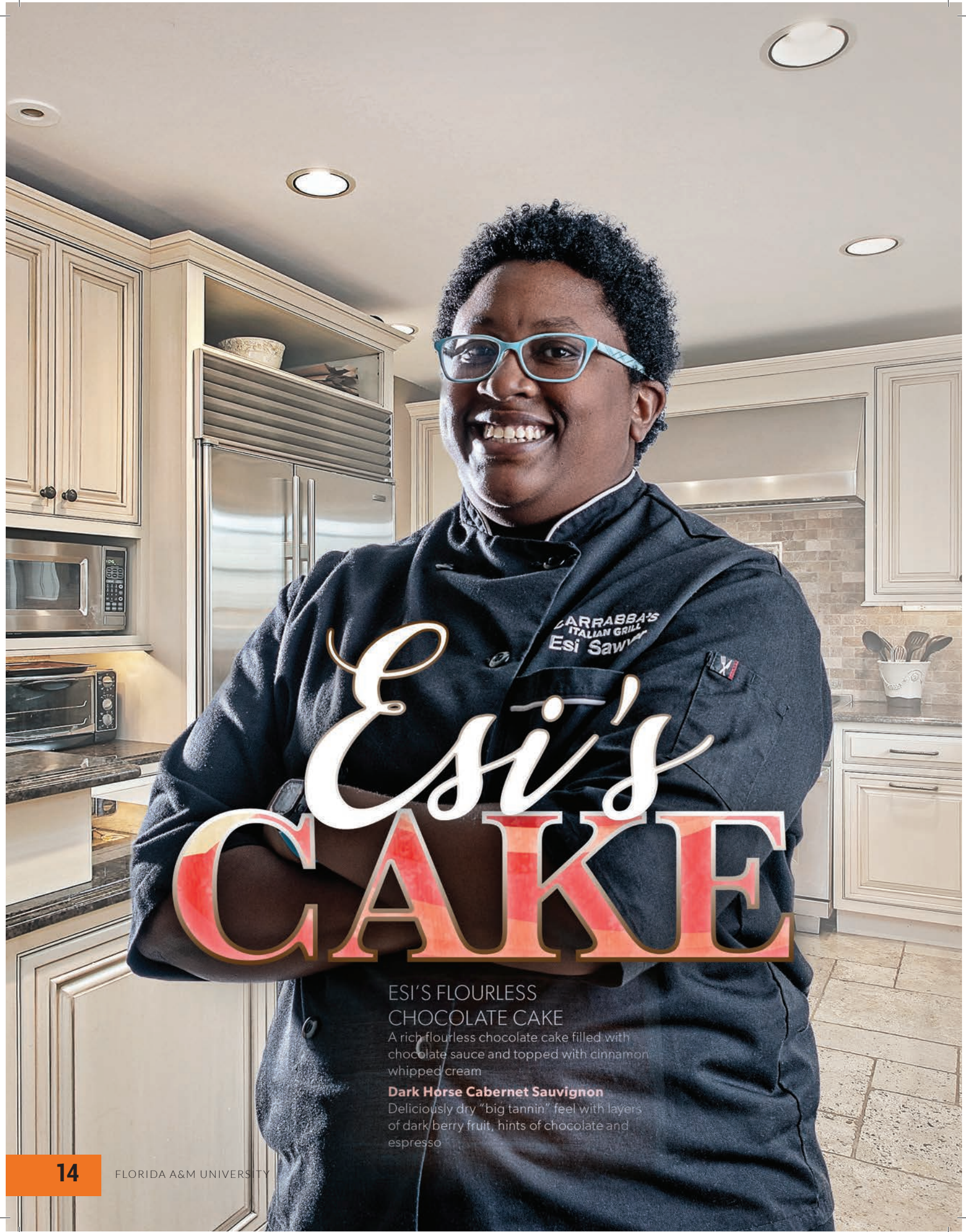
# THE 1890 RESEARCH AGENDA

MAKING CRITICAL CONTRIBUTIONS TO RURAL PROSPERITY  
AND SOLVING CHALLENGES IN FOOD AND AGRICULTURE

PROGRAMS+ABSTRACTS

**MARCH 30 - APRIL 3, 2019**

HYATT REGENCY RIVERFRONT | JACKSONVILLE, FLORIDA



# Esi's CAKE

## ESI'S FLOURLESS CHOCOLATE CAKE

A rich flourless chocolate cake filled with chocolate sauce and topped with cinnamon whipped cream

### **Dark Horse Cabernet Sauvignon**

Deliciously dry "big tannin" feel with layers of dark berry fruit, hints of chocolate and espresso

**W**hen you see a delicious chocolate cake with delicately placed layers of chocolate fudge, do you dare think it is a gluten-free flourless cake? Florida A&M University's (FAMU) School of Agriculture and Food Science student Esi Sawyer had a vision and passion for food, which could land her a spot on the restaurant chain Carrabba's Italian Grill's seasonal menu in 2019 with her original flourless gluten-free chocolate cake.

After an eleven-week internship, Sawyer walked away with a dish carrying her name and three other approved dishes. Making her the first intern in the research and development department of Bloomin' Brands, Inc. to successfully create four dishes.

According to Sawyer her placement on the Carrabba's menu started from a streamline of internship rejections that ultimately landed her in the right place at the right time. "I applied for the intern-supply chain internship for Bloomin' Brands. I did two interviews and didn't get it," Sawyer explained.

"But the first woman who talked to me thought I would be great for the research and development department one. So, the moment that one opened up, she sent me an application before the applications even opened up for it, and I ended up getting that job."

Originally from Miami, Florida, Sawyer says the internship offered her an opportunity to explore a new city.

"I had to move to Tampa for the summer, which I had never been to Tampa, but it was pretty cool because I got to explore another city while getting

paid to be there and eat a whole bunch of food."

Sawyers love for cooking stemmed from a household filled with food from the roots of her Bahamian father and mother from Memphis, Tennessee.

"I grew up eating food from all over the world. Between the island food and the southern food—and being in Miami, which is like a Mecca for all these cultures – I grew up eating everything," said Sawyer.

Though her path in the food science industry was headed initially toward chef work, after Sawyer's research and development internship success, she had another plan in mind. "Going to school and doing all this science stuff, I had no idea of how it would apply to my life. So when I got the opportunity to have a research and development internship, it solidified that the research and development part is what I loved the most," Sawyer continued.

"Researching and developing new concepts – the playing with the foods that I have always known and trying to make them better has inspired me and made me happy. Plus, not many people can say they had a dish named after themselves in an eleven-week internship."

The School of Agriculture and Food Sciences takes pride in encouraging students to develop their research skills. According to Sawyer's Professor Mitwe Musingo, Ph.D., Sawyer is one of a kind.

"She [Sawyer] is brave and [is] always willing to get involved in the School of Agriculture and Food Sciences activities," complimented Dr. Musingo.

After realizing the demand for

students of color in the food research and development industry and meeting Sawyer when she was a student at Tallahassee Community College, professor Neil James, Ph.D., encourages students to step outside of their comfort zone and reach for greatness.

"Esi can look at issues from the point of view that most students are not able to and this makes her insight unique. She is also quite passionate about food, determined to make a difference," explained Dr. James.

After customer feedback has been taken, look out for the "Esi Cake" coming to a Carrabba's near you.

"If they [customers] like it, it gets placed on a seasonal menu, and if it goes well it can be placed on the menu as a core menu item, but regardless of what happens it will always have my name on it."

According to her professors, Sawyer has a lot to offer the future of the Food and Science Industry.

"I believe that she has a lot to offer to the ever evolving food industry, especially in the area of new recipes for popular dishes, that would make them available to groups of persons for whom they are currently prohibited" Dr. James concluded.

# COOPERATIVE EXTENSION EDUCATOR RECEIVES USDA-NIFA GRANT AWARD

by **Andrine Stanhope**

There is mounting evidence that farming is no longer sustainable for the vast majority of minority farmers in Florida. For example, Recent data from the Florida Agricultural Statistics Service indicate that minority farmers in Florida receive less than one percent of farm generated income and own less than five percent of the commercial farms. Unless new directions are forged, the outlook for the 21st century is bleak for this socially disadvantaged group. A team of researchers lead by **gilbert Queeley, Ph.d.**, educator in the Cooperative Extension Program, saw the importance to address this issue. A proposal titled "Empowering Minorities and Veterans to Succeed in Agriculture" was developed and submitted to USDA-NIFA for funding.

"The grant funding in the amount of \$600,00 will be utilized for the College's tri-patriate mission of research, extension and teaching to address the problem," Queeley said.

Candidates eligible to participate in the program will be those farmers

who have less than 10 years of farming experience and limitations or disabilities that prevent them from turning their farms into profitable enterprises. Participants will be recruited with the assistance of the College's collaborating farmer's and veteran's associations.

"The long-term goal of the project is to establish an academy for developing successful minority farmers and ranchers," Queeley said. "Through the academy, participants will receive experiential training that will provide the knowledge and skill-sets required for competing in a 21st century farming environment.

The academy will specifically target minority farmers (including women farmers) and military veterans within the state of Florida. Training will be conducted at three strategically selected locations in Northern, Central and Southern Florida.

Queeley stated that anticipated outcomes from the project includes "knowledge expansion through the

acquisition of new production and marketing skills, an increase in small farm numbers, increases in small farm profit, and in the long term, a reduction in rural unemployment, and poverty."

Co-principal investigators on the project include Ray Mobley, DVM, professor emeritus; Lawrence Carter, Ph.D., director – Special Outreach Activities; and Sandra Thompson, Ed.D., extension specialist.

Collaborating partners include Kevin Humes, retired service disabled veteran of Vet Power Industries, South Florida; The Havana Community Development Corporation of North Florida and Fred Gainous, Ph.D., executive director of the FAMU Brooksville Agricultural and Environmental Research Station in Central Florida.







# *The Spotted Experience*

## *Saving the Cheetahs One Day at a Time*

As a child one of my dreams was to adventure to Africa on a safari. This was shaped by the many movies and pictures I saw of people in that type of setting, which looked exciting. I thought of the different types of animals I would see such as lions and cheetahs roaming in the wild. My curiosity, intrigue and love for animals began to take shape. Throughout high school and preparing for college, I knew I wanted to work with animals so, it was not a hard task to decide on a major when I applied to college.

As an animal science and industry major, and a senior in the College of Agriculture and Food Sciences (CAFS) at Florida A&M University (FAMU), going on internships are highly recommended. My quest and search for such an opportunity was geared towards wildlife veterinary medicine, and so I do not believe it was a coincidence when I happened upon the Cheetah Conservation Fund (CCF). After exploring what they were about, I became even more interested when I saw the impact they were making, educating people locally in Namibia (Africa) and internationally about the importance of saving the cheetahs.

"This is the one," I said to myself. I sent an email to the volunteer coordinator, Heike Stackman, expressing my desire and interest in their internship program along with a short bio. After a lengthy application process, I received an email announcing my acceptance into a 4-week summer internship program. One can only imagine how excited I was. My next challenge was to figure out how I would pay for this once in a lifetime opportunity. I was determined not to let this slip by me. Thanks to family and friends, I was off to Namibia for a lifetime experience, where I would work under the supervision of renowned research scientist, Laurie Marker, D.Phil., founder and executive director of CCF. Marker's areas of

research interest include conservation biology, genetics, biomedical/health/reproduction, wildlife management, agriculture and biodiversity to name a few. She was one of the integral persons who helped to develop the U.S. and international captive program, which established the most successful captive cheetah-breeding program in North America.

My first day at the Conservation, included orientation and a tour of the facility. My assigned tasks were feeding, observing and recording the behavior of the cheetah and other animals, assisting with clinical-work-ups, field work, and community outreach and education programs. A few days into my internship, I got the chance to make a presentation to Marker and staff and other volunteers. In my presentation I highlighted my current studies at FAMU, career goals, work and other internship experiences. Who knew that this would have landed me an opportunity to be a part of one of their research projects. I was personally selected and assigned to the research project by Dr. Marker. This said a lot to me and made me even more appreciative of what I have been taught and learned so far at FAMU. The local farmers believe that the cheetahs are the animals responsible for killing and eating their livestock, game and other small animals. Because of this the farmers are indiscriminately killing

the cheetahs. The research focus therefore is to convince local farmers through evidentiary data that this is not so. This is done by examining cross-sectional analysis of prey hair found in the cheetah's scat as a proper identification of the animal's diet, with the hope of reducing cheetah deaths on local farms.

My experience at CCF was beyond educational, albeit brief. I truly had an amazing time with the other interns, volunteers and the staff at the conservation. I must impart to my current colleagues and future college students, if at all possible, do not let a dream go unfinished, no matter what stumbling block may come in the path, fight to the end; express yourself and prove your dedication to the things you love doing.

In addition to my upbringing, faith, family support and drive to achieve my academic goals, being a student in CAFS has prepared me and played a role in my experience. Faculty and staff in the college truly care about the well-being of their students and future endeavors. Special thanks to Lee Anderson, Ph.D., Jean Beaudin, Robert Purvis, Ph.D., and Keawin Sarjeant, Ph.D., professors at FAMU and Chester Gipson, DVM, who played a role in molding and guiding me into the veterinary field that I have become so passionate about. Awesome things do happen in CAFS every day!

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*"Tamia took every opportunity to get involved in tasks and projects providing the much needed assistance for the day-to-day operation of the programs in various departments. Tamia contributed significantly to the "Hair reading project," which involved identifying the type of animals that cheetahs prey on. Interns like Tamia helped to contribute to the overall mission of CCF, although what she did may seem small, it is the small actions when combined, that make a big difference. We are thankful to Tamia and all interns around the world who continue to support CCF through their time, and above all their passion to help conserve this magnificent species." ~ Annetjie Sijaya, Research and Conservation Manager, CCF*

# Hard Work, No Pay:

## HOW SCHOLARSHIPS CHANGED ONE STUDENT'S LIFE

by **Kalen Johnson**

A natural desire to succeed and supportive parents were key factors in the molding of junior scholar Olivia Gilstrap.

"I was lucky enough to have amazing parents to support and assist me with my academics and preparations for the future," said Gilstrap.

Gilstrap is a food science major from Atlanta, Georgia. She currently holds a cumulative GPA of 3.85. With the push of her parents, she applied for many scholarships and to many universities prior to graduating from high school. Although she received many, one in particular set the direction of her life – the Distinguished Scholars Award.

The Distinguished Scholars Award Program is a merit scholarship for U.S. high school graduates. Eligible scholars receive an award to cover the cost of tuition and are eligible to receive the award for a maximum of eight semesters. Scholars in this program must maintain enrollment in the degree program under which this award was made. A cumulative GPA of 3.3 or better, 15-credit hours each semester and 22 community service hours at the end of each semester are a few of the requirements for renewal eligibility.

"This scholarship played a major role in my decision to come to Florida A&M University (FAMU)," Gilstrap said. In addition to the Distinguished Scholars Award, Gilstrap has received other scholarships during her time at FAMU. She has received scholarship awards from her church and the College of Agriculture and Food Sciences for maintaining a particular GPA each semester. Recently, she was chosen as one of five nominated students to receive the George Washington Carver Spirit of Innovation and Service Award.

"These scholarships and awards have continued to push me and remind me of my capabilities. With this push I can successfully finish my undergraduate studies and continue on to graduate school and eventually start my career," said Gilstrap.

Attending a historically Black college means a lot to Gilstrap. She describes being around educated Black women and men as beyond inspiring and motivating. She also values the guidance she receives from educators that genuinely care about her success.

Through her demonstrated work ethic and relationships built with educators, she was afforded the opportunity to study abroad in Spain during her freshman year.

When asked about the study abroad experience, Gilstrap said, "It was truly an unforgettable and amazing experience."

In addition to being a scholar, Gilstrap is also a proud initiate of The SpellBinding Psi Beta Chapter of Sigma Lambda Gamma National Sorority, Inc.






# FLORIDA FOREST WATERSHED RESEARCH PROGRAM (FFWRP) COLLABORATION WITH FAMU

by **Andrine Stanhope and Johnny Grace III**

The United States Department of Agriculture Forest Service (USDA-FS) is one of the largest organizations within the USDA and is the primary federal organization responsible for caring for the Nation's forestlands. The Forest Service relies on the following program units namely; the National Forest System (NFS), Forest Service Research & Development (FS R&D), State and Private Forestry (S&PF), and International Programs (IP), to manage 193 million acres spread out over 154 National Forests and 20 grasslands. The NFS contains the majority of employees in the FS and serve as the primary management unit to manage public lands in 44 States, Puerto Rico and the Virgin Islands. The FS R&D program unit has the primary charge to provide the scientific and technical knowledge necessary to protect and sustain the Nation's natural resources on all lands, providing benefits to people within the capabilities of the land. The S&PF unit cooperates with state and local governments, forest industries, other private landowners and forest users in the management,

protection, and development of forestland in non-federal ownership. The IP unit serves as an outreach arm to interface and address international issues by linking the skills of FS field-based staff from all units with international partners; thereby allowing the organization to address the world's most critical forestry issues and concerns. This provides an avenue to not only contribute, but also to gain information and expertise for the improvement of our nation's interests.

In 1998, Florida A&M University was awarded a Capacity Building Grant from the USDA-FS administered through the R&D program unit by the Southern Research Station. The objective of the grant was to pursue a Center for Excellence in Water Quality to support education and research functions of the University. It was also expected to facilitate collaborative work between the agency and University, create greater connectivity between underrepresented students in natural resource fields and the Forest Service, and increase



◀ Collecting wetland soil cores to determine carbon content as a function of vegetation type in the Apalachicola National Forest.

the general understanding of water resources in southern watersheds. Since the initial award of the grant, funding was made available to Florida A&M University for projects that return value to the agency, University, community and public. In 2013, the program was refocused and redirected to increase relevancy, concentrate on research emphasis areas, enhance impact, improve program connectivity to SRS research and enhance student opportunities.

The program established a framework to promote an enhanced partnering with stakeholders in the region and improved transparency and accountability for program funds.

Since then, FFWRP funding to FAMU has supported more than 17 projects to a tune of approximately \$1 million, positively making an impact to the FAMU's land-grant mission areas of teaching, research and extension. These projects have afforded students from diverse backgrounds, experiential learning opportunities and research engagements, which prepares them to compete academically, with an aim of securing the next generation of natural resource professionals and scientists. In addition to the

education and experiential learning benefits, the program continues to serve FAMU by creating an avenue where faculty, staff and students can engage with stakeholders as well as existing and potential partners to: 1) discuss ongoing research and education efforts, 2) present and discuss the current state of the science in the panhandle, 3) explore additional research, educational and outreach needs, and 4) develop coalitions to pursue additional work in the panhandle region.

The FFWRP-FAMU projects value and impact to the USDA-FS lies in the program's ability to: 1) conduct research on current and emerging issues in soil and water resources concentrating on the biological diversity hotspots, and 2) conduct technology transfer with stakeholders, engage non-traditional audiences, increase interactions with natural resource scientists, and introduce and engage kindergarten to University students within the broader watershed sciences subject areas. This feeds into the USDA's overarching goal to develop a diverse workforce of natural resource professionals that is reflective of the demographics that the agency serves.

▲ Dr. Lucy Ngatia (right) showing CAFS students Gbemisola Akinbi (left) and Dennis Kipkosgei, how to map their location within the Pine Creek watershed in the Apalachicola National Forest.



▲ Scholarship check donation from the Reuben Capelouto Foundation. (L-R) Robert Taylor, Ph.D., Janice Peters, Susie Legaspi, Ph.D., Grant Capelouto, Lambert Kanga, Ph.D. and Audrey Simmons Smith.

## REUBEN CAPELOUTO FOUNDATION SCHOLARSHIP FUND STILL HELPING STUDENTS AFTER 35 YEARS

by **Andrine Stanhope**

The Reuben Capelouto Foundation, Inc., has been providing scholarships to students studying entomology at Florida A&M University (FAMU) over the past 35 years. Capelouto started his own pest control business, Capelouto Termite & Pest Control, Inc. in Tallahassee, Florida in 1965. A professional in pest control, he was an ardent believer in education. In 1970 he joined FAMU as an adjunct faculty teaching entomology related subjects. He helped to expand the undergraduate curriculum by exposing students to business-related entomology, as he thought that many of the students would enjoy careers in the pest industry.

Following his passing in 1980, the family established the Reuben Capelouto Foundation, Inc. to assist with educational support for students studying entomology at FAMU. The Foundation has been giving these awards at the Annual Field Day and Workshop in entomology, which was started by Capelouto and was later renamed the William L. Peters Annual Field Day and Workshop. William Peters, Ph.D., was an entomology professor in the College of Agriculture and Food Sciences for 33 years and was instrumental in Capelouto being added to FAMU's faculty at the time. Peters passed away in 2000.

Scholarship awards, not only helped to cover the cost of pursuing higher education, but positively impacted and changed the lives of students as well.

"The Capelouto scholarship I received was of great help in paying my tuition fees," Jermaine Perrier, a graduate student said.

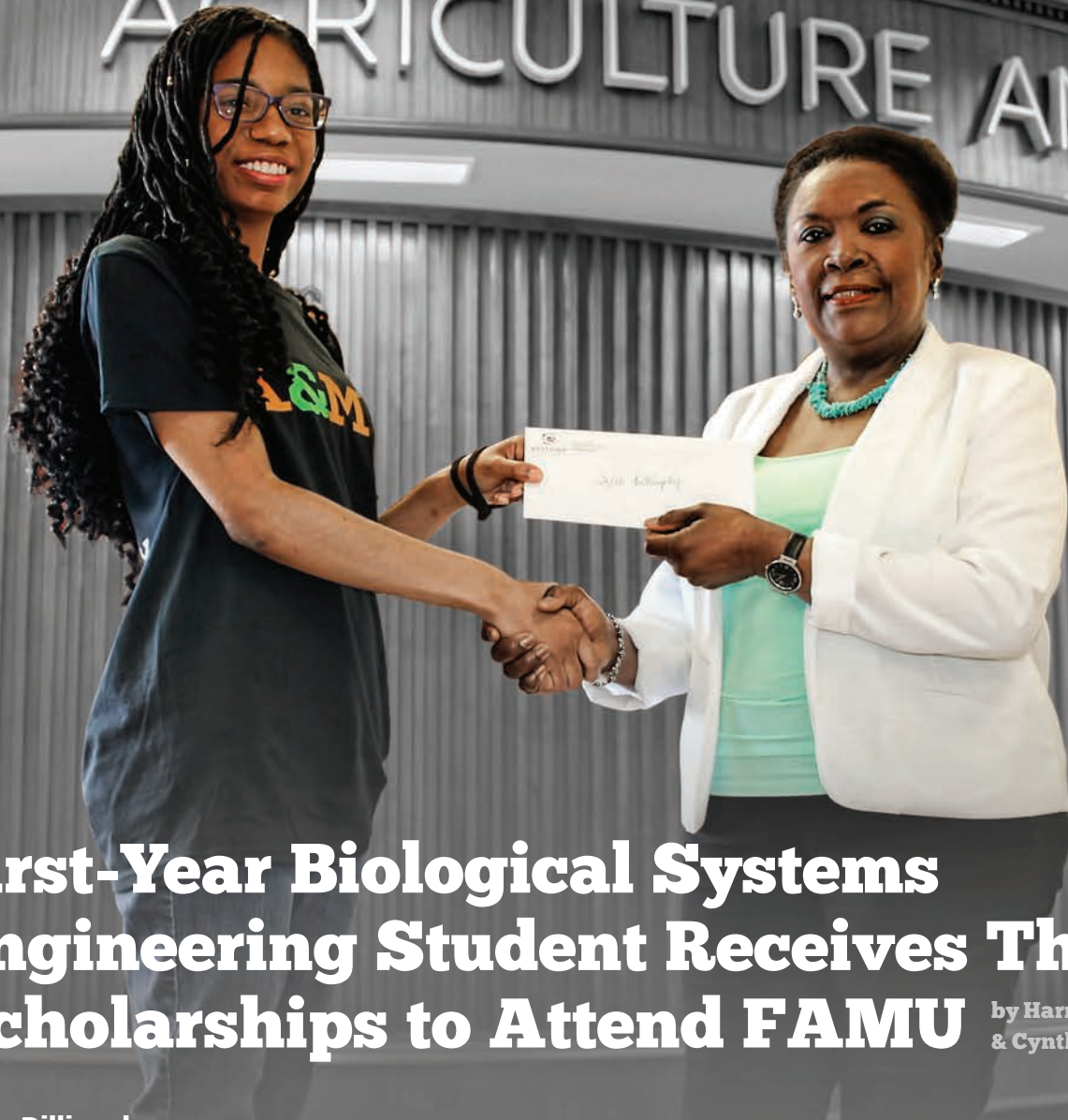
"The scholarship helped me greatly. I was able to purchase text books and a laptop that aided the timely completion of my master's degree in entomology," said Worrel Diedrick a three-time recipient of the scholarship and a current doctoral entomology student.

"Being a recipient of the William Peters Memorial Scholarship awarded through the Reuben Capelouto Foundation has boosted my self-confidence knowing that I am one step closer to attaining a master's degree in entomology," Donna Arnold said. "It provided the well needed financial assistant I used to purchase books and other materials essential to my studies." The Capelouto Foundation transferred a lump sum cash asset of \$50,000 to FAMU in August 2018, to continue support for students.

Many students graduate and will graduate from college with enormous student loans, and some will curtail their education in an attempt to control costs. Scholarships, however small, play an important role in helping to make college not only more accessible, but also affordable. The scholarships awarded through the Foundation have done that over the past 30 years, paving the way for recipients to be successful in the pursuit and completion of their degree.



# AGRICULTURE AND HOME



## First-Year Biological Systems Engineering Student Receives Three Scholarships to Attend FAMU

by Harriet Paul  
& Cynthia Portalatín

**Tajah Billingsley**, a first-year biological systems engineering major, was awarded a \$5,000 scholarship through the inaugural Gerard Magloire Goodwill Fund to support her college education at Florida A&M University (FAMU). The funds were awarded as a grant to the Marialla V. Magloire (MVM) Foundation, and disbursed to Ms. Billingsley. She was also awarded a \$500 scholarship from the MVM Foundation's Gerard Magloire Goodwill Fund. These awards were presented by the FAMU Office of International Agriculture Programs' Director, Harriett A. Paul, in her capacity as president of the MVM Foundation, during a special presentation held in the College of Agriculture and Food Sciences (CAFS). The MVM Foundation offers scholarships to students with dedication and passion for science, the arts and providing care to those with various medical needs.


Billingsley received an additional scholarship for \$700 from the Program of Excellence in Science, Technology, Engineering and Mathematics funded under the Department of Education's Minority Science and Engineering Improvement Program. As part of this program, in which she remains active, she attended four summers and four years of school-year Saturdays during high school.

Choosing to attend FAMU continues to be a Billingsley family legacy of becoming "Rattlers," as her mother, father and both of her grandmothers are also FAMU graduates. A 2018 graduate of Lincoln High School, Billingsley was recruited to attend CAFS by Paul.

"Tajah demonstrated outstanding academic achievements in high school while also being a direct caregiver to her father when he was ill," said Paul. "She not only is an exceptional student, but she is also a person who puts her family first. For these reasons, she was selected to receive the MVM scholarship award, and we look forward to the wonderful things that are yet to come for her as she continues to pursue her education."

For more information on the Marialla V. Magloire (MVM) Foundation, visit: [www.mariallamagloirefoundation.org/](http://www.mariallamagloirefoundation.org/).

▲ Tajah Billingsley, biological systems engineering freshman (left), being presented with her scholarship award by Harriett Paul, director for International Agriculture Programs (right).



# Crossing Borders:

Research Training and global outreach

by **Andrine Stanhope**

An institution of higher education, Florida A&M University (FAMU) is no stranger in partnering with international government agencies and other institutions of higher education to provide research and training opportunities. The College of Agriculture and Food Sciences (CAFS) at FAMU is known for its global exchange programs offering technical expertise, use of the well-resourced laboratories, rigorous research and fresh perspectives to both deliver assistance and improve policies and practices where needed.

▲ Associate Dean Verian Thomas, Ph.D. (center) and Assistant Professor Muhammad Haseeb, Ph.D. (right), combined efforts to offer training to Guyanese research scientist, Oceana O'Dean.



▲ Oceana O'Dean identifying insect under microscope.

## GUYANESE RESEARCH SCIENTIST RECEIVES TRAINING AT FAMU

Stemming from her sabbatical at the University of Guyana, Verian Thomas, Ph.D., a professor in CAFS, the National Agricultural Research and Extension Institute (NAREI) in George Town, Guyana was able to collaborate with CAFS' entomology program to host and offer training to one of their staff members, Oceana O'Dean.

O'Dean a research scientist and head of the Entomology, Plant Pathology and Weed Science Department at NAREI got the opportunity to conduct research under the supervision of Muhammad Haseeb, Ph.D., assistant professor and entomologist in the Center for Biological Control (CBC), Lambert Kanga, Ph.D., professor and director for the CBC, and Jesusa Legaspi, Ph.D., entomologist at the U.S. Department of Agriculture Agricultural Research Service (USDA-ARS) and co-director for the CBC.

Her training focused on proper identification of signs and symptoms of serious pests. In addition, training was provided on the IPM practices to manage pests effectively in open fields. "Guyana have very few entomologists and they need new innovations to identify, monitor and manage pest insects and diseases," Haseeb said.

"The country, is moving forward on reducing the acreage on sugarcane production and is focusing on the bio diversification of their agroecosystems to support stakeholders and clientele."

"FAMU has interest in the region to support higher education, trade, tourism and food security."

Having learned things like techniques used in morphological identification, assessing plants for insect damage and various ways to manage these insects, has opened a new world of possibilities for me as a researcher and for our local stakeholders," O'Dean said.

"By realizing the gaps, we have in Guyana I can identify areas, which need to be addressed." O'Dean also serves on the Research Committee, Crop Protection Committee and the Extension Services Committee at NAREI and has authored several technical articles published in NAREI's Annual Reports.



▲ Muhammad Haseeb (left) observing a field of legume crop after the mechanical removal of weeds.

## CAFS PROFESSORS TRAVEL TO JORDAN

Dairy producers in eastern Jordan relies heavily on forage sorghum and silage corn to feed their cattle, however, production of these irrigated grown forages are not sufficient.

Aavudai Anandhi, Ph.D., and Muhammad Haseeb, Ph.D., both assistant professors in the College of Agriculture and Food Sciences (CAFS), traveled to Zarqa and Mafrag in Jordan to observe and support ongoing research and extension initiatives by Mohunnad Massimi. Massimi, a former Borlaug fellow and crop production and extension officer with the Ministry of Agriculture in Zarqa, Jordan, conducted a 3-month research training at the Florida A&M University College of Agriculture and Food Sciences in the summer of 2017.

"Lower crop productivity is due to poor agricultural practices and people including local farmers moving to urban areas and out of farming and agriculture related areas," said Muhammad a specialist in agricultural best management practices.

"In addition," said Anandhi, "sustainable yield and economic yields are not favorable due to global warming and its impact on soil salinity and crop productivity."

An expertise on irrigation modelling, Anandhi stated that every year, Jordan suffers a lot of extreme and harsh environmental conditions such as high temperatures and drought conditions, making it even more reliant on irrigation.

Anandhi and Haseeb made several visits to farmer fields where they were able to see Massimi's work firsthand and provided their feedback on how to on how to enhance the production of the crops.

Anandi and Haseeb experts on best management practices saw the positive results from Massimi's training at FAMU and saw the need to develop an MoU to strengthen collaborations between the institutions that can facilitate easy exchange of scholars, exchange of ideas and experiences.

# FAMU STUDENTS GAIN INSIDE LOOK AT AG PEST AND PLANT DISEASE PREVENTION IN FLORIDA

by Cynthia Portalatin

**S**tudents recently gained an inside look at how the Florida Department of Agriculture and Consumer Services (FDACS) and its federal and state partners protect Florida's agricultural industry from invasive or exotic plant species.

Seven students minoring in global agriculture at Florida A&M University (FAMU) participated in a two-day "Florida Study Tour" held September 14-15, as part of a U.S. Department of Agriculture (USDA) grant program led by Harriett A. Paul, director of FAMU's Office of International Agriculture Programs (OIAP) and Center for International Agricultural Trade Development Research and Training (CIATDRT).

The USDA provided funding through the 1890 Universities Foundation, Inc. to create a small grant program to advance the goal of increasing the diversity of USDA employees in the Foreign Service.

"We are excited to partner with the USDA to increase the participation of our agriculture graduates from historically Black colleges and universities (HBCU) into Foreign Service career tracks," says Paul.

Students visited the following three locations during the tour: FDACS - Division of Plant Industry; USDA - Animal Plant Health Inspection Service (APHIS) and U.S. Customs and Border Protection - Jaxport; and an I-10 Agriculture Inspection Station.

## **FIRST STOP: FDACS - Division of Plant Industry**

The first stop of the tour was at the FDACS - Division of Plant Industry in Gainesville, Florida where students learned how the division supports and promotes agriculture while safeguarding consumers. Through the Bureau of Pest

Eradication and Control, staff respond to the introduction of plant pests and diseases of economic significance to Florida and initiates control and eradication measures against these pests. FAMU students also visited the Bureau's entomology rooms and viewed a variety of insect collections, as well as an apiary room where they were able to sample different flavors of honey. Leroy Whilby, Ph.D., bureau chief of Entomology, Nematology and Plant Pathology at FDACS, who is also a FAMU alumnus, was the host for the study tour at the Division of Plant Industry.

## **SECOND STOP: USDA APHIS and U.S. Customs and Border Protection - Jaxport**

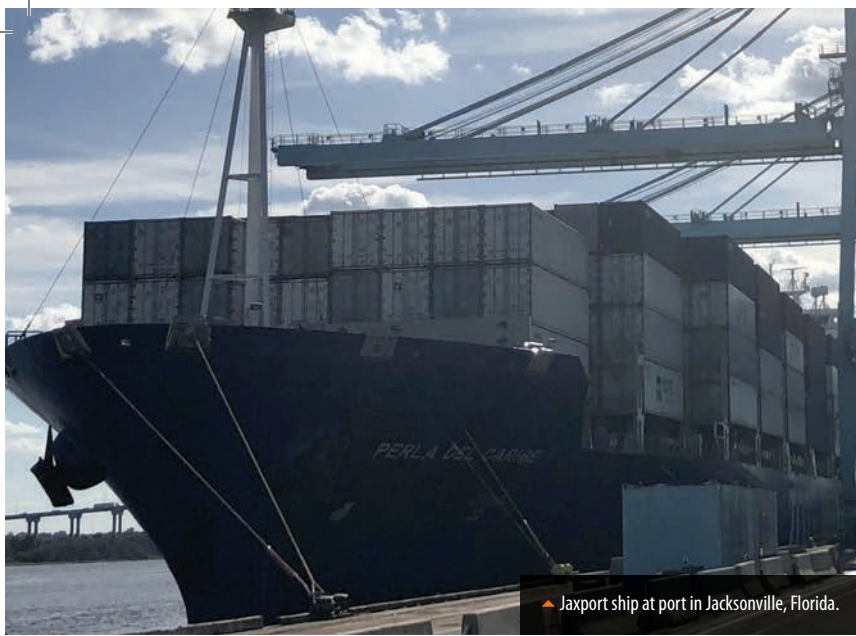
The next visit was the USDA APHIS and U.S. Customs and Border Protection - Jaxport, located in Jacksonville, Florida. Jaxport is an international trade and cruise seaport situated in the heart of the South Atlantic at the crossroads of the nation's rail and highway network. Students learned how agents monitor and control the introduction of pests that arrive in the U.S. on various shipments from foreign countries. They also toured a pest identification lab and observed a ship being unloaded at the port.

## **THIRD - FINAL STOP: I-10 Agriculture Inspection Station**

After a full day of experiential learning on Friday, the students rose early on Saturday to head to their final study tour destination – an I-10 Agriculture Inspection Station in Live Oak, Florida. Agricultural Law Enforcement officers on duty described their jobs and what they look for in shipments on motor vehicles and trucks traveling on Interstate 10 (I-



▲ Agricultural law Enforcement Officer demonstrates inspection of agricultural commodities at I-10 Ag Inspection Station in Live Oak, Florida.



▲ Jaxport ship at port in Jacksonville, Florida.

10). Their main duty is to prevent plant and animal pests and diseases, and unsafe food from entering Florida.

Students were able to observe the officers in action as they inspected a truck containing broccoli and Brussel sprouts. The inspectors randomly selected several boxes that were separated from the shipment and examined carefully for possible pests or signs of plant disease. After the inspection, the boxes that had been examined were wrapped with yellow tape before returning them to the truck. Marking the boxes that had been examined will help prevent the shipment from being rejected once it reaches its destination.

During cargo inspection, officers look for agricultural products that are not in compliance with state and federal plant quarantine regulations or that have not been inspected. They also check for agricultural pests, disease carrying plants and animals, unsafe food products, and food products that are improperly stored. Statewide, 23 agricultural inspection stations operate to protect Florida's agriculture to ensure a safe food supply. Open 24 hours a day, 365 days a year, there's a station on every paved highway going into and out of the state, according to FDACS.

"This trip was only a day and a half but I took away so much knowledge from this experience. I am happy to see that there are so many opportunities and experiences available in Florida, and I am very excited for my future," said Tashani Brown, graduate student and entomology major.

**Students who participated in the Florida Study Tour were:**

- Kristen Adkins, *entomology major*
- Tashani Brown, *entomology major*
- Meghan Campbell, *veterinary technology major*
- Jorge Del'Angel, *biological systems engineering major*
- Jahlita Janeau, *agronomy major*
- Shayah Pierre, *food science major*
- Halimah Wynn, *agronomy major*



▲ Trucks, trailers and any vehicles carrying agricultural, horticultural or livestock products are inspected at the I-10 Agricultural Inspection Station in Live Oak, Florida. Students observing inspection.

"I am very proud of how our global agriculture students have taken on the role of young agricultural diplomats, learning both the science and the social science aspects of the varied careers," says Paul. FAMU CAFS OIAP extends special appreciation to the following individuals for their assistance in ensuring that our students had an exceptional learning experience during the Florida Study Tour: Leroy Whilby, Ph.D., bureau chief of Entomology, Nematology and Plant Pathology at FDSACS, Division of Plant Industry; Phil Shur, supervisory agricultural specialist at Jaxport U.S. Customs & Border Protection; Peter T. Grace, Supervisory PPQ Office, USDA APHIS; and Steve Hildebrandt, import certification specialist, Division of Plant Industry; I-10 Agriculture Inspection Station.

For more information, contact Harriett Paul at [harriett.paul@famuedu](mailto:harriett.paul@famuedu) or (850) 599-8867. Follow our global journeys on Facebook at: <https://www.facebook.com/GlobalAgricultureFAMU/> for Global Ag Minor student news and <https://www.facebook.com/FAMUFarmertoFarmerProgram/> for FAMU USAID Farmer-to-Farmer project news.

# FAMU COOPERATIVE EXTENSION PROGRAM ANSWERS THE CALL OF DUTY

by Kalen Johnson

Like many Americans, Vonda Richardson, director for the Cooperative Extension Program at the Florida A&M University (FAMU) College of Agriculture and Food Sciences (CAFS) watched the devastation that hurricane Michael brought on sections of the Florida Panhandle and Big Bend area and knew that CAFS had to do something to help.

Cooperative Extension Program (CEP) set out to provide relief services to Hurricane Michael victims without duplicating the efforts of others in the community.

"Responding to some of the basic needs of our clientele after hurricane Michael, showed CAFS' Cooperative Extension strengths in time of disaster," Richardson said. "We work in these communities, and they support our programs, so it was only natural for us to support them."

After receiving donations from faculty and staff, the staff went shopping for the supplies needed to put their plan to action.

The FAMU CEP provides direct technical assistance to improve the quality of life for limited resource

citizens throughout Florida. After Hurricane Michael, the program did just that. They hosted spaghetti dinners, offering citizens a hot meal. Through their 4-H project they created the Hurricane Michael Donation Drive. They asked for non-perishable items and school supplies for the children affected by the storm. They utilized the Smith-Williams Community Center as a drop-off location.

The Family and Consumer Sciences extension program conducts disaster preparedness and safety education in addition to helping citizens respond and recover from disaster. Extension agent, Kimberly Davis said, "We believed people needed more than education because of the impact of our area. These are the people that we work with and are a part of our community. Therefore, we decided to do hurricane efforts to assist the people."

Hurricane Michael was the third-most severe hurricane in the Atlantic to make landfall in the United States. It was also the first Category 4 storm on record to make landfall in the Florida Panhandle.

Nearly 122,000 public power

customers in Tallahassee, Havana, Quincy, Chattahoochee and Blountstown were without power. Tallahassee had more than 95 percent of its customers without power. Havana, Quincy, Chattahoochee and Blountstown were left 100 percent in the dark.

The program hosted their Hurricane Michael disaster relief in multiple locations including the Havana Community Development Cooperation in Havana, FAMU Research and Extension Center in Quincy and in Apalachicola. Coordinator, Ronda Miller said, "We tried to make sure we went to the areas where help was minimal, as some areas had an influx of relief efforts."

The Cooperative Extension Program continues to have a presence in some of the affected areas providing on-going assistance and donations in the form of canned food, clothing and household goods. An organization is only as strong as its people. Responding to and recovering from these disasters showed the "true value" of FAMU CEP.



▲ Cooperative Extension personnel preparing to feed hurricane victims at the Havana Community Development Center in Havana, Florida. Left – right Renysha Harris, Rhonda Miller and Erica Willis.



*IF I WAS ABLE TO MANIFEST  
A VISION INTO REALITY,  
THEN SURELY YOU CAN.*





# DON'T GIVE UP

**A** historically Black college and university known for delivering irreplaceable experiences and a valued education, a rich legacy, the Marching "100," Set Fridays, spades tournaments, cultural explosion, prestige, and opportunity are just a few things that comes to my mind when I think of my Alma Mata, Florida A&M University (FAMU).

My name is J'Que C. Jones, a 31-year old professional engineer, currently employed at the natural Resources Conservation Service (NRCS), an agency within the United States Department of Agriculture (USDA). When I applied to the FAMU-FSU College of Engineering, I knew I wanted to be an engineer, but was not certain which of the disciplines I wanted to pursue. Upon my enrollment at FAMU in the fall of 2004, I initially pursued electrical engineering, but after my

first course, introduction to electrical engineering, I quickly found out, it was not for me. I had to make my decision quickly on another discipline in engineering that would interest me. Carefully perusing the other engineering majors, I decided to change from electrical to civil engineering as it offered a wide range of fields one could specialize in dealing with the built environment such as design and construction of roads and bridges, rail and subway systems, water and irrigation management to name a few.

In life sometimes things go bad, leaving you without any recourse, or so you might think. Up to my sophomore year as a civil engineer student, most of my classes were large, which made it even harder get quality one-on-one and assistance from professors after classes. With very little guidance, I enrolled in classes out of sequence, took on several difficult classes at the same time and some semesters more credit hours than I could handle. Like a lot of other students, I worked during the evenings and on most weekends, which took time away from studying. This was surely a recipe for disaster and my grades started to suffer. By the end of my sophomore year, my grades plummeted so badly, I found myself out of the program. Not to leave myself blameless, if had forego some of the parties, hung out less and applied myself more, I am sure my grades would have been better.

I went into the summer break not sure what my next academic move would be, what other degree I could pursue, or if going back to college was an option. As the days went by and I pondered my next move, I received a letter in the mail from Charles Magee, Ph.D., a professor in the former College of Engineering Sciences Technology and Agriculture now known as the College of Agriculture and Food Sciences (CAFS). In the letter Dr. Magee outlined that African Americans were far removed from agricultural fields and that more African Americans needed to be ▶

## ALUMNI

## SPOTLIGHT

### J'QUE C. JONES

enrolled in agricultural majors in order to contribute to global food security. Reading the letter, not only was it motivational and inspiring, but I felt humbled that I was not given up on. I thought if Dr. Magee felt I could succeed

in this program, then I owed it to myself to give it my all. After reading the other documents he had included about the BASE program, such as the curriculum and other requirements for graduation, I realized I had already completed most of the prerequisites, I felt like this was a sign that this was where I needed to be.

I did not miss a beat and in the fall of 2006, I enrolled in the BASE program. As the semester progressed, I knew I had made the right decision. A stark contrast to my first two years. The class sizes were much smaller, professors were readily available after classes and I had an advisor who ensured I carried a manageable course load and a balanced mix in terms of difficulty. Although I had to take some of the engineering courses at the College of Engineering, it was no longer daunting, I now had a support system and comradery of my other BASE classmates. It was this support system that that helped propelled me to where I am today.

My career with the NRCS actually started during my final summer in the BASE program. After going through a competitive interview process, I was selected and offered an opportunity to intern in Palmetto, Florida as an engineer trainee. I must have carried out my assigned task and duties well, because after graduating fall 2009, I was offered a full-time job as an agricultural engineer. Nine years later, I was promoted to an assistant state conservation engineer in North Carolina. In this position, I was fortunate enough to have worked in central and north Florida, and several locations in North Carolina where I conducted topographic



surveys; planned, designed and oversaw construction on engineering practices ranging from irrigation systems, auxiliary spillway repairs and dam structures. In my recent promotion as acting state conservation engineer, I am

responsible for providing leadership and guidance to the State of North Carolina in all phases of engineering.

I am sharing this not to brag or gloat, but to motivate and inspire my fellow current and future Rattlers, and other college students that you should not allow failure to stop you from picking yourself up and trying it again. Don't get me wrong, by no means was I an all "A" student, as is obvious in my previous statements. However, I was not about to make one failure put a damper on my future or hinder my success. As the familiar phrase by William Edward Hickson states, "... If at first you don't succeed, try, try and try again." If I was able to manifest a vision into reality, then surely you can. The truth is that for most of us, success is where preparation meets opportunity: Opportunities are abundant, but will you be ready when they present themselves?

I know there is still much to be accomplished, more work to do, and still higher heights to reach and stereotypical barriers to break through, but I am ready for the task. None of this would have been possible without the FAMU-CAFS faculty and staff, especially Dr. Magee, Margaret Gitau, Ph.D., and Crystal Carter who really took genuine interest in the success of their students.

*In the 84 years of the Natural Resources Conservation Service (NRCS) Agency's history, only six African Americans have excelled to become state conservation engineers and acting state conservation engineers. Three of the five are graduates from FAMU. "J'Que has demonstrated that all flowers do not bloom at the same time," said Magee.*

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# Cornu Copi A inStitut E Ad vi Sor y pAnEl

**Jennifer Taylor, Ph.D.**, associate professor in the College of Agriculture and Food Sciences (CAFS) at Florida A&M University (FAMU), was appointed in October 2018 to serve in a leadership position on the Cornucopia Institute's Policy Advisory Panel. The Cornucopia Institute, is a farm policy research group based in Wisconsin, that provides education in support of ecological principles and economics underlying sustainable and organic agriculture. Through research and investigations on agricultural issues, the Cornucopia Institute provides needed information to consumers, family farmers and the media.

A small farm specialist in CAFS Cooperative Extension Program, Taylor developed and coordinates the Statewide Small Farm Program, focusing on food systems and sustainable agriculture.

"The program is a participatory sustainable development program that provides education, hands-on training and technical assistance in alternative agricultural systems, organic farming systems, alternative market/food systems development and sustainable living for underserved farming populations and their communities," Taylor said. "The objective and end goal is to help farmers gain access to resources, enhance small farm sustainability, enable change and encourage farm community well-being in Florida.

Of the more than two million farms in the U.S., about 80 percent are small farms and a large percentage of these are family owned. Family and small farms are vital to our economy and

well-being as a nation.

Small farmers have the opportunity to sell their products at the Growers' Market, another one of Taylor's conceptions and creations. Consumers from the Tallahassee community and surrounding counties visit the Growers' Market at Lake Ella in Tallahassee, Florida, to purchase local fresh food and support local small farmers.

"Every Wednesday for the past 15 years and now on Saturdays, the public gets the opportunity to meet their local small farmers and purchase fresh organically grown produce and an array of food including seasonal fresh vegetables, fruits, gourmet baked breads, falafel, halvah, pita and much more," Taylor said. "Over the years, the Growers' Market has been a launchpad for several successful Community Sustainable Agriculture value-added businesses and local farm operations.

Taylor also facilitates on-farm tours to local small farmers, allowing consumers to see how their food is grown and as a form of agro tourism.

"The students and faculty in CAFS also benefit from these tours, which adds to the overall classroom-learning experience," Taylor said.

Taylor served as the chair on the National Organic Standards Board Material Committee for the USDA National Organic Program and the GMO-Ad hoc subcommittee from 2011 – 2016 and also served on the USDA Advisory Committee for Beginning Farmers and Ranchers.

"My service on the respective committees gave me an additional platform to work with and enable underserved small farm populations

to improve sustainability of organic small farms and serve as a voice to the nation's organic community," Taylor said.

Taylor currently serves as a member representing the southern region on the Organic Farmers Association (OFA) as vice president of OFA's Governing Council and Vice President of OFA's Policy Committee and on the Real Organic Standards Board for the Real Organic Project; member of the United States Food Sovereignty Alliance (USFSA) and co-coordinator of the USFSA southern region; and member on the Executive Board of the International Federation of Organic Agriculture Movements - North America Board.

In September of 2018 Taylor served as a U.S. delegate to the International Terra Madre Salone del Gusto Conference in Turin, Italy, where she represented small farmers and FAMU. "Small farmers, fishers, ranchers and producers, chefs, experts and facilitators from around the world, discussed important issues linked to agriculture, organic farming, agroecology, climate change, seed saving, GMO contamination, and the related food issues that protect healthy food choices, sustainability, biodiversity, indigenous knowledge, and well-being of communities and key areas of concern," Taylor said.

Taylor's participation in Italy's 2018 Terra Madre Salone del Gusto provided a great opportunity for FAMU, an 1890 Land-grant Institution to engage in issues concerning global food and agriculture.



## AAU REAFFIRMS COMMITMENT WITH FAMU FOR INTERNATIONAL COLLABORATION

**AS**

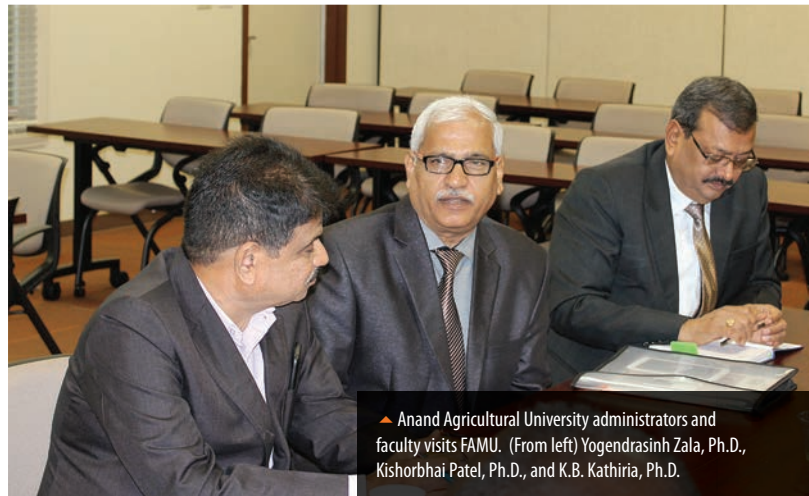
part of their on-going initiative and collaboration, a delegation of administrators and scientists from Anand Agricultural University (AAU) visited Florida A&M University's (FAMU) College of Agriculture and Food Sciences during the summer of 2018. The visit was a follow-up to the Memorandum of Understanding (MoU) signed by the two universities earlier in the year. The MoU signals the commitment of Larry Robinson,

Ph.D., President of FAMU to expand the University's global reach in international education, research and outreach. Leading the delegation from AAU were Kathiria Keshubhai Bachubhai, Ph.D., director of Research and dean of Postgraduate Studies; Patel Kishorbhai Parsottam, Ph.D., dean and principal of the College of Agriculture, and Yogendrasinh Chhatrasinh Zala, Ph.D., dean and principal of the International Agribusiness Management Institute at AAU. The AAU delegation's visit reaffirmed their commitment to international collaborations with administrators and scientists at FAMU.

Keen and mutual areas of interest between FAMU and AAU are international collaborative research, faculty exchange programs, student exchange programs, courtesy appointments of faculty, online course offerings, joint degrees, technology transfer and capacity building. Other Indian institutions under the on-going collaborative work of the FAMU-India Initiative includes the National Council on Climate Change, Sustainable Development and Public Leadership, Vivekananda Research and Training Institute and Junagadh Agricultural University.



▲ Odemari Mbuya, Ph.D., director of the Center for Water Resources at Florida A&M University's (FAMU) College of Agriculture and Food Sciences, giving a presentation to administrators and faculty at Anand Agricultural University in Gujarat, India.



▲ Anand Agricultural University administrators and faculty visits FAMU. (From left) Yogendrasinh Zala, Ph.D., Kishorbhai Patel, Ph.D., and K.B. Kathiria, Ph.D.



▲ Advances in biotechnology makes it possible to reduce the breeding time of date palm trees from 7 to 4 years. Dr. Kathiria showing one of the date palm trees bred using tissue culture.



## FAMU Partnership in Re-entry Issues Facing Ex-felons Symposium

Professionals from law enforcement, religious organizations, higher education and nonprofit organizations participated in a two-day symposium focusing on “enhancing re-entry partnerships.” The event held November 28 - 29, 2018 at the Tallahassee Community College (TCC) Center for Workforce Development was attended by several re-entry stakeholders, such as Florida A&M University (FAMU), Bethel's Ready 4 Work, Leon County Sheriff and Department of Corrections (DOC) personnel.

The symposium was the brainchild of Keith Parker, Ph.D., a professor of sociology and criminal justice, in collaboration with the Cooperative Extension Program (CEP). Parker said the event is necessary to shed light on issues that lead to recidivism.

Several ex-felons in the audience brought reality to the conversation

during a question and answer session that followed Vikrant P. Reddy's methodical outline of philosophies and practices that affect the re-entry process for people who have served their prison sentences. Reddy, senior research fellow at Charles Koch Institute, pointed out several faults with ways that ex-felons are prepared for their eventual release. Many in the audience pointed to a lack of vocational training, education and drug rehabilitation as part of the problems they face when they return to their communities. Reddy agreed, pointing to the lack of employment readiness as one of the biggest issues facing ex-felons.

“Absolutely,” he said. “There has to be a lot more work done behind bars on getting people trained with the right education and the right skills. “Job training is so important. It is the number one factor as to whether

or not people recidivate when they come out from behind bars. It's also important to get people the necessary drug treatment and medical health treatment.”

“FAMU's Cooperative Extension Program, in partnership with several re-entry stakeholders and other organizations in the Big Bend area, provide training and other educational programs geared towards helping incarcerated persons' re-entry into society, find meaningful employment, live successful lives and contribute to their community,” said Vonda Richardson, director. Florida releases just more than 30,000 prisoners annually, according to the state's corrections department. Many of them face almost all of the issues that Reddy spoke on.

“I think it's very important for the community to engage in a symposium like this because 95 percent of people





by St. Clair Murraine,  
Andrine Stanhope

▲ Keith Parker, Ph.D., professor of sociology and criminal justice at FAMU (right), along with (L-R) Samuel Hand, associate professor and extension educator at FAMU; Annie Grier, director of Community Partnerships and Training Institute of Justice and Research and Development at Florida State University and Taylor Parks, sociology senior at FAMU.

who are placed on supervision and people who are incarcerated are going to be released and they are going to be released into our communities," said Matthew Sampson, a DOC Circuit 2 administrator. "It's very important that every entity get on board because guidance is needed. "

"If you've been locked up for five to 10 years, you have nothing, especially if you don't have family. We want to provide them with guidance."

Several educational and skill-training programs where ex-felons can receive certification are ongoing. FAMU CEP in collaboration with Fresh Start Visions Re-entry Program and Franklin County Sheriff's Department offer inmates the opportunity to get a certification in Green Industries Best Management Practices (GI-BMP), which is required for people working in lawn-care and landscape maintenance. Students who graduate from the GI-BMP

training, can enroll for further training by FAMU CEP where they would then receive a horticultural professional certification upon successfully passing a comprehensive exam administered by the Florida Nurserymen Growers and Landscape Association (FNGLA).

Reddy, who titled his speech "How to Talk to Your Conservative Friend About Criminal Justice," delved into three main areas affecting re-entry – public safety, money, and human dignity. On the issue of public safety, Reddy said that putting people behind bars isn't the absolute answer. He also suggested that re-entry might be more effective if preparation for prisoners' release begin the day they start to serve their time.

"There is an impression among a lot of people that in order to have a safe and secure society that you've got to do is lock people up," he said. "Put them away; get the bad guys off the

streets and we are all going to be safe."

"Human dignity should be a part of the ongoing debate over criminal justice reforms," Reddy said. "The mindset that family and community are core to the America ideal is good; however, there is the question of what happens in neighborhoods that have one third of the fathers behind bars," Reddy said. Usually the fallout is devastating, research has shown.

"If you have a child who has a parent behind bars, that child's likelihood of graduating from high school is lower. That child's likelihood of becoming pregnant as a teenager is higher. That kid's likelihood of using drugs is higher and that kid's likelihood of someday ending up in prison is much, much higher."







## Alumni Corner



### LEVON ESTERS,

professor at Purdue University was awarded the 2018 National Experiment Station Section National Diversity and Inclusion Award. Esters earned a bachelor's degree from the College of Agriculture and Food Sciences (CAFS) agri-business program in 1995.

### KIMBERLY MARIE,

promoted to commodity analyst at the USDA Foreign Agricultural Service. Marie earned a master's degree from CAFS' agri-business program in 2016.

### KHYRRAH-CYMONE SHEPARD,

independent scientist, deliberates realistic challenges within the realm of cannabis genome sequencing and how advances in technology will better equip the industry for innovations. Publication entitled: "Challenges in Cannabis Genome Sequencing for Genetic Tracking and Traceability," was published in the Cannabis Industry Journal. Shepard earned a master's degree from CAFS' food science program in 2015. <https://cannabisindustryjournal.com/column/challenges-in-cannabis-genome-sequencing-for-genetic-tracking-and-traceability/>

### JULIUS EASON,

published a paper titled "Mechanisms of Resistance to Organ phosphorus and Pyrethroid Insecticides in Asian Citrus Psyllid *Diaphorina citri* Populations in Florida," in Current Investigations in Agriculture and Current Research (CIACR) open access journal. Eason earned a master's degree from CAFS' entomology program in 2015. DOI: 10.32474/CIACR.2018.01.000111.

### PENGXIANG WU,

published a paper titled "Functional Responses and Intraspecific Competition in the Ladybird *Harmonia axyridis* (Coleoptera: Coccinellidae) provided with *Melanaphis sacchari* (Homoptera: Aphididae) as Prey," in the European Journal of Entomology. Wu earned a master's degree from CAFS' entomology program. doi: 10.14411/eje.2018.022.

### EDIDIONG INYANG,

placed third in the College of Science's Annual Celebration of Excellence by Students (ACES) – 2018 Research Symposium oral presentation competition. Inyang is a recipient of the University of Texas System Louis Stokes Alliance for Minority Participation two-year fellowship for students pursuing their doctoral degree in STEM. Inyang earned a master's degree from CAFS' entomology program.



## Congratulations Fall 2018 Graduates!



### UNDERGRADUATE STUDENTS

|                            |                             |
|----------------------------|-----------------------------|
| <b>Mia Butler</b>          | B.S., Agri-Business         |
| <b>Shachem Crafton</b>     | B.S., Veterinary Technology |
| <b>Aubrey Cross</b>        | B.S., Food Science          |
| <b>Kimani Flemming</b>     | B.S., Agri-Business         |
| <b>Tatiana Hughes</b>      | B.S., Food Science          |
| <b>Brittany Johnson</b>    | B.S., Animal Science        |
| <b>Destiny Johnson*</b>    | B.S., Animal Science        |
| <b>Keiyana Johnson*</b>    | B.S., Veterinary Technology |
| <b>Kaleigh Monroe</b>      | B.S., Agronomy              |
| <b>Hailee Morris*</b>      | B.S., Agronomy              |
| <b>Chinemenma Okoroji*</b> | B.S., Entomology            |
| <b>Tranard Styles</b>      | B.S., Animal Science        |
| <b>Tristum Williams**</b>  | B.S., Agronomy              |
| <b>Zachary Wilson**</b>    | B.S., Food Science          |

\*\*\* Summa Cum Laude | \*\* Magna Cum Laude | \* Cum Laude

### GRADUATE STUDENTS

#### Albertha J. Parkins

*Degree:* M.S., Agricultural Sciences: Entomology  
*Thesis:* Monitoring and management of the Spotted-Wing Drosophila, *Drosophila Suzukii* (Diptera: Drosophilidae), a Serious pest of blueberries in Florida  
*Thesis Chair:* Muhammad Haseeb, Ph.D.

#### Gbemisola Oyindamola Akinbi

*Degree:* M.S., Agricultural Sciences: Major: Plant Science  
*Thesis:* Influence of vegetation Types on carbon dynamics, microbial response and methanogenesis in Apalachicola National Forest wetlands  
*Thesis Chair:* Robert W. Taylor, Ph.D.



## Retirement >>>>>>>>>>>>>>>>>>>

**DONNA SWILLEY**, the College of Agriculture and Food Sciences would like to wish you a very happy retirement after 20 years of service. Your hard work and dedication have greatly benefitted our college. Retirement will surely offer you many new opportunities, which we know you will embrace wholeheartedly. We are wishing you the best in your future endeavors and this next phase of your life.

## THE FALLEN

### **Clarence Major Glenn, Ph.D.,**

*December 2018*

Glenn was the first African American to start his own veterinary practice in Huntsville, Alabama back in the early 70's on Jordan Lane. He was an outstanding veterinarian and earned his bachelor's degree from the School of Agriculture and Home Economics, now known as College of Agriculture and Food Sciences at FAMU.

## Grant Awards

**LUCY NGATIA, PH.D.**, assistant professor and Alfredo Lorenzo, Ph.D., professor, were awarded a U.S. Forest Service grant in the amount of \$74,000. The grant will focus on restoring Florida's open scrub to enhance water supply. The duration of the grant is August 2018 - July 2020.

**DANIEL SOLIS, PH.D.**, professor, was awarded a U.S. Forest Service grant in the amount of \$10,000. The grant will be used to fund undergraduate experiential learning programs. The duration of the grant is August 2018 - August 2019

**MICHAEL THOMAS, PH.D.**, professor, was awarded a USDA-APHIS grant in the amount of \$50,000. The grant will focus on economic analysis of biocontrol: APHIS cooperative agreement. The duration of the grant is August 2018 - August 2019.

**ISLAM EL-SHARKAWY, PH.D.**, assistant professor, and collaborators were awarded the NIFA grant in the amount of \$500,000. The grant will focus on muscadine whole genome and next-generation grape breeding: integrated approach to empower the quality of research and training at FAMU. The duration of the grant is December 2018 - November 2021.

**ISLAM EL-SHARKAWY, PH.D.**, assistant professor, was awarded Florida Department of Agriculture and Consumer Services (FDACS)/Viticulture Advisory Council (VAC) funding in the amount of \$20,000. The funding will be used to study muscadine genotypes in Florida with superior healthy qualities to reduce cancer risks; and \$37,000 to study breeding high quality southern grape cultivars for meeting industry demands in Florida. The duration of both funding is from July 2018 - June 2019.

**VIOLETA TSOLOVA, PH.D.**, professor and director for the Center of Viticulture and Small Fruit Research, received FAMU-USDA/ National Clean Plant Network/APHIS cooperative agreement funding in the amount of \$48,000. The funding was granted for the work plan regarding the FAMU National Clean Plant Center for Grape. The funding duration is from September 2018 - August 2019.

**VIOLETA TSOLOVA, PH.D. AND WALID EL-KAYAL, PH.D.**, professor and director for the Center of Viticulture and Small Fruit Research, received FDACS/VAC funding in the amount of \$30,000. The project will focus on virus(es) of the grapevine rugose wood disease and the probable cause of trunk/ fruiting arm dieback of muscadine in Florida and southeastern U.S. The funding duration is from July 2018 - June 2019.

**VONDA RICHARDSON**, director for FAMU Cooperative Extension Program, was awarded a Florida Department of Agriculture & Consumer Services (FDACS) grant in the amount of \$227,169. The Rural Farm to School Pilot Project, in collaboration with the New North Florida Cooperative Association, Inc., will focus on increasing the awareness and encourage school district consumption of locally grown produce through participation in Farm-to-School efforts. The duration of the grant is from August 2018 - June 2019.

**KEAWIN SARJEANT, PH.D.**, assistant professor, was awarded a USDA-NIFA grant in the amount of \$10,000. The grant which is sub-award through the University of Florida, will focus on building collaborative infrastructure in the Southern to support Food Safety Modernization Act (FSMA) compliant training, education, extension, outreach, and technical assistance as it relates to the produce industry. The duration of the grant is from October 2018 - September 2021.

## CAFS Professors: Co-PIs on Million-Dollar Grant

Gang Chen, Ph.D., professor, at the FAMU-FSU College of Engineering and principal investigator; and co-principal investigators, Lucy Nagatia, Ph.D., and Anandhi Swamy, Ph.D., assistant professors, College of Agriculture and Food Sciences; Joan Wu, Ph.D., Jan Boll, Ph.D., Vicki McCken, Ph.D., and Ani Jayakaran, Ph.D., Washington State University; and federal collaborator, Johnny Grace, Ph.D., general engineer, USDA Forest Service Southern Research Station (Collaborator), were awarded a National Institute of Food and Agriculture grant in the amount of \$1.18 million to focus on land-use changes in response to climate change by vulnerability analysis. The researchers will use data on water quantity and quality, air quality, soil property, soil usage, and precipitation from various agencies to inform models developed by Swamy, to determine stress levels in an agricultural system. They hope to determine how best to strike a balance between the need to produce food and fiber, while maintaining sound environmental practices. The duration of the grant is August 2018 – July 2021.

## VET Tech Fully Accredited

Florida A&M University's Veterinary Technology Program was granted full accreditation on April 13, 2018. The American Veterinary Medical Association Committee on Veterinary Technician Education and Activities elevated the FAMU Veterinary Technology Program to full accreditation after deliberation of the report and evaluation from their April site visit.

FAMU's Veterinary Technology Program is one of the majors in the College of Agriculture and Food Sciences Agricultural Sciences program. Upon completion of this program students are prepared to provide the necessary medical and clinical support to veterinarians, and have a significant impact in animal health.

Congratulations to Glen Wright, DVM, Robert Purvis, Ph.D., Julie-Anne Valliant, Norman Scarbrough and Cynthia Holloway, the team that lead this effort.

## Patent Applications >>>>>>

Florida A&M University College of Agriculture and Food Sciences Center for Viticulture and Small Fruit Research submitted applications and awaits the approval for the following patents:

**REN, Z., LU, J., LEONG, S. AND TSOLOVA, V.**  
2018. "Floriana" New Red Muscadine Wine Grape

**REN, Z., LU, J., LEONG, S. AND TSOLOVA, V.**  
'Onyx' New Red Fresh Fruit Muscadine Grape

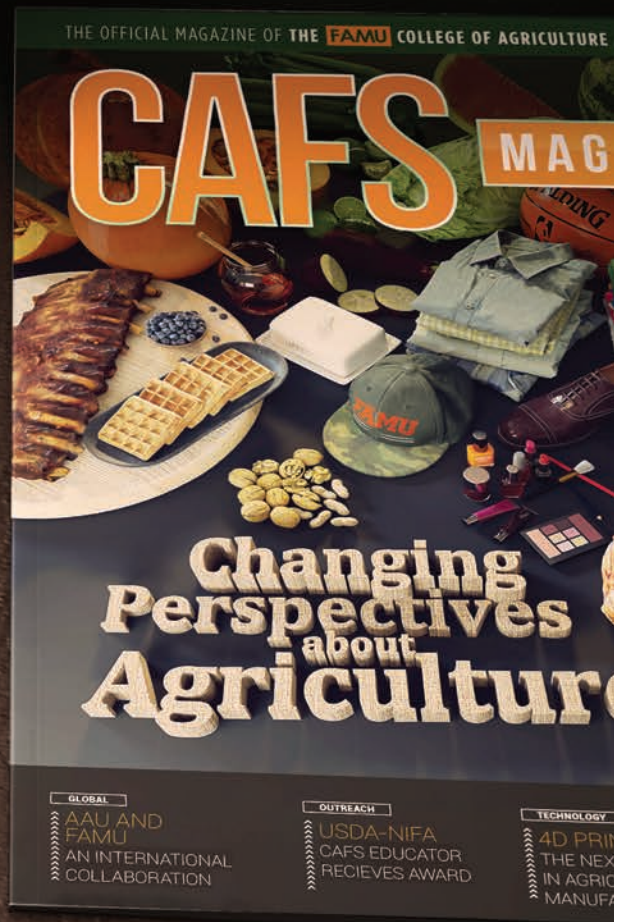
## NEW EMPLOYEES

### Omolola Betiku, Ph.D.,

Employed as an assistant professor in the Animal Science Program. Betiku graduated with a doctorate in animal nutrition and range sciences with emphasis on animal nutrition and microbiomics from Montana State University in Bozeman, Montana.

### Lashonda Cloud

Employed as the administrative assistant in the College of Agriculture and Food Sciences Agricultural Sciences Program.



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