

SUMMER 2013

THE

magazine

UNIVERSITY OF KENTUCKY

COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT



From a Farm,
We Grew
Out of a campus
farm sprouted a
thriving university.

A Degree Above
No Business Like Sheep Business

from the dean

Looking Back:



By now, most of you have heard that I am stepping down after this year. As the search for a new dean progresses, I am fielding many questions about what was best, worst, most difficult, significant, or fun about my 13 years in this office. Certainly, one of my winners in the category of Most Satisfying Long-Term Project would have to be this college magazine.

Before I started as dean, we produced a variety of magazines, each focused on a specific part of the College: alumni, extension, or research, those types of subjects. But I was looking for a single higher quality publication that brought together the many parts of our land-grant mission. And thanks to the skills and energy of our writers, photographers, and designers in Agricultural Communications Services I got just that. I am particularly grateful to three talented and patient editors (Deborah Witham, Martha Jackson, and now Carol Spence) who allowed me to be as meddling and biased as I wanted to be about content. They pushed me, however, to complete each of these columns personally, even though every one was past deadline.

One of our goals was to showcase the talent and achievements of our students, alumni, faculty, and staff. We have great material to work with, and in twelve years have never run short of new content. It is always a challenge to represent the full breadth and variety of what our college is and does. Yet, in *The Ag Magazine* there has been space and time to cover it all beautifully, so that diversity became a treasure, not a challenge.

The Ag Magazine has been filled with college news and useful information, but for me it has been more about the stories, stories about remarkable people doing interesting and important things, and about what changed as a result of their work. Those tales were told not just with good writing, but also with beautiful photography and design.



We all know this is an age of seconds-long communication: tweets, text messages, one-pagers, sound bites, and instant answers from Google. The most important stories of our college, however, cannot be told in 140 characters. The explosion of interest in local foods, the revolution in a tobacco-based economy, the globalization of agriculture, or the reclamation of surface-mined lands are the sort of difficult, complex stories best consumed at your own pace. So even as we design a new website and deploy cutting edge communications technology for our new College of Agriculture, Food and Environment, for my money the most complete, attractive, and compelling representation of the College will continue to be on these pages. I know there remains a great future for one of my favorite long-term projects.

M. Scott Smith
*Dean, College of Agriculture,
Food and Environment*

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Ag Ripple

Like a pebble tossed into a pond, agriculture ripples into the local economy far beyond its base worth of acreage and yield. The effect is known as an economic cluster, where the core business—in this case, agriculture—can impact other businesses that have direct or indirect relationships to it.

Surrounding the core industry is a ring of businesses that directly feed into the center, such as combining services, veterinarians, or fencing companies. Insurance companies, tax accountants, and banks that make farm loans occupy the next ring. Outside that level are more distantly related businesses—anything from dry cleaners to hospitality and tourism.

“Ignoring these businesses underestimates the value of the agricultural sector,” said Alison Davis, UK agricultural economics associate professor.

She, Leigh Maynard, chair of the Department of Agricultural Economics, and Community and Leadership Development Professor Lori Garkovich recently released a study on Fayette County’s agricultural cluster; it accounts for one in nine jobs and \$2.4 billion in annual revenue.

“With the increasing pressures on land use, it is interesting to explore what happens to the overall local economy when there is a loss in production agriculture,” Davis said.

If production agriculture were to decline by 10 percent —\$41 million—in Fayette County, there would be an overall *additional* decrease of \$26 million in output. Though the numbers would vary, if productive farmland were to decrease in other counties, the general outcome would apply there as well.

“It’s important to remember that clusters are geographically based, but not geographically bound,” Garkovich said. “If the core industry moves away, the cluster will too.”

— Carol Lea Spence

Raised on an Australian farm, Seth DeBolt has spent most of his professional life in the United States. He’s been an associate professor in horticulture at UK for six years. He is passionate about discovery-based research, but admits that sometimes, he’d rather be surfing.

Q: What attracted you to discovery-based science?

A: It was the opportunity to actually make a discovery about something others may not have looked at yet.

In graduate school, I studied grape and wine genetics and their application to grape physiology, but I really wanted to learn more advanced

genetics and techniques. So, I sought out a post doctoral scholar at Stanford who had discovered the model plant, *Arabidopsis*; that really opened my mind. I went there with a question about cell shape and development as a fundamental component of every organism. That took me to cellulose research, and that became very important because of national and international efforts on renewable products.

Q: What’s the big deal about cellulose?

A: Cellulose is the most abundant biopolymer on the planet—clothes, paper, this table we are writing on—it’s all cellulose. There are very few moments in the average human life that are not spent in direct contact with it.

Q: Some of your research recently gained national attention. Tell us about that.

A: In my lab, we are really interested in discovering chemicals that regulate cellulose biosynthesis and bioprospecting (discovering and commercializing) natural products for new chemicals and drugs. Our research led to a patent last year; it was one of our main discoveries—the ability to create a flawed cellulose microfiber that would fall apart into a more digestible form of glucose, which could be converted to biofuel.

Q: What are some other things you are working on?

A: I am developing an undergraduate class in wine and brewing science. It’s always been a pet interest of mine. I think there are a lot of jobs in this area, but there’s not a lot of education around here about it.

Q: Are you doing what you “wanted to be when you grew up?”

A: In high school, I really didn’t know what I wanted to do. I tried all sorts of things from business to creative writing, and it turns out all those things are really hard, but so is chemistry and science. I think the hardest thing is finding something you’re good at and building on that.

Q: Any hobbies that you have time to indulge?

A: I really like surfing. So if someone could create some surfing in Kentucky, that would be great; there’s a lot of coastline, but no waves!



Steve Patton

Baby Onboard: Check the Backseat

It's always sad to hear about a child dying, especially when the death could easily have been prevented. Last year more than 30 children in the United States, most under age two, died in the backseats of hot cars where they were left unattended. In Kentucky, 15 children have perished this way since 1998.

Thanks to funding from a Barnhart Fund for Excellence Award, UK Senior Extension Associate Connee Wheeler developed Beat the Heat: Check the Backseat, borrowable displays and educational materials, in an effort to prevent these tragedies.

"I think most people would be surprised that a low percentage of these deaths are a result of the caregiver being impaired by drugs or alcohol," she said. "In fact, 70 percent of the time, it's because the caregiver simply forgot the child was in the car, or they only planned to be gone for a few minutes."

It only takes about 10 minutes for the temperature inside a car to rise 19 degrees. Leaving the windows slightly open has little or no effect.

"Keep something you know you'll need in the backseat, so when you go to grab it, you see the child," she recommended. "Avoid phone calls and texts while you're in the car."

Wheeler said anyone can check out the materials from a local Cooperative Extension office to use in programs or displays at churches, information fairs, farmers markets—anywhere parents or caregivers might see them.

Wheeler created the displays in cooperation with the Louisville office of the National Weather Service and its director John Gordon.

— Aimee Nielson



Zoo STORY



Wallabies observe while Wayne Long and Roy Burns carry out a search-and-destroy mission for toxic weeds at the Louisville Zoo.

A few years ago, some animals at the Louisville Zoo began showing signs of gastrointestinal issues. As zoo officials were looking at the potential causes, a zookeeper found a bittersweet vine growing between exhibits and through the cages' mesh. Weeds can be a lot more than nuisances; some, like bittersweet, are toxic.

The vine was immediately removed as a precaution, and today, zoo personnel regularly identify and eliminate noxious weeds.

"Most well-fed animals, most of the time, will not eat toxic plants, and the animals at the zoo get really, really good nutrition," said Dr. Roy Burns, one of the zoo's veterinarians. "Whether that (the bittersweet) was the cause of their distress, we'll never know, but it got our attention that we needed to do an annual refresher course on looking for toxic plants."

For help, Burns turned to Wayne Long, Jefferson County agriculture and natural resources extension agent, and J.D. Green, University of Kentucky weed scientist.

"UK specialists are our go-to people for a lot of things," Burns said.

Since then, Green and Long have led zoo personnel on annual treks searching for and identifying any poisonous weeds at the zoo. Poison hemlock is the weed of biggest concern. Due to its location and prevalence within one area, Burns believes the seed was introduced when soil was brought in for a new exhibit.

"As the name implies, poison hemlock can be extremely toxic, with the potential to kill animals that consume the plant," Green said.

As toxic weeds are identified, Green and Long work with zoo personnel on control measures—often removing the plants by hand—to ensure all of the zoo's animals remain healthy.

— Katie Pratt

College of Agriculture, Food and Environment

Hall of Distinguished Alumni

For nearly 150 years, the UK College of Agriculture has graduated extraordinary alumni who have contributed substantially to their chosen fields, to their communities, and society. To pay tribute to these distinguished graduates, the College and the Ag and HES Alumni Association initiated the Hall of Distinguished Alumni in 2012. This award is the highest honor the College will bestow.

2012 Living Inductees



Louis Boyd of Bogart, Ga., '50, MS '51, began his 41-year career in animal agriculture as an extension specialist at UK before distinguishing himself at the University of Tennessee, Michigan State University, and the University of Georgia. His research in breeds and genetics has enabled countless producers to improve their

profitability and livelihoods.

Under his leadership, external funding for UGA's College of Agricultural and Environmental Sciences and Agricultural Experiment Station increased more than fourfold. He was also instrumental in building the UGA alumni association and college development activities. Throughout his career, he was a mentor to students, student clubs, and teams.



Maurice Cook of Raleigh, N.C., '57, MS '59, a leader in soil science and world-renowned expert in soil and water conservation, taught at North Carolina State University for more than 30 years before retiring in 1992.

He directed the Division of Soil and Water Conservation in North Carolina's Department of Natural Resources, where he initiated a soil and water conservation cost-share program for farmers, the first in the nation. Cook also served as senior advisor for agricultural affairs, representing the governor on issues of better soil and water conservation management.

The UK Hall of Distinguished Alumni inducted Cook in 2000.



David Switzer of Lexington, '67, is recognized worldwide for his extensive knowledge, experience, and accomplishments in the horse breeding and racing industries and is also an acknowledged expert in equine foundation bloodstock and insurance. He successfully promotes the Kentucky

Thoroughbred industries locally, nationally, and internationally.

Switzer played a vital role in communications during the Mare Reproductive Loss Syndrome crisis in 2001-2002. He also led efforts to create an emergency response team from state government and industry should another such event occur.

Switzer was the inaugural recipient of the Friend of the UK Equine Initiative Award in 2006.



Harold Workman of Louisville, '69, recently retired as president and CEO for the Kentucky State Fair Board. Because of his efforts, the Kentucky Exposition Center is home to several signature events, including the North American International Livestock Exposition, the largest purebred livestock

show in the world, and the National Farm Machinery Show, which generates more than \$20 million in annual economic impact for Louisville. Under his leadership, the exposition center has grown into one of the 10 largest facilities of its type.

Among Workman's many honors is induction into the UK Department of Animal and Food Sciences Hall of Fame.



Joseph Wright of Harned, '62, a farmer and implement dealer, served 16 years as state senator, 11 of those as senate majority leader. During his tenure, he helped support the purchase of land for what is now the C. Oran Little Research Center and spearheaded efforts to secure funding for additional College

building needs.

He is a past president of the Burley Growers Cooperative board of directors and was a founding member of the Kentucky FFA Foundation. Wright also served on the state fair board; Council for Agricultural Research, Extension, and Teaching; Breckinridge County school board; and 2012 Kentucky Tax Reform Commission.

Posthumous Inductees

Garland M. Bastin, '45

Smith D. Broadbent Jr.,
'34, MS '35

Thomson R. Bryant, 1908

Patricia J. Buster, '34

Russell F. Frazier, '40

Opal Hurley Mann Green,
'44, MS '65

John H. Heick, '50

James Kabler, '38

Pauline Park Wilson
Knapp, '24

Charles A. Mahan, 1907,
MS 1908

Shirley H. Phillips, '48,
MS '56

Doris A. Tichenor, '52,
MS '58, PhD '69

Larry Turner, PhD '84

McElwyn D. Whiteker, '51,
MS '57, PhD '61

Harry Young Jr., '41

Find more information
about the 2012 inductees
at <http://www2.ca.uky.edu/alumni>.

Bus to Art

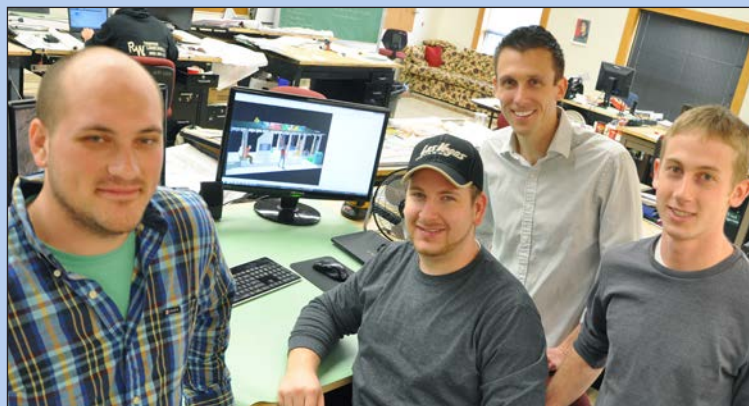
Lextran, Transit Authority of Lexington, recently chose a team of three UK landscape architecture students as winners in a Lexington area transit competition to design an art-inspired bus shelter in Lexington. The design by Martin Steffan, Chad Riddle, and Justin Menke, which won out over several professional design firms, was a modern take on a Craftsman-style bus stop.

"For a student group to win, this is a big deal," said Ryan Hargrove, UK assistant professor of landscape architecture. His Materials and Methods course for senior-level students was their project gateway into the competition.

The competition, however, was about more than coming up with a winning design. Beyond submitting drawings, the student team had to spec out materials for each element of design. They partnered with professional contractors to learn construction methods and how to create and process construction documents. At the same time they had to meet cost and budget requirements for building their unique bus shelter. They presented their design proposal and participated in a series of interviews

UK Landscape Architecture students Justin Menke, Chad Riddle, and Martin Steffan designed this Lexington bus stop—a modern take on Craftsman-style—that will be built at Towne Center Plaza.

NEWS in brief



(l-r) Martin Steffan, Chad Riddle, Ryan Hargrove, Justin Menke

with Art in Motion, a non-profit group that is helping fund several aesthetically pleasing bus shelters along Lextran bus routes.

"It was a further test of getting to know the design process beyond getting the grade," Menke said.

Construction on the bus shelter should begin this summer at the Towne Center Plaza on Leestown Rd. in Lexington. Lextran plans to open proposals for other bus shelter design competitions in the future. Their goal is to give each bus shelter a unique identity that combines beauty and function.

"These types of structures can be beacons in the community that add value and help increase bus ridership," Hargrove said. "It's going to help with the whole idea of Lexington getting more people involved in public transit, and art is a great way to do that."

—Brad Beckman





CAMPUS HISTORY:

From a Farm, We Grew

By Jeff Franklin

Photography by Matt Barton

Waiting on the steps of what is today called Cooper House, at the corner of Nicholasville Rd. and Cooper Dr., a young Tom Hammond, '67, would run down the paved driveway to greet his grandfather, Thomas Poe Cooper, walking home from work in the afternoon. Cooper was dean of the UK College of Agriculture from 1918 to 1951.



Hammond, an NBC sportscaster and a life-long Lexingtonian, lived at Cooper House with his mother Catherine, Cooper's daughter, while Tom's father was away in the army during the mid- to late-1940s. He said it was a magical place to grow

up with UK's research farm as his backyard and playground.

"It was like growing up at Disney World, for a young kid to grow up on that farm. I'm sure I bedeviled all the farm workers," he said with a laugh. "They would give me a ride on a tractor every now and then, but it was a working farm with all of the experiments going on and lots of stuff to do for a kid."

Driving down Nicholasville Rd. these days, past UK's campus near the Chandler Medical Center, it's hard to believe that the College of Agriculture, Food and Environment's research farm was once located there. The farm has given way to a sprawling medical campus, Commonwealth Stadium, parking

As a boy, Tom Hammond lived at Cooper House, which fronted UKAg's original research farm. "I'm sure I bedeviled all the farm workers."



lots, dormitories, and numerous buildings. But you don't have to go that far back in time to remember what the old farm looked like.

"The hog barn was right about the 50-yard line of the football stadium," remembered C. Oran Little, former dean. Little came to UK as an animal nutrition assistant professor in 1960. The College was just beginning a doctoral program in animal science, and Little was hired to help get it started.

"The real challenge was beginning a new doctoral program, particularly at a time when other new developments were in progress across campus. A medical school was being built with a new emphasis on the basic sciences," Little said. "Outstanding biochemistry and physiology faculty were being brought to the College of Medicine, and these folks provided new graduate courses and research complimentary to our animal nutrition efforts that made the job very attractive."

Little said Kentucky had a reputation for doing good work in the feeding and management of beef cattle, but new emphasis was needed in more fundamental studies. Bob Hall, '53, president and owner of Hallway Feeds and Farmers Feed Mill in Lexington, was herdsman of UK's beef unit from 1958 to 1964. Hall said the time had come for the research farm to move.

"It was progress. They had just the bare necessities for equipment with the research farm on campus and very little space," Hall said.

"The move from campus to Coldstream Farm jumpstarted the research programs, and people were hired, like Oran Little, who wanted to make big things happen."

Hammond said his grandfather was very protective of the research farm on campus and "wouldn't let anyone fool with it." But he said his grandfather was an intelligent man and wouldn't have stood in the way of progress. Hammond believes The Arboretum exists today because Cooper demanded it.

"As the University expanded and as the role of the College of Agriculture and the Extension Service evolved, I think he would have seen the need to use the farm for other things and establish experiment farms at other places," said Hammond. "He was always ready to put the University first."



"The hog barn was right about the 50-yard line of the football stadium,"

— C. Oran Little



Convenience versus Progress

Having the research farm on campus was convenient for professors, whether they were conducting research projects or teaching classes.

“We could go from one classroom building to the farm and have our labs in a matter of minutes,” explained Bill Moody, ’56, a retired animal sciences professor at UK. “You could walk, you didn’t need any transportation; it was unique at that time.”

The campus farm was a place with a lot of student contact.

“We had students involved there,” said Hall. “We had students from other states wanting to come and work at the beef, sheep, and hog barns because of the success the University had at international and national shows exhibiting livestock.”

But it was becoming more apparent that the facilities weren’t adequate and a move was needed, especially for Animal Science.

Dairy Center Burns

It was a Sunday morning in the spring of 1953 and the daily milking routine at the Dairy Center on campus, the E. S. Good Barn as it is called today, was chugging right along. Bill Poor, ’55, a sophomore animal science major from Danville, was working and living at the Dairy Center. He was on the milking crew that morning.

“When we went to milk that morning we didn’t see or hear anything,” Poor recalled. “The first time I saw anything was when I looked up where you



A farm management field day on campus, circa early-1900s. The dairy barn is in the background.

drop the hay down from the loft and saw a ring of fire above my head.”

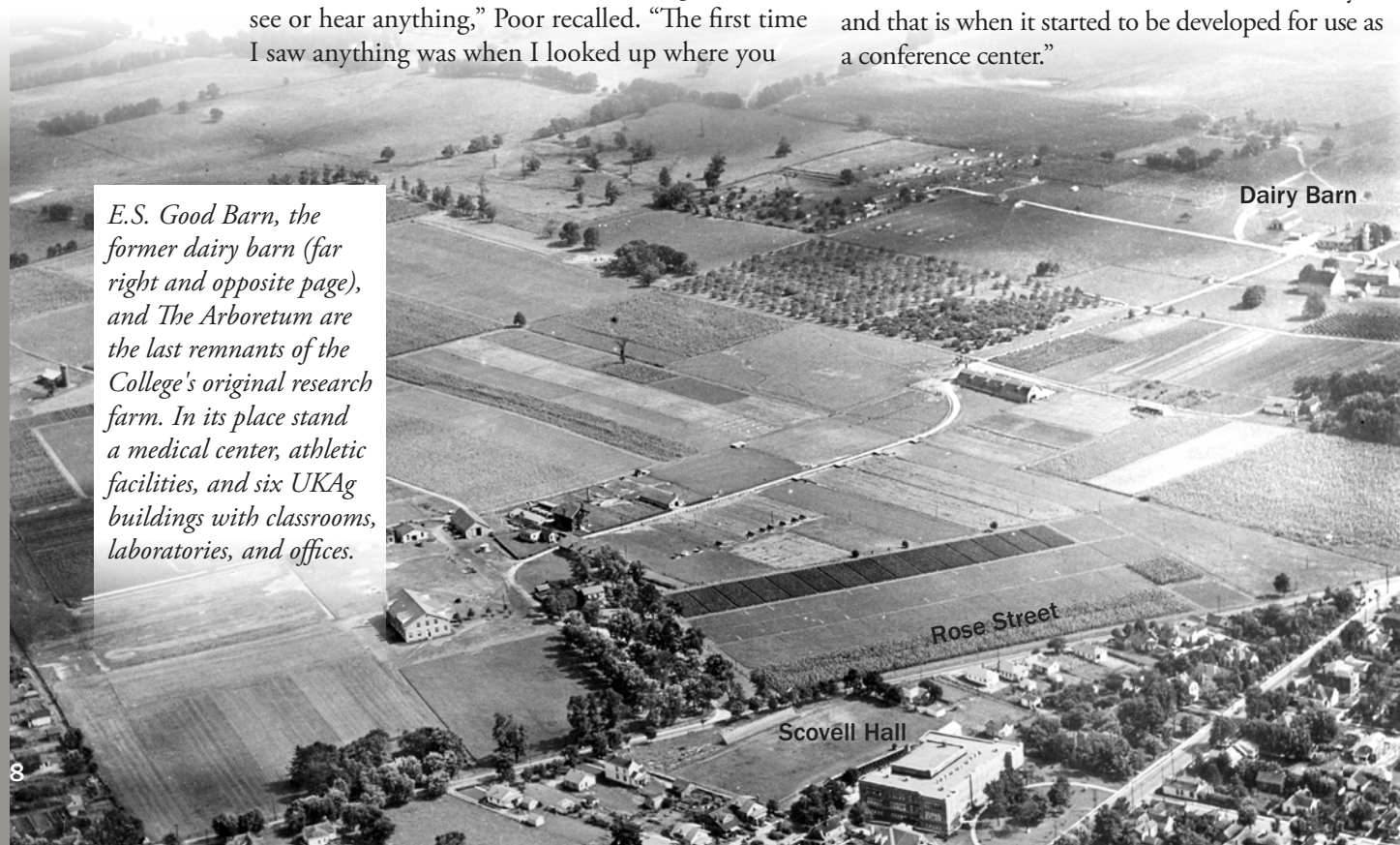
Poor said it is believed the fire started in the hayloft, the result of a lightning strike during a thunderstorm in the early morning hours. Fortunately all the workers and cows made it out safely, but the roof and loft of the barn were destroyed.

“It was a great fire and a big loss,” Moody said.

Milking went on as usual that evening, unaffected by the damage. That’s because the barn itself was constructed of reinforced concrete, and it is probably why it still stands today. The loft is now home to the College’s Landscape Architecture program.

“The Good Barn was scheduled to be demolished, but there was a problem. It is poured reinforced concrete: floors, ceiling, walls, everything,” said Little. “Demolition was estimated to be too costly, and that is when it started to be developed for use as a conference center.”

E.S. Good Barn, the former dairy barn (far right and opposite page), and The Arboretum are the last remnants of the College’s original research farm. In its place stand a medical center, athletic facilities, and six UKAg buildings with classrooms, laboratories, and offices.



Today, the Good Barn, named for E.S. Good, a former UK animal scientist and administrator, is considered the centerpiece of the College of Agriculture, Food and Environment.

"I am pleased that the Good Barn stands today," Moody said. "I think it is a legacy to the College and to the University, because a lot of people use it and know it as a conference center. I think it is very much appreciated."

W. L. (Lloyd) Mahan was the research farm manager for many years. His son, Jim Mahan, '66, said a lot of his dad's job as farm manager was about putting out fires, but not the real kind.

"It was a matter of trying to keep everybody happy. The hog people, the cattle people, and the sheep people," Jim said. "I guess he was more of a peacemaker than a farm manager, but they seemed to get along fine."

Mahan's family has a long history with Kentucky agriculture. His grandfather, Charles Mahan, was the first full-time county agriculture agent, hired in Henderson County in 1912.

New Opportunities

The purchase of Coldstream Farm in northern Fayette County in 1957, the gift-purchase of Spindletop Farm in 1959, and in the mid 60's, the purchase of Maine Chance Farm, provided UK with a nucleus of farms that was second to none. Strong emotional ties to the research farm on campus remained, however, even to the point that survey stakes for the new hospital disappeared one night after they had been placed in the ground where an unnamed researcher had corn plots.

Construction was delayed and the researcher completed the data collection on the plots.

Little said many people in the College were upset over the new medical school coming in and taking land away. But relocating the campus farm provided opportunities for the development and expansion of the College and the University as a whole.

"Relocating the farm provided other opportunities for the medical school, dormitories, athletics, the College, and the community college," Little said.

Little strongly believes having a research farm is as essential to an agriculture program as a chemistry lab is to a chemistry program, no matter if that farm is just out the back door on campus or at the back side of the county.

"As the ag programs were relocated off the main campus, there were many anxious moments and delays, and inconveniences were experienced, but our faculty and staff adjusted," Little said. "There were opportunities to enhance our land-grant responsibilities with new research initiatives to better serve Kentucky's agricultural interests."

When UKAg expanded from a single campus research farm to farms in northern Fayette County and Woodford County, it provided more opportunities for cutting-edge research.



A Degree Above

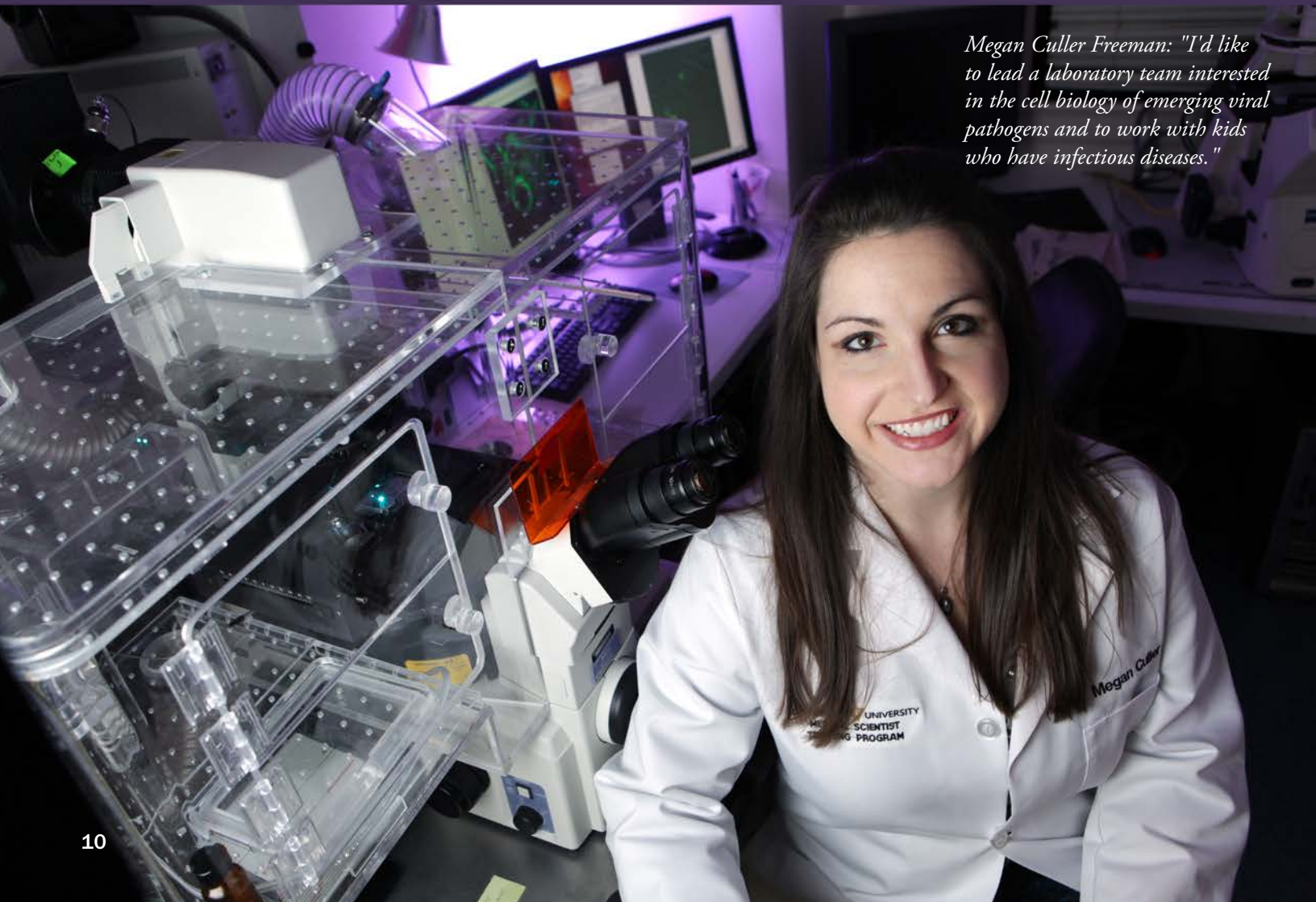
By Aimee Nielson

Photography by Stephen Patton

Arguably one of the toughest undergraduate biological sciences programs on campus, the Agricultural Biotechnology Program consistently produces some of the most successful graduates around. Students who complete the program go on to become physicians, scientists, and even entrepreneurs.

"I liken the program to the Olympics," said Michael Goodin, program mentor and associate professor in plant pathology in the College of Agriculture, Food and Environment. "The students have to be very committed to doing what it takes to be successful. For that reason, the program attracts people who have that drive and really want to be academic Olympians. That said, the driving force of the program lies in the remarkable faculty and staff who are ultra-committed to the success of our students."

Megan Culler Freeman: "I'd like to lead a laboratory team interested in the cell biology of emerging viral pathogens and to work with kids who have infectious diseases."



Faculty mentors and advisors frequently go far beyond the call of duty to enhance both the academic and personal welfare of our students.

“The faculty who founded the program were true visionaries of education, and those who maintain it are exceptionally dedicated to the program,” Goodin said.

Diverse Career Paths

Students come to ag biotech from diverse areas of study, from fine arts to the more predictable pre-med paths. Currently 160 students are making their way through the program. That number is up from just 130 three years ago. Goodin believes the growth is a result of students embracing the fact that ag biotech can prepare them for any career of their choosing.

Megan Culler Freeman is a Lexington native who graduated from the Math, Science, and Technology Center at Paul Laurence Dunbar High School before coming to UK to study ag biotechnology. She graduated from UK in 2008 and is now working toward MD and PhD degrees at Vanderbilt University in Nashville.

“I’m not sure I would have even known about my career path, if it weren’t for ag biotech,” she said. “I knew from the beginning that I wanted a career in research or in medicine, but it was a combination of my adviser suggesting this track and working with an MD/PhD student in my research lab (at UK) that really solidified my choice. I worked in that lab for three years and genuinely loved it.”

Megan wants to study infectious diseases that affect children.

“My mentors in ag biotech helped me realize I really wanted to be able to shape the science of medicine in addition to treating patients, making the physician-scientist track perfect for me,” she said. “The strong biological science background helped me prepare for the Medical College Admission Test and for medical school, and the research emphasis has helped give me the ability to ask good scientific questions.”

After Freeman finishes up her PhD in the next year or so, she’ll go back to medical school to complete the remaining two years there. Then, she



Anne Rayner, Vanderbilt University

will do a residency and a fellowship to specialize.

“This should allow me to have a career that is both clinical and research oriented,” she said. “Ultimately, I’d like to lead a laboratory team interested in the cell biology of emerging viral pathogens and to work with kids who have infectious diseases.”

Goodin says the structure of the College’s ag biotechnology program more closely resembles a graduate course of study and is very intense, but definitely prepares students for the rigorous demands of any future career.

“The program provides exceptional opportunities for experiential learning. I believe a real strength is that we can tailor design curricula to the student’s specific career aspirations,” he said. “We craft the degree and pair them up with a mentor who can help them achieve their goals.”

Novel Approaches

Ag biotech led Kyle McKinney to a career at Alltech shortly after he graduated from UK in 2003. When he was a freshman, he filled out a questionnaire about his career goals; he wrote that he wanted to join a biotech company and help make a difference using novel approaches. It seems he is well on his way to reaching his goal.

“Thinking back to 2003, I had an opportunity to join a global leader in animal health and nutrition using novel science technologies 15 miles from the UK campus,” he said. “The course work, lab work, and most importantly, the independent research project gave me skills, a work ethic, and the drive to begin my Alltech career.”

Over the course of his career at Alltech, he has earned a master’s degree and is currently working toward completing his doctorate.

"The ag biotech program also required a high level of independence with a research project," he said. "I could not have gained that experience from a textbook or a classroom. The project provided opportunities for me to explore a research area of my interest and also to develop data or information for further studies. The combination of courses and the lab research prepared me for any direction I could have chosen after graduation."

In the Broadest Sense

While most career paths ag biotech graduates take are predictable and have evidence of a clear relationship to the student's coursework, others take a different twist. A closer look, however, reveals the underlying ties.

Lesley Mann Lynch went through the ag biotech program and went on to complete a master's degree in business at the University of Cambridge in England. She also started a compost business, Charlie's Compost, with her father Charlie Mann in Calhoun, Ky. and is now in culinary school in Texas.

Lesley understands how, on the surface, none of her choices really seem to fit together and may even look a bit scattered to some, but she's found a way to intertwine them all.

She said Charlie's Compost has been in her father's mind for more than a decade. It finally became reality a few years ago. Charlie's Compost is a natural fertilizer and soil amendment made on their poultry farm. They recycle the manure from their chicks with other locally-sourced organic matter. After eight to 10 weeks, naturally occurring beneficial microbes transform the natural products into a complex mix of plant-available nutrients that build up in the soil for long-term performance.

"It wasn't until the last few years that starting the venture seemed feasible, given market conditions and availability of help," she said. "Charlie and I have combined our strong suits—his are his incredible people skills, local knowledge, and vision for the company, and mine are the ability to handle the scientific issues and organizational responsibilities to get this business off the ground."

*Kyle McKinney:
"The course work,
lab work, and most
importantly, the
independent research
project gave me skills,
a work ethic, and
the drive to begin my
Alltech career."*





Lesley Mann Lynch: "The rigor of the program prepared me to tackle any professional pursuit."

We have been growing and developing slowly—we like to say organically—but we have made significant progress. Our compost product is currently registered and sold in 17 states and on Amazon.com. More than anything, we are proud of the product that goes out the door.”

Lesley said her strong natural science training has been crucial to the development and production of their products.

“Biochemistry, microbiology, and soil biology all play a role,” she said. “I’m constantly drawing on concepts I learned in my soil science class and every basic science class I have taken. Whether it is designing an experiment to test effectiveness, reading a soil biology lab report, or talking with a potential customer about their specific soil needs, I am falling back on my science training all the time.”

“Some people might say that I do not use my ag biotech degree because I am not working in the industry,” she said. “However, I think this is the opposite of the truth. The rigor of the program prepared me to tackle any professional pursuit. These general competencies and ability to use them in diverse settings are the ultimate take-aways from a college experience.”

As for culinary school, Lesley explained the connection she sees.


“(For me), there is a strong connection between the ag biotech program and culinary school—food,” she said. “I’m interested in every step of the food chain, from farming to cooking to sharing a meal as quality time to composting. The other underlying theme is science; you can be a nerd about anything, even cooking.”

Though students from every field of study are welcome, Goodin said the one criterion they have for incoming students is “do not judge a book by its cover.” He said the program can take students anywhere they want to go, and it’s not all about the academics.

“The ag biotechnology program is really about student success in the broadest sense.” Goodin said. “Two of our students were winners in the 2012 Alltech Young Scientist Competition, which is great. But when they stop by your office, brimming with pride, to thank you for helping them achieve goals they did not think they were capable of, the true importance of the ag biotech program becomes manifest.”



No Business Like Sheep



Kentucky sheep producers are tapping into a rich history. Stone Age humans domesticated sheep 10,000 years ago in Asia Minor—the first farm animals on record. They were easy to handle, and they produced meat, milk, fiber, and shelter. What more did humans need?

If ever there is a picture of quintessential Americana, it's the view from the driveway of Eileen O'Donohue's Two Shakes Ranch in Washington County: a cozy, picket fence-encircled cottage with placid ewes and lambs grazing in the front yard. It calls you to chuck the dress shoes, pull on the wellies, and start raising sheep. O'Donohue heard the call; she was living in Bakersfield, Calif. when she decided to buy the place four years ago.

Colleen and Sanford Dotson also heard the call and started the only sheep dairy in the state in Bath County. Dianne MacDonald heard it 35 years ago and has raised wool sheep (plus a few

alpaca) for her fiber business ever since. Jim Mansfield has been raising sheep in Mercer County for about a decade.

In fact, full-time and part-time producers, as well as many beginning farmers, see the appeal behind the gentle ovines. Sheep are prolific, can thrive on marginal lands, don't need a lot of space, and the initial investment is small compared to other livestock. What's not to love?

At their peak in 1942, national sheep numbers stood at 56.2 million. Kentucky, with its 1.4 million head, had more sheep per square mile than any state east of the Mississippi. Professor Don Ely, UK sheep coordinator, describes the

Sheep Business

By Carol Lea Spence

Photography by

Stephen Patton and Matt Barton

60-mile radius area of Central Kentucky as the buckle on the sheep belt in those days, because sheep thrived on bluegrass.

After World War II, the development of synthetic fabrics hit the wool markets hard, and the entire sheep industry felt

2011, they were up 18 percent and up another 8 percent in 2012," said Kelley Yates, executive director of the Kentucky Sheep & Goat Development Office.

Hair today...

Mansfield and O'Donohue are producing lamb for a high-end niche market. Hair sheep are what you'll find at O'Donohue's place and also on Mansfield's Four Hills Farm. Hair sheep are a meat breed and don't produce wool. Instead, they shed their curly hair in early spring, sometimes looking like batting is peeling off them. The fact that they don't need to be sheared is appealing to some producers.

Not all meat producers prefer hair sheep, however. The majority of sheep in the state are wool sheep, breeds such as Polypay, Hampshire, or Suffolk.

"The first question you should ask yourself as a producer is 'What are my production goals?' Then you can ask which breed best fits those goals," said Debra Aaron, UK animal sciences professor. "If your goal is to produce heavy-weight lambs on the traditional market, maybe a Hampshire or Suffolk fits best. Eileen and Jim found the breeds that fit their needs the best."

Mansfield raises Katahdins. "We feel so confident about these sheep that I've trademarked the phrase New American Lamb."

A former UK specialist in agricultural economics, Mansfield sells about 1,500 lambs a year to grocery stores and restaurants. This year he is starting direct-to-consumer sales of cuts on his farm. He raises all he can on his own farm, but to meet the demand, he has developed relationships with 25



(above)
Eileen O'Donohue:
"One of the things
I've learned is how
important it is to
have other shepherds
in your flock. I've
gathered a lot of
women from going
to those Eweprofit
days. We've done a lot
of lambing over the
phone together."

(r) Raising dairy
sheep is more than a
business to Colleen
Dotson. "They need us
and we need them. It's
a good trade-off. They
love attention. And it's
nice to be needed."

the blow. Sheep were raised primarily for their wool; meat was merely the by-product. These days, the model has flipped, with meat being the primary product, though it continues to be a by-product in fiber and dairy production. Despite a different emphasis, the industry hasn't bounced back to its old numbers. The U.S. sheep inventory is less than 10 percent of what it was in 1942, numbering 5.35 million.

Kentucky, with more grazing land than cropland and a strong program for distributing tobacco settlement money, is trying to buck the trend.

"Nationally sheep numbers are down, but in Kentucky in



Persistence has paid off for Jim Mansfield, who spends much of his time marketing his product to food distributors, food processors, and stores. "We're focused on being a reliable supplier of local lamb year round."



other producers in Kentucky, Indiana, Tennessee, and Virginia who meet his requirements—pasture-raised lambs without antibiotics or hormones.

"I'm able to pay people a premium, and everybody I've worked with has expanded," Mansfield said.

Kentucky Lamb, O'Donohue's business, was once one of Mansfield's suppliers. Now she is doing her own marketing of lambs that are White Dorper crosses. In the short time she's been in business, she has leaned on Ely, Aaron, and UK sheep unit manager Endre Fink for help.

"There's a lot of good support out of UK, so it helps if you use them as a resource," she said.

UK's sheep experts know what producers need. They hold three Eweproof Schools a year for new and prospective sheep producers and schools for lambing and shearing. The sheep unit at UK's C. Oran Little Research Center in Woodford County often hosts tours for livestock groups, FFA, and 4-H. Plus, universities send their students to UK to prepare for sheep judging competitions at the North American International Livestock Exposition.

Fink spends a lot of time on the phone or at field days helping a growing number of producers from Kentucky and other states.

"We're doing research that is really practical for people. We can show them what we just did and what worked and what didn't," he said.

Aaron worked for seven years on a grading-up project to develop White Dorsers less expensively. Grading up means using one breed to improve another breed through generations of controlled breeding.

"We had to start somewhere, because White Dorper sheep weren't available at that time, and if they had been available, we couldn't have afforded

them," Aaron said. "We had to grade up; that was something producers were also thinking about doing."

...Wool to Follow

A friend gave Dianne MacDonald an orphaned lamb 35 years ago. She kept it in a playpen in her kitchen and raised it at home with her three young sons.

"Considering my ignorance, it's a miracle it survived," she said.

In the process, MacDonald decided she liked sheep a lot and wanted to raise them for their fiber.

Over the years, she taught herself through the College's field days and even enrolled as a "mature student" in Ely's sheep science course.

Today, she crosses Romneys, CVMs, and Bluefaced Leicesters, with an occasional Wensleydale ram thrown in, to get the long, lustrous locks that are in demand.

From her on-farm studio in Woodford County, she sells yarns, roving, and fleeces and conducts workshops in dyeing and spinning. It's not a get-rich business, she's quick to say—"My husband would find that extremely funny if he were here"—but she makes enough "to support the sheep, support my habit, encourage other people, do the kinds of things I want to do, and live the kind of life I want to live."

Her advice for people interested in getting into the sheep business?

"Start small, with just a few experienced ewes. Buy from someone who is willing to mentor you and be there to answer any questions you might





Dianne MacDonald believes natural fibers are more appreciated now than a decade ago. "There are more people doing this now. I'm not so much the weird lady with the sheep, anymore. There are a few others," she said with a laugh.

have. And be prepared to learn a lot, especially during your first lambing season."

"We didn't know anything."

"We'd never touched a sheep. We didn't know farming," said Sanford Dotson, farmer, shepherd, cheese maker, and proprietor, along with wife Colleen, of Good Shepherd Cheese, Kentucky's only sheep dairy.

Realizing it's hard to make a living just doing wool and knowing many people were already doing meat sheep, they thought sheep cheese could be their niche.

"We were dumb enough to think it wouldn't be that bad," he laughed.

The Dotsons bought property near Owingsville and took UKAg's first cheese making class. They spent 2010 learning to milk their East Friesian

sheep, a breed that will typically give four times the milk of other breeds, and they practiced making cheese on the kitchen counter. They chose to make an aged raw milk Pyrenees-style cheese, a recipe that goes back several thousand years. Responding to a demand from high-end restaurants, they're adding a bleu cheese to their repertoire this year.

"It takes a lot of dedication and commitment," Sanford Dotson said. "We do everything that a lamb operation would do for raising meat lambs, then we do the dairy on top of it, and we do the cheese making on top of that. Then we do the marketing. You get discouraged sometimes. Sometimes you think, remind me, Lord, why we're doing this. But I wouldn't trade it. It's a good family life."

Sheep can lead to a financially rewarding life, as well. As Ely points out, five ewes will generate, on average, 7.5 lambs and feed costs will be the same as feeding a cow and her one calf. Yet, depending upon market prices, those 7.5 lambs could net about \$175 more than a calf at weaning weight. Those are numbers that make sense to a lot of Kentucky farmers.

"We're probably never going to have 150,000 head in this state again, but sheep production is going to continue to be an economically viable part of Kentucky's agriculture," Aaron said. "Just because it's not large doesn't mean it can't be viable."

Because after all, what more do humans need?



Academic Programs

2012 Annual
Report

Lots of records were set by the College of Agriculture, Food and Environment this year: freshman class, total undergraduates, total graduate students, grand total students, and total degrees awarded. Of course, that means a lot of our 18 majors continued to grow; a sample is shown on the next page. Still, the personal side of our college shines through beyond the mere numbers. Meet Sarah, Olimpia, and Eric, three of our special undergraduates. Our college is chock full of such students, and we have the privilege of interacting with them every day. Note, too, that the College was especially honored that two more of our faculty—Professor Roberta Dwyer, Veterinary Science, and Professor John Grove, Plant and Soil Sciences—were named Great Teachers by the UK Alumni Association.

Larry Grabau
Associate Dean for Instruction
N-6 Ag Science North
(859) 257-3468
lgrabau@uky.edu

Student Profiles

Written by Melissa Patrick

OLIMPIA FERGUSON

Year: Sophomore

Major: Entomology. “Because my dad works in pest control and I grew up surrounded by the pest control industry, I became interested in it at a young age. I decided I wanted to pursue entomology at UK and go into pest control after college.”

Home: The Bahamas. She chose UK because it offered an undergraduate entomology degree.

Extracurricular activity: Sits on the executive board of the UK chapter of Minorities in Agriculture, Natural Resources and Related Sciences, a national student organization. “My involvement in MANRRS has been memorable. They have helped me move forward in my professional development, and it is like a family atmosphere. They also helped me with my transition at UK, since I joined (the chapter) as a freshman.”

Impressions of the College: “I feel like it is a close knit family in the College of Agriculture. They offer so much to help students.”



Steve Patton

Matt Barton

Fast Facts for 2012-2013:

Total College Enrollment—**3,011**

Freshman class—**402**

Undergraduate students—**2,573**

Graduate students—**438**

Undergraduate students in Human

Environmental Sciences—**945**

BS degrees awarded—**533**

MS and PhD degrees awarded—**106**

Faculty recognized as Great Teachers—**2**

Roberta Dwyer and John Grove

Female students—**62.5%**

Graduating seniors who say that the

College met their expectations—**88.5%**

Dollars of undergraduate scholarships
awarded—more than **\$568,000**
(+12% over last year)

Undergraduate students receiving a
College of Agriculture scholarship—**433**



ERIC DAVENPORT

Year: Junior

Major: Dietetics. "I have had diabetes since I was six and have seen a dietician my whole life. I have learned, through proper eating, that I can manage my diabetes. I want to take what dieticians have helped me with and pass that on to other people."

Home: Covington, Ky.

Future plans: Eric has been accepted to the 2015 Coordinated Program in Dietetics. He hopes this supervised practice component of his degree will help him determine his exact career path.

What's good about the program? The practical application the Dietetics program offers in the kitchen. "Coming into the kitchen has been fantastic. Learning to cook and learning the science behind it is very cool."

Extracurricular activity: Eric is the co-president of UK's Kayak Club, a member of UK's Shaolin-Do Karate Club, and is on UK's Dodge Ball Team.

SARAH BARNEY

Year: Junior

Major: Natural Resources and Environmental Science with a focus on invertebrate ecology and conservation biology. Currently doing undergraduate research related to conservation biological control. "I'm really interested in a career that is not just a job; I'm interested in a career that makes a positive impact. For me, that is preserving nature."

Home: Lexington, Ky.

Most memorable experience at UK: NRES Summer Camp, a three-week field course in Robinson Forest. "It was great to be learning, but also to be outside for three weeks." This summer Sarah is participating in a study abroad program, Tropical Agroecology and Sustainable Development in Indonesia

What's next? After graduation, Sarah wants to work somewhere in the tropics. "I'd like to get my hands dirty first before I jump back into school." She enjoys research and eventually would like to get a master's degree in environmental science.



Matt Barton

Selected Undergraduate Enrollments:

Human Nutrition—**283**

Agricultural Economics—**271**

Animal Sciences—**260**

Equine Science and Management—**239**

Dietetics—**205**

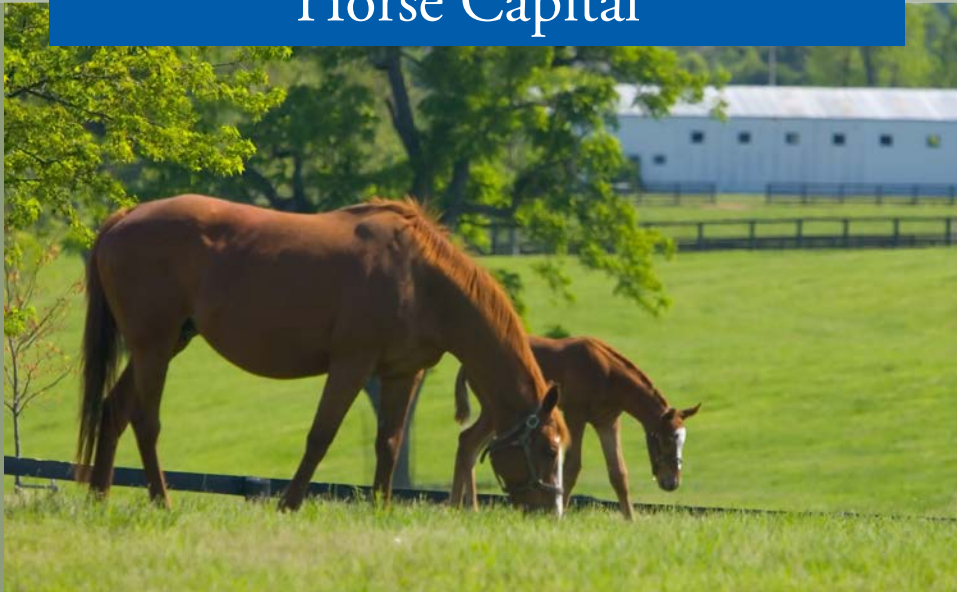
Community and Leadership Development—**183**

Merchandising, Apparel and Textiles—**161**

Biosystems and Agricultural Engineering—**121**

Advancement 2012 Annual Report

Horse Capital



If you ever doubt horses are important to Kentuckians, look at the findings of the 2012 Kentucky Equine Survey, which counted 242,400 horses in the state—nearly six horses for every 100 people. The total value of equine and equine-related assets in Kentucky is estimated at \$23.4 billion.

The statewide survey of all breeds of horses, ponies, donkeys, and mules was the first one done since 1977. Conducted by the Kentucky field office of the National Agricultural Statistics Service, with support and assistance by the College of Agriculture, Food and Environment and the Kentucky Horse Council, the survey identified 35,000 equine operations and 1.1 million acres devoted to equine use.

The value of Kentucky's equine and equine-related assets is significantly larger than other states for which we have data," said Jill Stowe, project lead and director of UK Ag Equine Programs. "It serves to underscore that Kentucky is the Horse Capital of the World."

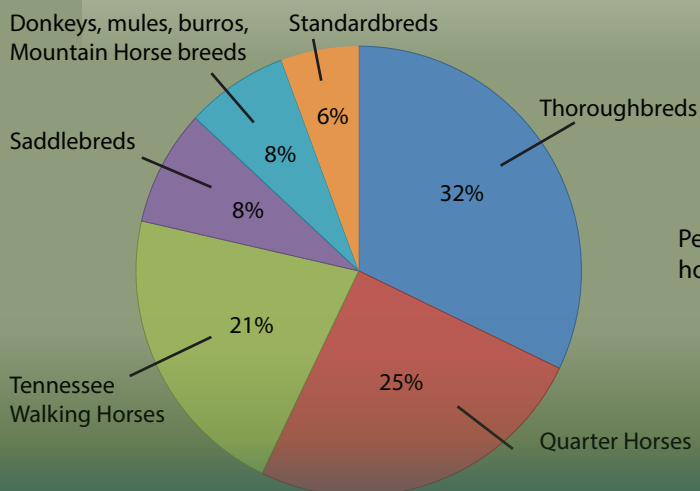
2013 AREA SUMMER EVENTS

Bluegrass/Fort Harrod—July 12
 Green River—July 22
 Lake Cumberland—July 15
 Licking River—June 7
 Lincoln Trail—August 3
 Louisville—July 26
 Mammoth Cave—July 29
 Northeast—June 24
 Northern Kentucky—July 18
 Pennyrile/Purchase—July 23
 Quicksand—July 25

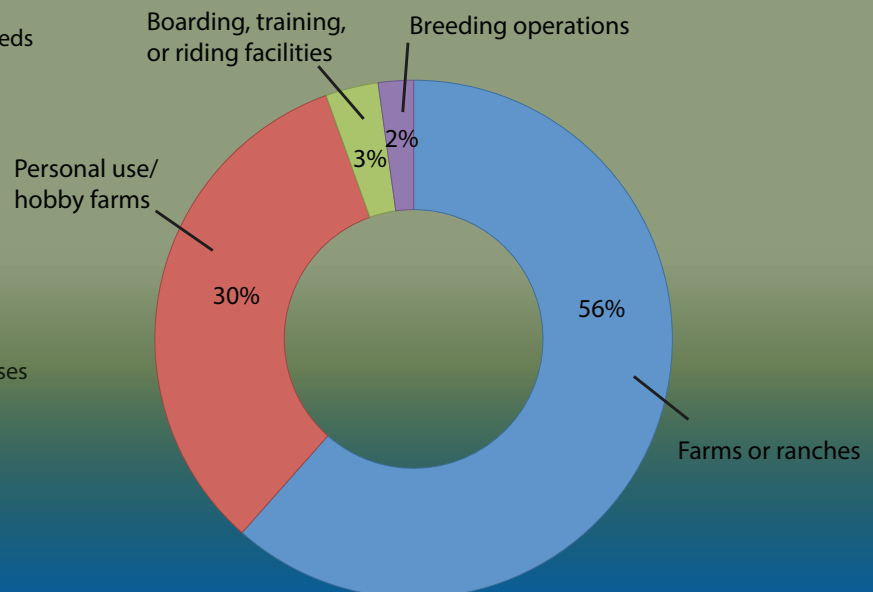
ROUNDUP
 September 7

UK HOMECOMING
 November 2

Breeds



Equine Operations



The Mission is Stewardship

SCOVELL & ERIKSON SOCIETY Introducing our new members:

Rich and Debbie Banas
Roger and Bonnie Quarles

This is not a complete listing of all new Scovell & Erikson Society members, as several have requested to remain anonymous.

FOR MORE INFORMATION
about becoming a donor, contact the
Office for Advancement at
(859) 257-7200.

2012 ANNUAL EVENTS SPONSORS

PLATINUM: \$10,000+

Kentucky Farm Bureau Insurance
Kentucky Farm Bureau Federation

GOLD: \$5,000–\$9,999

Kentucky Association of Electric Cooperatives Inc.
& Kentucky's Touchstone Energy Cooperatives
Kentucky Beef Council
Kentucky Thoroughbred Owners and Breeders Inc.

SILVER: \$2,500–\$4,999

Farm Credit Services of Mid-America
Lexington Convention and Visitors Bureau
University of Kentucky Alumni Association
Whayne Supply Company

BLUE: \$500–\$999

H & R Agri-Power
Kentucky Corn Growers Association
Kingsford Manufacturing Co.
Workman Tobacco Seed Inc.

WHITE: \$250–\$499

AgriBusiness Association of Kentucky
Ale-8-One
Burley Tobacco Growers Cooperative Association
Edgeview Farms
The Hilton Lexington Downtown Hotel
Liberty Mutual
Robert L. Conley Livestock
Southern Belle Dairy Co.
Stith Wimstatt and Associates, CPAs
University Inn
University of Kentucky Federal Credit Union

The Department of Forestry is all about stewardship, and its alumni prove that every day.

After graduating with a degree in forestry, Dave Leonard, '74, never left Lexington. Maybe that is why he so passionate about the stately old trees that dot the city's landscape. For 39 years, Dave Leonard Tree Specialists has been preserving those trees; "not just cutting them down," Leonard emphasizes.

Before UK demolished Haggin Hall to make way for new dorms, University officials contacted Leonard about saving some trees near the building. Leonard was able to save a male ginkgo and a red oak, using a new technique to combat compacted soil and aerate the ground 18 inches deep around the trees. He also injected a tree-growth regulator to slow their growth over the next three years,

diverting energy from the treetop to promote a healthier root system. A pin oak that already had some root-decay problems couldn't be saved, however.

"We took extra-special care to do the job," Leonard said. "We have worked on several projects at UK, and it is good to do that, whenever we can preserve more shade."

Preserving trees fits into the Department of Forestry's mission to be effective stewards of natural resources. Some forestry alumni are banding together to be different kinds of stewards, by ensuring the education of prospective forestry students. Sally Browning, Al Freeland, John



Perry, John Redmon, Jim Ringe, Kate Robie, Mike Shearer, and Gary Wilmhoff are alumni from five forestry graduation classes in the 1970s; they have formed a committee to raise \$25,000 for an endowed scholarship in forestry.

"We thought it would be cool if we older grads took the lead in raising the money and setting an example for involvement and support with the department," Robie said.

They hope to meet their initial goal by the end of 2013 and award the first scholarship in 2014. If you would like to contribute to the Forestry Alumni Scholarship, visit www.uky.edu/GiveNow/welcome.htm?select=AG for an on-line donation form.

"Foresters are family," Robie said.

A family that takes stewardship seriously.

—Jeff Franklin

Advancement 2012 Annual Report

Doggett-ly Supporting UKAg



Diana Wells Doggett, '75, MS '77, knew early on Extension was the place for her. A daughter of a third-generation farmer and heavily influenced by the late Laura Colvin, Pendleton County home economics agent, she saw first-hand the positive impact Extension has on the lives of others.

Doggett attended the University of Kentucky and obtained her bachelor's and master's degrees in vocational education. After graduation, Doggett became the Woodford County family and consumer sciences extension agent. With the exception of a brief stint as a teacher at Southern Middle School in Lexington, Doggett has built an 18-year career in Extension; she is now the FCS agent in Fayette County. Along the way, she has received numerous college, local, state, and national awards.

"Regardless of where I have lived, rolling green hillsides or manicured urban neighborhoods, I have found that Kentuckians are genuinely interested in making good choices for their families," she said.

After her college graduation Doggett joined the UK Ag and HES Alumni Association. She saw the association as a key way to stay connected to the College's vast collection of research, knowledge, and expertise and also as an opportunity to build and strengthen connections with the network of College alumni. Over the years, she's held many leadership positions in the association including committee member, officer, executive secretary, and an earlier stint as president.

Doggett hopes to further build and strengthen the association so more College graduates can access the association's network of knowledge, camaraderie, and support that's been invaluable to her.

"A goal I have is to connect with more UK graduates, especially the most recent and those dispersed nationally as well as globally," she said. "This College has some amazing people, and we need to identify and provide an alumni base for them."

— Katie Pratt

2012 AG & HES ALUMNI BOARD

EXECUTIVE BOARD

PRESIDENT—Diana Doggett
VICE PRESIDENT—Whitney Stith
SECRETARY—Martha Nall
TREASURER—Chuck Canter
PAST PRESIDENT—Bill McCloskey
AT-LARGE MEMBER—Audrey Carr
AT-LARGE MEMBER—Danny Bailey
UK ALUMNI ASSOCIATION LIAISON—Michelle McDonald

AREA PRESIDENTS

BLUEGRASS—Matt Koch
FORT HARROD—Brian Osterman
GREEN RIVER—Daniel Smith
LAKE CUMBERLAND—Sue Stivers
LICKING RIVER—Celia Barker
LINCOLN TRAIL—Jeremy Hinton
LOUISVILLE—Beth Allison
MAMMOTH CAVE—Grant Hildabrand
NORTHEAST—Priscilla Merritt
NORTHERN KENTUCKY—Jay Hellmann
PENNYRILE—Amanda Conrad
PURCHASE—Fred Gillum
QUICKSAND—Tom Cravens
WILDERNESS TRAIL—Pending

FACULTY REPRESENTATIVES

EXTENSION—David Herbst
RESEARCH—Kelly Webber
TEACHING—Will Snell

STUDENT REPRESENTATIVES

STUDENT COUNCIL PRESIDENT—Kellie Owen

COMMITTEE MEMBERS

Cassinda Bechanan, Mike Chalfant, Tony Estes, Bobby Gaffney, Tony Holloway, Brooke Jenkins-Howard, Katie Keith, Liz Kingsland, Stephanie Osterman, Rick Ryan, Bill Smith, Myrna Wesley, Amelia Wilson

Over **400** Endowed Funds in the College

Awarded **433** Students \$568,046 from **180** Individual Scholarships.

14 Kentucky Area Alumni Association Chapters

Total Annual Ag & HES Alumni Association Members: **541**

College of Agriculture,
Food and Environment
Jan. 1, 2012—Dec. 31, 2012

TOTAL GIVING
\$5,723,948

TOTAL GIFTS
3,986

TOTAL DONORS
2,036

Drew Graham, Assistant Dean
Director of Advancement
Office for Advancement
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E.S. Good Barn
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Lexington, Kentucky 40546-0097
E-mail: drew.graham@uky.edu

Married to Their Work



Matt Barton

The Probsts, Adam, '05, and Tracy, '04, showed cattle at the same county fair when they were younger, but their paths didn't cross until they became students in the UK College of Agriculture, Food and Environment. Adam was in FarmHouse Fraternity. Its members volunteered to work as Safe Cats, a student safety escort service. As Tracy tells it, she would be on campus at night pretending to study, which was really just a ruse to get Adam to walk her home.

They dated through their UK years and married in May 2005. Then their lives took off in different directions. Tracy taught vocational agriculture at Anderson County High School while Adam farmed in Scott County and worked on a master's degree at UK.

"We always used to say, 'We feel like we are flying, when are we going to land?'" Tracy said. "We feel like we have landed now."

Woodford County is where they landed. Adam became the county's extension agent for agriculture and natural resources in 2011. Tracy is in her second year teaching vocational agriculture at Woodford County High School. The couple bought a 38-acre farm in the county and plans to put down roots. They want their sons, Carson, 5, and Cooper, 3, to grow up on a farm like they did—Tracy in Montgomery County and Adam in Scott County.

Working in agriculture in the same county, the couple's paths often cross.

"Like Farm Bureau meetings," said Adam. "We are both expected to attend, and there are Extension events, which FFA is involved with, so there is a lot of overlap."

Taking an active role in the community is very important to Adam, while supporting the county's strong agricultural base. He sees himself in Woodford County for the long term and hopes others can benefit from his commitment.

Tracy says she always knew she wanted to teach, and Woodford County is a good place to be.

"We have really good self-motivated kids in this county who have strong ag backgrounds because of their parents and grandparents," said Tracy. "It isn't anything I have done. I try to help them and point them in the right direction, and they pretty much take off from there."

— Jeff Franklin

**Total Lifetime Ag & HES Alumni
Association Members: 2,578**

**Total Number of College of
Agriculture, Food and Environment
Graduates: 22,598**

**Number of Living College of Agriculture,
Food and Environment Graduates: 19,508**

SHORT ROWS

What's for Dinner? **Sunlight.**

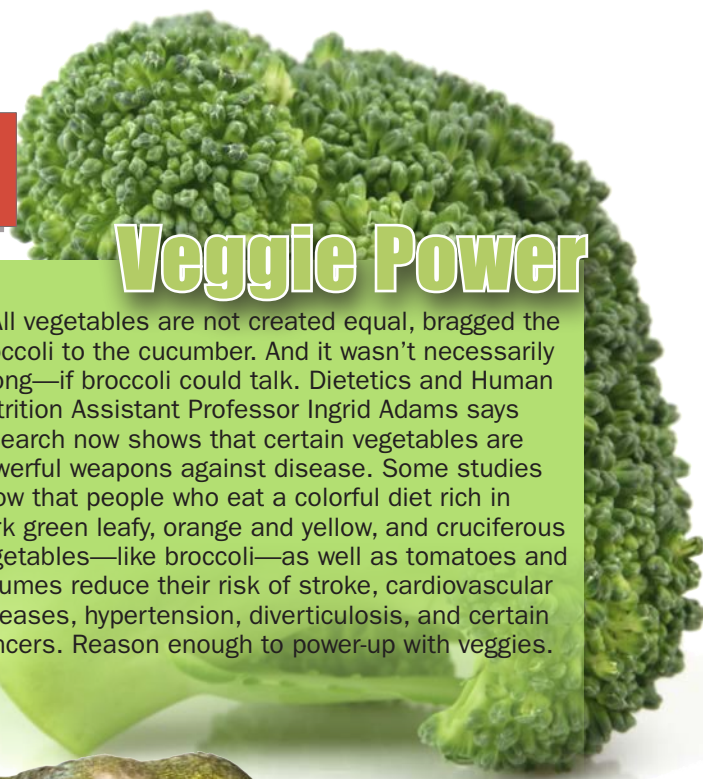


It looks like a juicy sirloin or a tender lamb chop on your plate, but it's not. Neither is the potato or the side salad. At their core, they are sunlight. Through photosynthesis, plants transform light into carbohydrates, which they either store as starches, use for energy, or turn into oils and proteins. Livestock eating grasses, clovers, or alfalfa consume those substances and further convert them into fats and proteins for their own use. As do we, either directly by eating fruits and vegetables, or indirectly through meat consumption. So the next time someone asks, "What's for dinner?" tell them. Sunlight.

An Insatiable Beauty



Green lacewings, with their translucent, multi-veined wings, iridescent green coloring, and eyes like golden orbs, look too delicate to be anything but plant jewels. Beauty, however, is in the eye of the beholder. Ask an aphid. Green lacewings in the larval stage are frequently called aphidlions, for good reason. UK entomology professor Ric Bessin describes them as voracious predators that seek and devour soft-bodied insects such as mealybugs, thrips, mites, young whiteflies, small caterpillars, and yes, aphids—pests that can inflict serious damage on vegetable crops. No slouches when it comes to work, they quickly rise to meet increases in pest populations, making them farmers' allies.



Veggie Power

All vegetables are not created equal, bragged the broccoli to the cucumber. And it wasn't necessarily wrong—if broccoli could talk. Dietetics and Human Nutrition Assistant Professor Ingrid Adams says research now shows that certain vegetables are powerful weapons against disease. Some studies show that people who eat a colorful diet rich in dark green leafy, orange and yellow, and cruciferous vegetables—like broccoli—as well as tomatoes and legumes reduce their risk of stroke, cardiovascular diseases, hypertension, diverticulosis, and certain cancers. Reason enough to power-up with veggies.



A Wee Cradle

Not only are hummingbirds dazzling barnstormers, the females are also masterful architects. UKAg forestry professor Tom Barnes says they weave nests—half the size of a walnut shell—from bud scales and plant down, cover them with lichen and wrap them in spider silk. High above the ground in a deciduous tree, two chicks will call that wee cradle home for three weeks until they fledge. Child rearing is left to Mom. Dad zips off to dazzle another female with his jewel tones and acrobatics.



ASSURE Tractor Safety

Tractor accidents play a major role in Kentucky farm fatalities, but a few simple precautions can keep you from becoming a statistic, says Mark Purschwitz, extension professor in agricultural safety and health. Help "assure" safe operations with these steps: **A**void driving across steep slopes. **S**upervise youth and new operators. **S**top tractor completely before mounting or dismounting. **U**se a roll-over protective structure (ROPS) on all tractors—the **most** important thing you can do. **R**educe speed on slopes. **E**xamine areas for washouts or obstacles.

imA_gine

achieving excellence

UK Ag Equine Programs Director Jill Stowe steers a multidisciplinary equine effort vital to Kentucky, the Horse Capital of the World.

Committed to enhancing Kentucky's signature agricultural industry, Stowe is one of the dozens of faculty, staff, and students from eight different departments who collaborate through UK Ag Equine Programs to make UKAg a world leader in equine education, research, and outreach. And we stand out. Students around the country come to study in this nationally prominent program, and our research is second to none.

ImA_gine acquiring world-changing knowledge from the people who are changing the world right now.

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UK Ag

Roundup 2013

September 7