

[HTTP://NEWS.CALS.VT.EDU/INNOVATIONS](http://news.cals.vt.edu/innovations)

The College of Agriculture and Life Sciences

Adding value pays off for Virginia cattle producers



By Lori Greiner

With more than 1.4 million head of cattle across the commonwealth, Virginia's beef cattle industry is big business.

But while the cattle market has been favorable over the past few years, producers understand the need to continually improve their operations to stay competitive.

The Virginia Quality Assured certified feeder cattle program provides producers with the means to add value to their cattle, enabling them to receive premium prices for their calves.

Virginia Cooperative Extension partnered with the Virginia Cattlemen's Association to develop and administer the program, which encourages the use of research-based health and best management practices for feeder cattle. Participants are eligible to market feeder cattle through the Virginia Quality Assured initiative.

The program, which started in 1997, has marketed more than 125,000 head of feeder cattle, resulting in \$6.4 million in value-added income for Virginia's beef cattle producers.



Feeder cattle are tagged with purple tags to verify that they have met the Virginia Quality Assured program standards.

"Having the ability to add value to Virginia's beef cattle operations is critical to the sustainability of Virginia agriculture and rural communities," said Scott Greiner, Virginia Cooperative Extension beef cattle specialist.

“Having the ability to add value to Virginia's beef cattle operations is critical to the sustainability of Virginia agriculture and rural communities.”

Scott Greiner

Virginia Cooperative Extension beef cattle specialist

The initiative would not prosper without the coordinated efforts of all parties involved.

"Part of what makes this program so successful in our area is the collaboration among Extension agents, the Virginia Cattlemen's Association, Virginia Department of Agriculture and Consumer Services, Abingdon Feeder Cattle Association, Tri-State Livestock Market, and the producers," said Scott Jessee, agriculture and natural resources Extension agent in Russell County. "We all have a role to play."

Throughout the year, Jessee and his fellow Extension agents and specialists provide producers with valuable health, management, genetic, and marketing information. This education is offered through a variety of methods, including field days, on-farm visits, group meetings and workshops, demonstrations, and distance learning. Extension agents also serve as third-party verifiers to ensure that producers have followed the required vaccination and management protocols. The eligible animals are evaluated and described by VDACS livestock marketing representatives. The cattle are then grouped by similar traits and offered for sale in truckload lots at scheduled intervals on the Virginia Cattlemen's Association Tel-O-Auction. The livestock market provides the facility and equipment to sort, weigh, and load out cattle.



Cattle producer Philip Bundy (left) and Russell County Agriculture and Natural Resources Extension Agent Scott Jessee discuss herd management and marketing options for this year's calf crop.

"Having the cattle groups in tractor trailer loads allows the producers to reach a different level of buyer," said Jessee.

Philip Bundy (agronomy '88), a Russell County cattle producer and president of the Abingdon Feeder Cattle Association, has been marketing cattle through the program since it started in Southwest Virginia 11 years ago.

"We've built a reputation of providing high-quality, weaned feeder calves," said Bundy. "Our cattle are highly sought after, and we are now outselling western cattle."

The program has taken off in the past couple of years. In 2014, producers in Southwest Virginia more than doubled the number of cattle marketed through the program in 2013.

Online extras at <http://news.cals.vt.edu/innovations>



Featured CONTENT

Adding value pays off for Virginia cattle producers 1
Dean's Update..... 2
President Sands tours AREC 2



Alumni making a difference

2

New college experts directory 2
Virginia Tech helps grow agriculture industry..... 3
Kentland Farm..... 3
Industrial hemp 4
Outstanding alumni..... 4



Companion and lab animal emphasis graduates first cohort

4



Discovering new species of millipedes right here in Appalachia

5

Alumni events..... 5
Extension brings healthy cooking classes to Hispanic families in Charlottesville..... 6
Feed the future..... 6
Produce auction 6



Virginia Tech leads the way in agricultural biotech and bioscience initiative

7

Outstanding CALS students..... 7
Endowment helps Virginia Tech 7

Keep up with all the exciting research, academic, and Extension news at the College of Agriculture and Life Sciences' website, www.cals.vt.edu, or find us on social media.



Online extras, videos, links, and an interactive version of Innovations can be found at

<http://news.cals.vt.edu/innovations>.



Scan the QR code to access Innovations from your mobile device.



Dean's Update

The College of Agriculture and Life Sciences is home to many of the best and brightest scientists and educators in the world. In this issue of Innovations, you can read about how CALS is researching some of the biggest issues of our time and how this new information is being shared with students in the classroom and with communities throughout the commonwealth.

One of the initiatives highlighted in the following pages is the new Experts Directory — a searchable website that uses keywords to identify faculty members based on their areas of expertise. Not only will this site help media representatives find subject-matter experts, it will also provide an excellent resource for our industry partners, prospective students, alumni, and friends who want to locate particular experts in the college. Take a moment to explore the site at <http://news.cals.vt.edu/experts>.

This issue of Innovations contains stories about how CALS is making a difference in Virginia and around the world. For example, in Southside Virginia, Extension agents have helped create an auction for producers to market their goods locally. And in Richmond, Virginia Tech was a major contributor to the 2015 Governor's Conference on Agricultural Trade and continues to be relied on as a vital source of research and outreach that helps Virginia agriculture compete globally.

You can also read about several of our students and how their work is having a global impact and exemplifies *Ut Prosim* (That I May Serve). For example, agricultural technology student Junior Beauvais is creating a seed bank in his native Haiti to help the country recover from the 2010 earthquake. Jessica Li, the 2015 Virginia Tech Undergraduate Student of the Year, held a number of internships and used her talents to serve as a medical translator in Honduras.

Also in this edition, you will find updates on the Dining Services Farm and learn more about a gift now worth \$2 million that continues to have a lasting impact throughout the commonwealth.

This is truly an exciting time for the college! Thanks for all you do to be a part of it.

Sincerely,

Alan Grant
Dean

Online extras at
<http://news.cals.vt.edu/innovations>



Alan Grant, dean

“The College of Agriculture and Life Sciences is home to many of the best and brightest scientists and educators in the world.”



President Sands tours Hampton Roads AREC and new Tech Center

Virginia Tech President Timothy D. Sands recently visited the Hampton Roads Agricultural Research and Extension Center in Virginia Beach where he toured the facility and got a chance to meet researchers and students who work there. Just a few months ago, Sands visited the Eastern Shore AREC in Painter.

Sands was in the area for the Virginia Tech Hampton Roads Showcase, an event that encouraged cooperation between the university and local companies where the new Tech Center in Hampton Roads is being built. The center will function much like the Virginia Tech Corporate Research Center in Blacksburg, but it will also incorporate retail and living space. At the showcase, Sands met with researchers from the Eastern Shore and Virginia Seafood ARECs, along with faculty members of the Department of Food Science and Technology.

President Sands (right) speaks with Virginia Seafood AREC Director Mike Jahncke.



Alumni Making a Difference: Phillip J. Haynie III

Phillip J. Haynie III isn't only a fifth-generation farmer from Reedville, Virginia, he's also an informal ambassador to the agriculture industry.

In addition to running a high-quality grain operation where he grows soybeans, corn, wheat, and barley on the family farm, Haynie, (agricultural and applied economics, '99) regularly addresses students and policymakers about issues affecting the agriculture industry.

A proponent of precision agriculture, he has spoken to students at Virginia Tech to encourage them to consider nontraditional careers in the industry, perhaps as engineers, who can develop increasingly automated and sophisticated farming systems, or as seed geneticists, who can someday provide a more drought-resistant or disease-tolerant strain of seed.

He also takes time away from the farm to educate policymakers about the challenges facing farmers.

“I enjoy engaging with audiences,” said Haynie, who has visited Kenya, South Africa, and Cuba as a representative of the agriculture industry.

A member of the National Black Growers Council, Haynie is also an advocate for minority farmers. The



organization is critical to building a network for minority farmers, whose numbers have dwindled from 1 million in the 1920s to fewer than 15,000 in the last decade.

His advocacy for minority farmers through the council and the agriculture industry in general was recently recognized by the Obama administration, which named Haynie a Champion of Change.

“I feel really passionate about giving back to the agricultural community,” he said.

New directory taps into network of college experts

Looking for an expert on agricultural productivity or animal welfare? Diabetes or drought? Climate change or community viability?

Look no further than the college's new online Expert Directory. More than 275 faculty members from the college and Virginia Cooperative Extension are listed — along with a detailed description of their areas of expertise — in one easily searchable directory.

The website will allow media representatives to tap into our vast network of experts, make it easy for current or prospective students to find researchers they want to work with, and enable other scientists to find collaborators.



Online extras at
<http://news.cals.vt.edu/experts>



Keep up to date with all the college's news and upcoming events at

www.cals.vt.edu



Virginia Tech President Timothy D. Sands (left), Dean Alan Grant, and Professor Richard Crowder (far right) present alumnus C.G. Thornhill an award recognizing his crucial role in Virginia agricultural exports.

Virginia Tech helps grow agriculture industry, increase global trade

Virginia Tech is poised to help feed a growing world population while assisting the state's agriculture and forestry industries to flourish and become global leaders, said Virginia Tech President Timothy D. Sands during a speech at the 2015 Governor's Conference on Agricultural Trade.

"Virginia Tech and other land-grant partners, including Virginia State University, are in a great position to be a partner with all of you to take advantage of this opportunity going forward," Sands told the crowd. "This is a great place to be if you are excited about agriculture."

At the conference, Gov. Terry McAuliffe announced that in 2014, Virginia once again set a record with more than \$3.35 billion in agriculture and forestry exports. That makes Virginia the second-largest agricultural exporter on the East Coast, up from third place the previous year.

Kentland Farm feeds hungry students and intellectual curiosity

By Amy Loeffler

Students who love the award-winning culinary offerings at Virginia Tech can give thanks to the Dining Services Farm, a sustainable vegetable- and fruit-growing operation located at Kentland Farm.

What started out as a small herb garden in 2009 has grown exponentially — the 2014 season yielded 40,856 pounds of produce valued at \$22,687.

"Production of local food is an avenue for direct participation in agriculture," said Alex Hessler, the sustainable food systems director who manages the farm. "Agricultural landscapes have great cultural and aesthetic value. They beautify our communities, foster wildlife, provide opportunities for recreation, and, when managed sustainably, protect our natural resources."

Hessler, who joined the college in 2014, is a faculty member in the Department of Horticulture and in Dining Services. He teaches the Sustainable Agriculture Practicum, an experiential course offered by the Department of Horticulture that gives students the opportunity to manage cultivation and harvesting at the farm.

"The most rewarding experience as the director of the Dining Services Farm has been working and learning alongside the student farmers," he said. "The students gain enormous joy and satisfaction from growing fresh vegetables that are served to students, staff, and faculty at Virginia Tech. Facilitating that experience for them is why I do what I do."

The Dining Services Farm has been using organic growing practices for nearly five years, and Hessler is applying for organic certification for the farm. Organic farming incorporates techniques such as using compost and cover crops, biological pesticides, and beneficial insect habitat.

The farm is also partnering with Virginia Cooperative Extension's Fresh Produce Food Safety Team to implement Good Agricultural Practices — procedures that maintain food safety throughout the production and harvest process.



The produce Alex Hessler's class harvests is used by Virginia Tech Dining Services.

"Agricultural landscapes have great cultural and aesthetic value. They beautify our communities, foster wildlife, provide opportunities for recreation, and, when managed sustainably, protect our natural resources."

Alex Hessler

Sustainable food systems director

INNOVATIONS

SUMMER 2015

Dean Alan Grant
 Director of Communications and Marketing.....Thea Glidden
 Editor Zeke Barlow
 Contributors..... Zeke Barlow, Lori Greiner, Amy Loeffler, and Jamie Lucero
 Graphic Designer Nickola Dudley
 Copy Editor Bobbi A. Hoffman
 Photographers Zeke Barlow, Lori Greiner, Amy Loeffler, and University Relations

Office of Communications and Marketing
 130 Smyth Hall (0904)
 185 Ag Quad Lane
 Blacksburg, VA 24061
 540-231-5309

Innovations is published by the Virginia Tech College of Agriculture and Life Sciences, 104 Hutcheson Hall (0402), 250 Drillfield Drive, Blacksburg, VA 24061.

Please email address changes and circulation inquiries to calseditor@vt.edu. Editorial inquiries and other comments should be sent to Innovations Editor, 131 Smyth Hall (0904), 185 Ag Quad Lane, Blacksburg, VA 24061 or calseditor@vt.edu.

Innovations is produced by the Office of Communications and Marketing in the College of Agriculture and Life Sciences.

Virginia Tech does not discriminate against employees, students, or applicants on the basis of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other basis protected by law.



Alex Hessler, director of sustainable food systems, and students in his Sustainable Agriculture Practicum produced 40,856 pounds of produce for Virginia Tech dining halls last year. Hessler plans to seek organic certification for the Dining Services Farm.



Hemp can be used in food, pharmaceuticals, and fiber.

CALS will research production, use, and economic impact of INDUSTRIAL HEMP

A new state law and the establishment of an industrial hemp research program by the Virginia Department of Agriculture and Consumer Services have given Virginia Tech the ability to evaluate the potential for industrial hemp production in the commonwealth.

The bill Gov. Terry McAuliffe signed into law allows Virginia's public institutions of higher education to grow industrial hemp for research purposes. The Virginia Department of Agriculture and Consumer Services will be responsible for issuing the growing licenses.

"We look forward to working with our partners across the state to undertake research that has the potential to bring a new crop to Virginia's already robust agricultural portfolio," said Alan Grant, dean of the college. "Although we are only in the beginning stages of establishing this program, our research abilities — when combined with those of Virginia Cooperative Extension and our Agricultural Research and Extension Centers — can help this initiative grow and benefit the state."

Fourteen states have established industrial hemp programs and are exploring how the plant can boost economic development. Retail sales of hemp-based products in the United States could exceed \$300 million annually, according to industry reports.

Companion and lab animal emphasis graduates first cohort

By Amy Loeffler

At the Montgomery County Animal Care and Control shelter, a tan-colored hound mix named Flossy wagged her tail in anticipation of being let out of her kennel for a walk.

Flossy wasn't just going for a walk, though. She was becoming a member of the pack that was instrumental to the first cohort of Dr. Luciana Bergamasco's companion and lab animal emphasis in the Department of Animal and Poultry Sciences.

The class gives students interested in animal science a more diverse view of the field through hands-on learning. On the day of Flossy's debut, the class was learning about animal shelter management and canine behavior and health.

Students interested in applying for veterinary school, like Dillon Didehvar, a senior from Hockessin, Delaware, enjoyed the experiences and guest lectures.

"I really liked the different vets who visited the class. We have had everyone from a vet who spoke about holistic medicine to a board-certified veterinary cardiologist," Didehvar said.

The hours students spend in this class can give them a competitive edge if they decide to apply to vet school.

"We learned how to manage aggressive animals, give CPR, and sew sutures on dogs and cats using mannequins," said Jasmine Mingo, a senior from Richmond, Virginia, who plans to work as a veterinary technician.

Lab animals were a component of the syllabus too, and students completed training to work with rats and mice in a laboratory. Students also learned about lab animal management.

"This class made us aware of other careers in animal science beyond the traditional avenues of vet medicine and farming," said Katelyn Westerholm, a senior from Stafford, Virginia. "We learned about career options in the research field, in the public health sector developing vaccines, and in companion animal management in disaster situations."

Flossy the hound mix learned something, too — humans need her just as much as she needs them.



Katelyn Westerholm and Flossy, a hound mix at Montgomery County Animal Care and Control, spend some quality time together. The field trip to the shelter is a component of the companion and lab animal emphasis in the Department of Animal and Poultry Sciences.

“We learned about career options in the research field, in the public health sector developing vaccines, and in companion animal management in disaster situations.”

Katelyn Westerholm
Stafford, Virginia



Jim and Janet Johnson (above, left) were inducted into the CALS Hall of Fame by Dean Alan Grant (right). Lt. Katrina Piercy (below, center) was given the Outstanding Recent Alumni Award by Vice President for Alumni Relations Tom Tillar (left) and Grant.

OUTSTANDING ALUMNI RECOGNIZED

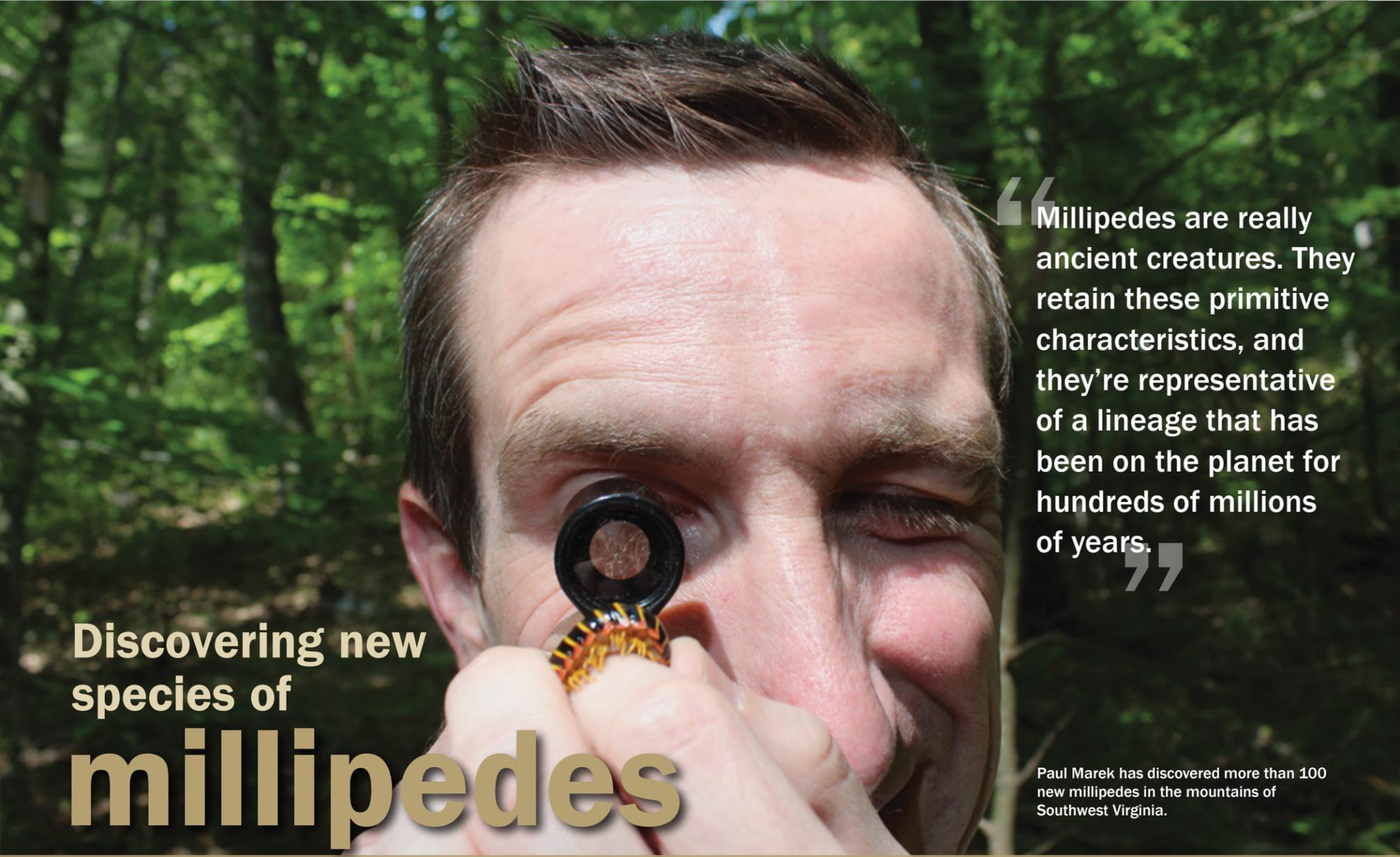
Jim and Janet Johnson, of Roanoke, Virginia, were honored as this year's inductees into the CALS Hall of Fame. Jim (animal science '60, M.S. extension '67) retired as director and associate professor emeritus of Virginia Cooperative Extension. Janet is dean emeritus of the College of Human Resources and Education and has been active in the Department of Human Nutrition, Foods, and Exercise since her retirement. As members of the Ut Prosim Society, the university's most prestigious donor society, their philanthropy has made a mark on numerous areas of the Blacksburg campus and has funded four endowments. In addition to being extremely generous with their time and money, the Johnsons have assumed leadership roles that have served the university and community in a multitude of ways.

Lt. Katrina Butner Piercy, of Gaithersburg, Maryland, received the Outstanding Recent Alumni Award. Piercy (Ph.D. HNFE '10) serves as the physical activity and nutrition advisor to the U.S. Department of Health and Human Services in the Office of Disease Prevention and Health Promotion in Rockville, Maryland. She is part of the U.S. Public Health Service Commissioned Corps. She was a subcommittee lead for the development and promotion of the most recent version of the Dietary Guidelines for Americans, and she designs My Plate guidelines — two online resources used by millions of Americans seeking information about healthy lifestyles.

Other award winners included

- Outstanding Ambassador: James Rockwell of Stephens City, Virginia, a senior majoring in environmental horticulture and agribusiness management.
- Outstanding Faculty Service Award: Dan Eversole of Blacksburg, Virginia, professor of animal and poultry sciences.
- Outstanding Alumni Leadership Award: James Saunders of Piney River, Virginia, partner of Saunders Brothers Inc.
- Outstanding Alumnus in International Programs: Cary Gordon "C.G." Thornhill ('75) of Boston, Virginia, president and general manager of T.K. Exports Inc.

For more information on these and other award recipients, visit www.cals.vt.edu/alumni/awards.



“Millipedes are really ancient creatures. They retain these primitive characteristics, and they’re representative of a lineage that has been on the planet for hundreds of millions of years.”

Discovering new species of millipedes right here in Appalachia

Paul Marek has discovered more than 100 new millipedes in the mountains of Southwest Virginia.

By Amy Loeffler

The refrigerator in Paul Marek’s boyhood home contained the usual comestibles of the average family — a gallon of milk, assorted vegetables, and meats.

And bugs Marek stored in the freezer.

“I’ve always had a collector’s itch,” said Marek, an assistant professor of entomology. “As a kid I would always collect rocks and feathers and bugs.”

His boyhood obsession with collecting artifacts of the natural world has translated into a career as a preeminent diplopodologist — a millipede scientist. Today, his lab on the Virginia Tech campus is ground zero for millipede research and is the only functioning millipede lab in the United States.

Marek has identified 10 new species of what may be 200 yet-to-be-discovered species of millipedes that inhabit the decaying leaves in the mountains of Appalachia. And there is room for much more research in the field.

Marek estimates that only 10,000 millipedes have been identified and catalogued globally, but another 100,000 that have yet to be seen by human eyes likely exist

under brush, in arid foothills, and in humid tropical forests.

“We’re sending probes out to Mars to explore the galaxy for other signs of life. But we can go out here and find new species of beings as close as Montgomery County,” he said.

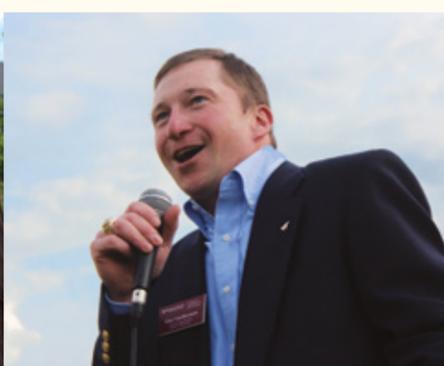
He has more than 100 newly discovered millipedes in his lab waiting to be named and classified.

Incidentally, Marek points out, millipedes do not have 1,000 legs as the Latin etymology suggests. The most legs that have been identified on a millipede are 750 — and Marek himself is responsible for rediscovering that creature. It had last been seen in 1928 and was thought to be extinct.

“Millipedes are really ancient creatures,” said Marek. “They retain these primitive characteristics, and they’re representative of a lineage that has been on the planet for hundreds of millions of years.”



Online extras at <http://news.cals.vt.edu/innovations>



ALUMNI EVENTS FOR NEW GRADUATES AND UNDERCLASSMEN SMASHING SUCCESSES

On April 17, the CALS Alumni Organization hosted a networking social for first-year, sophomore, and junior students. Alumni and Virginia Tech leaders guided a discussion on career choice, interviewing skills, and networking.

The Alumni Organization also hosted a well-attended celebration for the college’s 2015 graduates at the Hahn Horticulture Garden and Pavilion April 29.

Katie Frazier (agricultural economics and political science ‘04) — president of the Virginia Agribusiness Council and member of the CALS Dean’s Advisory Council and the Virginia Tech Alumni Association board of directors — gave the keynote address. Representatives of the Virginia Tech Alumni Association and the CALS Office of Communications and Marketing showcased the many ways to stay connected with the university and the college after graduation.

In addition to graduating seniors, some of the attendees at the New Alumni Launch Party were Roger Harris, horticulture department head and Dean Alan Grant (bottom right) and Tim VanReenen, the CALS alumni board president (top right).



Families in Ian Pasquarelli's healthy cooking classes learn about the importance of preparing balanced meals using fresh fruits and vegetables.

Extension brings healthy cooking classes to Hispanic families in Charlottesville

When Habitat for Humanity suggested that Virginia Cooperative Extension Agent Ian Pasquarelli's programs would be of interest to the mainly Hispanic community of Southwood in Charlottesville, he set about developing a Spanish-language component to incorporate into his programming.

As a family and consumer sciences agent, his programming targets low-income, underserved, and underrepresented populations in Albemarle, Fluvanna, and Greene counties and focuses on healthy meal preparation, food safety techniques, and the importance of sharing meals and family time.

"It's very important to make the connection between the healthy foods we should be eating and how they need to be prepared," said Pasquarelli. "It doesn't do us any good to tell people to eat more fresh fruits and vegetables if they don't know how to prepare them."

Pasquarelli has partnered with a Spanish-language interpreter to conduct his family nutrition classes. He is currently taking Spanish classes through Virginia Tech, and he hopes to be able to lead future classes in Spanish.

To date he has conducted 14 healthy cooking classes.

Agricultural Technology student receives seed bank grant to help

feed^{the} future

By Amy Loeffler

Recent history has not been kind to Haiti. In many ways the country is still reeling from the 2010 earthquake that leveled Port-au-Prince, and access to nutritious food and basic health care remain elusive for many of the country's residents.

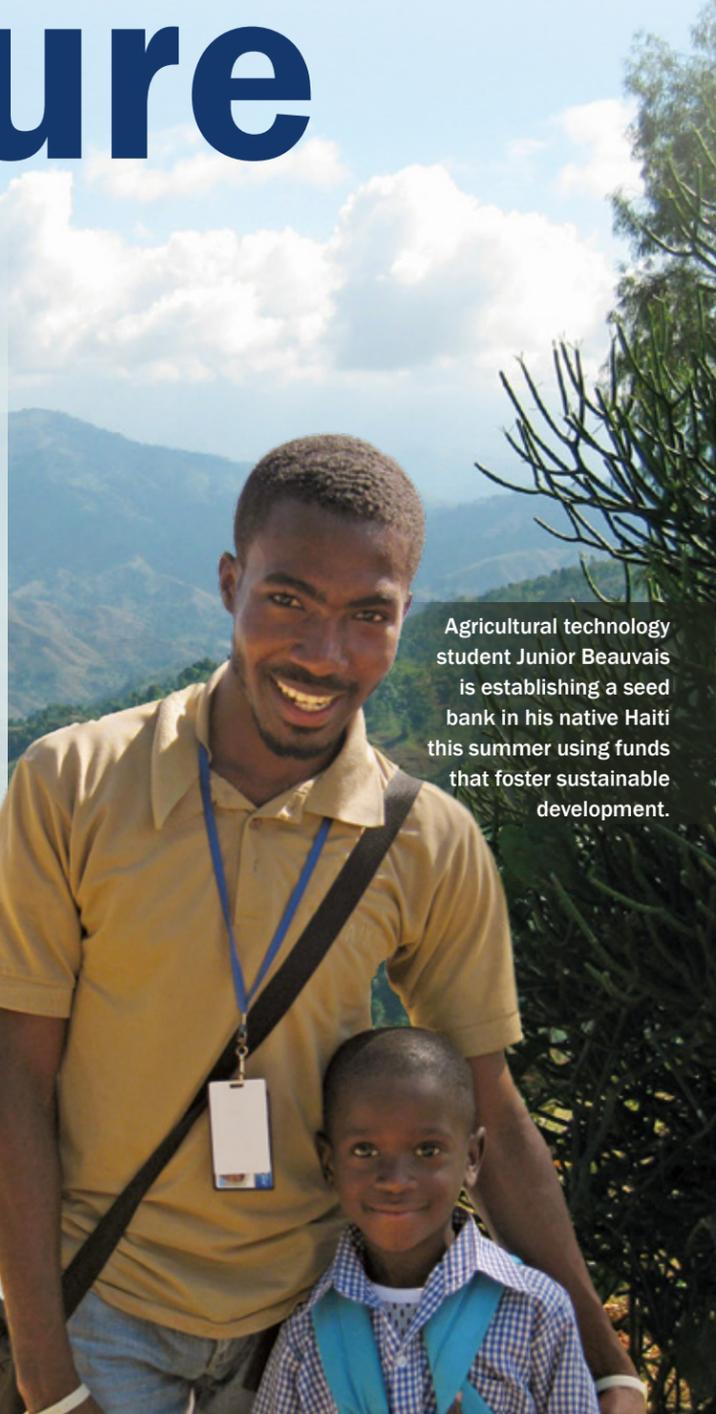
But Junior Beauvais, 26, is trying to change that — one small seed at a time.

Beauvais, who is pursuing his associate degree in agricultural technology, recently received a grant of 15,000 euros — currently valued at about \$16,000 — from multinational pasta company Barilla to start a seed bank.

This summer, Beauvais is constructing a building to house heirloom seeds that he will gather from farmers throughout Haiti. According to Beauvais, who hails from Jacmel on Haiti's southern coast, the hearty heirloom seeds will produce more nutritious and prolific crops, which in turn will generate more cash for farmers and allow them to send their children to school.

"I can build the seed bank in one or two months," said Beauvais. "The longer process will include building a program to increase the number of seeds, buying construction equipment, paying for staff to educate farmers, and starting a seed buy-back program."

Beauvais will graduate in 2016. No doubt he will take the lessons from his time as a student here in Blacksburg back to Haiti where he hopes to work as a teacher and change the face of his community one student — and one seed — at a time.



Agricultural technology student Junior Beauvais is establishing a seed bank in his native Haiti this summer using funds that foster sustainable development.

Produce auction expands economic avenues for farmers



The Extension initiative to create a produce auction in Southside Virginia has been a boon to local producers.

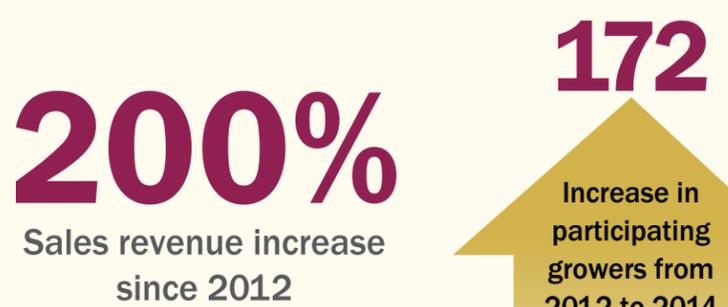
Marketing fruits and vegetables used to be a challenge in Southside Virginia. A lack of outlets for farmers to get their produce to market limited the amount that could be sold, which diminished farmers' profits.

The solution? A produce auction was born in 2012 with assistance from Virginia Cooperative Extension to help farmers sell products and decrease the amount of time they spent manning markets and roadside stands.

In recent years, the Southside Produce Auction has experienced phenomenal growth while maintaining exceptional quality and boosting profits for growers.

"The produce auction worked in several ways to help producers in the area," said Bob Jones, agriculture and natural resources Extension agent in Charlotte County. "This came from listening to the community and its needs and partners that not only made the auction an initial success, but also allowed its growth to continue into 2014."

To date, the auction has brought more than 16,000 visitors to Charlotte County.



Virginia Tech leads the way in agricultural biotech and bioscience initiative

By Amy Loeffler

Agricultural biotechnology and bioscience are emerging industries that blend the artistry of molecular science with agricultural production to boost productivity and improve plants, animals, and microorganisms using techniques that are not possible with traditional crossing of related species alone.

The industries received a boost when Gov. Terry McAuliffe announced plans for a Virginia Bioscience Initiative in 2014. The effort has the state's research universities and the private sector working together to catalyze the growth of the emerging industries.

The agricultural bioscience initiative is part of Gov. McAuliffe's broad effort to create a New Virginia Economy that seeks to overhaul the state's economy on several fronts.

And the College of Agriculture and Life Sciences is well-positioned to meet the needs of the nascent industries.

Faculty members in the college perform agricultural technology and biosciences research that runs the gamut from developing alternative sources of energy to increasing swine production.

Assistant Professor of Animal and Poultry Sciences Kiho Lee is developing ways to increase hog production using gnotobiotic, or germ-free, animals to develop genetic pathways that maximize feed to increase muscle mass and producer profits.

In the Department of Food Science and Technology, Assistant Professor Andrew Neilson is infusing food with nutraceuticals like cocoa flavanols — compounds that greatly lowered blood sugar levels and prevented weight gain in mice that were fed a high-fat diet.

Virginia Tech biological systems engineering Ph.D. graduate Joe Rollin and Professor Percival Zhang are



Kiho Lee, who is working with pigs to increase muscle mass, is one of the many scientists working in agricultural biotechnologies and biosciences.

“As Virginia’s leading research university, Virginia Tech is already at the forefront of a lot of agricultural biosciences research and development.”

Saied Mostaghimi

Associate dean for research and graduate studies in the College of Agriculture and Life Sciences

creating revolutionary alternative energy systems using the abundant agricultural resource of corn stover to create zero-emission hydrogen fuel.

“As Virginia’s leading research university, Virginia Tech is already at the forefront of a lot of agricultural biosciences research and development,” said Saied Mostaghimi, associate dean of research and graduate studies in the college. “We look forward to helping grow these industries in the commonwealth.”

ENDOWMENT HELPS VIRGINIA TECH MAKE COMMUNITIES MORE SUSTAINABLE AND ECONOMICALLY SECURE

By Amy Loeffler

Ten years ago, an endowment was created to help communities across the commonwealth and beyond be more sustainable and resilient through partnerships with Virginia Cooperative Extension, Virginia Tech, and local community members.

Since its inception in 2004, the endowment — which has grown to more than \$2 million — has provided income to fund numerous projects that foster partnerships and spur creative research at the granular level. It has also provided seed money for an array of projects with wide-ranging impacts.

“A gift like this can get lots of different projects started,” said Rick Rudd, head of the Department of Agricultural, Leadership, and Community Education and the Virginia Cooperative Extension Professor of Excellence in Community Viability, a position funded by the endowment. “We are helping people leverage resources.”

The gift was given in honor of R. Michael Chandler, Donald P. Lacy, and J. Douglas McAlister in recognition of their service to Virginia Cooperative Extension.

One initiative that has its roots in the Community Viability Endowment is the Virginia Agricultural Leaders Obtaining Results program. Supported with seed money from the endowment, the program trains professionals from industry, research, and education to serve as leaders in the agricultural industry.

Another program currently being funded is the Appalachian Foodshed Project. Funds from the community viability project have helped get crucial conversations started about strengthening food security networks throughout Appalachia.

“The project has brought more awareness about the challenges Appalachia faces when talking about community food security,” said Susan Clark, associate professor of horticulture and director of the program. “By listening to what community stakeholders are telling us, everyone learns how to work together to meet the goal of regionally enhanced food security.”

In the Shenandoah Valley, Harrisonburg EATS is also being funded by the Community Viability Endowment.

“We’re hoping to engage the community but also to have those tangible impacts that come out of this process,” said Beth Schermerhorn, education research support specialist at the Virginia Sustainable Agriculture Research and Education development program. “Part of our goal is not only increasing food security through access, which seems to be what the broader discussion is about, but also providing meaningful employment that provides a salary and living wage through food systems.”

Other projects funded this year include programs to expand science-based outreach and to use agricultural curriculum as a multidisciplinary teaching tool.

Ten years after the original gift, the impact of the endowment continues to grow and touch countless people across Virginia. Just like its donor wanted it to.



Jessica K. Li



Hope Wentzel



Sarah R. McCoski



Sarah Phoebe Williams

OUTSTANDING CALS STUDENTS HONORED

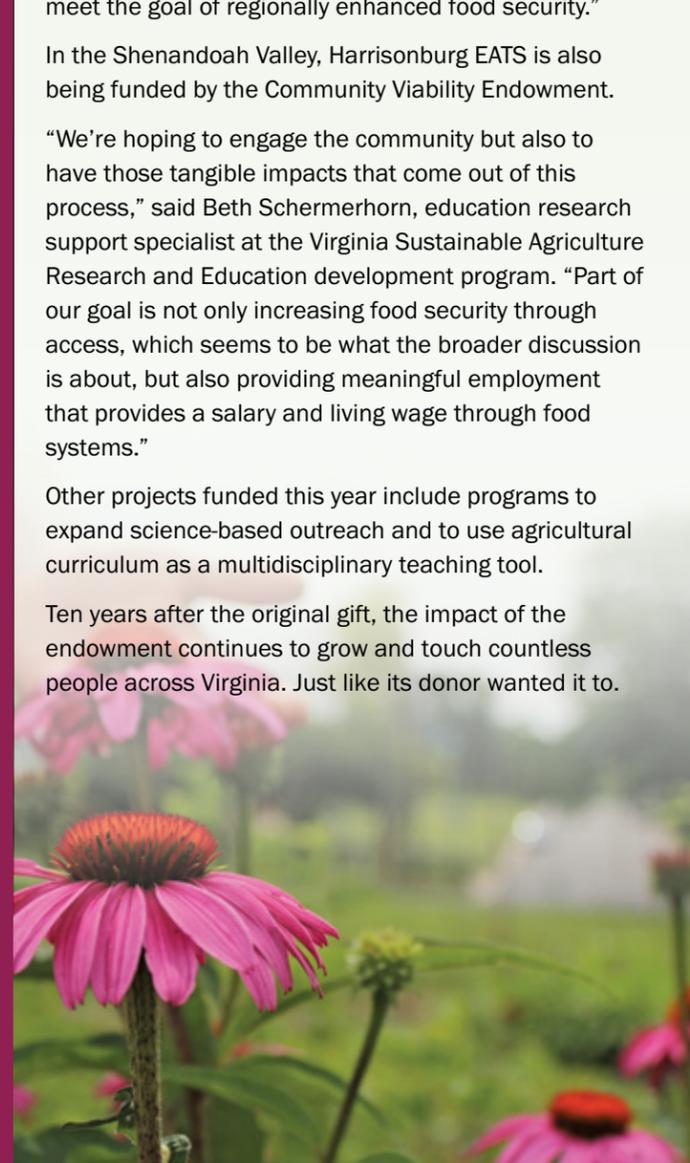
Four students from the college were honored this spring for their academic excellence and service to community.

Jessica K. Li of Martinsville, Virginia, received the Virginia Tech Undergraduate Student of the Year Award. Li graduated with dual degrees in human nutrition, foods, and exercise and biological sciences. Li held numerous internships and positions during her time at Virginia Tech that called on her dedication to public service, including working as a medical translator in Honduras and interning in the field of geriatric medicine. Continuing with her interest in public service, she plans to attend medical school, where she will focus on cultural diversity and geriatrics.

Hope Wentzel of Alexandria, Virginia, received the 2015 Outstanding Senior Award. Wentzel majored in animal and poultry sciences and minored in forestry. A Pamplin Scholar, she received numerous scholarships throughout her academic career and made four sojourns abroad to better understand international development and agriculture's role in fostering capacity building. She founded Ag for ECHO, an organization that provides agriculture and health education activities for an adult day services group.

Sarah R. McCoski of Amsterdam, New York, was named the college's outstanding master's degree student. She is earning her M.S. in animal and poultry sciences with a concentration in reproductive biology.

Sarah Phoebe Williams of Charlottesville, Virginia, was named the college's outstanding doctoral student. She is earning her Ph.D. in biochemistry. Williams is working on projects sponsored by the National Science Foundation. She has been first author on research papers and has given presentations at international meetings.



GET INVOLVED!



with your College Alumni Organization

No dues!

We offer opportunities for you to participate in alumni activities that will help you keep in touch with classmates, friends, and faculty, as well as help you to make new friends and network. At the same time, you will have opportunities to give back to the college and its departments in the form of service and support.

Upcoming events

Sept. 7

FallFest Homecoming Tailgate

- Entrance of Litton-Reaves Hall on the Virginia Tech campus
- Four hours prior to kickoff
- In collaboration with The Ohio State University College of Food, Agricultural, and Environmental Sciences

Sept. 19

Virginia Tech/Purdue tailgate at Purdue University

In collaboration with Purdue University College of Agriculture

All registration links can be found at www.cals.vt.edu/alumni

Homecoming Celebration

FALLFEST

Join us for a celebration before the Virginia Tech–Ohio State football game!

MONDAY
Sept. 7, 2015

Four hours prior to kickoff at the entrance of Litton-Reaves Hall

- ▶ Virginia agriculture tent featuring industry and local growers
- ▶ Tailgate buffet and adult beverages
- ▶ Games and activities for Hokies of all ages
- ▶ Live music
- ▶ Special appearance by the HokieBird

Register online at

www.alumni.vt.edu/reunion/cals



Endowment
helps
Virginia Tech
make communities
and **more sustainable**
economically secure
(story page 7)