

THE OHIO STATE UNIVERSITY

continuum»

News from the College of Food, Agricultural, and Environmental Sciences

Summer 2017

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WELCOME!

CATHANN A. KRESS,

KRIS BOONE

JOIN CFAES

A portrait of Cathann A. Kress, a woman with shoulder-length blonde hair, smiling. She is wearing a dark blue sweater with white trim around the collar and sleeves. A small orange pin is visible on her left chest. The background is a blurred indoor setting.

 MICHELLE BALL

Q&A WITH THE NEW DEAN

CATHANN A. KRESS TOOK THE REINS OF THE OHIO STATE UNIVERSITY'S COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES ON MAY 1. SHE NOW OVERSEES 4,100 UNDERGRADUATE AND GRADUATE STUDENTS, 330 FACULTY AND 1,230 STAFF MEMBERS, 10 ACADEMIC UNITS, AND OFFICES AND/OR FARMS IN EVERY OHIO COUNTY. KRESS COMES TO OHIO FROM IOWA, WHERE SHE SERVED AS VICE PRESIDENT FOR EXTENSION AND OUTREACH AND DIRECTOR OF COOPERATIVE EXTENSION AT IOWA STATE UNIVERSITY.



I'm thrilled to be joining the great community of people and scholars at Ohio State. The college has a tremendous opportunity to lead in the grand challenges facing the world: food security and the entire supply chain; future leadership in agriculture; and communicating and working with consumers about what we do.



Q: What do you hope to accomplish during your first 90 days?

A: The first few months will be focused on listening and learning. I'll need to engage with a lot of people to learn about their perceptions of our purpose, strategies and priorities. Listening and learning also gives me an opportunity to get to know people—to be in and among our students, faculty, staff and stakeholders—to make sure that I understand the big picture. There will be important issues for me to gather information around, including the current state and hearing the collective wisdom. In addition, I hope to be able to share my leadership point of view, which includes my philosophy, my expectations and what others can expect of me.

Q: What do you hope to accomplish during your first year? What will be your priorities in your new position?

A: There are some specific areas that need attention, such as focusing on the leadership team and working to plan out the searches for positions that still need to be filled to complete the team. Given the long period of interim leadership, there also has to be attention given to alignment and clarification of the strategic plan, which includes gaining agreement about goals, standards and priorities.

Beyond that, we need to build momentum for the future. I think there are some key propositions to help us achieve that. First, we'll be tackling several areas simultaneously. Attention to cultivating collaborations and creating conditions to incentivize actions around the "one college" model will be important.

We also will need to carefully review and determine how we will collectively target investments and leverage resources in support of key priorities. We need to continue to evolve in our understanding of what it takes to support individual students—at either Ohio State ATI or on the Columbus campus—and at the same time, we need to continue to build the capacity to impact issues at a scale to address whole industries or communities.

Finally, I hope to focus us holistically and not just incrementally—beyond just adding a few programs or recruiting more students—and plan how we will enhance our research capacities and then develop processes of evolving enterprisewide to fully serve students and our fellow Ohioans.

Q: Why Ohio State?

A: Ohio State is home to a diverse group of people, colleges, centers and opportunities. I believe it is poised to be a place that can take on grand challenges. I want to be part of that kind of work. I like the Midwest, and I'm dedicated to the mission of the land-grant university.

Q: Who do you see as your most important customers?

A: The people of Ohio. Children. Those we will serve in the future—those who will be our students, our producers, our leaders, our manufacturers.

Q: What do you see as the college's strengths?

A: The success of the students and the depth of talent among the faculty and staff, combined with strong collaborative partnerships across the university and the state. Numerous specialties, including food security, production and human health; bioenergy; and especially the focus on the environment. But our real strength is our people and the caliber of their work.

Q: What do you see as opportunities?

A: There are several key opportunities in CFAES. The first is developing long-term plans for facilities so we can provide cutting-edge facilities for world-class teaching and research. We also will continue to build the "one college" model by focusing our faculty and staff on a shared vision for the college, and we will enhance student experience and enrich the work we do to build and create lifelong connections.

Q: How do you see CFAES addressing critical issues facing Ohio today?

A: We are immersed in a state with strong related industries and activities. We are well-aligned and connected to be a key resource for many sectors.

Q: What's the best advice you've ever been given?

A: From my dad, "Leave things better than you found them."


Q: What's the most recent book you've read?

A: "The Night Bookmobile," a graphic novel, by Audrey Niffenegger.

Q: What are you reading now?

A: "Those Who Work, Those Who Don't: Poverty, Morality, and Family in Rural America," by Jennifer Sherman.

Q: What's your favorite book and why?


A: "The Darkness Around Us Is Deep," by William Stafford. It includes my favorite poem, "Ritual to Read to Each Other," and I like that Stafford described his writing as starting from experience and following it towards what is real. 



Follow the dean on Twitter:
@cathannkress

» As ATI director, Kristina Boone provides leadership for teaching, research, service, engagement, marketing, student services and student recruitment.

NEW DIRECTOR: A **BOONE** FOR ATI

 SUZANNE STEEL

To Kristina Boone, preparing students for graduation is a means to an end, not the end in itself. “We know that one of the best ways to change someone’s socio-economic status is through education and skill development,” said Boone, who became director of Ohio State’s Agricultural Technical Institute on April 1.

“We know that improved socio-economic status relates to better health outcomes and other life improvements. That’s what ATI does so well. It brings the engine of Ohio State to a larger and broader group of people to improve lives,” she said.

Located in Wooster and sharing a campus with the Ohio Agricultural Research and Development Center, ATI grants associate degrees and is within Ohio State’s College of Food, Agricultural, and Environmental Sciences. ATI provides smooth entry into the college, with all credits transferring for those who wish to pursue a four-year degree.

“Ohio State is a great institution with many, many strengths. ATI provides students


an affordable and accessible pathway to the Columbus campus, as well as great technical education opportunities and workforce development,” Boone said.

Besides shaping students, Boone believes education strengthens communities. “ATI is a real builder for Wooster and the area. It has had a tremendous impact on this region,” she said.

In her new position, Boone would like to establish more links with the Columbus campus—getting ATI students engaged with their peers in Columbus—and would like to create an environment for faculty success.

She wants to upgrade facilities “and continue the great work of building the ‘Wooster campus’ and ‘one college’

concepts. In addition, I want to get involved in the Wayne County area,” Boone said.

Boone received her MS and PhD from Ohio State in agricultural communication and extension education, respectively, and her undergraduate degree from Texas Tech University. She returned to Ohio State from Kansas State University, where she chaired the Department of Communications and Agricultural Education. 

ATI’s curriculum includes general and basic studies, experiential learning and a paid industry internship. It is the largest institution of its kind in the country, offering 26 programs of study. For more information see ati.osu.edu.

Advancing Women's Careers in Ag and Life Sciences

 SUZANNE STEEL


When Sandra Velleman began her research career in the late 1970s, there were not many women working beside her. "Doors were open to be tech support, but doors closed as you went up the ladder," said the professor of poultry science at Ohio State.

She saw herself and her female colleagues having to work harder or needing to have better credentials in order to get to the same place as their male counterparts, Velleman said. "Ohio State is making a dedicated effort to address gender issues, but the doors are still not fully open."

With support from Executive Vice President and Provost Bruce McPherson, who was dean of CFAES at the time,

Velleman launched the CFAES Gender Initiative in 2015.

Her target audience: faculty, staff, undergraduate and graduate students. The mission: to identify and create a support structure that will lead to the retention and advancement of women's careers in the agricultural and natural sciences.

Velleman set off to create a tool bag for women by offering a variety of symposiums and workshops. Topics have included career paths, negotiating, interview skills, conflict management and maximizing one's personal brand. Future offerings will focus on confidence and will dive deeper into negotiating skills, Velleman said. 

When asked about being the first female dean of CFAES by a student journalist, "I told her I hadn't thought about gender that much. I was focused on leadership," said Cathann A. Kress. "But I came to realize that it was important to this young woman that a female was going to lead the college. I hope I can serve as a role model to show the career potential for women in agriculture and academia. If I can do anything to encourage others, that's a good thing."

GENDER INITIATIVE



Science Whiz Wins National 4-H Award

 **SUZANNE STEEL**

She can recite Newton's laws the way most people give out phone numbers. She built a model of a trebuchet—a catapultlike device used in the Middle Ages to hurl stones—and can accurately predict the trajectory of the marble it throws. When she turned 8, she wanted a “science-themed” birthday party, to include a History Channel program and science experiments.

Ava Lonneman is no ordinary 17-year-old. The third-generation 4-H member from Suffield, Ohio, just east of Akron, is the winner of the 2017 Youth in Action Pillar Award for Science, Technology, Engineering and Math (STEM) from the National 4-H Council. She is being honored for organizing 4-H members in her high school STEM club, at Bio-Med Science Academy in Rootstown, to share their knowledge with more than 600 middle schoolers in surrounding Portage County.



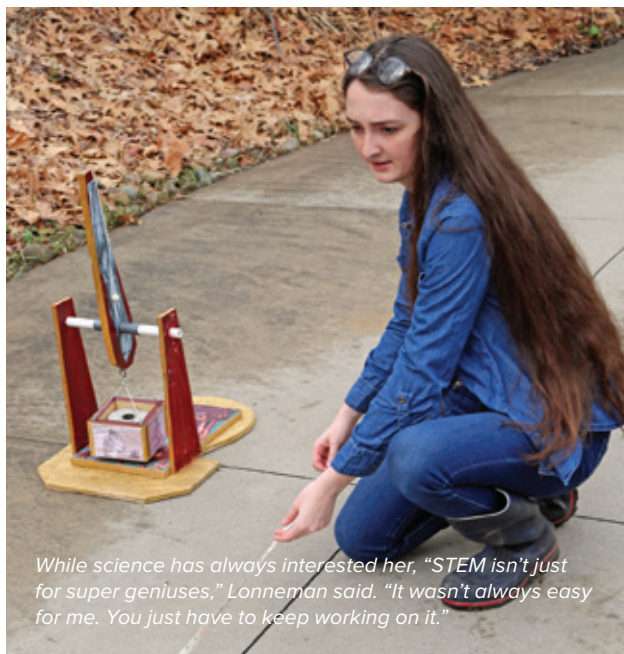
LOOKING BACK IN HISTORY

TO LOOK FORWARD TO THE FUTURE

This year, two key departments within Ohio State's College of Food, Agricultural, and Environmental Sciences are celebrating important milestones: the Department of Agricultural Communication, Education, and Leadership is marking its 100th year in existence while the Department of Plant Pathology is reflecting on its 50th year as an integral part of the college. Following is a look back at some of each department's key moments in time. **TRACY TURNER**

KEY

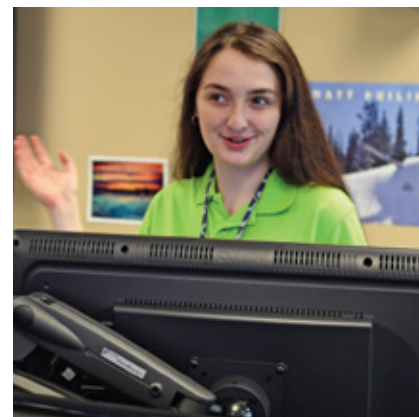
-  Department of Agricultural Communication, Education, and Leadership
-  Department of Plant Pathology



While science has always interested her, “STEM isn’t just for super geniuses,” Lonneman said. “It wasn’t always easy for me. You just have to keep working on it.”



Hands-on learning is one feature that attracted Lonneman to 4-H. “I have ADHD (attention deficit hyperactivity disorder). I figured out I get the most out of learning by doing,” Lonneman said. “That’s what 4-H is all about. Hands-on learning.” Lonneman started in 4-H as a Cloverbud, the 4-H group for children in kindergarten through second grade.



Club members used the 4-H National Youth Science Day curriculum, Motion Commotion, to teach middle schoolers about such things as Newton’s laws and to show the consequences of texting when in motion. Their visits to middle schools were made possible by a \$1,770 Ohio 4-H Foundation grant for youth STEM outreach.

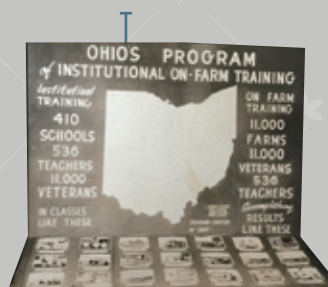
July 1, 1917: The Department of Agricultural Education was created, not long after the passage of the Smith-Hughes Act, which provided funding for secondary agricultural education and was created to prepare teachers to work in the secondary education programs of vocational agriculture. Dean Alfred Vivian served as department chair from July 1917 to September 1917.

1917–1948: W.F. Stewart headed the department. He established departments of vocational agriculture in high schools statewide and began a college training program for agricultural educators. The number of high schools approved to teach vocational agriculture grew from 19 in 1918 to 352 in 1940.



1948–1978: Ralph Bender served as department chair. During this time, the department completed an evaluation of its curriculum and included a provision for field experience with the Cooperative Extension Service.

1954: Agricultural extension and vocational agriculture education efforts were combined into one department. Changes were made in the curriculum to make the program suitable for those seeking employment in either extension or vocational agriculture.



1960s: Graduate courses in administration, leadership development and program development were created. Extension education became a specialization within the department. Later, agricultural communication was added.

1900

1930

1950

PRAIRIE, STREAM PROJECTS ARE WIN-WIN FOR GWYNNE

 KURT KNEBUSCH

Look for new players like riprap, blazing star and willow fascines in the College of Food, Agricultural, and Environmental Sciences' Gwynne Conservation Area. The nearly 70-acre facility, part of the college's Farm Science Review site at the Molly Caren Agricultural Center in London, Ohio, recently started two new projects—one designed to diversify its prairie plantings; the other, to protect the banks of Deer Creek, which flows through the grounds. Review Manager Nick Zachrich said the projects offer double benefits. They improve the Gwynne itself, and they demonstrate practices that people—including the Review's 100,000-plus visitors every September—can take home and use on their own land, too.

go.osu.edu/theGwynne

1967: The Department of Plant Pathology was established. The department's faculty were formerly part of the Department of Botany and Plant Pathology. The stand-alone Department of Plant Pathology was administratively in the College of Agriculture and Home Economics, now CFAES. Botany faculty joined the new College of Biological Sciences.



1960

1968: Ira W. Deep served as the first chair of the department. Deep chaired the committee that designed a new plant protection undergraduate major.

1970s: Graduate courses in youth organizations, camp program development and youth program management in nonschool settings were created.



1970



1971: Selby Hall was completed on the Ohio Agricultural Research and Development Center campus in Wooster, Ohio, to house the Department of Plant Pathology and microscopy facilities (now the Molecular and Cellular Imaging Center).

1976: U.S. Department of Agriculture and OARDC plant pathologists and entomologists identified the maize chlorotic dwarf virus as the cause of a serious corn disease in the United States.



Blazing star is one of the many forbs, or wildflowers, to be planted—via new seed mixes—in the Gwynne's 10-plus acres of prairie. Asters, milkweeds and coneflowers are others.



Previously, the Gwynne's prairie plantings were mostly just two grasses: big bluestem and Indian grass. The new seed mixes, which have forbs plus grasses, hold benefits for pollinators and wildlife.



The prairie project also is demonstrating forb-friendly management—involving disking, burning, removing residue or a combination. Mike Retterer, an Ohio-based biologist with the nonprofit Pheasants Forever, helped develop the strategies.



Riprap (large chunks of stone) and willow fascines (bundles of live stems that are planted, take root and grip soil) are two tools helping to restore Deer Creek's stream bank.



As a first step, however, Ohio Land Improvement Contractors of America, a longtime Review partner, will excavate the stream bank, reduce its slope and eliminate an unstable undercut.



GREEN SCENES

Top 3 Moments from EPN's Events

Five years ago, David Hanselmann helped launch the Environmental Professionals Network, a statewide professional group based in CFAES's School of Environment and Natural Resources. Since then, EPN has grown to have nearly 2,000 members. It's held 55 monthly Breakfast Club programs, which typically draw 125-plus people, and five signature events, with a top attendance of 1,400. Hanselmann, who coordinates the network as a lecturer in SENR, shares his top three moments from those events. **KURT KNEBUSCH**

1. 'One Million Actions for Planet Earth' Speaker: Jack Hanna, Columbus Zoo and Aquarium, April 10, 2014.

"Jack led zoos across America to encourage their visitors to adopt sustainable practices daily. We encouraged the 700 attendees in the Ohio Union ballroom to join the effort, ultimately making Columbus the winner. Jack's message was inspiring; the animals he brought, adorable. None pooped on stage, either."

2. 'Cleaning Up America's Rivers' Speaker: Chad Pregracke, 2013 CNN Hero of the Year, Feb. 24, 2015.

"On a frigid winter morning, hundreds of students came to hear a young guy living on the banks of the Mississippi who had quietly started pulling debris from the river. Then, CNN's Anderson Cooper interviewed him, opening the doors for financial support and ultimately more than 70,000 volunteers on 15 rivers (livinglandsandwaters.org). How neat to see our students on the edge of their seats, wanting to know how to get involved."

3. 'An Evening With Joel Sartore' Speaker: Photographer Joel Sartore, March 26, 2015.

"Famous for his photos and stories in National Geographic, Sartore spoke in the Ohio Union ballroom after his work was projected on the United Nations headquarters building in advance of the UN Climate Summit. He didn't try to impress people with his fame. Instead, he inspired students to get involved in wildlife conservation and sustainable living. He shared his Photo Ark of endangered species (joelsartore.com/galleries/the-photo-ark). Amazingly, after landing in Columbus, he went straight to an SENR grad student's home to chat with him about his endangered-salamander conservation work."

Videos of EPN's events are archived at epn.osu.edu. A schedule of upcoming events is provided there, too, as are details on joining the network. Membership is free and open to anyone working in an environmental field, including students. **0**

Read two more moments, and more, at go.osu.edu/Top5EPN.

1978–1986: J. Robert Warmbrod served as chair for eight years before becoming dean of CFAES.



1981: On the Columbus campus, the Department of Plant Pathology moved from the Botany and Zoology Building (now Jennings Hall) to the newly constructed Kottman Hall, where it resides today.

1980

1982: OARDC became part of The Ohio State University. Since then, the Department of Plant Pathology has operated as a single academic department housed on two campuses. Gray leaf spot in corn was first reported in Ohio, and yield losses of 50 percent were common.



1984–1996: Charles R. Curtis served as department chair.

1986–1989: L.H. Newcomb served as department chair.



thoughts

FROM CFAES
OUTSTANDING
SENIORS

Whether they plan to join the Peace Corps after graduation, continue their education in graduate school, or reflect on life lessons they've learned during their higher education, Ohio State College of Food, Agricultural, and Environmental Sciences Outstanding Seniors all have at least one thing in common: their appreciation for the educational experiences they've received from the college. These students were honored as the college's 21 Outstanding Seniors on April 6 during CFAES's 64th Annual College Recognition Banquet. Here's just a sampling of some of their thoughts about their college years. **TRACY TURNER**



1. Andrea Kackley

*Agribusiness and Applied Economics
Pleasant City, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? My Vietnam War History class. I was able to learn about a time in history I knew little about, and I was able to work on applying those lessons today. It helped that the professor was very engaging and made the class interesting to learn about.

2. Ashley Rector

*Plant Pathology
Troy, Ohio*

WHAT'S YOUR FAVORITE THING ABOUT COLLEGE? My favorite thing about college is the variety of courses you can take. There is always a course being offered every semester that peaks my interest in a cultural way. It's impossible to have a boring semester.

3. Clint Gasser

*Animal Sciences
Creston, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? Favorite class would have to be a toss-up between Jeffery Firkins' Ruminant Nutrition and Maurice Eastridge's Feeding Management and Records Analysis for Dairy Cattle courses. They are some of the hardest classes I have taken here, but are incredibly applicable and pull together a large variety of concepts I have been learning since freshman year.

4. Carley Snider

*Agriscience Education
Felicity, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? My Agricultural Systems Management class. I learned so much about welding, carpentry, and agricultural systems that I didn't know prior to taking the class. It's prepared me to be a teacher in an agricultural education program.

5. Carolyn Voigt

*Environment, Economy,
Development and Sustainability
Indianapolis, Indiana*

WHERE DO YOU SEE YOURSELF IN ONE YEAR? In one year, I see myself as a Peace Corps volunteer working as a food security specialist in Zambia. My favorite class was Intercultural Leadership, because it gave me such insight into privilege and identity, and the responsibility that accompanies that privilege.

6. Brittany Webb

*Animal Sciences
Milford, Delaware*

WHAT'S YOUR FAVORITE THING ABOUT COLLEGE? Favorite Ohio State memory? Spelling O-H-I-O everywhere I went as a Buckeye, whether it was at a football game, dairy farm, community service event, the Grand Canyon or Brazil. Nothing better shows the strong friendships, school spirit and diverse opportunities I have experienced during my time here.

7. Craig Berning

*Agribusiness and Applied Economics
Anna, Ohio*

WHAT IS YOUR FAVORITE MEMORY AT OHIO STATE? It's when I walked onto the field at Ohio Stadium right before the Ohio State homecoming game as part of the Ohio State homecoming court. Seeing the stadium filled with so many people and being able to soak that experience in and see the magnitude of the community of Ohio State was really neat for me.

8. Megan Besancon

*Agricultural Communication
Sterling, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? My favorite class was Agricultural Feature Writing. Our class created an entire magazine, and I served as editor. It was an amazing opportunity for the entire class of graduating seniors to pull together all the skills we've learned throughout our entire undergraduate careers into the 123rd edition of *AgriNaturalist*.

9. Hallie Davidson

*Food Science and Technology
Solon, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? My favorite class was Food Additives. The class was great because it teaches you about what all that random stuff is on a food label that no one knows anything about. So now I can look at a food label and know exactly what's going into the foods that I am eating.

10. Jarred Shellhouse

*Agricultural Communication;
Public Affairs
Sycamore, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? My favorite professor was Nicole Kraft in a magazine writing course. She was the first person to challenge me in ways that I hadn't been challenged

before. It was one of the most difficult classes I've had, but walking away, I realized that I had learned far more about writing and about life than I would have ever imagined before setting foot in the same room as Nicole.

11. Mary Siekman

*Agricultural Communication
Delaware, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? My favorite class was during my sophomore year when I took a class on cultural proficiency with Dr. Susie Whittington. It really stretched my way of thinking, and I've applied what I've learned in that class to my everyday life.

12. Leah Schwinn

*Agricultural Communication
New London, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? My favorite class would have to be my Advanced Human Anatomy class. I spent seven hours a week in the lab working with cadavers and really learning about the human body. It was by far the hardest class I've ever taken with the amount of content I had to memorize and the practicals I had to take, but throughout the entire semester, I learned more than I could have ever imagined.

13. Lydia Bednarski

*Environment, Economy,
Development and Sustainability
Rocky River, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? My favorite class was my senior capstone course, Assessing Sustainability. The real-world applications from our semesterlong project with the Smart Columbus team were unparalleled when comparing other classes I have taken. Working on a team to create a plan of action for the Smart Columbus pilot projects that will be utilized by sustainability professionals was one of the highlights of my academic career.

14. Vanessa Egbo

*Food Science and Technology
Cincinnati, Ohio*

WHY DID YOU PICK YOUR MAJOR? I picked food science because I've always been interested in food. Food is really complex and interesting, and the food industry always experiences new challenges and trends. Plus, I'm never going to be out of a job, because people will always need

to eat. I'll also never be bored because it's so interesting and there is always something new going on.

15. David Glass

*Agribusiness and Applied Economics
Chillicothe, Ohio*

WHAT IS YOUR FAVORITE MEMORY AT OHIO STATE? I have two favorite memories. I was able to be in Ohio Stadium to watch the Buckeyes Beat TTUN (that team up north). And last fall at Mirror Lake, I proposed to my best friend and future wife. She said yes.

16. Rachel Adams

*Animal Sciences with an Animal
Biosciences specialization
Morgantown, West Virginia*

WHAT IS YOUR FAVORITE MEMORY AT OHIO STATE? My favorite memory is of an experience I had during my study abroad in Spain in my junior year. Three friends and I were eating paella, which is an amazing rice dish local to Spain, at this really fancy restaurant on the coast. It was amazing to share this memory with close friends—sharing really good food and wine with great friends.

17. Sierra Jepsen

*Major: Agribusiness and Applied
Economics; Minors: Animal Sciences
and Meat Science
Amanda, Ohio*

WHY DID YOU PICK YOUR MAJOR? My dad is a farmer and he always joked that if he could go back and do college all over again, he would have taken more business classes and paid a little more attention!

18. John Rowe

*Animal Sciences
Cincinnati, Ohio*

WHAT WAS YOUR FAVORITE CLASS, OR WHO WAS YOUR FAVORITE PROFESSOR? Equine Production and Management, taught by Kimberly Cole. During this class, I got to see the birth of a foal and got to take care of it immediately after birth. I also got to implement training techniques with young horses, and got to monitor the progression of pregnancy in a mare. The amount of practical and hands-on learning in this course has been engaging and applicable to my future as a veterinarian hoping to specialize in equine internal medicine.

*Not pictured: Summer McCracken,
Miranda Miser, and Samuel Reed.*

► Ohio State raised nearly \$3.5 million, with 375 CFAES donors providing \$32,440, during the first Day of Giving in February. That included \$5,539 for the fund profiled below.

Nourishing Students and Success

 **MATTHEW MARX**

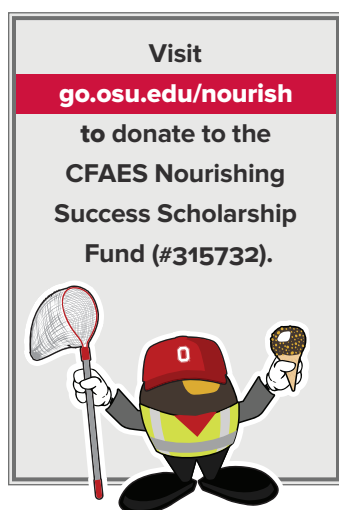
Upon learning about The Ohio State University's efforts to resolve the local, national and global issue of food security, Bill Hoerger and Ellen Lake of Oakland, California, were inspired.

Hoerger and Lake created a scholarship fund for food-insecure students in Ohio State's College of Food, Agricultural, and Environmental Sciences.

The CFAES Nourishing Success Scholarship Fund (#315732) helps cover costs of meal plans for college juniors and seniors who live off campus and are income-eligible.

For every \$4 donated to the scholarship fund, a meal is provided to a student in need, allowing him or her to concentrate on studies instead of an empty stomach.

CFAES promoted the new scholarship fund during Ohio State's first Day of Giving in February, raising \$5,539 for Nourishing Success during the 36-hour campaign. As a result, 1,384 meals will be provided




to CFAES students in need.

At Ohio State and throughout the nation, students have taken on jobs and are struggling to pay for education, said Hoerger, a college alumnus (BS 1964, Rural Sociology; MS 1968, Agricultural Economics) and loyal donor.

"This phenomenon is not necessarily hidden, but it is more visible and more widespread than people think," he said.

Hoerger, who grew up on a family-run dairy farm in northeastern Holmes County, Ohio, remembers his mother telling him how she subsisted on peanut butter and Jell-O while attending Ohio State with no financial support in the 1920s.

"We all know hunger diminishes your ability to work and think and learn. This is something that confronts Ohio State students," Hoerger said. "It is in the university's interest to benefit from these students becoming fantastically successful." 



HOMECOMING WEEKEND 2017

Save the date! Homecoming weekend, including the CFAES Fallfest Tailgate, is Oct. 6–8. After a Friday of interesting programming for our alumni and friends, get ready for football in the 'Shoe on Saturday. Before watching the Buckeyes host the Maryland Terrapins in a Big Ten Conference game, enjoy a yummy meal, live music and family-friendly entertainment at Fallfest. It's a great way to relax, to reconnect with CFAES and old college friends, or to make new friends. The university-wide Class of 1967 reunion luncheon is Sunday.

Learn more at go.osu.edu/fallfest2017

1989: The first comprehensive "Ohio Plant Disease Index," a record of plant diseases and their causal agents, was published.



1989–1995: Kirby Barrick served as department chair.



1992: The department celebrated its 75th anniversary.

1994: The plant health management undergraduate major was established.



1995–2000: N.L. (Mac) McCaslin served as department chair.

1990

► Thanks to Anderson International and OCS Process Systems—along with Rockwell Automation, Pentair, AGC Heat Transfer, Anderson-Negele, Fristam Pumps, Industrial Automation, and Tetra Pak—for their equipment donations.

DONATIONS COOKING UP OPPORTUNITIES

 **MATTHEW MARX**

Even four-legged consumers of Ohio-based food products and beverages may enjoy the impact of new pilot-plant equipment for food science students, industry professionals and entrepreneurs at The Ohio State University College of Food, Agricultural, and Environmental Sciences.

Pet food and animal feed are among the products being tested using state-of-the-art equipment that allows for hands-on learning and applied research involving a wider variety of food and beverage products.

While the Expander-Extruder-Cooker in the pilot plant at The Wilbur A. Gould Food Industries Center in CFAES's Department of Food Science and Technology is used mostly to produce foods for humans, such as snacks and breakfast cereals, a number of companies have taken an interest in its applications for healthier pet food, a growing industry.

"In extrusion cooking, ingredients are augured through a heated, cylindrical barrel by a rotating screw, and released from the barrel through an extremely small die," said Steven Simmons, a program specialist with the pilot plant. "This process combines temperature, pressure and shear to form a variety of unique, finished products."

Plus, a High Temperature Short Time (HTST) Pasteurizer Skid and Homogenizer processes milk, dairy and nondairy products, including frozen dessert mixes, nondairy milks (almond, soy, etc.), yogurt mixes and juices.

In pasteurization, liquid foods are heated to temperatures

below their boiling points to minimize possible health hazards and extend shelf life, Simmons said. HTST pasteurization is a short heating process, combined with subsequent cooling, to meet product safety and preservation goals while optimizing nutritional quality and other attributes.

Entrepreneurs can build their knowledge and skills for their new product innovations, as well as scale up their batch sizes in order to take the next step in commercialization, Simmons said.

Many pieces of equipment at the pilot plant have been used by students, faculty and industry over the years. One entrepreneur, Dara Schwartz of Darista Dips, has found the equipment at the pilot plant essential these past three years for creating and distributing new flavors of gourmet hummus in her growing business. 



1996–2006: Randall C. Rowe served as department chair.

1996: The diagnostic clinic was renamed the C. Wayne Ellett Plant and Pest Diagnostic Clinic in honor of Ellett, the first clinic director and a noted plant pathologist and mycologist.

1996: The Plant Pathology Graduate Students Association was formed.



1998–2012: The department merged with the Department of Rural Sociology to form the Department of Human and Community Resource Development.



2006–2007: Larry Madden (left) served as interim department chair until Mike Boehm was named department chair in 2007. Boehm was then named vice provost for academic and strategic planning in 2010, when Madden again assumed the role of interim chair.

2000

► The Ohio State University's Ohio Sea Grant program serves to make Lake Erie better—cleaner, healthier, safer—including in matters of algal blooms: ohioseagrant.osu.edu.

Turning Green Blooms Blue

 CHRISTINA DIERKES

Scientists involved in the Ohio Department of Higher Education's Harmful Algal Bloom Research Initiative (HABRI), some of them from Ohio State's College of Food, Agricultural, and Environmental Sciences, are making progress battling harmful algal blooms. They're learning how algae move in the water near treatment plant intakes. They're evaluating ways to reduce bloom-causing phosphorus runoff. They're creating custom solutions for algae problems in municipal water reservoirs.



Harmful algal blooms stink—in more ways than one. They turn lakes soupy green, making recreation unpleasant or impossible. Worse, they sometimes emit toxins that make water unsafe to drink.

HABRI's projects "go a long way toward understanding bloom movement and toxicity, potential impacts on human health, and improving the ways we treat drinking water," said Ohio Sea Grant Director Christopher Winslow. "They are also addressing state agency priorities."


Ohio State and the University of Toledo oversee HABRI, while Ohio Sea Grant, which is based at Ohio State and is part of the National Oceanic and Atmospheric Administration's national Sea Grant program, coordinates HABRI's proposals and manages its projects.

In one of those projects, Margaret Kalcic, assistant professor in CFAES's Department of Food, Agricultural and Biological Engineering, is leading a multi-university team of modeling experts. The team is evaluating how changes in agriculture and other land management practices, such as fertilizer timing, are likely to affect water quality.

At the University of Toledo, Tom Bridgeman is studying how algae, including the cyanobacteria behind harmful algal blooms, move through the water column during the day. His findings could help water

treatment plants reduce how much algae they take in, and with it, their costs.

At The University of Akron, Teresa Cutright and Donald Ott are creating tailored water treatment solutions for a number of Ohio reservoirs—solutions that remove algae, avoid the release of toxins from dead algae, and better manage drinking water for the reservoirs' customers.

Learn about all of HABRI's projects at go.osu.edu/habri. 

2007: Plant pathology researchers contributed to a multistate web-based forecasting system for Fusarium head blight of wheat.



2011: Terry L. Niblack was appointed department chair.

2012: Rural Sociology left Agricultural Education and moved to the Department of Environment and Natural Resources. The name of the department was changed to Agricultural Communication, Education, and Leadership.

2012: The Master in Plant Health Management (MPHM) program was established by the Departments of Plant Pathology and Entomology, thus the MPH M undergraduate major became a plant pathology-entomology joint major. The MPH M program also became the university's first Professional Science Master's program.

2012: An undergraduate major in plant pathology was added as the university changed from a quarter to a semester calendar.



2010

» To learn more about the innovative work being done in Katrina Cornish's lab, see cornishlab.cfaes.ohio-state.edu.



Tomorrow's tires could come from the farm as much as from the factory. Ohio State researchers have discovered that food waste can partially replace the petroleum-based filler that has been used in manufacturing tires for more than a century.

In tests, rubber made with the new fillers exceeds industrial standards for performance, which might open up new applications for rubber.

According to Katrina Cornish, Ohio Research Scholar Endowed Chair in Bio-based Emergent Materials at the Ohio Agricultural Research and Development Center, the technology has the potential to solve three problems. It makes the manufacture of rubber products more sustainable, reduces American

dependence on foreign oil and keeps waste out of landfills.

Cornish has spent years cultivating new domestic rubber sources, including a rubber-producing dandelion. Now, she has a patent-pending method for turning eggshells and tomato peels into viable, locally sourced replacements for carbon black, a petroleum-based filler that American companies often purchase from overseas.

Cindy Barrera, a postdoctoral researcher

in Cornish's lab, found that eggshells have porous microstructures, which provide larger surface area for contact with the rubber and give rubber-based materials unusual properties. Tomato peels, on the other hand, are highly stable at high temperatures and can also be used to generate material with good performance.

"Fillers generally make rubber stronger, but they also make it less flexible," Barrera said. "We found that replacing different portions of carbon black with ground eggshells and tomato peels caused synergistic effects—enabling strong rubber to retain flexibility."

"We may find that we can pursue many applications that were not possible before with natural rubber," Cornish added. **O**



2012–2015: Gary Straquadine served as department chair.

2014: The Master in Plant Health Management-Online program was added.

2015: Niblack was named acting senior associate dean of CFAES, so Madden again assumed the role of interim department chair. U.S. Department of Agriculture and OARDC plant pathologists and entomologists identified the cause of the devastating maize lethal necrosis disease in East Africa as a complex of two (or more) viruses.

2015

2015–present: Student enrollment has reached an all-time high, with 38 MS/PhD students, nearly 20 MPHMM students and 25 undergraduate majors. Genomics and computational biology tools have increased our understanding of pathogenic and beneficial microbes. Technology innovations have provided improved options and applications in plant disease management.



Aug. 1, 2016: Tracy Kitchel began his tenure as department chair.



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

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FSR is sponsored by the College of Food, Agricultural, and Environmental Sciences.

Continuum is produced by the College of Food, Agricultural, and Environmental Sciences at The Ohio State University. View *Continuum* online at cfaes.osu.edu/about/continuum.

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Graphic Designer: Kim Brown

Photographer: Ken Chamberlain

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