EXTENDING
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TRAINING STUDENTS
For a Future in Ag

ALUMNI PROFILE:
Allen Cannedy ‘89

4-H is Back!
Developing leaders is at the heart of the College of Agriculture’s mission. We develop industry leaders through our three academic departments: Agriculture; Family and Consumer Sciences; and Hospitality Management. For example, the college laid the foundation for animal science major Allen Cannedy ’89 (p. 14) to become a national leader and advocate for minority enrollment in veterinary medicine. Cannedy has received several national awards for his work in diversity and inclusion. You’ll also find a story (p. 13) about two VSU College of Agriculture alumni—classmates and best friends—who are pursuing their doctor of veterinary medicine degrees at Tuskegee University’s College of Veterinary Medicine.

We develop leaders in the other divisions of the college as well. Each year the VSU Agricultural Research Station employs between 20 and 40 students who work in labs in the MT Carter building on campus and at Randolph Farm. These students receive training on lab instruments, equipment and processes, and conduct their own projects, generate data and present their results at scientific meetings. Read about how their work with our agricultural researchers (p. 12) gives them the experience and leg up to move on to master’s-level or even Ph.D.-level work and competitive jobs. Meanwhile, agricultural research faculty like Francoise Favi, Ph.D. (p. 10), and Toktam Taghavi, Ph.D. (p. 11), are taking leadership roles in global food production and food safety, respectively. Favi’s work earned her the 2018 President’s Volunteer Service Award.

Perhaps the most publicly visible way the college trains leaders is through our newly re-energized 4-H Cooperative Extension program. In 2018 the college hired Maurice Smith Jr. ’09, Ph.D., as Extension specialist in Youth Development, Citizenship and Leadership Development, and Chantel Wilson, Ph.D., as Extension specialist/STEAM educator. Both have hit the ground running (pp. 4-7), developing curricula and programming designed to help youth become responsible citizens, lead healthy and productive lives, and discover critical science-focused innovations.

Please enjoy this issue of Connection Magazine. We hope you’ll be inspired, encouraged and pleased by the work we’re doing leading students, faculty and the public to a more food secure and safer world.

Sincerely,

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Four years after publishing the groundbreaking study, *Food Deserts in Virginia*, VSU continues to identify ways to raise awareness of the commonwealth’s food security issues and to provide fresh, affordable food to all residents. The university has partnered with Sabra Dipping Company to develop the Summerseat Urban Garden Project, an initiative that will transform a historic 2.2-acre parcel on the VSU campus into a food and agricultural hub to address food security issues within local schools and communities, enhance nutrition and food education, and bring people together.

The first phase of the Summerseat Urban Garden Project got underway on June 11 with volunteers from the community, Sabra Dipping Company, and VSU staff and faculty. They constructed 10 raised bed gardens that included shorter ones accessible to children and those in wheelchairs, and waist-high beds, providing easy access for those who find it difficult to bend over. The beds will hold a wide variety of crops throughout the growing season and will have a twofold purpose: to teach members of the community how to successfully grow their own healthy food; and to harvest the crops for donation to food distribution centers for residents in and around Ettrick who have low access issues to fresh and nutritious food.

The project is an initiative of VSU’s Sustainable and Urban Agriculture Cooperative Extension Program and is part of Sabra’s Plants with a Purpose program, which addresses the needs of communities living in food deserts. The historic Summerseat land parcel is located on the VSU campus at the corner of Chesterfield Avenue and River Road, across from Ettrick Elementary School and next to VSU’s Multi-Purpose Center.

Sabra Dipping Company shares VSU’s commitment to resolving food desert and security issues and its belief that everyone should have ready access to affordable fresh fruit and vegetables. Both entities are confident that together they will be able to create a recreational, historical and productive green space at Summerseat that will provide maximum benefits to the public. Later phases of the Summerseat Urban Garden Project may include a certified kitchen, nutrition and cooking classes, the development of a historical museum within the Summerseat building and K-12 educational programs.

In addition to the Summerseat collaboration, Sabra is providing tuition assistance for students of VSU’s Sustainable Urban Agriculture Certification Course, which aims to increase competence and marketability for a career in urban agriculture. Students will have an opportunity to apply their skills in Sabra’s 340-square-foot employee work-share garden installed on the Sabra campus in Colonial Heights.
4-H at VSU has been reinvigorated thanks to the addition of two new hires. Maurice Smith Jr. ’09, Ph.D., joined in January as Extension specialist in Youth Development, Citizenship & Leadership Development, and Chantel Wilson, Ph.D., joined in August as Extension specialist/STEAM educator. This article, the first of a two-part series on 4-H, will focus on Smith’s efforts.

Smith joined Cooperative Extension because he wanted to give a new spin to 4-H youth development at his alma mater. “This is my home, so that was one of the main reasons to come back, to give back to my college where I started my educational journey,” he said. One new spin, among several, is developing Virginia 4-H as a brand that reflects the statewide initiative and partnership between VSU and Virginia Tech.

Although the Sussex County native wasn’t raised on a farm and didn’t participate in 4-H while growing up, Smith majored in agriculture because he wanted to know more about where his food came from. He earned his bachelor’s degree in agriculture business and economics from VSU, and his master’s and doctoral degrees in agricultural and Extension education from Virginia Tech (2012) and The Pennsylvania State University (2017), respectively. He is also a former 4-H youth development Extension agent in Sussex County. His education, along with his professional experience, has given him a knowledge base he can share with others.

Engaging Youth

Smith is intent on connecting with youth and offering programming that matches their interests. “We can’t expect youth to come to us. We have to meet them where they’re at,” he said. “If it’s social media marketing, we have to bring our webpage and our social media presence up to par so parents can have an avenue to find information.” Programmatically the 4-H curriculum he’s implementing will be the same, but will be spiced up with innovative, hands-on educational activities. “My motto is not to reinvent the wheel,” he said. “I like to work from something and build it up because I pay respect to those that have built that wheel for me to get to this point.”

He likened engaging students to baking a tasty cake. “We have to put the right ingredients in our programs here at VSU to make it taste good because I really like desserts,” he said with a smile. Furthermore, exposure is key for youth excitement and thinking about career options in agriculture. “When I talk to students, I find out what their interests are, where they come from, then ask...
‘Have you ever thought about…?’ When I use that question, it gets their minds rolling,” he said. “Then I share aspects about my personal story and how I got involved in these organizations and stepped out of my comfort zone to get involved.” As part of his job he helps 4-H agents assess needs in specific communities and recommends which programs may best fit, including trainings and workshops at VSU.

**iLeadership Institute**

Smith put his innovative efforts to work to create VSU’s first iLeadership Institute (formerly the Intermediate Congress), held last July. The one-week program is for youth aged 11 to 13 who are interested in becoming leaders in 4-H. During the week, the youth delegates were introduced to STEAM activities and participated in team building, networking and hands-on workshops. There were distinguished speakers and an etiquette dinner, during which youth learned important social and life skills such as how to conduct themselves at a formal occasion, how to sit at a banquet, manners for eating, etc. The institute is designed to enhance delegates’ ability to serve in local, district, state and national 4-H leadership roles.

Almost 40 youth attended the iLeadership Institute. “A lot of these kids were coming from the tri-city area, rural and urban communities, including inner city Richmond or areas in Chesterfield County. Some attendees from rural areas had never seen an 1890 land-grant university,” he said. “They have not been exposed to a program such as this, so it was eye-opening for them and they didn’t want to leave.” Smith recalled a young girl who was so moved by her experience that she cried when it was time to go home. Smith wants to create more opportunities for youth to network and make friends. “It’s very exciting now that those intermediate, middle school-aged youth will have an idea of what they want to major in and career opportunities available,” he said. “I’ve had a lot of parents call wanting their kids to be participants. I’m looking for a dramatic increase in participation going forward.” His goal: increase participation to 75 delegates next summer.

**Collegiate 4-H Club**

Smith recently submitted a proposal to create the first Collegiate 4-H Club on VSU’s campus. Only two other post-secondary institutions in Virginia have one. Smith explained that he wants to have Collegiate 4-H combine with or run adjacent to VSU’s Minorities in Agriculture Natural Resources and Related Sciences (MANRRS) chapter. “I think Collegiate 4-H is going to give us a signature platform to recruit more students into agriculture and related sciences. It’s going to provide students more opportunities for professional development, to learn soft skills and for them to find out what they want to do,” he said. “The goal is to help prepare students for their career after the classroom.” Students attending VSU from counties and cities across the commonwealth are also a great resource to tap into for 4-H programming.
Mentorship
VSU’s 4-H program targets heavily populated urban areas where underrepresented, at-risk youth may want to participate in 4-H, but cannot due to poverty, socioeconomic status, transportation issues and lack of resources. Smith spends a lot of time in schools, particularly in Hopewell, an at-risk area with no 4-H Extension agent. “Being that we’re so close, VSU can definitely engage youth through some targeted in-school programs,” he said. Smith wants to build a strong mentorship program because he considers it a critical ingredient to youth’s success. “Building relationships is one of the great components to youth development, and youth get to see how they can be contributing citizens as they grow up,” he said. Smith had a mentor whom he said changed his life just by listening. “I see my own life story and career story being a catalyst for other youth,” he said.

Students participating in Collegiate 4-H or MANRRS are already mentoring K-12 students, which, he said, “is essential because those kids look up to college students, and college students look up to professionals, so it’s a succession of different things happening all at once, and I think putting the right people in the right place, that exposure, can effect positive change.”

STEAM Fest
Plans are underway to launch STEAM-VSU, a Saturday morning event to be held at VSU in winter 2019. Smith is collaborating with STEAM Educator Dr. Wilson to plan a unique, hands-on STEAM (science, technology, engineering, agriculture and math) experience for K-12 students that will be held at VSU’s Multi-Purpose Center. The STEAM Fest will expose youth from urban, at-risk communities to STEAM.
In August, VSU welcomed Chantel Wilson, Ph.D., who joined Cooperative Extension as the Extension specialist/STEAM educator. STEAM in this instance stands for science, technology, engineering, agriculture and math. “Programs such as 4-H can have a tremendously positive influence on the lives of young people,” Wilson said. In high school Wilson belonged to Future Farmers of America (FFA), an organization she enjoyed. “I believe that my participation in FFA helped me to develop career aspirations and the skills needed for my success, eventually leading me to become the first person in my family to graduate from college,” she said.

Wilson, who earned a Ph.D. in crop and soil environmental sciences from Virginia Tech, an M.S. in plant pathology from the University of Wisconsin-Madison, and a B.A. in biology from Hood College, loves science and nature and is eager to get youth excited about both. “I think a lot of kids are getting disconnected, especially with the natural world and the environment. That concerns me,” she said. “I want to work with kids to try to increase their scientific literacy, their regard for the environment and science, and prepare them for a changing world.” She cited grass as a simple example of a plant that most kids take for granted—most don’t likely realize how grass is essential for water quality, food supply, habitat, landscaping and aesthetics.

Drawing on her diverse background, which includes work in aquatic ecology, biology, plant pathology, turfgrass science and toxicology/non-clinical safety assessment, Wilson will collaborate with Extension agents to design and deliver programs that will get kids excited about STEAM and educate them about many career options available. She will also work with agents and stakeholders to assess community needs and determine the skills youth need for success in STEAM fields. “I hope to channel my creativity and passion to develop fun, informative and useful programming based on current research,” she said. “I’m excited for the chance to give back by developing programming to help prepare young people for success.”

Although she’s just getting started, Wilson is already exploring working with Virginia Master Naturalists to create Junior Master Naturalist chapters because students could benefit from its mission and from volunteerism. She hopes to get kids interested in volunteering for the sake of building a better world. Finding a way to connect with kids is key, which entails knowing one’s audience, their interests and having a good facilitator who can engage them. Although she hasn’t yet worked with kids in a formal capacity, Wilson understands that connecting with kids by talking to them and working with them is essential. She gave an example of digging fossils out of a spoils pile with her fiancé at the Aurora Fossil Museum in North Carolina. That day, some elementary school students were also visiting the museum and looking for fossils in the spoils pile. “My fiancé told some kids, ‘Oh, you know, she’s a scientist,’ and then boom! A lot of kids started coming over, asking me questions and getting involved,” she said. “If you’re interested in the same things kids are, it’s so much easier, and it comes naturally. It’s not really a job at that point. It’s just sharing what you love.”
A crowd of administrators, staff, students and distinguished guests gathered on the VSU campus on April 17 to celebrate receiving the 2017 Tree Campus USA Award. The recertification award is in recognition of the university’s commitment to its campus forest management and environmental stewardship. It is the fourth consecutive year that VSU has been recognized by the Arbor Day Foundation.

Distinguished guests included Virginia’s Secretary of Agriculture and Forestry Bettina Ring and Virginia Senator Rosalyn Dance. “I'd like to recognize the great leadership that has made this possible. It really does take all of us working together, the commitment that you have to this campus, to your green spaces and to trees,” Ring said. “Keep up the great work and thank you for all that you continue to do to support students and learning in agriculture and forestry.”

“I'm proud of all the great stuff that's happening here,” said Dance, a VSU alumna. “Tree Campus USA, VSU, all the way!” VSU was first named a “Tree Campus USA University” in 2015 and has been recertified annually. The university is only one of four post-secondary institutions in Virginia to be recognized—along with Old Dominion University, the University of Mary Washington and Virginia Tech.

“On this day, being honored and recertified is very special to us,” said VSU Provost Dr. Donald E. Palm. “Not only does it bring the community together, it brings the campus together, especially for our students to learn, our faculty to do research. It’s an awesome day.”

Joel Koci, associate Extension specialist in urban forestry with the College of Agriculture, spearheads the initiative annually. Each year he works with a committee comprising faculty, students and campus staff. To receive the designation, a university must meet five core standards: establish an advisory committee; develop a campus tree-care plan; allocate annual dedicated expenses of $3 per full-time student; hold a service-learning project; and host an Arbor Day celebration.

The recertification ceremony was held beside a sycamore tree planted in 2015. The sycamore was selected because it grows large and has a long lifespan. The ceremony ended with the dedication of a plaque to recognize the march in Selma, Alabama, during the Civil Rights movement. Events were held during the morning, including the creation of a living wall of flowers and strawberries. There were also presentations on water quality, sustainable food and goatscaping, an environmentally friendly alternative to property clearing and weed removal.

The Arbor Day Foundation is a million-member nonprofit conservation and education organization dedicated to inspiring people to plant, nurture and celebrate trees. J. Sterling Morton, a Nebraska newspaper editor who served as secretary of agriculture under President Grover Cleveland, initiated the Arbor Day holiday in Nebraska in 1872. He is considered the father of Arbor Day nationally. Virginia celebrates Arbor Day on the last Friday in April.
SFOP Will Boost Programming and Outreach to Socially Disadvantaged and Veteran Farmers and Ranchers

The Small Farm Outreach Program (SFOP) received a $200,000 grant from the U.S. Department of Agriculture (USDA) that will enable it to expand its programming and outreach. The funding, which is part of $9.4 million in grants announced on October 12 by Secretary of Agriculture Sonny Perdue, will be used to help socially disadvantaged and veteran farmers and ranchers (SDVFR) in the state.

“We’re grateful for the funding support from USDA. We will use the funding to continue our training and outreach efforts to help socially disadvantaged and veteran farmers and ranchers build successful and sustainable businesses,” said SFOP Director William Crutchfield.

The SFOP supports SDVFR by equipping them with the tools and skills needed to make informed decisions in owning and operating profitable farm businesses. The grant money will enable the SFOP to provide support to an additional 10 counties in southwest Virginia, bringing the total to 74. The SFOP will use the funds to support areas from the Northern Neck and the Eastern Shore to the Southwest region of Virginia where there is a high concentration of SDVFR. It will provide workshops, conferences, field days and farm tours, as well as the one-on-one training to SDVFR.

Funds will also be used toward a new high tunnel project that will be completed in early spring 2019 and two mobile demonstration units. Both projects also support training and education of SDVFR. Yet another important SFOP initiative is to create awareness and increase participation by SDVFR in USDA farm programs.

This USDA funding is available through its Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers and Veteran Farmers and Ranchers Program (also called the 2501 Program) managed by the USDA Office of Partnerships and Public Engagement (OPPE). The 2501 Program was created through the 1990 Farm Bill.

New Incubator Farm and Demonstration Site Opens in Culpeper County

A new incubator farm and demonstration site in Culpeper County will enable visitors to learn firsthand about agricultural management practices they can use or adapt for their own farm enterprises. A two-acre plot of land and hoop house will be used to grow an assortment of vegetable crops and to provide learning opportunities for small farmers.

The site is the result of a memorandum of understanding between the Small Farm Outreach Program (SFOP) at VSU and the George Washington Carver Agriculture Research Center (GWCARC). “This collaboration is an excellent opportunity for us to offer a broad range of educational workshops, hands-on trainings and field demonstrations to the Culpeper area,” said SFOP Director William Crutchfield.

“The agreement supports our shared agriculture education programs for small and new farmers,” said Senior Extension Agent Carl C. Stafford. “GWCARC seeks to develop new
knowledge and opportunities for agriculture in this region through partnerships with institutions of higher education, cooperating producers and local government.”

The SFOP will provide fertilizer, seeds, and hand and power gardening tools that will be used onsite, as well as personnel to provide training and technical assistance. Workshops, meetings and training sessions for farmers will be held onsite at the GWCARC. GWCARC is organized and operated exclusively for charitable research and education benefits in agriculture. It is housed in the Carver Center, home of the former George Washington Carver Regional High School, which was built in 1948 and served as the regional high school for African American students.

“We’re excited to begin working with farmers from a variety of backgrounds and experience levels,” said SFOP Hispanic Outreach Agent Leonel Castillo. “As we build connections with the local farming community, we’ll be able to deliver information, education and training on farm operations such as irrigation, fertilization, crop selection and rotation, soil management, equipment use and maintenance, and more.”

The agreement between the SFOP and GWCARC was made possible thanks to the USDA Beginning Farmer, Rancher and Veteran grant that the SFOP received to assist individuals with limited resources who are interested in starting a small farming operation.

About GWCARC:
George Washington Carver Agriculture Research Center
The Carver Center
9432 James Madison Hwy, Rapidan, VA.
For more information, visit www.gwarc.org

A Helping Hand Earns A National Service Award

By any measure April 21 was an extraordinary day for Francoise Favi, Ph.D.—it was the day she received the President’s Volunteer Service Award. And it happened during National Volunteer Week.

Favi, a laboratory and research specialist in entomology at VSU’s Agricultural Research Station (ARS), received the national honor for her volunteer work in Bangladesh on a project to grow cassava for industrial use. “I was overwhelmed with joy,” she said. “This work involved a lot of time outside my regular employment. I am very grateful to VSU and everyone who helped…we have made a great contribution toward U.S. assistance for international development.”

Cassava, a tropical plant native to South America, is used as an industrial crop in Asia, but is not currently grown in Bangladesh. The cassava’s tuber is used to make gluten-free starch that is turned into the sweetener glucose or flour. Cassava starch is also vital for the country’s clothing industry, which accounts for 20 percent of Bangladesh’s gross domestic product. Ninety percent of cassava starch used in the country is imported from Thailand.

PRAN Agro Business Limited, a food processor and agribusiness company in Bangladesh, started a project to grow cassava for industrial purposes and needed a volunteer to train entrepreneurs. As part of her volunteer work, Favi visited farms to assess the status of cassava production, agricultural practices, problems and potential pests. She trained PRAN staff and cassava producers on improved production methods and developed training modules for future training. She also established a surveillance unit to monitor crop pests and diseases.

President George W. Bush established the President’s Volunteer Service Award in 2003. It is awarded annually to individuals, groups and families who have met or exceeded requirements for volunteer service and have demonstrated exemplary citizenship through volunteering. Winrock International (Winrock) is one of thousands of certifying organizations participating in the award program and confers the award to recognize the outstanding achievements of its volunteers. More than 200 people volunteer each year on behalf of Winrock through the Farmer-to-Farmer Program funded by the United States Agency for International Development.
Consumers who are more conscious of eating healthy want fresh, delicious tasting produce. Fresh fruits and vegetables are largely produced far from the cities and populated areas. They are very perishable and decompose in a few days and cannot withstand the long-distance transportation. To counteract these problems, researchers are continually looking for methods to extend the shelf life of fresh produce. Toktam Taghavi, Ph.D., who joined VSU’s Agricultural Research Station in 2017 as an assistant professor in horticulture, leads the Postharvest Research Program, a multidisciplinary research program to extend the shelf life of fresh fruits and vegetables.

One of Taghavi’s current research concentrations is improving postharvest quality of strawberries, and she’s focused on how essential oils can be used to achieve that end. Previously, she has studied many different sustainable methods during pre-harvest and postharvest to extend the shelf life of fresh produce. She has used irrigation and illuminating techniques, as well as natural products such as plant extracts and minerals to extend shelf life. Produce can be dipped in, exposed to or sprayed by a natural product. “Extending the shelf life of produce by even one or two days can make a tremendous difference,” she said. Taghavi explores what impact the methods she studies will have on the fruit’s firmness, sweetness, acidity, color, flavor, gas exchange and disease development.

Postharvest research is important because once fruits and vegetables are picked they can no longer receive water from the mother plant. At the same time, they lose water and begin to soften, which makes them vulnerable to disease. “Quality rarely improves after postharvest,” she said. “The only thing growers can do is to maintain quality. Therefore, we train growers to do their best to produce a good-quality product and then do their best to maintain the quality after harvest.” Growers are looking to halt the decomposition process, which goes against the nature of the produce, which are inherently inclined to soften and decompose to disperse their seed for reproduction. The first step is to cool down the temperature of the produce quickly using precooling methods by water or forced air. Precooling addresses about 80 percent of the postharvest issues, while other postharvest measures address the remaining 20 percent. “It’s challenging for small growers to do the precooling process because they don’t have the facilities to do so,” Taghavi said. “The infrastructure is costly, which makes it hard for a small grower, yet whatever the growers do at the farm is going to make a big impact on the quality of produce that is stored.”

Once Taghavi has a solution, she collaborates with Horticulture Extension Specialist Reza Rafie, Ph.D., and other Extension personnel to promote it to growers. “The work I do is for growers, so the connection with Extension helps to transfer this knowledge to the community. That connection is vital, especially with small growers,” she said. “Large growers have a lot of resources, so small growers are the ones that need the most help, and I’m happy to help them.”

Inspired by her father who introduced her to agriculture, Taghavi trained to be a horticulturist. While pursuing her post-graduate studies she focused on plant nutrition, because it is one of the fundamentals of plant growth and development. Later on, she became involved in postharvest physiology research. Within that domain she can investigate the physiological processes and molecular genetics of the produce receiving the sustainable production and postharvest practices. She has spent much of her research career assisting small farmers, first in her native Iran, then in Florida, Canada and now Virginia. Her research is important, she said, because of the importance of fresh fruits and vegetables to the human diet. “We cannot underestimate the importance of fresh fruits and vegetables for good health, yet still people don’t consume enough,” she said. “The challenge in my work is finding sustainable ways to extend the shelf life of produce at the highest quality after harvest.”

**Extending Produce Shelf Life**

“The work I do is for growers, so the connection with Extension helps to transfer this knowledge to the community. That connection is vital, especially with small growers.”

**Dr. Toktam Taghavi**
The Agricultural Research Station (ARS) is the hub of agricultural research at VSU. Annually, the ARS secures millions of dollars in grants to fund research that benefits small-scale farmers and local and national companies like Sally Bell’s Kitchen, Sabra Dipping Company and Pfizer Inc. Student training is also an important component of the ARS’s mission. “Students are an integral part of our research program. They help us implement the research projects we conduct here, and we provide them with opportunities to learn the practical aspects of lab work or field work,” said Wondi Mersie, Ph.D., associate dean and director of research.

Shakeyla Willis, a senior majoring in chemistry, worked for Pfizer last summer. “Working in the Food Processing and Engineering Lab at VSU enabled me to get the summer internship with Pfizer,” she said. “It [the internship] was due to the research project I had been working on, the skillsets I’d mastered and the instrumentation I’d used.” Willis began working within the ARS under the guidance of Associate Professor Yixiang Xu, Ph.D., and Research Specialist Edward Sismour, Ph.D., in 2016. She is part of a team working on a USDA-funded project to design “green” food packaging films using biodegradable polymers and incorporating natural antimicrobial agents and cellulose nanocrystals from agricultural waste.

Students learn other crucial skills as well. Sismour teaches students data analysis and graphic design for scientific presentations. Students develop soft skills such as critical thinking, leadership, organization and collaboration. “Students are involved in project-based training in which they learn how to start and implement a project, how to gather and report data and how to work with others,” said Xu. “We prepare students to be able to work on any project they may get assigned, and the skills they acquire through the hands-on training we provide will prepare them for a career when they leave school or for further academic studies.”

Through their private-sector partnerships, the ARS helps companies accomplish specific objectives, and the funding that these companies provide enables ARS researchers to hire students to do applied research and thereby gain invaluable experience. Mersie advises students while at VSU to take advantage of the learning opportunities the ARS provides, in the lab and at Randolph Farm. “Agriculture is a broad field with a lot of employment opportunities, not just in production, but in food processing companies, and marketing in health and food-related areas,” he said.
Pursuing Childhood Dreams

Samantha Rodriguez ’17, Eboni Charity ’17 and Kiera Sweetenburg ’17, three VSU alumni who studied animal science/pre-veterinary medicine, are classmates again this fall. This time they’re together at Tuskegee University’s College of Veterinary Medicine in Tuskegee, Alabama.

At age six Rodriguez decided she wanted to become a veterinarian. “When I was little I was the person who would go out and try to help the injured baby bird to be able to fly again,” she said. Growing up she had a lot of pets: ferrets, guinea pigs, dogs and cats.

When Charity was seven, she lost her first puppy, Coco, to parvovirus. It was then that she determined she would become a vet and help animals. “I’m excited about accomplishing this dream I’ve had for a long time. Being able to start and accomplish it is amazing,” she said.

Both students credit Associate Professor Pamela Thomas-Buchanan, DVM, (called Dr. B), in large part, for their success. Dr. B educates her students about vet schools across the country, and even takes them on trips to visit. “When I was younger, the only vet school talked about was Virginia Tech,” Charity said. But Dr. B opened her eyes to other possibilities.

Dr. B has structured the curriculum to ensure students complete the academic requirements and get the community service experience required for admission into a veterinary medicine program. “Dr. Buchanan provided support, gave me the classes I needed, and prepared me on what to expect for the future,” Rodriguez said. “She helped me get the veterinary hours required to get accepted into vet school. She was always there if I needed something.”

Charity credits Dr. B with encouraging her to believe she could get accepted into vet school. “She acts as a ‘mom’ to everyone,” she said. “Dr. B helped with anything. She gave students rides home and she stayed beyond office hours to help students.”

Veterinary school is four years of graduate education. Afterwards Rodriguez plans to work under an established veterinarian to gain some experience and then set up her own clinic, work with a wildlife rehabilitator or work with exotic animals. “It’s thrilling that I’ll be able to do what I’ve always wanted to do,” she said. She’s open to moving anywhere in the U.S. or in the world to care for animals. Charity plans to specialize in emergency and critical care for small animals. She’s not sure where she will end up practicing, but she’s ready for whatever comes her way.

For aspiring veterinarians Rodriguez emphasized the importance of completing all coursework “because those grades really do matter,” and getting the community service hours. Many vet schools require between 200 and 500 hours of clinical experience, which can be amassed through a practicing clinic, in academics or in research.

“At VSU you’ll learn what you’ll need to get into vet school...By the end of the semester you’re family with everyone.”

Eboni Charity ’17
Veterinary medicine has a diversity problem. According to a 2017–2018 Annual Data Report published by the Association of American Veterinary Medical Colleges (AAVMC), in 2018, only 18.5 percent of veterinary medical school students are from underrepresented groups. In addition, 80 percent of applicants to veterinary medicine colleges are female and 20 percent are male.

As a male, black veterinarian, Allen Cannedy ’89, DVM, understands the statistics all too well. For more than a decade, he has been passionately working to change the profession’s culture and to boost minority enrollment in the field. He earned national recognition of his efforts in 2017 when he received the Iverson Bell award from the AAVMC. And in 2016, he received the Distinguished Alumnus Award from his alma mater, Tuskegee University’s College of Veterinary Medicine. “Obtaining the Iverson Bell award is the highest acknowledgement of individuals who’ve done work on diversity and inclusion,” Cannedy said. “That is the pinnacle of where I stand as far as recognition of my efforts to do the work I’ve done on diversity.”

Cannedy didn’t set out to be a champion for diversity and inclusion. It also wasn’t until age 19 that he decided to pursue a career in veterinary medicine. He confessed he preferred cows to concrete and had no interest in becoming a concrete contractor like his dad. “I didn’t want anything to do with concrete,” he admitted. He worked on a dairy farm while growing up in Spotsylvania County outside Fredericksburg, Virginia. He milked cows and provided follow-up care to sick animals after a vet visit. “Getting the exposure to help those sick dairy cows is what got me interested in being a doctor to animals,” he said.

North Carolina State University’s CVM has also demonstrated its commitment to diversity and inclusion through several initiatives and partnerships. NCSU is partnering with Purdue University Veterinary College to launch a program directed to engage K–4 elementary school children, especially those from underrepresented minority groups in the veterinary profession, to consider pursuing careers in the veterinary profession,” he explained. “Veterinary medicine has the sad distinction of being labeled the least diverse of all the healthcare professions.”

By investing in diversity and inclusion, NCSU has been a leader and innovator. “They saw the need for the effort and saw that I had an interest in helping out,” he said. “I was willing to engage in ‘courageous’ conversations that needed to happen regarding why the profession didn’t have the diversity it claimed it wanted.” Administrators at the university were willing to engage in important yet difficult discussions about diversity and address misconceptions about why blacks and other minority groups are underrepresented. “We’ve done a lot of work in trying to change the culture in our college,” Cannedy said. “Changing the culture takes an extremely long time.”
underrepresented groups, to spark their interest in the veterinary profession. Both Purdue and NCSU have diversity and inclusion certificate programs in which administrators, faculty, staff and students can participate. Cannedy recruits at several historically black colleges and universities (HBCUs) around the U.S., including VSU. He recruits undergraduates, veterinary students, interns and residents seeking careers in veterinary medicine. His efforts on behalf of NCSU have resulted in increased enrollment numbers of students from diverse cultural and ethnic backgrounds and from in state and out of state. NCSU CVM has managed to improve its diversity in black student demographics from one in each class in 1995 to an average of five in each class now. Despite the advancements, he said there’s still a lot of work to be done. He’s begun tackling the lack of diversity in faculty at NCSU CVM. As an example, he said there is the same number of African American faculty members now as when he joined the faculty 20 years ago. He’s determined to precipitate change in this space as he has with diversity in student enrollment.

His recruitment strategy includes efforts to engage kids in K-12. He invites high school students to shadow him in his own mobile practice, Small Ruminant and Camelid Mobile Veterinary Services, which provides veterinary care for goats, sheep, llamas and camelids. Cannedy speaks to elementary and middle school kids to get them interested in the veterinary medicine field. And every summer he coordinates the NCSU summer veterinary camp for students in grades six to eight. Through his 14 years working on diversity and inclusion, Cannedy has found that underrepresented minority communities are unaware of different career pathways for veterinarians. He explains there are veterinarians who are senators, university professors and administrators, astronauts and presidents of organizations.

“I tell students to imagine what they can do that hasn’t been done yet...I tell them to dream and then plan.”

Dr. Allen Cannedy ’89

“Veterinarians need to be wherever animals are,” he said. He speaks broadly to students about the different career options and how they can position themselves to get accepted into a veterinary college. He also shares his personal story as a minority veterinarian and minority administrator. “I tell students to imagine what they can do that hasn’t been done yet,” he said. “I tell them to dream and then plan.”

Cannedy has mentored hundreds of students over the years. Every year people reach out and thank him for his help to put them on the path to veterinary medicine. “One of the most pleasurable times is graduation when we get to welcome our new graduates into the profession,” he said. “The thank you cards and notes are lifetime treasures to me.”

Working to change the culture of an environment is extremely hard work and takes a long time. However, the rewards of seeing people become open and accepting of differences and become willing to learn from each other is well worth the effort. Cannedy said, “I truly feel I’ve had a positive impact at NC State College of Veterinary Medicine and on the veterinary profession.”
Out of eight applicants, Danielle Wilson '17 was selected as the 2018 summer Extension intern for Virginia Cooperative Extension (VCE) in Chesterfield County, Virginia. Chesterfield Cooperative Extension helps citizens maintain and improve the quality of their environment, and offers programs in financial management, gardening, nutrition education, plant diagnosis, youth development and more.

To be considered, applicants must be either a rising junior or senior at a four-year accredited college or university in a course of study relevant to Cooperative Extension’s mission, or have a bachelor's degree in a discipline related to Extension's mission. Applicants must have strong communications and relationship building skills, be good at planning, organizing, coordinating and problem solving, and be willing to work with diverse clientele and colleagues in the local community. For more information about summer internship opportunities with Virginia Cooperative Extension, visit https://ext.vt.edu/internship.html.

Danielle reflects on her summer experiences:

The summer internship with Chesterfield County Cooperative Extension was a 10-week paid internship from June 4 to August 10. I arrived early on the first day at the Chesterfield VCE office where I met Jennifer Coates, the administrative assistant. She gave me a tour of the office, introduced me to staff and provided me with a schedule.

Throughout the summer, I helped the Master Gardeners complete a demonstration garden, designed youth programming for the 4-H day camp, planned a super hero-themed family fun day for the Chesterfield County Farmers Market, and provided administrative support to the Chesterfield VCE staff. I also worked with community organizations such as Girls for a Change, Chesterfield Young Professionals, Come 'bucha, Blue Eye Flowers, Kidz R Cookin', Chesterfield County Fire and EMS, and Sebandon Hill Farm.

I put into practice important skills I learned while studying nutrition and dietetics at VSU. I taught 9-13 year olds about cooking, how to grow one’s own food, healthy eating habits, stress management tips and how nutrition affects you from the inside out. We also took weekly trips to the Chesterfield County Farmers Market.

Being a summer intern for Chesterfield Cooperative Extension was a delightful experience and one that I would recommend to any student looking to gain experience in 4-H youth development. To read more about my experiences, check out my record of internship at https://adventureswithchesterfieldvce.wordpress.com.

Students considering a career in agriculture or an agriculture-related industry can get paid, practical experience through a summer internship with Virginia Cooperative Extension and through employment with the United States Department of Agriculture (USDA).

**Virginia Cooperative Extension Summer Internships**

Virginia Cooperative Extension’s (VCE) summer internships are paid positions that provide participants with opportunities to explore careers in nutrition, agriculture, environmental science, natural resources, family and consumer sciences, or community and youth development.

Internships must have completed their sophomore year or have earned a bachelor's degree in a course of study relevant to Extension. Internship opportunities are usually posted in late February and applications are due by late March.

For more information, visit: https://ext.vt.edu/internship.html

**Undergraduate and Graduate Employment with USDA**

USDA has several programs for students and recent graduates to gain invaluable professional work experience and insight into a future career with USDA. Opportunities include the USDA Pathways Program, USDA Internship Program, USDA Recent Graduates Program and USDA Presidential Fellows Management Program. Each year USDA employs thousands of students nationwide throughout its mission areas, agencies and administrative offices.

For more information, visit: https://www.usda.gov/our-agency/careers/usda-pathways-programs
Agriculture Alumni Chapter Holds 37th Annual Banquet

On November 9, the Agriculture Alumni Chapter held its 37th Annual Banquet. The keynote speaker was Robert Holland, '78, Ph.D., who serves as associate director for operation within the Office of the Director for the National Institute of Food and Agriculture at the United States Department of Agriculture (NIFA-USDA). Holland provides leadership and direction for NIFA-USDA’s $1.5 billion federal assistance programs.

Holland was given a plaque for being keynote speaker. Michael Carter Sr., agricultural management agent with Virginia Cooperative Extension’s Small Farm Outreach Program, received a plaque for Dedicated Service and Outstanding Contributions to the Field of Agriculture. Many other individuals received certificates of recognition:

- Anthony Hunter
- Leonel Castillo
- Mery Caldwell
- Michael Carter, Jr.
- Michael Carter, Sr.
- Susan Cheek
- Derrick Cladd
- Cheryl Crawford
- William Crutchfield
- Lesha Berkel
- Chasten Davis
- James Edwards
- Leonard Elam, Jr.
- Marylin Estes
- Frank Fisher
- Michell Green
- Megan Harrison
- Vernon Heath
- Alston Hilliard
- Tammy Holler
- Nadine Jackson
- Mojdeh Karimi
- Fidelis Okpebholo
- Darren Owens
- Tracy Porter
- Resheed Reid
- Charles Salley
- Hannah Sawyer
- Jameelah Scott
- Clifford Somerville
- Grace Summers
- Roland Terrell
- Michael Wooden

4th Annual 1890s Land-Grant Communications Summit Held at VSU

Twenty-one members of communications departments from nine land-grant institutions convened at Randolph Farm for a two-day 1890s Land-Grant Communications Summit in November. The theme of the 4th annual event was “Solving the Diversity Dilemma: Developing Messaging & Delivery Methods for Diverse Audiences.” Communications professionals from as far as Wyoming and Texas attended to gain insights from invited industry leaders and each other to further the 1890 Extension and research missions. The summit kicked off with an optional day of tours at Ellwood Thompson’s, Tricycle Gardens 31st Street Baptist Church farm and Hardywood Brewery. Extension and Agricultural Research Station faculty and staff were invited to attend a presentation on writing impact statements by guest speaker Robin Adams Cheeley of WriteRight. The 1890 land-grant institutions are 19 historically black colleges and universities (HBCUs) that are designated with land-grant status under the Morrill Act of 1890.
Under Construction: Mobile Meat Processing Unit

Construction is underway on the mobile meat processing unit (MMPU). Once constructed and in operation, the MMPU will fulfill an important need for small ruminant producers in Virginia by providing a USDA-certified mobile slaughter and processing facility housed in a 40-foot trailer.

1 – Exterior of VA’s Own Small Ruminant Processing and Educational Unit

2 – Inside Cooler Room with Trolley System Leading from Back of Unit

3 – Rear Interior of Unit Depicting Rear Entrance Ramp Door (with cold curtain), Floor Drain, Trolley System (top) and Stainless Steel Sinks for Handwashing and Cleaning

4 – Front Interior of Unit with a Side Access Door (left wall with cold curtain), Cooler Door (front) and Trolley System (top)
BERRY CONFERENCE - March 21, 2019
The Berry Conference is an annual event in which participants can learn about growing and marketing varieties of strawberries, raspberries and blueberries that are suited to Virginia’s climate.

BLUEBERRY FIELD WALK - April 18, 2019
More than 45 blueberry cultivars are grown and studied at Randolph Farm. The field walk is an opportunity for participants to see these cultivars and decide which one may be suitable for their future blueberry production.

VIRGINIA URBAN AGRICULTURE SUMMIT - April 24–26, 2019
The three-day summit in Virginia Beach will feature community leaders and agricultural experts sharing their knowledge about sustainability, food waste, policy, starting a business and more. Tours will include urban farms, farmers markets and other related sites.

UPCOMING EVENTS

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GREENHOUSE
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SERVING COUNTIES: Accomack, Chesapeake CITIES OF: Essex, Gloucester, Hampton, King and Queen, King William, Matthews, Middlesex, Newport News, Norfolk, Northampton, Northumberland, Portsmouth, Richmond, Virginia Beach, Westmoreland, Williamsburg

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Roland Terrell (804) 892-4612 rterrell@vsu.edu
SERVING COUNTIES: Albemarle, Buckingham, Culpeper, Fluvanna, Greene, Louisa, Madison, Nelson, Orange, Rappahannock, Warren
A July 2018 farmer’s market on the VSU campus featured a variety of fresh fruits and vegetables, all grown at the university’s Randolph Farm. The farmer’s market is part of an effort to promote healthy eating and living on campus, as well as to communicate the value and purpose of Randolph Farm and the College of Agriculture to students, faculty and staff. (Pictured from left to right: Theresa Nartea, Kayla Surley, Fatima Richardson, Charles Hill, Reza Rafie, Mojdeh Karimi, and Sam Williams)

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