

FALL 2020 - SUMMER 2021

CAFS

Magazine

CULTIVATING
AGRICULTURAL
RESEARCH SCHOLARS AND SCIENTISTS



MESSAGE FROM THE
dean

Last year brought with it unpredictable events, including the COVID-19 health pandemic, the Black Lives Matter movement in response to police brutality, and a siege of our nation's capital by violent protestors opposed to the election of a new United States president. In the midst of the turmoil and uncertainty, Florida A&M University (FAMU) proved to be a vital resource for our community, students, and our country. Our colleges pivoted to online and hybrid learning, and we remained open for our students and community. FAMU began hosting a COVID-19 testing center early on at the Bragg Memorial Stadium and administered over 101,013 tests in 2020, according to FAMU news reports. FAMU is also a free site for COVID-19 vaccines, with services provided at the Al Lawson Center.

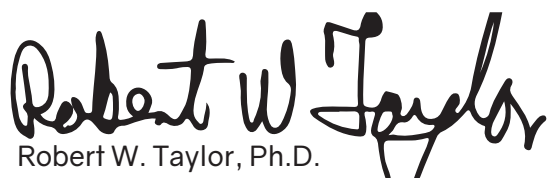
FAMU also received \$1.5 million from the Bill and Melinda Gates Foundation to operate its own COVID-19 testing lab, located within the College of Agriculture and Food Sciences (CAFS) Center for Viticulture and Small Fruit Research. The FAMU lab will serve as a hub providing testing for other Florida HBCUs, including Bethune-Cookman University, Edward Waters College, and Florida Memorial University. Collected specimens will be tested in a 340-square-foot laboratory at the Center. The agreement provides funding through October 2022. The Gates grant also allows FAMU to fully utilize \$2.5 million in equipment and supplies donated by Thermo Fisher Scientific as part of The Just Project to provide testing for students, faculty and staff during the 2020-2021 school year.

Our college experienced the best 2020 undergraduate recruiting class ever, with a GPA of 3.8 and higher. We also welcomed our highest number of scholarship recipients to CAFS last fall, awarding three times more than the usual number of scholarships, totaling 76 high-achieving scholars. Nearly 30 scholarships were awarded to outstanding returning FAMU CAFS scholars.

As of April 2021, CAFS has encumbered 92 scholarships through the 1890 USDA David A. Scott Scholarship Program for a total amount of \$628,563. Of these, 20 were half scholarships and 72 were partial scholarships. This has boosted the enrollment of high-caliber students in CAFS, especially out-of-state students, at this time of the current coronavirus pandemic. Many of these scholars had their debt significantly reduced or even eliminated. We are deeply grateful to U.S. Representative David A. Scott for his efforts in sponsoring and securing the USDA 1890 Scholarship Fund that benefits all 19 of the 1890 HBCUs which includes our students. FAMU received \$252,632 dollars in one-time discretionary scholarship funds, and the first installment of \$500,000 in mandatory funds for each of the next four years, for a total of \$752,632.

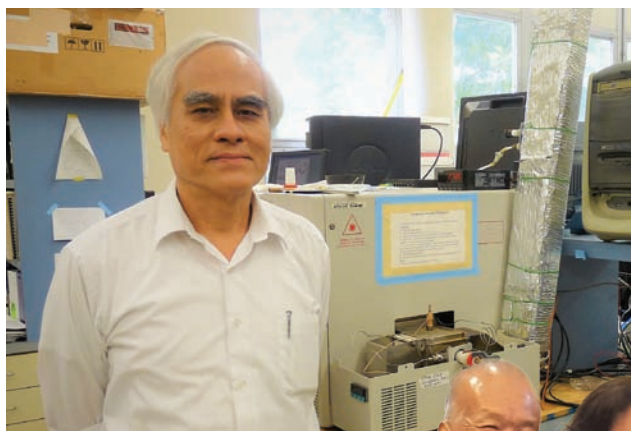
We are gearing up for an increase in on-site campus visibility and service for the fall 2021 semester, and we are preparing to serve our students through both in-person and online courses and research. Our faculty and staff look forward to increasingly successful endeavors in research and academic areas that provide opportunities for our students to grow and prepare for the competitive workplace.

This issue of CAFS Magazine includes research and student scholar highlights from spring 2020 through spring 2021, and we are happy to share these exciting achievements. We hope you enjoy reading some of the great things that happen every day at FAMU CAFS.


Robert W. Taylor, Ph.D.

Dean and Director of Land-Grant Programs
College of Agriculture and Food Sciences





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CAFS MAGAZINE
FALL 2020 - SUMMER 2021 ISSUE



Floriana muscadine grapes at the Center for Viticulture
and Small Fruit Research

FAMU

GRANTED TWO NEW GRAPE PATENTS

By Ciara Mims

Two new grape patents were granted to Florida A&M University (FAMU) College of Agriculture & Food Sciences (CAFS) in 2020 – a breakthrough for University research and an important development for the Florida grape and wine industry, according to Violeta Tsolova, Ph.D., director of FAMU's Center for Viticulture and Small Fruit Research.

"The long-term sustainability of the state and national grape industry depends on new genetic resources that carry adaptive traits capable of overcoming the existing and future challenges in grape industry sustainability," said Tsolova. "There are critical needs for the development of new grape cultivars exhibiting stress resistance and superior fruit vinification qualities to mitigate production cost and expand wine and fresh fruit market opportunities."

The two muscadine grape patents granted to FAMU are called "Floriana" and "Florida Onyx." The traits of both have been repeatedly observed and have been the most distinct when grown in Florida. Zhongbo Ren, FAMU grape breeder, conducted the breeding work that took more than 10 years to bring this development to fruition.

The Center, established in 1978 with Florida Senate Bill No. 898, has been the national leader in muscadine grape research and plans to continue its success.

The patents granted are:

Muscadine grape plant named Floriana – US Patent, PP31, 654

April 14, 2020, developed by Ren, Z., Lu., J., and V. Tsolova

Muscadine grape plant named Florida Onyx – US Patent, PP31, 407, January 18, 2020, developed by Ren, Z., Lu., J., and V. Tsolova

According to Tsolova, the Center will work with the university's Office of Technology Transfer to license the new patented grape cultivars with nursery producers and grape growers in Florida and the southeastern United States. This will generate royalties for FAMU research, elevate international and national standing for FAMU and the Center, and increase opportunities for students.

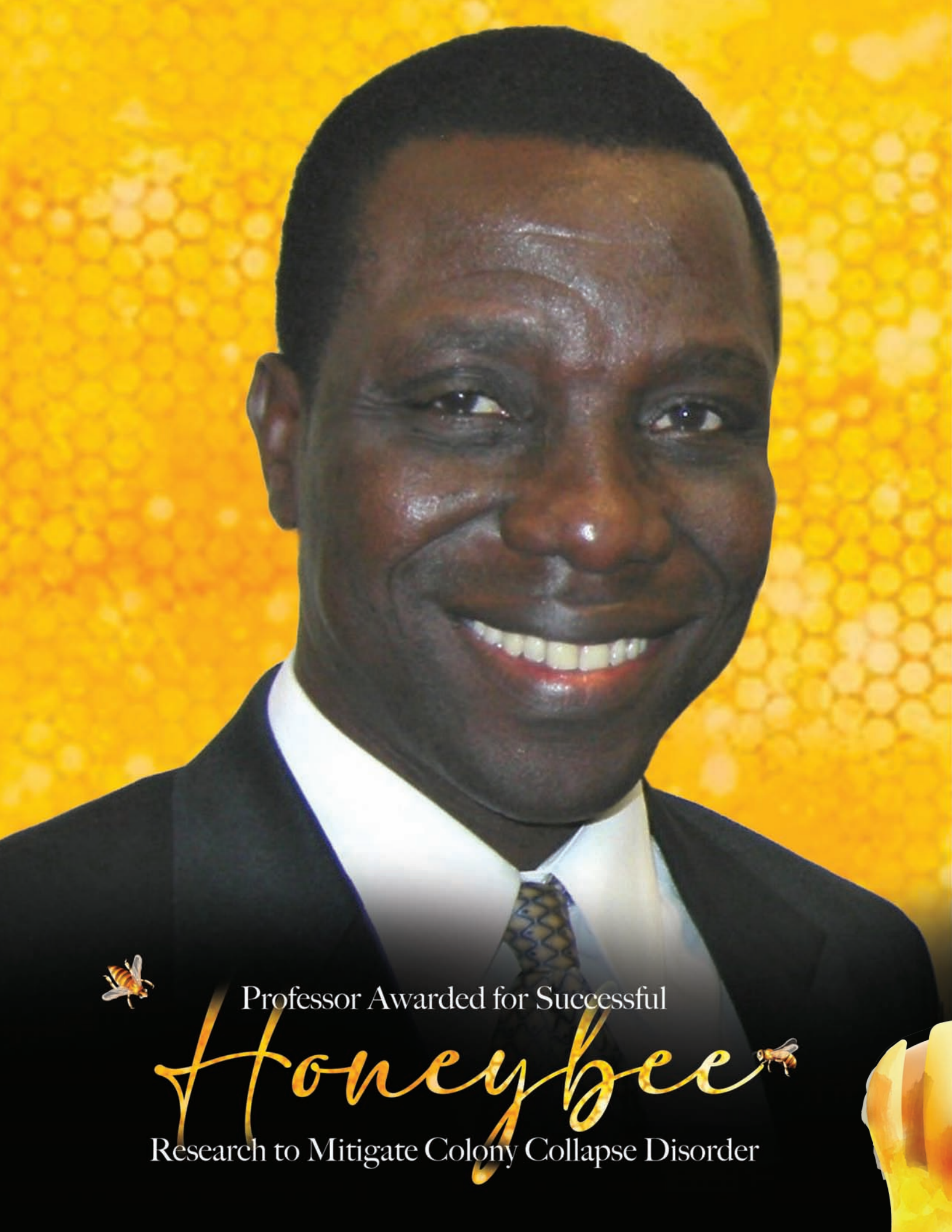
"The two new plant patents that cover the new varieties of grapes

are a reflection of the quality of research and the innovative minds at work here on FAMU's campus," said Reis Alsberry, FAMU Office of Technology Transfer and Control director. "Any time new patents are issued to a university, they bring the kind of positive attention that garners respect and admiration from those who work in that particular field and the American research community as a whole."

For more information about specialized research that is being done at the Center, please contact Tsolova at (850) 412-7394 or violeta.tsolova@famuedu.

Z. Ren and Violeta Tsolova, Ph.D., at the 2018 "Discovery on Parade" Exhibit/ I-show in Tallahassee, Florida, a joint initiative between





Professor Awarded for Successful

Honeybee



Research to Mitigate Colony Collapse Disorder



By Cynthia M. Portalatin



Florida A&M University (FAMU) Professor Lambert H. B. Kanga, Ph.D., is the recipient of the 2021 Integrated Pest Management (IPM) "Bright Idea" Award from the Friends of Southern Region IPM's Center for Excellence.

Kanga has pioneered the development of a successful microbial control strategy (patent pending) for Varroa mite, the most destructive pest of the honeybee. The Southern IPM Center recognized him for his extraordinary achievements in mitigating the mitigation of the honeybee colony collapse disorder affecting crop pollination, a \$24 billion-a-year industry in the United States.

"The novel findings of this cutting-edge research have been translated into several languages around the world and have provided new, environmentally friendly avenues for managing key pests of honeybee colonies," said Kanga, who is also director for the FAMU Center for Biological Control.

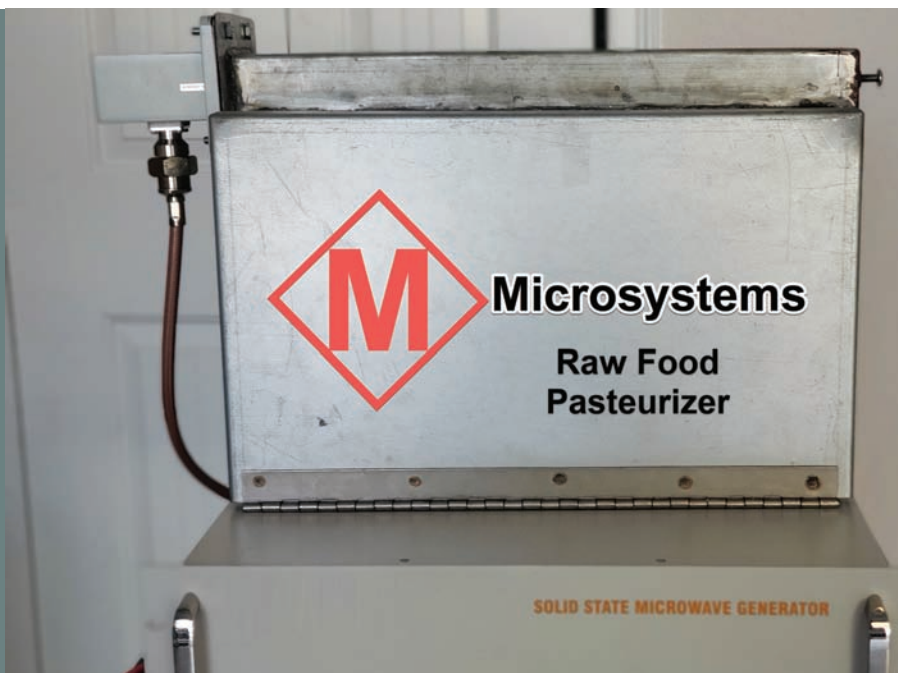
He was officially presented with a plaque recognizing his outstanding contributions at the annual meeting of the Southeastern Branch of the Entomological Society of America on March 31.

"Bee health is critical for the success of pollination-based agriculture in the U.S., and Dr. Kanga's unique contribution is a great testimony to the high impact of his research and novel discoveries as related to honeybee health and management, and we are elated to have such a talented faculty in our College," said Robert W. Taylor, Ph.D., FAMU CAFS dean and director of ILand-gGrant pPrograms.

The Southern IPM Center's program recognizes extraordinary achievement in Research, Extension, and Implementation of IPM in the Southern region of the U.S. Serving as the hub of a multi-state partnership and communication network linking researchers, growers, extension educators, commodity organizations, environmental groups, pest control professionals, government agencies and others, it is one of four regional centers funded by the U.S. Department of Agriculture's National Institute of Food and Agriculture to promote IPM.

From its home office in Raleigh, North Carolina, the Southern IPM Center serves 13 Southern states, and two territories: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, the U. S. Virgin Islands, and Virginia. For more information, visit the Center online at: <https://southeripm.org>.





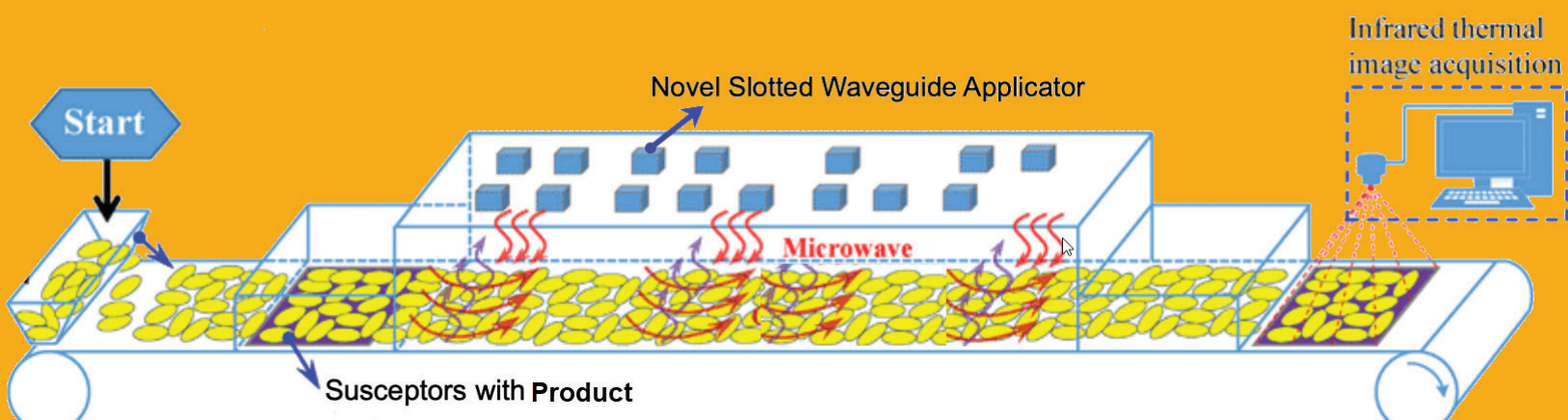
MICROWAVE-ASSISTED RAW FOOD PASTEURIZER RECEIVES U.S. PATENT

By Cynthia M. Portalatin

Satyanarayan Dev, Ph.D., assistant professor of biological systems engineering for the College of Agriculture and Food Sciences, won the American Society of Agricultural and Biological Engineers (ASBE) AE50 International Award for the “2019 Most Innovative Product of the Year” for design and development of a Microwave-Assisted

Raw Food Pasteurizer. This equipment, involving a non-linear slotted waveguide technology, pasteurizes raw foods such as eggs, shellfish, fruits, vegetables, and meats to reduce harmful pathogens to undetectable levels without altering the raw food's characteristics. His microwave pasteurizer design recently received the U.S. Patent # 2020/0128837 A1.

A Canadian citizen, born and raised in India, Dev has been teaching at Florida A&M University (FAMU) since 2015. He is both an assistant professor of BSE in CAFS and an adjunct professor in the department of chemical and biomedical engineering at the FAMU – FSU Joint College of Engineering.



Recently, Dev shared his thoughts on his development of the microwave pasteurizer and new technologies during an interview with CAFS communications:

What inspired you to pursue the development of a microwave pasteurizer at this particular time?

I read in the news about a huge recall on table eggs due to Salmonellosis, resulting in half-a-billion eggs being destroyed. As a person who genuinely cares about the food security of humans, this caught my attention, and I set out to solve this problem. What motivated me was the challenge that an egg would explode in a microwave cavity, and it requires an ingenious engineering design to overcome this challenge. While the pasteurizer was originally meant for eggs, it became suitable for heat pasteurization of any food material that poses similar challenges like oysters and other shellfish.

How do you see this technology being used in the future (in business, in homes, in agriculture)?

Although this technology would work well at a domestic level, the effectiveness of any pasteurization technique depends on how quickly one can get the product pasteurized after harvesting. This is due to the fact that the microbial load doubles approximately every 20 minutes, and it becomes difficult to bring it to an undetectable level without altering the characteristics of the food after two days, at most. Therefore, this equipment would serve its purpose best if it is installed on-farm or at the central distribution facility for the commodity of interest.

How long did the process take from conceptual idea to creation, to developing the working technology, and then obtaining a patent?

This invention is an outcome of six years of research and development on a unique, non-linear slotted waveguide applicator for controlling microwave energy distribution in food materials with different compositions and geometries. It then took an additional three years to get the patent.

Dev's two additional recent patents are:

"Dielectric Detector for Pest Infestations" (2020). Inventor: S.R.S. Dev, Co-Inventors – A. Anandhi and B. Hottel. U.S. Patent No: US10765109, Issued: September 8, 2020.

"Microwave Assisted Portable Solar Vapor Absorption Refrigeration Systems for Sustainable Cold Chain" (2020). Inventor: S.R.S. Dev, Co-Inventor – C. Magee. U.S. Patent No.: US10648712B1, Issued: May 12, 2020.

What's new for you? Are you working on developing additional, new technologies?

Multiple technologies are under development in my lab, to name a few:

A gravity Independent 5-Dimensional Bio-printer to print food and pharmaceuticals on earth, space, moon, and mars alike.

Hollow-fiber bioreactors for dairy production without a cow.

SASER (Sound Amplification through Stimulated Emission of

Radiation) Drone Schools for underwater applications.

Soil nutrient and wild-life assessment using LiDAR drones etc.

An active electric force field fabric for pathogen protection.

A ceramic-based CubeSat/ SmallSat propulsion system for in-orbit maneuvers.

Wireless temperature sensing using a non-linear slotted waveguide antenna.

What is your teaching philosophy?

I subscribe to the old saying that "You give a man a fish, you feed him for a day; you teach him how to fish, you feed him for life." Unlike any other form of wealth, knowledge simply multiplies by giving. Hence, I wanted to serve in this noble profession of teaching. I identify myself to be among the teachers who have a strong sense of accountability and having significant obligations to the future. From that perspective, the importance of my role in producing educated citizens, especially from the underrepresented minorities, is paramount, and I deeply understand the critical role played by biological systems engineering in global agriculture and the society at large. Enlightening future generations of biological engineers will ensure the successful carry forward of the underlying engineering and technological concepts in a sustainable fashion.



Multi-Element Scanning Thermal Analysis Technology Receives U.S. Patent

By Cynthia M. Portalatín



Fifteen years ago, there was no convenient, chemical method to analyze complex solid samples such as aerosols, soils, and sediments, according to Yuch Ping Hsieh, Ph.D., professor at Florida A&M University's (FAMU) College of Agriculture and Food Sciences (CAFS). It was then that he began to develop a Multi-Element Scanning Thermal Analysis (MESTA) Technology for Complex Solid Samples, for which he was awarded United States (U.S.) patent # 10690605 in June 2020.

MESTA also won first place in the 2015 National Science Foundation I-Corps Workshop among that included 21 United States (U.S.) universities, including Harvard University.

"When I was studying the smoke of forest fires ten years ago with a National Science Foundation (NSF) grant, I applied the developed MESTA to analyze aerosols," said Hsieh. "It worked very well."

"This development has allowed us to quickly examine the thermochemical properties of compounds in solid, liquid, and mixed samples with little or no pretreatment requirement," said Hsieh. "Due to limitation of separation technique for solid mixtures chemical analysis of solid mixtures, such as soils, sediments, aerosols, and many other environmental samples, has been difficult. MESTA technology provides an answer to the problem by a giving quantitative and detailed thermochemical analysis of complex, solid substances in terms of their carbon, nitrogen, sulfur and hydrogen thermograms."

MESTA is a novel, versatile analytical tool for a wide range of scientific research and industrial applications, he added. For

example, it can quickly analyze crude oil for the requirement of refineries in less than one hour. Hsieh explained that to get the same information using the traditional methods would take at least three days. MESTA can also conveniently and quickly analyze organic sulfur compounds in soil and sediment samples, which is not achievable by the traditional methods.

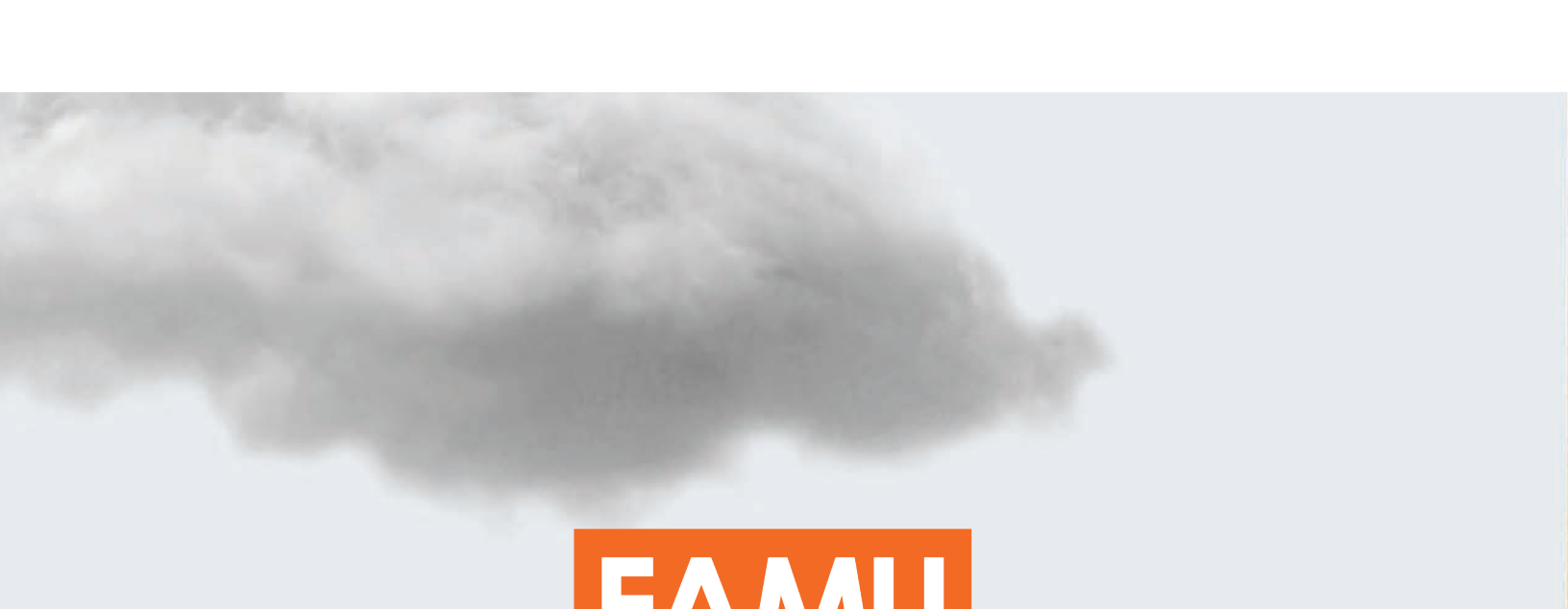
"I think MESTA is a rapid and convenient analytical tool for soil research, aerosol analysis, crude oil and petroleum product analysis, solid pharmaceutical product analysis, and even solid forensic sample analysis."

Hsieh shared that what he enjoys the most about his research and work at FAMU is that the administrators give him the freedom to pursue what he thinks is most important in the field.

When asked what new projects he is working on, he shared there are several, including:

- A novel soil erosion field technology that can determine land degradation rates for sustainable agriculture research.
- A novel technology for mercury and copper toxicity determinations in sediments.
- A rapid method for soil microbial biomass determination for soil health research.
- Using stable isotopic tracers to study hydrological budgets and processes in forested wetlands.

Hsieh has taught at FAMU since 1982. His wife is an emeritus professor at Florida State University who also holds a chaired professorship.



FAMU

Brooksville Station

RECEIVES \$1M GRANT

to Provide Conservation Training to Black Farmers

By Andrew Skeritt



FAMU Brooksville Agricultural and Environmental Research Station. Photo by John F. Odhiambo, Ph.D.

The Florida A&M University Brooksville Agricultural and Environmental Research Station (FAMU BAERS) received a \$1.15 million grant from the U.S. Department of Agriculture (USDA) to provide conservation training to African-American farmers in North Florida, South Alabama and South Georgia.

The overall objective of the “Conservation Collaboration for Selected States Project: Florida, South Georgia and South Alabama (CCSSP-FGA)” is to contract with former and retired USDA-Natural Resources Conservation Service (NRCS) employees and others, who are trained conservationists, who will work with African American farmers in 18 counties in the Big Bend, South Georgia and South Alabama.

The project will be led by BAERS Executive Director Fred Gainous, Ph.D., and Oghenekome U. Onokpise, Ph.D., professor emeritus and research plant scientist at BAERS. The project is crucial because too few African Americans and other people of color are participating in natural resources conservation programs.

“Everybody ought to participate in the conservation of natural resources,” said Gainous, who cited watershed, wetlands and wildlife habitat management as some of the conservation skills to be passed on to farmers. The project has a goal to recruit five farmers from each of the 18 targeted counties, but the

initiative would be a sign of progress even if fewer farmers signed on.

“We would like to have at least 60 farmers in Florida, Georgia and Alabama who have joined with us for conservation best management practices on their property and who are equipped with the skills,” Gainous said.

As part of the proposed project, recruited conservation specialists will provide the underserved farmers and ranchers with community assistance, transfer of technology, develop natural resources tools and information to address concerns in soil, water, air, animals and plants in six Big Bend counties –Franklin, Gadsden, Jackson, Jefferson, Leon and Madison; six South Georgia counties and six South Alabama counties.

Historically, wealthy white farmers are the biggest beneficiaries of the Natural Resources Conservation Service projects. The grant is designed to alter the landscape by training more Black farmers to be conservationists.

“It’s one reason why FAMU was given this grant,” Onokpise said.

A 165-acre portion of the more than 3800-acre Brooksville location will be used for long leaf pine and wildlife habitat restoration. The plan also calls for bringing farmers to the Hernando County facility for hands-on learning and experience.

Another goal is to increase the number of people in South Alabama, South Georgia and North Florida who can successfully coach others through USDA-NRCS applications and increase participation through a well-developed USDA-NRCS Strategic Plan with a plan of action for program delivery.

“It’s a matter of conservation for all. You can’t leave anyone out of the conservation equation,” Gainous said. “You must consider everyone a potential conservationist, because they are. It’s not like you can separate clean air from dirty air.”

The project started on February 23, and retired conservationists have been recruited to launch the initiative. For more information, email fred.gainous@famuedu.

Participating Counties:

North Florida: Franklin, Gadsden, Jackson, Jefferson, Leon and Madison

South Alabama: Dallas, Green, Lowndes, Marengo, Sumter and Wilcox

South Georgia: Brooks, Early, Grady, Lowndes, Mitchell, and Thomas



CAFS RESEARCH *Grants &* PUBLICATIONS

FAMU 1890 AND 1862 UNIVERSITY PARTNERSHIPS

UF- School of Forest Resources and Conservation - Collaborating with Dr. Jason Vogel on wood debris decomposition in Chipola Experimental Station after hurricane Michael. <https://edis.ifas.ufl.edu/entity/author/a-vogeljg> Contact: Lucy Ngatia, Ph.D., Assistant Professor & Soil Biogeochemist, FAMU Center for Water Resources, lucy.ngatia@famuc.edu, (850) 599-3428.

Building Research, Extension and Outreach / Education Capacity in Hydrologic Exchanges Between Human and Natural Systems: NIFA, \$588,000. PI: Katherine Milla, Ph.D.; Co-PIs: Amita Jain, Ph.D.; Odemari Mbuya, Ph.D.; Maia McGuire (University of Florida). In collaboration with the FAMU Cooperative Extension program and the University of Florida Sea Grant program, a Citizen Science Watershed Lab was established at the FAMU Teleconference Center at

2010 Pinder Drive. The purpose of this lab is to educate students and the community and promote awareness about microplastic in water and air, as well as build new capacity to conduct research and education on socio-hydrology to understand the dynamics of human-water interactions and feedbacks. Contact: Katherine Milla, Ph.D., Professor, katherine.milla@famuc.edu, (850) 561-2215.

Collaboration with the University of Florida (UF) to Develop and Evaluate a Remote, Produce Safety Curriculum – (\$319,000) Two-year grant beginning September 1, 2020. Delayed until Spring 2021 due to COVID-19. Strengthening partnership between FAMU teaching and extension units and the UF Produce Safety Outreach unit at the Citrus Research and Education Center. FAMU students will be trained in the FDA Produce Safety Rule and participate in site visits to participating small-scale and disadvantaged farmers. Contact: Michelle Danyluk, Ph.D., PI and

UF Professor, Citrus Research and Education Center, mddanyluk@ufl.edu, (863) 956-8654; Harriett Paul, Director and Co-PI, FAMU Office of International Agriculture, harriett.paul@famuc.edu, (850) 599-8867.

FAMU Cooperative Ph.D. in Entomology with the University of Florida. Contact: Lambert Kanga, Ph.D., Professor and Director, Center for Biological Control, lambert.kanga@famuc.edu, (850) 599-8558.

Collaborative Teaching and Research with the Purdue (UF) NRT-INFEWS: Sustainable Food, Energy, and Water Systems (FEW) – Period of support: 9/1/2017-8/31/2022 (\$488,455). Develop novel and innovative metrics, frameworks, models, tools, and educational materials to improve the understanding and representation of the FEW nexus sectors. Broader Impacts: developed creative scholarship and research by translating a theoretical concept (water resource vulnerability) to an operational definition, and through

improved understanding of systems thinking, uncertainty, and causality between drivers (climate and land use) and responses (food, water, land, and ecosystems). Benefitting scientists, agronomists, and managers; and enhancing teaching, mentorship, and community engagement through development of pedagogy that improved student outcomes (five scholarships and awards), lead to recruiting, motivating, and retaining minority students in STEM, while sustaining a pipeline to graduate education (Wade et al., 2020). Contact: Aavudai Anandhi, Ph.D., Assistant Professor, Biological Systems Engineering, anandhi.swamy@famuedu

CAFS PARTNERSHIPS WITH OTHER TOP RESEARCH UNIVERSITIES:

Inclusion of Hemp Seed Meal as a Replacement for Fishmeal in Florida Pompano and Red Drum in a Plant Oil-Based Diet – Project goal is to ensure a steady supply of warm-water marine finfish seed stock and research alternative, sustainable ingredients for culturing Florida Pompano and Red Drum to support the development of the U.S. aquaculture industry. Sponsor: USDA ARS. Contact: Paul Wills, Ph.D., Project Group Leader, Research Professor and Associate Director for Research at Harbor Branch Oceanographic Institute, Department of Aquaculture and Stock Enhancement, Florida Atlantic University, pwills2@fau.edu, www.hboi.fau.edu; Omolola C. Betiku, Ph.D., Assistant Professor, Animal Science Program, Florida A&M University, omolola.betiku@famuedu, (850) 412-5651.

Research collaboration with Florida State University (College of Engineering). Contact: Aavudai Anandhi Swamy, Ph.D., anandhi.swamy@famuedu, (850) 412-5005.

Florida State University-Maglab – Collaboration with Riqiang Fu, Ph.D., of FSU, on soil carbon composition in

wetlands in the Apalachicola National Forest, addressing the carbon sequestration and greenhouse gases production in the face of climate change. Contact: Lucy Ngatia, Ph.D., Assistant Professor & Soil Biogeochemist, FAMU Center for Water Resources, lucy.ngatia@famuedu, (850) 599-3428.

FFWRP – Enhanced Fuzzy Logic Indicator-based Modeling Approach (FLIMA) for Prediction of Sustainability of Natural Resources in Woody Biomass Harvest and Handling for Biofuel Production: USDA Forest Service: \$62,500. To develop a Fuzzy Logic Model that employs environmental indicators for predicting the socio-economic aspects of dead biomass harvest in the Forest. Contact: Satyanarayan Dev, Ph.D., Assistant Professor: satyanarayan.dev@famuedu

Value Addition to Forest Biomass using Novel Bioconversion Process for High Throughput Production of Crystalline Nano-Cellulose: USDA NIFA McIntire Stennis Student Assistantship Program: \$24,000. To develop and scale-up the extraction technique used different categories of nanocellulose, such as cellulose nanofibrils, cellulose nanocrystals, and bacterial cellulose for 3D, 4D and 5D bio-printing. Contact: Satyanarayan Dev, Ph.D., Assistant Professor: satyanarayan.dev@famuedu

CAPACITY BUILDING GRANTS 2020:

Project: Developing FAMU's Capacity to Manage Invasive Pest Insects in Specialty Crops in Florida (\$318,619). Principle Investigator (PI): Muhammad Haseeb, Ph.D., muhammad.haseeb@famuedu

Project: Partnership to Improve Heifer Development and Beef Cow-Calf Management in Northern Florida: Focusing on Limited Resource Producers in North Florida (\$94,921). PI: John Odhiambo, Ph.D., john.odhiambo@famuedu

Project: Developing Seedless Muscadine Table Grapes Using Gene Editing System (\$390,000). PI: Mohamad Rahman, Ph.D., mohammad.rahman@famuedu

Project: Elucidating Prebiotic and Probiotic Potential of Muscadine Grape to Promote Gut Health (\$300,000). PI: Mehboob Sheikh, Ph.D., mehboob.sheikh@famuedu

Project: Building Community Resilience to Strengthen Capacity to Climate Change and Natural Disaster (\$249,490). PI: Kimberly Davis, kimberly.davis@famuedu

TOTAL AWARDS FOR CAPACITY BUILDING GRANTS: \$1,850,030

RESEARCH GRANT AWARDS (as of February 2021):

Project: Partnership to Improve Beef Cow-Calf Development and Management in North Florida: Focusing on Limited-Resource Beef Cow-Calf Producers
Principle Investigator (PI): John F. Odhiambo, Ph.D., john.odhiambo@famuedu
Co-PI's: Derrick J. Coble, Ph.D., and Michee A. Lachaud, Ph.D.
Period of Performance: 4/01/2021 – 03/31/2024
Sponsor: USDA NIFA, (\$594,921)

Project: Toward Culturally Responsive Disaster Management for Historically Underserved Agricultural Producers: The Role of Person, Place and Professional Agencies
PI: Kimberley Davis
Period of Performance: 4/1/2020 – 3/31/2023
Sponsor: Prairie View A&M University (\$22,991)

Project: Developing FAMU's Capacity on Identification and Management of Economically Important Invasive Pest Insects from Caribbean Countries to Florida
PI: Muhammad Haseeb, Ph.D., muhammad.haseeb@famuedu

Co-PI's: L.B. Kanga, Ph.D.; K. Milla, Ph.D.; A. Lorenzo, Ph.D.; and D. Solis, Ph.D.
Period of Performance: 4/15/2021 – 4/14/2023
Sponsor: USDA NIFA
Award Amount: \$318,619

Project: Building Capacity in Agro-Nutraceuticals to Study Muscadine Grape as a Potential Prebiotic and Probiotic Source to Promote Gut Health

PI: Mehboob B. Sheikh, Ph.D.
Period of Performance: 5/1/2021 – 4/30/2024
Sponsor: USDA NIFA
Award Amount: \$300,000

Project: Ag-Discovery Summer Enrichment Program

PI: Carmen Lyttle-N'Guessan, Ph.D.
Period of Performance: 1/6/2021 – 9/30/2021
Sponsor: USDA Animal and Plant Health Inspection Service (APHIS)
Award Amount: \$60,379.58

Project: Establishing Gene Editing Tech to Develop Seedless Muscadine Table Grape

PI: Mohammad A. Rahman, Ph.D.
Co-PIs: Mehboob B. Sheikh, Ph.D.; Jianping Wang Ph.D.
Period of Performance: 4/1/2021 – 3/31/2024
Sponsor: USDA NIFA
Award Amount: \$390,000

Project: CAFS MMERI Student Practicum

PI: Gilbert L. Queeley, Ph.D.
Period of Performance: 2/1/2021– 1/31/2022
Sponsor: MM Internal Award
Award Amount: \$6,000

Project: To Support Landowners and Research Through Conservation to Increase USDA Opportunities and Programs

PI: Fred J. Gainous, Ph.D., fred.gainous@famuedu
Co-PI: Oghenekome Onokpise, Ph.D.
Period of Performance: 2/24/2021 – 2/23/2023
Sponsor: USDA Natural Resources

**Conservation Service (NRCS)
Award Amount: \$1,150,000
Project: Sustainable Agriculture Research and Education (SARE) Program 2019**

PI/Co-PI: Angela McKenzie-Jakes, angela.mckenziejakes@famuedu
Sub PI: Terry Gipson, Langston University, Terry.Gipson@langston.edu
Period of Performance: 9/1/2020 – 8/31/2021
Sponsor: USDA NIFA
Award Amount: \$200,000

Project: FY21 D1 FAMU UMB/ Demonstration Model

PI: Carmen Lyttle-N'Guessan, Ph.D.
Period of Performance: 4/1/2021 – 3/31/2022
Sponsor: USDA APHIS
Award Amount: \$29,322

Project: Nutrient Reduction to Surface and Groundwater by Replacing Synthetic Fertilizers Pilot

PI: Odemari S. Mbuya, Ph.D., odemari.mbuya@famuedu
Co-PI: K. Milla, Ph.D., and L. Ngatia, Ph.D.
Period of Performance: 4/22/2021 – 3/30/2022
Sponsor: State of Florida Dept. of Environmental Protection
Award Amount: \$487,200

Project: Sustainable Agriculture Research and Education (SARE)

PI: Cassel S. Gardner, Ph.D., cassel.gardner@famuedu
Period of Performance: 7/01/2020 – 6/30/2021
Sponsor: USDA NIFA; University of Georgia
Award Amount: \$8,326,843

Project: Muscadine Grapes Clean Plant Network

PI: Violeta Tsoлова, Ph.D., violeta.tsoлова@famuedu
Sponsor: USDA Animal and Plant Health Inspection Service (APHIS)
Award Amount: \$75,631

**FAMU USDA CENTERS OF EXCELLENCE RECENT FUNDING:
Center for Innovative and Sustainable Small Farms, Ranches,**

and Forestlands FAMU is the Co-Lead, Thrust Area 1: Farm Commodity, Process & Systems.

Principal Investigator (PI): Vonda Richardson, vonda.richardson@famuedu, (850) 412-5252
Period of Performance: 7/1/2020 – 6/30/2022
FAMU Award: \$75,000

Virtual Center to Motivate and Educate for Achievement (MEA)

Project under MEA Objective 2: Deliver Workforce Development Experiences by Creating/ Strengthening A Partnership with a 9th – 12th grade Bridge Program in Food, Agriculture, and Natural Resources, and **Project under MEA Objective 3:** Expand student experiences to increase their knowledge and engagement in STEAM with Cooperative Extension's AgriSTEM Saturday Academy. PI: Verian D. Thomas, Ph.D., Professor and Associate Dean for Recruitment, Student Support and Alumni Affairs, verian.thomas@famuedu
Period of Performance: 7/1/2020 – 6/30/2022
Sponsor: USDA National Institute of Food and Agriculture (NIFA) MEA
FAMU Sub-award: \$35,174

Center: Virtual Center to Motivate and Educate for Achievement (MEA)

Project Title: Building a Community of Future Employees in Food and Agricultural Sciences, Natural Resources, and Related Sciences: Opportunities Through Collaboration (includes experiential learning for new 1890 Scholars). PI: Verian D. Thomas, Ph.D., Professor and Associate Dean for Recruitment, Student Support and Alumni Affairs, verian.thomas@famuedu
Period of Performance: 7/1/2020 – 6/30/2022
Sponsor: USDA NIFA MEA
FAMU Award: \$50,000

USDA 1890 Center of Excellence for International Engagement and Development (CEIED)
Project Title: Training Globally Competent Students for the Food, Agricultural, Natural and Human Sciences Workforce; an 1890 and Latin American Institutional Partnership

PI: Verian D. Thomas, Ph.D., Professor and Associate Dean for Recruitment, Student Support and Alumni Affairs, verian.thomas@fam.u.edu

Period of Performance: 8/1/2020 – 6/30/2022

Sponsor: USDA NIFA

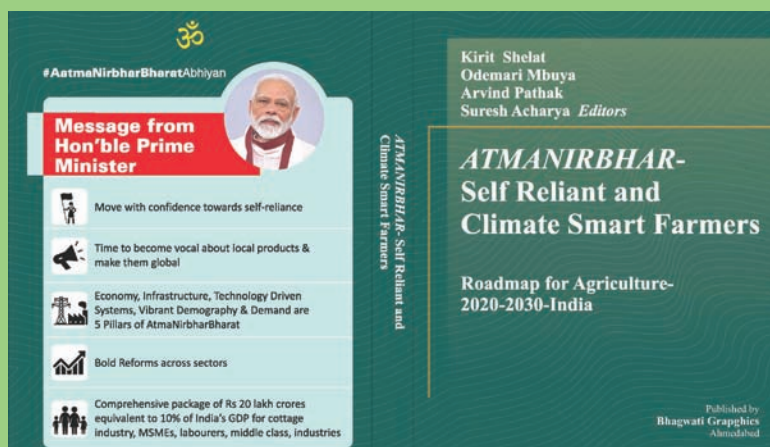
FAMU Award: \$24,000

RESEARCH PUBLICATIONS:

Ngatia L.W., De Oliveira L.M., Betiku O.C., Fu R., Moriasi D.N., Steiner J.L., Verser J.A., Taylor R.W. (2021). Relationship of arsenic and chromium availability with carbon functional groups, aluminum and iron in Little Washita River Experimental Watershed Reservoirs, Oklahoma, USA. *Ecotoxicology and Environmental Safety*, 207:1 <https://doi.org/10.1016/j.ecoenv.2020.111468>

Ngatia L.W.; Moriasi D.; Grace III J.M.; Gardner C.; and Taylor R.W. (2021) Soil organic carbon; soil health indicator. In book: *Environmental health*. DOI: 10.5772/intechopen.95764

Diedrick, Worrel – CAFS Graduate student and research assistant, published in *Florida Entomologist*, “First Record of *Ooencyrtus nezarae* (Hymenoptera: Encyrtidae) a Parasitoid of *Megacopta cribraria* (Hemiptera: Plataspidae) in Florida” (July 2020). Worrel is first to discover an efficient egg parasitoid (*Ooencyrtus nezarae* Ishii) in Florida, a new biocontrol tool that can be used to manage kudzu bug (*Megacopta cribraria*), a destructive, invasive pest species that affects essential food crops such as soybean and legumes. This new biocontrol tool helps avoid the need for use of pesticides in soybean production, the second most planted field crop in the U.S. which has an estimated \$39 billion annual revenue.



Mbuya, O.S.; Shelat, K.; and Arvind P. (March 2021) *ATMANIRBHAR – Self Reliant and Climate Smart Farmers, Roadmap for Agriculture 2020-2030 – India* (Published by Bhagwati Graphics, Ahmedabad). Through a series of essays, this book lays out a roadmap for the Indian agricultural sector and covers a wide range of challenges and opportunities: from evidence-based studies on various aspects of agriculture, to new pathways of development through climate resilient forms of agriculture; from diversification of livelihoods and rural enterprises for higher incomes to mitigating the risks to farmers and improving the access to credit; from diversification and intensification of agriculture to post harvest technologies for higher returns. It also looks at social challenges like women in the farm sector, optimal water use through new technologies, promotion of natural farming, and application of technology in enhancing crop productivity.



Mbuya, O.S.; Patel, N.C.; and Vyas R.V. (2020) *Strategies for Doubling the Farmers' Income – A Gujarat Perspective* – By (Satish Serial Publishing House, India, 2020). This book explores the potential of deployment of agricultural technologies to increase farmers' income by maximizing agricultural output through technological advancements and by increasing resource use efficiency, which in turns saves the cost of cultivation with better productivity. Several examples of success stories serve as models for researchers, extension agents, policy makers, students and other stakeholders intended to serve farmers.



CAFS

Announces 2021 Research and Extension Forum Student Winners

Students showcased their recent research at the 2021 Virtual Research and Extension forum hosted by the College of Agriculture and Food Sciences (CAFS) on April 13, 2021. During the forum, students presented on group and individual research projects from four internship programs: (1) Cultivating Undergraduate Research Scholars (CURS) Program; (2) Research Internship Program; (3) Extension Internship Program; and (4) Animal Science Internship Program. The CURS research program was sponsored by Evans-Allen funding. The winners, by program, were:

CULTIVATING UNDERGRADUATE RESEARCH SCHOLARS (CURS) PROGRAM

1st Place: Kayla Braggs, Food Sciences, Junior (\$75 prize)

Braggs' research mentor is Michée Lachaud, Ph.D., assistant professor, agri-business. Braggs is also a CAFS AG Ambassador, a FAMU Student Government Association (SGA) Senator, the Parliamentarian for the FAMU MANNRS Chapter, and serves as Region II Undergraduate Vice President for the national MANRRS organization.

2nd Place: Rachel Dunn and Kiana Green, animal science/pre-vet senior (\$25 prize, each)

Dunn and Green were mentored by John Odhiambo, Ph.D., assistant professor, animal science. Green is also president of the CAFS Animal Science Club.

3rd Place: Micala Jones, biological systems engineering, junior (\$20 prize)

Jones' research mentor was Lucy Ngatia, Ph.D., research associate, Center for Water Resources. Jones serves as Secretary for the FAMU MANRRS Chapter Office.

RESEARCH INTERNSHIP PROGRAM

1st Place: Ahja Butler, animal science - pre/vet, and Devin Pryor, agronomy

Butler's mentor was Allen Frank Humphries, research associate, Center for Viticulture and Small Fruit Research.

2nd Place: Lailah Hall, agri-business, and Staci Gamble, agri-business

Hall's mentor was Gilbert Queeley, Ph.D., research associate/extension educator, Cooperative Extension Program.

Extension Internship Program

1st Place: Victoria Wright, veterinary technology

Wright's mentor was Conchita Newman, extension agent II and 4-H program leader, Cooperative Extension Program; Sabrina Hayes, extension agent I, Cooperative Extension Program

Animal Science Internship Program

1st Place: Mikiyah Baldwin, Ashanti Baptiste, Kamii'ya Cargle, Alexis Chenevert, KaTriniece Joubert, Lauren Sloan, Kayla Smith, Kamari West, and Madison Whiddon - animal science - pre/vet; and Micaia Deuell, veterinary technology

Their mentors were: Ray Mobley, DVM, professor emeritus/extension educator, Cooperative Extension Program; Glen Wright, DVM, director, Veterinary Technology Program; Julie-Anne Valliant, veterinary technician; and Norman Scarbrough, veterinary technician.



CAFS Students Win Research, Essay, Photography Awards at 35th Annual MANRRS National Conference

Several Florida A&M University (FAMU) students received awards during the 35th Annual Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) national conference held virtually April 6 – 9, 2021. The following FAMU students received awards:

Kayla Braggs, a junior food science major and Cultivating Undergraduate Research Scholars (CURS) Program* participant, received the Dr. Eunice P. Foster Spirit of Excellence Award, a special recognition that honors a MANRRS national student officer who has demonstrated leadership through positive team contributions, dependable action and consistent hard work. Braggs was also elected as the 2021-2022 MANRRS national undergraduate president. She previously served as the Region II undergraduate vice president.

Isa Salaam, a freshman agribusiness major, won second place in MANRRS' national undergraduate written essay contest. Salaam's essay "Creating Modern Solutions to Food Deserts in Communities" was cited by the judges as being "very clearly written and compelling. The combination of policy initiatives and grassroots innovations to tackle the problem of food deserts was strategic and smart."

Micala Jones, a junior biological systems engineering major and CURS scholar, received second place in the undergraduate oral research contest for her presentation, "Microbial Indicators of Soil Health." Her research mentors from FAMU's Center for Water Resources were: Yuch-Ping Hsieh, Ph.D., professor; Glynis Bugna, Ph.D., research associate; and Djanan Nemours, biological scientist.

Christen Bryant, a junior agribusiness major, won second place in MANRRS' photography contest. (See accompanying photo and essay.)

Tommeron Timmons, coordinator for research program services for FAMU's College of Agriculture and Food Sciences (CAFS) and Verian D. Thomas, Ph.D., professor and associate dean for Recruitment, Student Support and Alumni Affairs for CAFS, serve as advisors for FAMU's MANRRS chapter.

MANRRS is a national society that provides networks to support the professional development of minorities. The organization promotes their entry and advancement in careers where they may otherwise go unnoticed due to the volume of established professionals in their corresponding fields.

Christen D. Bryant, a junior agribusiness major, won second place in the national photography contest held during the 35th Annual Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS) conference held virtually April 6 – 9, 2021. Following is her winning photograph and accompanying essay:

Blueberries: Preparation for Optimal Growth

By Christen D. Bryant, Agribusiness Junior



Most people, who have a fondness for blueberries are captivated by the differing shades of blue and perfectly shaped five-pointed star that can be found on the calyx (blossom end). I have discovered that my fascination lies in their growth. We should reflect on a few of the developmental aspects of these berries and include them in our daily practices.

Blueberries are very particular about their soil acidity and will always prefer acidic soil. If the soil is not acidic enough for the blueberries, they can become rootbound. When a plant has roots that are rootbound, the roots become entangled in themselves. It is difficult for most plants to thrive when they are rootbound. The taproots of the plant must be pruned and placed back into the pot to continue growth.

Oftentimes, we find ourselves in environments that cause our roots to become rootbound. During these times, our growth is stunted, and our roots begin to tangle. To rid oneself of this problem, the roots must be pruned to reduce the entanglement in the root system. After transforming the root system, refrain from planting yourself into the environment that initially prevented your growth. Use preventative methods and place yourself in a positive environment for optimal growth and productivity. Learn more about yourself and tailor your environment to your needs.

Many have wasted time trying to produce blueberries in alkaline soil. The time for relaxation has passed. Success is not easily achieved and requires hard work and patience. We must reclaim our time, territory, and triumph now! It is time to propel ourselves into a state of success.

For more information on MANRRS, visit online at:
<https://www.manrrs.org/who-we-are>.

CAFS

STUDENT POINTS OF PRIDE AND STUDENT LEADERS 2020-21

The year 2020 brought CAFS' best recruited undergraduate class ever, with a GPA of 3.8 or better. The college also had its highest number of scholarship recipients, as of April 2021 – awarding a total of \$628,563 for 92 scholarships. Of these, 20 were half scholarships, and 72 were partial scholarships. CAFS is appreciative of the USDA 1890 Scholarship funds received by FAMU in 2020, which added to this success.

A shining example of one of CAFS successful USDA 1890 scholars is DeAundr'e Newsome, a junior agribusiness major and top USDA 1890 Scholar, who won the John Deere Thurgood Marshall Scholarship and was named a top student in his program with a near perfect grade point average. Newsome has made the President's List every year while at FAMU. He was also selected as a Mercy Corps Market Systems paid virtual intern for the fall 2020 semester. Mercy Corps, a global humanitarian relief and development organization, signed a Memorandum of Understanding with FAMU on September 9, 2020, as part of a new Historically Black Colleges and Universities (HBCU) pipeline program overseen by the CAFS Office of International Agriculture Programs. Newsome is part of the first FAMU cohort of paid Mercy Corps HBCU Global Interns, which also includes: Nana Ama Marfo, a fourth-year computer science major with a minor in philosophy, selected as an IT software engineering intern for fall 2020; and Rhamira Corbett, a senior environmental studies major, selected as an agriculture digital communications intern for spring 2021.

Our college is full of talented scholars and research students! Listed below are some of our top student leaders and their areas of leadership:

CAFS AG Ambassadors:

Kristen Adkins, Senior, Entomology
Tajah Billingsley, Junior, Biological Systems Engineering
Kayla Braggs, Junior, Food Science and CURS scholar
Rae'gan Burton, Senior, Biological Systems Engineering
Andrew Chiwara, Junior, Agribusiness
Joshua Clements, Junior, Agribusiness
Theresa Jean Louis, Senior, Agribusiness
Blake Simpson, Junior, Agribusiness

FAMU MANRRS Chapter Officers:

President: DeAundr'e Newsome, Junior, Agribusiness
Vice President: Christen Bryant, Junior, Agribusiness
Secretary: Micala Jones, Junior, Biological Systems Engineering and CURS scholar
Treasurer: Khya Nelson, Junior, Agribusiness
Historian: Meghan Campbell, Senior, Veterinary Technology
Parliamentarian: Kayla Braggs, Junior, Food Science and CURS scholar

MANRRS National Undergraduate
Officers
2020-2021:

Region II Undergraduate Vice
President: Kayla Braggs,
junior, food science
National Undergraduate
Student Parliamentarian:
Theresa Jean Louis, senior,
agribusiness (also served
2019 – 2020).

FAMU Student Government
Association Senators:

Kayla Braggs, junior, food
science
Joshua Clements, junior,
agribusiness
Theresa Jean Louis, senior,
agribusiness
William Walter, senior,
agribusiness

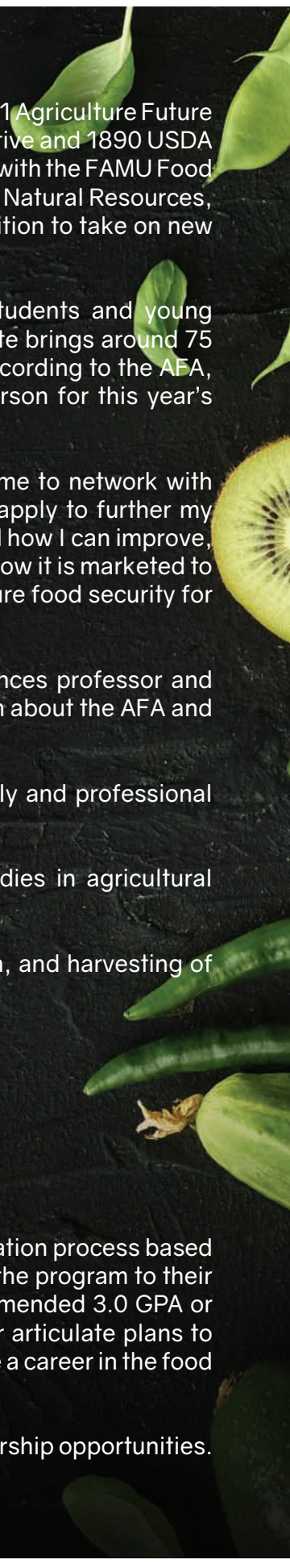
CAFS Student Clubs:

Animal Science – Kiana
Green, senior, animal science/
pre-vet
ASABE – Melvin Jordan,
senior, biological systems
engineering
Food Science – Amaris
Turner, junior, food science
FAMU MANRRS Chapter –
DeAundr'e Newsome, junior,
agribusiness
Veterinary Technology
– Mulleak Pitts, senior,
veterinary technology

*The Cultivating
Undergraduate Research
Scholars (CURS) Program is
sponsored by Evans-Allen
funding.



FAMU MANRRS Chapter President
DeAundr'e Newsome
Junior, Agribusiness



First-year agribusiness student Isa K. Salaam was selected to attend the online 2021 Agriculture Future of America (AFA) Food Institute from May 16 through May 18. The Tallahassee native and 1890 USDA David A. Scott Scholar credits his experience and motivation from his involvement with the FAMU Food Science Club, FAMU Chapter of the Florida Farm Bureau, and Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) – which he states have allowed him to be in the position to take on new opportunities.

The AFA provides personal and professional development programs to college students and young professionals in agriculture. Held annually in the winter months, the AFA Food Institute brings around 75 talented college students to the Chicago area to take part in a three-day program. According to the AFA, current COVID-19 restrictions and trends did not allow participants to gather in person for this year's Institute; therefore, the event was held virtually.

"This event helped me gain knowledge within the field of agribusiness by allowing me to network with peers that share a passion for agribusiness and showing me information that I can apply to further my studies," said Salaam. "Meeting other participants gave me a feel for where I stand and how I can improve, and I gained more knowledge about the production of crops, processing of food, and how it is marketed to consumers. These aspects of agriculture are important and need improvement to ensure food security for the underprivileged."

Salaam also credits Verian D. Thomas, Ph.D., College of Agriculture and Food Sciences professor and associate dean for Recruitment, Student Support and Alumni Affairs, for informing him about the AFA and many other opportunities for professional development.

"This event is wonderful for Isa to experience, and we are very proud of his scholarly and professional achievements," Thomas said.

After completing his undergraduate studies, Salaam plans to pursue graduate studies in agricultural economics.

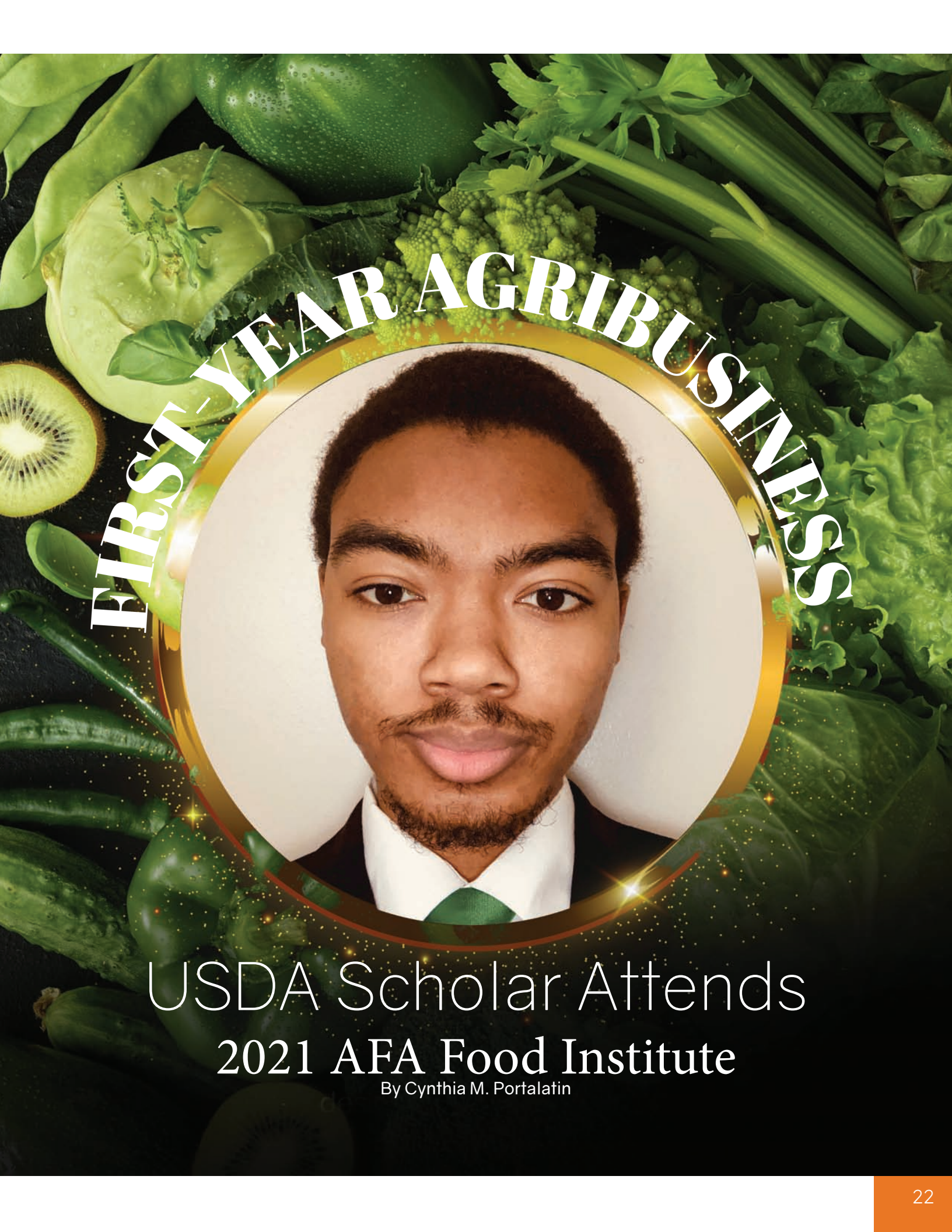
"In the future, I hope to be a farm manager, assisting with the production, cultivation, and harvesting of various crops," said Salaam.

The AFA Food Institute program includes:

- Discussions on hot topics in the food industry
- Networking with your peers and industry
- Career exploration in the food industry

Students interested in attending the AFA Food Institute are selected through an application process based on industry and leadership involvement, career goal and articulation of the benefit of the program to their career development. To be eligible, students must meet the following criteria: recommended 3.0 GPA or higher; undergraduate student status, age 17-25, attending a four-year institution or articulate plans to obtain four-year degree; possess a passion for food and agriculture; and plan to pursue a career in the food and agriculture industry.

AFA also provides an online forum for networking through AFA ONTAP as well as scholarship opportunities. For more information, visit the AFA online at: www.agfuture.org.



FIRST-YEAR AGRIBUSINESS

USDA Scholar Attends 2021 AFA Food Institute

By Cynthia M. Portalatin

CONGRATULATIONS

2020 and 2021 *Graduates!*

FALL 2020 BACHELOR DEGREES:

AGRIBUSINESS

Sean Miller
Yusuf A. Olorunfemi

AGRICULTURAL SCIENCES

Emily Powell - Abreu
Ebony N. Scott
Duwayne M. Thomas

ANIMAL SCIENCE

Daaajah Ahmad
Mikaela Engram
Keiondra Marshall
Tyra Platt
Omaria Rolle
Mariah E. Shields
Kristal Smith
Kiara Williams
Traneise A. Wilson

FOOD SCIENCE

Kahtya Henderson
Alexandra A. Reid
Rashawn W. Jackson
Sierra N. Johnson
Raheem D. Pierre

FALL 2020 MASTER DEGREES:

Feyisola M. Adetoyese
Degree: M.S. Plant Science

Thesis: Insect Pollinator Visit in Carinata (Brassicacarinata): A Comparative Study of Carinata in Allev vs. Non-allev Agroforestry Avstem

Tashani T. Brown

Degree: M.S. Entomology
Thesis: Evaluation of Non-invasive Techniques for Detecting Subterranean Termites (Blattodea: Rhinotermitidae) Infesting Trees

Jacenta P. Hinton

Degree: M.S. Plant Science (Non-Thesis)

Raquel D. McArthur

Degree: M.S. Agricultural Science: Plant Science & Biotechnology (Non-Thesis)

Oluwaseunfunmi Olaborode

Degree: M.S. Plant Science
Thesis: Adaptability and Agronomic Characteristics of Moringa Seed Sources Grown in North Florida

SPRING 2021 BACHELOR DEGREES:

Agribusiness
Nikolas Irusta

Theresa Jean Louis
Derrick Mayweather
William A. Walter

Agronomy

Casey L. Stark

Animal Science

Skylar Broome
D'Angelo R. Givens
Cutter Hammond
Rayven Osby
Melea Smith
Mychaela Taylor
Zia Williams
Kiama Williams-Robinson

Biological Systems Engineering

Ulrick A. Cherichel
Jorge M. DelAngel

Food Science

Akilah A. Austin
Hannah Middleton
Gabriela Shirley
Hera Varmah
Chantell Wells

Veterinary Technology

Rebecca Boireau
Monique Collier
Christal Foreman
Brittini McNeill
Armani Patterson
Tiana A. Smit



SPRING 2021 MASTER DEGREES:

Almando Morain

Degree: M.S. Entomology

Thesis: Comparative Assessment of the Impact of the Egg Parasitoids *Paratelenomus Saccharalis* and *Ooencyrtus Nezarae* on Kudzu Bug, *Megacopta Cribraria*, Populations in North Florida and Identification of Potential Fugal Pathogens of the Kudzu Bug

Chinemenma Okoroji

Degree: M.S. Agricultural Science
(Non-Thesis)

Jiovan Campbell

Degree: M.S. Plant Science

Thesis: Characterization of Large Muscadine [(*Vitis rotundifolia* Michx., syn. *Muscadinia rotundifolia* (Michx) Small)] Population for Diverse Phenological and Reproductive Performance Traits

Yasmine A Moffett

Degree: M.S. Agricultural Science
(Non-Thesis)

SUMMER 2021 *Bachelor* DEGREES:

AGRIBUSINESS

Miles Sullivan

AGRICULTURAL SCIENCE

Jared Smith

ANIMAL SCIENCE

Portia N. Jakes

Bailey A. Johnson

Mariah Perez

ENTOMOLOGY

Kristen J. Adkins

FOOD SCIENCE

Malik G. Eskridge

Bria S. Jones

Abigahill N. Simon

VETERINARY TECHNOLOGY

Sade Anderson

Katherine Collins

Vianca Contreras

Danaya Hemphill

Jermanie Lewis

Danielle Rhodes



FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY

NEW **1890** **SCHOLARSHIPS PROGRAM**

FOR ***FOOD AND AGRICULTURAL SCIENCES MAJORS!***

NEW 1890 Scholarships will become available in the 2020 fall semester for First Time in College (FTCs) and Transfer students in the College of Agriculture and Food Sciences, Florida A&M University, Tallahassee, FL. Funding from this Scholarship Program will support scholarships for FTCs to pursue and obtain their baccalaureate degrees in food and agricultural sciences from FAMU in four years, and similarly qualified, transfer students in two years. This funding will help CAFS cultivate and graduate more diverse leaders, who are well equipped to address and solve future emerging challenges in food and agricultural sciences.

FOR MORE INFORMATION ON THIS SCHOLARSHIP PROGRAM, KINDLY E-MAIL:

Shanteva Leonard at shanteva.leonard@famuedu (for Transfer Scholarships) or
Taquasha Freeman at taquasha.freeman@famuedu (for high school graduates).