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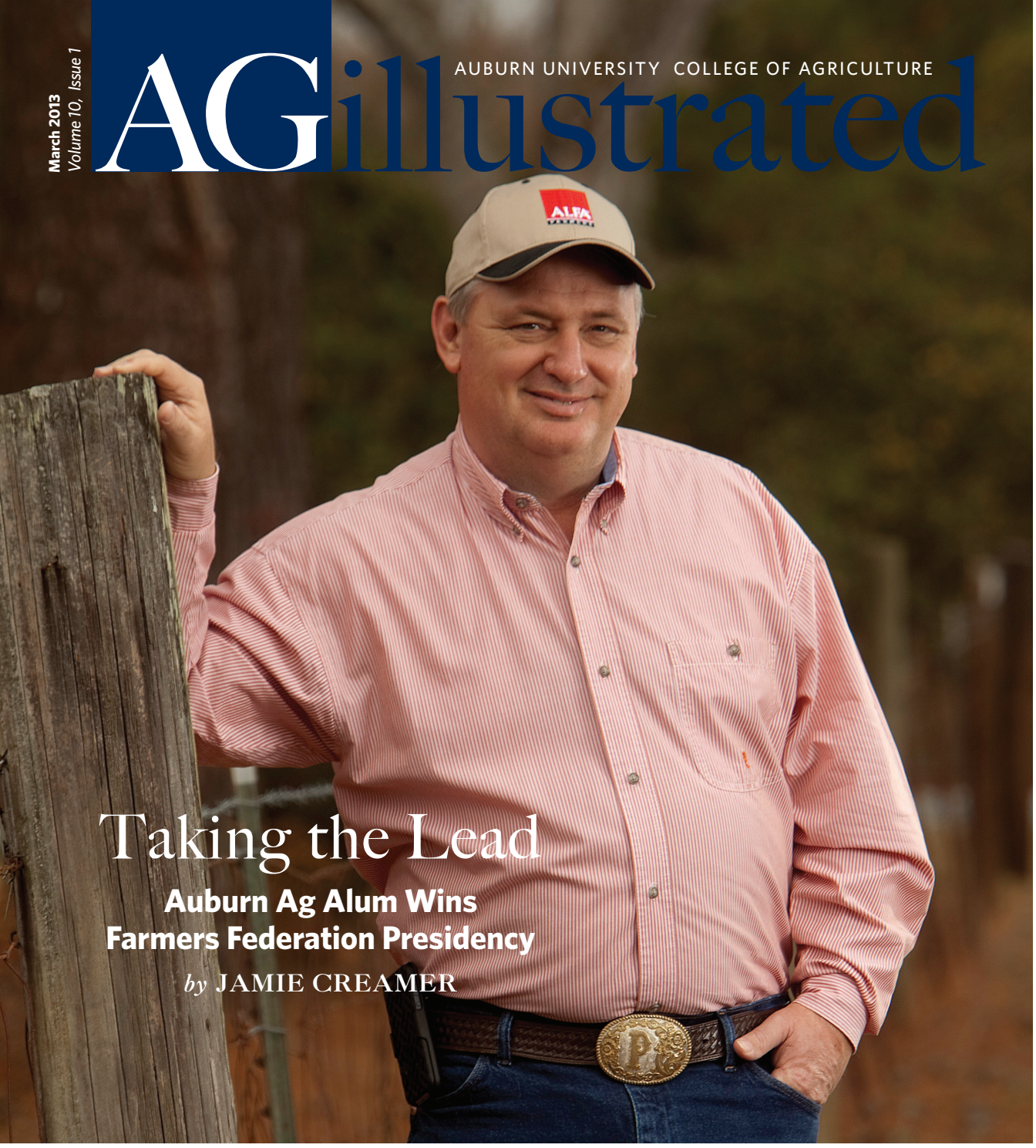

Taking the Lead

Auburn Ag Alum Wins Farmers Federation Presidency

by JAMIE CREAMER

ON DEC. 3, 2012, COLLEGE of Agriculture alumnus and fifth-generation Chilton County farmer Jimmy Parnell eked out a victory to become president of the Alabama Farmers Federation and, subsequently, president and CEO of Alfa Insurance Companies.

The federation, with 400,000 members, is the state's largest farm organization; Alfa Insurance, which the federation founded in 1946 to provide fire protection for rural Alabamians, has more than 1 million policies in force in 11 states.

Politically speaking, the Alfa presidency is a powerful position: The late Goodwin Myrick, who was elected to 10 consecutive two-year terms, was dubbed one of the most formidable figures in Alabama politics in the 1980s and '90s, and immediate past president Jerry Newby, who served in that role for 14 years, was included on a 2009 list of the 12 most influential people in Alabama.

Parnell, who, with wife Robin, has been actively involved in the organization since 1988, is well aware of the high-profile, political nature of his new position but makes it clear that isn't why he ran.

"I wanted to be president of the Alabama Farmers Federation because I believe I can make a difference," the 48-year-old says. "I feel I have some skills God gave me to bring people together for the betterment of our organization and Alfa. It is a big responsibility, but I've learned a lot through my involvement with the federation and I feel I am prepared."

That Parnell would someday hold such a post might not have been all that obvious when he arrived at Auburn University as an incoming transfer student in the fall quarter of 1983. To hear him tell it, he must have been the most unsophisticated individual ever to set foot on a college campus.

"You cannot possibly imagine a more country, more backward boy than I was," he says.

What his friends and classmates likely saw, however, was a level-headed, sincere, salt-of-the-earth kind of guy who was a pleasure to be around—*when* he was around, that is.

"The whole time I was at Auburn, I went home every single weekend but two," says Parnell, who earned his bachelor's degree in agricultural business and economics in 1985 at age 20. "I guess I was more focused on what was going on at home than at school. I was the student who left Auburn on Thursday night every time possible and rushed home to help on the farm and help run the business."

> "I made up my mind when I was knee high that I was going to college, and there was absolutely no question *where* I was going to college," he says. "I was going to Auburn."

The farm, located in Chilton County's Stanton community and now Parnell Inc., was a cattle and timber operation that his daddy, James H., had started in 1960.

"Our place was small, mainly me and my dad, and Daddy was struggling to grow it," Parnell says. "I was needed."

True enough. When Parnell says he's been a part of the farm "all my life," he isn't exaggerating. The firstborn of his then-teenaged parents' four children, he declares he was driving a tractor by the time he was 5 and, by age 12, was managing the farm's payroll.

"I've always been a business-minded person," Parnell says. "As far back as I can remember, I was trading goats and chickens and eggs and whatever else came along. I was just made that way."

But for him, that natural business acumen was not enough. He wanted a college degree.

"I made up my mind when I was knee high that I was going to college, and there was absolutely no question *where* I was going to college," he says. "I was going to Auburn."

A NEW ROLE Jimmy Parnell, a 1985 Auburn College of Agriculture alumnus with a bachelor's degree in agricultural business and economics, was elected to a two-year term as president of the Alabama Farmers Federation and Alfa Insurance in December. He makes the 120-mile round trip between his Chilton County home and farm and the Alfa building in Montgomery every day "because we're trying to keep life as normal as possible at home," he says. Above, the family photo includes Robin, a nursing instructor at Troy University at Montgomery; Parnell; James Robert, a College of Ag sophomore in ag business and economics; and Anna Grace, a high school sophomore and future Auburn agriculture major.

He had already knocked out a few basic courses at a junior college when he transferred to Auburn in September '83. He enrolled as an animal sciences/pre-vet major with the goal of becoming a veterinarian, but not far into his Auburn career, he started second-guessing that vet school dream.

"I knew pretty quick that I was not cut out to spend eight years in school," Parnell says. "But that kind of put me in a bind because I didn't know what I wanted, or what I wanted to do.

"I was a kid in a crisis."

It was the late Lowell Wilson, then an ag economics professor and one known throughout his 28 years on the Auburn faculty as an exceptional teacher and adviser, who helped him through that time of uncertainty.

"I was taking one of Dr. Wilson's classes—in fact, I wound up taking five of his classes while I was at Auburn—and I sat and talked to him after class one day, and things started falling into place," Parnell says.

What he wanted, he realized, was to farm, and for that, a degree in ag business and economics just made sense. That proved to be a very wise decision.

"The business and management concepts Lowell Wilson and others taught me are things I've used ever since," Parnell says.

After receiving his bachelor's in December 1985—"I got through quick," Parnell says. "I was in a hurry."—he officially assumed a role in the family farm and set out to make the place bigger and better. *(continued on page 3)*

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AUBURN AGRICULTURE
www.ag.auburn.edu

View from AGhill

Auburn University, in partnership with the Alabama Cooperative Extension System, the Alabama Agribusiness Council and many of the state's commodity groups, recently released results of a study on the economic impact of the agriculture, forestry and related industries in Alabama. This study confirmed what we all suspected: Agriculture and forestry are the largest industries in the state, representing more than 40 percent of the Alabama economy and supplying 22 percent of all jobs in the state. The poultry industry alone employs more Alabama citizens than Apple Inc. employs around the world.

I recently visited several Alabama congressmen in Washington, D.C., to discuss the results of this study. It is critical that the nation continues to fund agricultural and forestry research to keeps our top industries competitive.

There are tremendous job opportunities for our students in the Alabama food production and processing sector, and demand for our graduates continues to outpace supply. This winter I had the opportunity to visit Blue Bell Creameries in Sylacauga and Red Diamond Coffee and Tea in Moody. Both companies are good examples of the local value-added food industry in Alabama. These companies hire our students and are excellent supporters of the College of Agriculture.

This spring, the number of freshmen admitted into the College of Agriculture is up approximately 2 percent. We continue to work hard in recruiting students into our majors to meet the demand of the agricultural and food industry in Alabama and the southeastern U.S. We also continue to evolve our curriculum to create programs—such as a food science option and an environmental science degree—that are attractive to students who enter Auburn.

We recently developed a "2 + 2" program with Wallace State Community College in Hanceville in which students who want to major in poultry science take their first two years at Wallace State and then transfer to the program at Auburn, and we are in the process of developing similar arrangements with other community colleges as a way of recruiting students from across the state into our agricultural programs.

Finally, we have completed several cosmetic renovations on the first floor of Comer Hall, including new entry doors to the building and the dean's office, new flooring, new lighting, new sheetrock and fresh paint. Many students participating in our recruiting events often come through Comer Hall while on campus, and these renovations help project a positive image of our college to these students. Please drop by if you get a chance.

Follow me on Twitter @AuburnAgDean to get updates on the College of Agriculture.

Bill Batchelor
DEAN, COLLEGE OF AGRICULTURE
DIRECTOR, ALABAMA AGRICULTURAL EXPERIMENT STATION

Initiative To Focus on Ending Child Hunger in the State

by JAMIE CREAMER

The Auburn University–based Hunger Solutions Institute, a center established through the Alabama Agricultural Experiment Station in February 2012, is taking on the critical issue of child hunger in a statewide initiative that will launch later this spring.

The initiative, Ending Child Hunger in Alabama, will have as its mission ensuring that Alabama children have physical and economic access to a variety of nutritious foods and don't go to bed or go to school hungry.

Specifically, the campaign's goal is for Alabama to be in the top 25 percent of child-food-secure states in the nation by 2020. The state currently ranks in the bottom third, with one in every four Alabama children and youth facing food insecurity.

"The Ending Child Hunger campaign is the Hunger Solutions Institute's first major outreach initiative," says Harriet Giles, managing director of the institute. "The institute decided to establish the initiative because, as a land-grant university, our first and foremost commitment is to enhance the quality of life for the citizens of Alabama."

Giles says the latest data from Feeding America's "Map the Meal Gap" project indicates that 26.7 percent of Alabama's children are food insecure, compared to a national average of 20.6 percent.

"That means that for more than one in every four Alabama children, going hungry and not knowing where their next meal will come from is a reality," Giles says.

That single statistic should be a wake-up call for residents statewide, says College of Agriculture Dean and Alabama Ag Experiment Station Director Bill Batchelor.

"We often focus solely on the big picture and the future challenges of feeding a growing world population, but this is a reminder that we don't have to look globally to find hunger," says Batchelor, a task force member. "This new initiative should serve to drive that point home to all Alabamians and generate public support for addressing this disconcerting issue."

Plans for the campaign began in September 2012 when the Hunger Solutions Institute convened a 30-member task force of prominent state leaders from the public and private sectors to create a seven-year plan to significantly reduce child hunger across the state. Alabama Lt. Gov. Kay Ivey, a member of the task force, will be the official spokeswoman for Ending Child Hunger in Alabama and will issue the call to action at the campaign's kickoff event. At publication time, details for kickoff had not been confirmed.

The task force has developed five strategies for reaching its goal of moving Alabama to the top 25 percent of the least child-food-insecure states, Giles says. They include increasing Alabama families' economic stability, cultivating a strong regional food system, improving the food-assistance safety net for Alabama's children, supporting community action to improve child health and prevent obesity and building public will to end childhood hunger here at home.

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Agriculture, Forestry Dominate State's Economy, Study Shows

Agriculture, forestry and their related industries account for 41 percent of Alabama's $174 billion economy and provide 22 percent of all jobs in the state, a new report from Auburn University's Department of Agricultural Economics and Rural Sociology shows.

Specifically, the comprehensive analysis, based on 2010 farm data, indicates the industries pump $70.4 billion into the state's economy and employ 580,295 people.

"We looked beyond the total sales of crops, livestock and timber to encompass the production, processing and distribution of those products," says Deacue Fields, Auburn ag economist and chief author of the report, "Economic Impacts of Alabama's Agricultural, Forestry and Related Industries." "This was a farm-to-table study."

A year of data gathering, number crunching and fact and figure checking went into the project, which was funded by the College of Agriculture and School of Forestry and Wildlife Sciences at Auburn, the Alabama Cooperative Extension System and the Alabama Agribusiness Council. Alabama Gov. Robert Bentley announced the report's findings at a February news conference in Montgomery.

College of Agriculture Dean Bill Batchelor says the report demonstrates the importance of agriculture and forestry to the state's overall economic health.

"We have said for some time that agriculture and forestry constitute Alabama's largest industry, but the numbers we were using were over a decade old," Batchelor says. "This report confirms what we have known, that they are a huge section of our economy and that the return on investments in agricultural research, academics and outreach is strong."

According to the study, timber production and processing lead all farm and forestry sectors in economic impact, generating $21.4 billion and 122,020 jobs, followed by poultry and egg production and processing at $15.1 billion and 86,237 jobs.

In terms of production, Alabama's other top crops, in order of economic impact, are greenhouse, nursery and floriculture; beef cattle; cotton; and soybean, corn and wheat. The study also examined commodities unique to Alabama's economy, including peanuts and catfish, and indicated peanut production contributes $211.4 million annually to Alabama's economy and 2,046 jobs; catfish accounts for $158.2 million and 5,829 jobs.

Regionally, a group of 11 north Alabama counties and another of 19 central Alabama counties contribute $18.5 billion each to the total $70.4 billion, with nine counties in the southwest corner of the state contributing $14.4 billion.

"Economic Impacts of Alabama's Agricultural, Forestry and Related Industries" is available online and can be downloaded at no cost. Go to https://store.aces.edu and search for ANR-1456.

Fields and colleagues are now finalizing county-by-county agricultural and forestry highlights, including each county's top three commodities. An interactive website will launch this summer, from which all 67 county reports can be downloaded.

The last study of the ag, forestry and related industries' economic impact in Alabama was conducted in the 1990s and was more limited in scope, Fields says.

"This new report establishes a baseline of data that we can use to monitor and evaluate the industries' growth and progress in the future," he says.

Researchers used a professional economic-impact software and data package to capture the connections among agricultural industries and the rest of the state's economy and analyze their economic impacts. Then they scrutinized the results.

"When we had everything compiled, we spent three weeks making sure every number in this report made sense, vetting them through the National Ag Statistics Service, commodity groups, chemical and fertilizer companies—every industry involved—and if we found discrepancies, we corrected them," Fields says. "These numbers are completely valid.

"Everybody loves a winner and wants to invest in a winner," he says. "Agriculture is a very good investment because it's a winner."

Batchelor said the report's findings also offer further evidence that the future is bright for agriculture and, subsequently, for individuals graduating in the field.

(TAKING THE LEAD, *from page 1*)

A BIG BLOW Jimmy Parnell surveys the destruction after a tornado ripped through Parnell Inc. in early 2012 and wiped out the farm's barn and cattle-working facilities

And grow it he did—to an enterprise that today includes about 600 brood cows, a beef stocker operation and a timber and logging business that cuts 40 to 80 acres of timber and produces 100 loads of logs a day to sell to timber mills. Parnell Inc.—a partnership involving Parnell, his father and younger brothers Jeff and Joseph—employs 60 people.

Politics first appeared on Parnell's radar screen in the early 1990s, when he was selected to participate in the Alabama Agriculture and Forestry Leadership Development Program, or LEADERS, a joint project of the College of Ag, Extension and the School of Forestry and Wildlife Sciences that ran from 1984 to 2006 and was designed to help young farmers and timber producers hone their leadership skills and their understanding of the legislative and political processes.

"For the first time, I saw what politics is all about," Parnell says. "And what I saw showed me that we (ag and forestry) needed people involved."

He didn't just preach that message; he practiced it, largely through his stepped-up involvement and leadership in the Alabama Farmers Federation. With wife Robin, whom he has known since childhood and with whom he soon will celebrate his silver wedding anniversary, he revived the Chilton County Farmers Federation's young farmers' group and in 1997 served as State Young Farmers Committee chairman. Two years later, the Parnells and their two young children, James Robert and Anna Grace, were named Alabama's Outstanding Young Farm Family.

He served on Alfa's Board of Directors from 1999 to 2008 and was elected Chilton County federation president in 2006. But for many years, he had been contemplating a bid for the statewide leadership position, and around the time his term on the board ended, he went into campaign mode. An avowed "people person," Parnell started traveling the state, on a mission to build relationships with farmers statewide, and in December, the mission was accomplished.

Dennis Evans, an Auburn ag economist who headed the LEADERS program for many years and first met Parnell through the program, says he has followed Parnell in the years since and has watched him steadily grow as an industry leader. Evans was not surprised Parnell won the presidency.

"I look for Jimmy Parnell to do great things in the new job," Evans says. "A steady, solid individual with a sensible head on his shoulders will do well in this very important leadership position in our state."

Ditto, says College of Ag sophomore James Robert Parnell, who, like his dad, is majoring in agricultural business and economics and who, like his dad, plans to return to Stanton and full-time farming with Parnell Inc.

"I think he will do a great job being the new federation president," son says of father. "Anyone that knows my dad will tell you he is truly passionate about the federation and, more importantly, its members. I think this comes from his love for agriculture and wanting to make a positive difference."

James Robert was involved in his dad's campaign efforts every chance he got, and says he's already thinking of one day following in his father's political footsteps.

"I've been interested in politics for many years and definitely see myself being involved in politics in the future," he says. "It's just too important to *not* be involved. Agriculture is a crucial part of our economy and there needs to be more people involved who understand that."

Trends

For the Record

Twins Part of College's Largest Graduating Class

by WENDY REED

Even before the 123 College of Agriculture seniors set to graduate this coming May begin making their mark through work and careers, they will have made history as part of the college's largest graduating class on record.

For two members of the class—identical twins and animal sciences/pre-vet seniors Lauren and Lindsey Norberg—setting records is nothing new. The Ithaca, N.Y., natives, who have been swimming competitively since they were 9 and have been members of Auburn's stellar women's swimming and diving team since arriving on the Plains in 2009, still hold the 200-medley relay record in their home state, where Lauren also holds the 100-yard breaststroke record.

The twins say the self-discipline they developed from years of demanding practice schedules has benefited them academically.

"We are competitive when it comes to grades and have pushed each other to excel in all of our classes," says Lindsey, whose 3.8 GPA only differs from Lauren's by three-hundredths of a point. Both will graduate summa cum laude.

After high school, despite recruitment by other universities, the Norbergs left Ithaca and headed south to Auburn, a thousand miles away. They picked Auburn in part because their mother, who swam for Pittsburgh as a college student and formerly coached the Cornell women's swim team was well aware that Auburn had one of the best teams in the country.

Ultimately, though, the Norbergs chose Auburn because, as sisters who long had shared the dream of becoming veterinarians, they knew the outstanding reputation of the university's veterinary medicine program. The twins have always been drawn to animals and caring for them.

"We lived on a 100-acre farm and grew up around horses and assorted other farm animals," Lindsey says. "We didn't have a garbage disposal; instead, we had Daisy, our large pig. As such, we both developed a great love of animals."

The twins say they've always been extremely close and truly enjoy doing everything together. Only once in their 21 years have they ever been separated, and that was for two weeks due to an Australian swimming competition. And at Auburn, except for an English composition class, their schedules have been identical since their freshman year. They also share an apartment, an Italian greyhound named Iggy, a love of cooking and a car.

The togetherness will continue when the Norbergs graduate in May and then spend a year gaining work experience before applying to veterinary school. Though acceptance into Cornell's veterinary medicine program would take them "back home," they agree that Auburn is their first choice.

"We have thoroughly enjoyed our past few years and have fallen in love with the town," Lauren says.

The twins credit the College of Ag with making them feel at home. With 21 hours of swim practice each week and competitions that have meant entire weeks away from classes, the 2008 Olympic trial qualifiers and two-time SEC champions are grateful for the faculty's support.

MIRROR IMAGES Identical twins Lauren, left, and Lindsey Norberg, both seniors in animal sciences, will graduate in May 2013 as part of what will be the College of Ag's largest graduating class. The Norbergs just wrapped up their fourth season as members of the Auburn women's swimming and diving team.

"It's really the teachers that make it for me," Lauren says, and Lindsey echoes that.

"They go out of their way to help students," she says. "And they're so interested, so passionate about what they're doing."

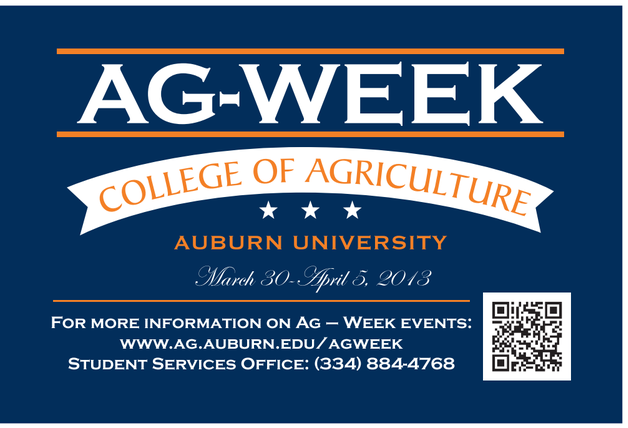
Paul Patterson, the college's associate dean for instruction, says each and every student in the college is important—not just to the college but to the future.

"We live in an ever-evolving, growing world that will need new solutions to address problems related to food production, the environment, energy supplies and human health," Patterson says. "The nation's colleges of agriculture are not graduating enough students for the jobs available in this country."

The Auburn College of Ag's total number of May 2013 graduates is 20 percent higher than the average class size from 2000 to 2012.

College To Celebrate Ag Week 2013 March 30-April 5

A weeklong, on-campus celebration aimed at raising awareness of and appreciation for agriculture is set for March 30-April 5 during the Auburn University College of Agriculture's Ag Week 2013.



This year's Ag Week will feature fun and educational events about agriculture, food production, philanthropy and community engagement. The activities have been designed to enlighten the non-ag community about not only the growing importance of agriculture but also the broad career possibilities a degree in agriculture promises, says Amanda Martin, student recruiter and alumni relations coordinator for the college.

"The College of Ag has some of the fasting-growing majors on campus," Martin says. "Even in the down economy, our graduates' job opportunities have only continued to increase."

The 2013 observance will kick off March 30 with "Ag in the Park," an event that will bring future and current students, alumni, faculty, staff and their families together for an informational program, campus tours, lunch and the Auburn-Alabama baseball game at Plainsman Park.

Events scheduled throughout the week of April 1-5 will include a discussion panel and presentation about the mysteries behind food, tie-dying with Aubie on The Concourse, an "ag facts day," a field day for local elementary schools at Ag Heritage Park and the always-popular Ag Hill picnic.

This year, the picnic will be about more than fried chicken, fried catfish and all the trimmings. The college also will host a career fair and announce the winner of the "Kiss the Goat" Ag Week fundraiser to benefit The Cam Newton Foundation.

A full schedule of activities is online at www.ag.auburn.edu/agweek. For more information, contact Martin at amanda.martin@auburn.edu or Megan Ross at mhr0001@auburn.edu.

Online Turfgrass Master's Degree Program Set To Launch Fall 2013

by WENDY REED

The College of Agriculture's proposed online master of turfgrass management degree program, which will be the first of its kind in the Southeast and one of less than a handful of such program in the U.S., is on track to begin fall semester 2013 following its unanimous approval by the Auburn University Board of Trustees in February.

The master of turfgrass, which is awaiting a final off-campus review by the Alabama Commission on Higher Education, will require 32 hours of coursework, including a two-semester-hour capstone experience. All courses will be offered via distance learning only.

Coursework will cover soil microbiology, plant genetics, advanced turfgrass management, soil chemistry, bioenergy crops, soil resources and conservation, chemistry and herbicides in crop production, landscape entomology and plant nematology.

Faculty in the Department of Agronomy and Soils developed the proposed program as a way to provide professionals in the turf industry the opportunity to pursue a graduate degree from wherever their careers have taken them. Leslie Cordie, distance learning coordinator for the College of Ag, says the online nature of the master of turfgrass "will make it literally a global program" that will attract golf course superintendents and other turfgrass professionals from across the nation and around the world.

Cordie says that, because all courses required for the degree will draw from ones that already exist, no additional resources, faculty or space will be necessary.

"The new program also satisfies part of Auburn University's strategic plan in terms of developing online master's-level programs and generating new sources of revenue in an area of distinct competence and high professional demand," she says.

Currently, turf management is one of four undergraduate specialty tracks offered in Auburn's agronomy and soils department. Students in the major learn about turfgrass production, maintenance and weed control and also learn how to work with customers and businesses such as golf courses in creating and maintaining healthy turf. Auburn's undergrad turf management degree program boasts a 100 percent job-placement rate.

To enroll in the master of turfgrass management program, an individual must hold a bachelor's degree and must have taken specific courses in basic science and pest and crop management as an undergraduate. Cordie says if a prospective student lacks the required undergraduate coursework, the pest and crop management classes are offered online.

For more information about or for updates on the online master of turfgrass management degree program, go to ag.auburn.edu/students/distanceeducation/ or contact Cordie at lak0007@auburn.edu.

Costa Rica To Be Backdrop for AU Entomology Course

by DAVID STORY

A rural, mountainous Costa Rican village will become Auburn entomology associate professor David Held's classroom for three-plus weeks in early summer when he leads a Maymester Abroad study tour to the Central America country.

Specifically, the group's destination will be the University of Georgia's Costa Rica campus at San Luis de Monteverde.

During the May 24-June 19 tour, Held will teach his economic entomology course—Entomology 4020—to Auburn students at an accelerated pace, such that students completing the course will receive full credit on their Auburn transcripts.

GETTING ORIENTED Auburn entomology associate professor David Held, right front, and five University of Georgia faculty attending orientation at UGA's Costa Rica campus pose on a suspended bridge during a canopy tour of the rain forests of Costa Rica. Held will teach his economic entomology at the campus in San Luis de Monteverde during an early-summer College of Ag international study tour.

"The concepts and principles of the class will be the same as in Auburn," Held says of the course that covers the biological aspects, life histories and control of insects. "We take local field trips in my on-campus course, but Costa Rica offers experiential education in a way that cannot be matched in Auburn."

The tour, open to any Auburn student sophomore and above, will be extremely beneficial for participating students, Held says.

"Costa Rica is a model for how agricultural production and sustainability wed with environmental stewardship," he says. "Costa Rica offers traditional and nontraditional agriculture in a sustainable, environmentally sensitive context, plus a diversity of arthropods that's incredible."

On a five-day field trip that will be part of the course, students will tour a variety of tropical cropping systems that will allow them to "see sustainable agriculture in operation," Held says.

"Students should leave Costa Rica with a unique perspective on how the plant sciences can be less environmentally intrusive," he says.

On weekends, students will have the opportunity to take canopy or zipline tours of the Monteverde and Arenal Volcano National Park cloud forests, which are adjacent to the UGA Costa Rica campus.

The Costa Rica tour and all study abroad tours in the college are coordinated by the Office of International Agriculture. "Maymester" courses are ones in which Auburn faculty teach Auburn students Auburn courses for Auburn credit, but all in an international setting.

For more on the Costa Rica or other study tours, go to www.ag.auburn.edu and click on the International Programs button.

Edgar Honored Posthumously for Poultry Research

S. Allen Edgar

S. Allen Edgar, a pioneer in poultry disease research and vaccine development and a Department of Poultry Science faculty member at Auburn for 39 years, has been posthumously inducted into the American Poultry Historical Society Hall of Fame.

Edgar joined the Auburn faculty in 1947 and retired with professor emeritus status in 1986. While at Auburn, he developed several vaccines, including the first against infectious bursal disease in chickens and the first against coccidiosis of chickens and turkeys. He also discovered and named a new species of coccidia in chickens and was instrumental in development and commercialization of anticoccidial drugs and vaccines. Edgar died in 2000.

The induction ceremony was part of the U.S. Poultry and Egg Association's 2013 International Production and Processing Expo in Atlanta in January. A bronze plaque with an image of Edgar will be on permanent display in the National Agricultural Library in Beltsville, Md.

College Announcements

Retirements

2013 has brought the retirements of two Department of Agronomy and Soils faculty members. **Michael Patterson**, professor and Extension specialist who joined the Auburn faculty in 1985, retired Jan. 31, and professor **Harold Walker** retired Feb. 28 from 35 years on the faculty. Also retiring effective Jan. 31 was Black Belt Research and Extension Center director **Jimmy Holliman**, who had been at the Marion Junction center for 37 years.

New Hires

Simon Snyder, a certified public accountant who holds bachelor's and master's degrees in accounting from Auburn University, has joined the College of Ag/Alabama Ag Experiment Station as assistant director of fiscal administration.

Former corporate travel agent, event planner and office administrator **Sandy Krietemeyer** has joined the College of Agriculture and the Alabama Agricultural Experiment Station as executive support specialist.

Josh Woods, head of communications and marketing at the University of North Alabama since 2007, has been named director of the Office of Ag Communications and Marketing for the College of Ag and Alabama Ag Experiment Station.

Relevant Research

Safe and Secure

$4.8 Million Grant Will Enhance Safety of Local Foods

by JAMIE CREAMER

Animal sciences assistant professor Christy Bratcher and a multidisciplinary team of scientists from Auburn and Tuskegee universities have been awarded a five-year, $4.8 million grant from USDA's National Institute of Food and Agriculture to help ensure the safety of locally produced foods.

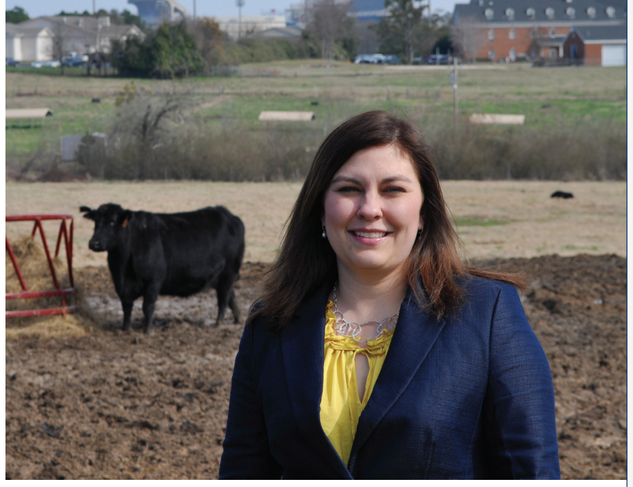
The project's title—"A systems approach to identifying and filling gaps in and between knowledge and practice in production and distribution of local and regional foods for a more secure food supply chain"—may be a mouthful, but it's the study in a nutshell.

"We're going to look at current production practices and find out how close farmers' perceptions of what they're doing to supply safe food actually come to reality and then develop approaches these and other small, local farms and processors can use to improve their production practices and reduce the risks of food contamination," Bratcher says.

In Alabama and nationwide, the popularity of and demand for locally grown food is soaring, as consumers increasingly insist on knowing where the food they buy came from and who grew it. That is excellent news for small-scale producers and processors and for rural economies in general, but Bratcher notes that those consumers have high expectations.

"A lot of consumers have the perception that foods that are produced locally are healthier, of higher quality and safer than what they can buy in the supermarket, but there are times when that may not actually be the case," Bratcher says. "Our goal is to identify what consumers perceive about local or regional foods and compare that to the perceptions of the farmers who produce those foods. We'll then test the information scientifically and provide recommendations and training modules for farmers and consumers to close the potential knowledge gaps."

Nine small-scale farms in Alabama and one custom food processor in west Georgia have agreed to participate in the study, which is set to begin this spring. Bratcher says the comprehensive project will include research, teaching and extension components.



SUPPLY-CHAIN ANALYSIS Christy Bratcher, animal sciences assistant professor, is spearheading a five-year, USDA-funded project aimed at ensuring the safety of locally and regionally produced foods.

"The first phase will be data collection—on-site, environmental bacterial sampling of troughs, barns and equipment as well as microbial sampling of creeks and streams located near each farm to test water quality," Bratcher says. "Then we'll begin gathering in-depth information through surveys and face-to-face interviews, not just with farm operators but with their customers, too."

Based on analyses of the data, the research team will develop guidelines and practices aimed toward improving food safety and build teaching modules that will be used to deliver the information to the farm operators in the study. The project's final phase will include a second round of surveys and of environmental sampling.

"This will allow us to assess changes in producer behavior and measure how effective our work has been, by comparing that data to the baseline data initially established," Bratcher says. "We'll determine whether farmers are implementing the changes in management and production practices that have been developed, and if so, whether that is improving the safety of the foods they produce."

Also rounding out the project will be information and techniques farmers can use to promote and market their products and increase sales.

The five-year project brings together a diverse team of scientists that includes fisheries research fellow and Alabama Water Watch director Bill Deutsch, animal sciences associate professor Don Mulvaney and assistant professor Luxin Wang, poultry science associate professor Manpreet Singh, food science professor Jean Weese and rural sociology assistant professor Michelle Worosz, all in the College of Ag; Joe Hanna, associate dean for research in the College of Business; Regina Halpin with the Auburn University Food Safety Initiative; and ag economist Nii Tackie and poultry scientist Janette Bartlette, both at Tuskegee.

Study: Rocky Path Could Reduce Lameness in Cattle

by JAMIE CREAMER

Animal lameness is an all-too-common condition that can seriously affect the well-being and economic productivity of dairy and beef cattle, costing producers an estimated $302-$446 per episode in terms of treatment costs and performance losses. Preliminary research conducted at Auburn, however, indicates that bovine foot disease and injuries could be reduced and perhaps prevented by altering a couple of calf-rearing practices that are standard in the industry today.

"Our goal was to evaluate whether exercise and a change in environment, specifically in terms of terrain, could impact how the bovine foot develops," says Julie Gard, an associate professor of clinical sciences in the College of Veterinary Medicine. "What we have found in our work thus far is that the digital cushion—the foot's 'shock absorber'—and bony structures in calves' feet will actually remodel in response to increased physical activity on rough terrain, creating animals that are better equipped to withstand the rigors of the industry and less prone to lameness."

In the Alabama Agricultural Experiment Station–funded study, Gard looked at two groups of newly weaned dairy calves over a four-month time period. The 10 calves in the control group were raised in the traditional dairy environment—on small, grassy lots with food and water easily accessible—while the 10 in the treated group were given free access to a rocky, half-mile lane.

"We put their food and water at one end of the lane each morning and at the other end in the evenings, so they all had to walk at least two miles a day," Gard says.

At the end of the four months, the researchers used MRIs and CT scans to thoroughly evaluate the calves' feet and found significant structural and anatomical differences between the two groups of animals. Adjusting for weight differences, the digital cushion in the feet of calves that hoofed it up and down the lane day in and day out was 37 percent thicker and had a surface area 18 percent larger than in the control group. The bones of the treated calves' feet were also 9 percent thicker and larger when compared to those of the traditionally raised animals.

An earlier study Gard had conducted with four calves per group yielded similar results, and Gard is pursuing additional funding from public and industry sources to expand the research using a larger number of calves over longer time periods.

"Ultimately, we want to establish best management practices producers can readily implement that will help dairy and beef cattle develop healthy feet," Gard says. "We want these protocols to be tools that will enhance productivity and the welfare of the animals."

In the cattle industry, producers raise dairy and beef calves as replacement heifers to take the place of older, less productive cows in their herds. But herd replacement is costly: In 2010, the cost of raising a replacement heifer from weaning till it's ready to enter the production system averaged $1,725. Raising replacements that have stronger, well-cushioned feet would make economic sense, Gard says.

"Our results would suggest that changes in the environment can create animals that are better equipped to withstand the rigors of the industry," she says. "The increased longevity and superior production that you get from an animal that's able to thrive in the production system will allow producers to maximize their economic returns and their herd's well-being."

Auburn Releases First Peanut Variety; Others on Horizon

by JAMIE CREAMER

IN A NUTSHELL Auburn-released AU-1101 is a large-seeded Virginia-type peanut that is recommended for growers in West Texas because it matures earlier than most varieties currently grown there. Auburn's peanut breeding research team is also poised to release other varieties adapted for producers in Alabama and the Southeast.

A peanut breeding program operated jointly by the College of Agriculture's Department of Agronomy and Soils and USDA's National Peanut Research Lab in Dawson, Ga., has yielded AU-1101, a high-yielding, early-maturing, Virginia-type peanut and the first peanut variety ever released by Auburn. But program leader Charles Chen says it won't be the last.

"We currently have three promising advanced breeding lines, and they could be released as early as 2015," says Chen, a former USDA Agricultural Research Service research geneticist who in early 2012 joined the College of Ag's agronomy and soils department as an associate professor of peanut breeding and genetics.

Those varieties, Chen says, will be high-yielding runner-type peanuts that are adapted to the Southeast and bred for improved resistance to tomato spotted wilt virus, leafspot and other costly diseases and for reduced seed size. Those two characteristics could help farmers in Alabama, Georgia and Florida lower their seed and overall production costs.

While AU-1101 also promises high yields and improved drought tolerance, its other key trait—early maturity—will make it a strong option for West Texas peanut growers, once certified seeds become available to farmers in 2014, Chen says.

"AU-1101 is a large-kernelled Virginia-type peanut, and that is the type grown in West Texas, but the varieties that dominate the fields there now often aren't mature enough to harvest and are still in the ground when the first frost hits," Chen says. "That can reduce crop quality and yields."

That the first peanut variety to be released by Auburn was developed for growers in West Texas might seem odd, except that the research behind AU-1101 began in the Lone Star State in the early 2000s under Ernest Harvey, one of the world's leading peanut breeders. In 2007, Harvey, then with the National Peanut Research Lab in Dawson, moved his peanut germplasm to Auburn and laid the groundwork for a cooperative breeding program between Auburn's agronomy and soils department and the Dawson lab.

The Auburn-NPRL breeding program was established in April 2012, which is also when Chen joined the agronomy and soils faculty. He says the new program is a continuation of one he and others began at the national lab in 2007.

Joe Touchton, head of the agronomy and soils department—who, along with Chen, Harvey and Marshall Lamb, research chief at the National Peanut Research Lab, is credited with breeding AU-1101—says the objectives of the program are to develop cultivars with desirable improved traits adapted to all U.S. peanut-producing regions and to enhance elite peanut germplasm through conventional and genomic approaches.

The program is focusing on high yield, resistance to diseases, drought tolerance, early to medium maturity, seed characteristics and high oil and oleic acid content.

Chen says his research team planted 1,100 and 700 breeding lines, respectively, in Dawson and at the Alabama Ag Experiment Station's Wiregrass Research and Extension Center in Headland to evaluate for individual plants with desirable traits.

"We also planted 38 advanced breeding lines on test plots at those two locations as well as in Lucedale, Miss., and at the Gulf Coast Research and Extension Center in Fairhope to evaluate for yield and other characteristics," Chen says.

The advanced lines also will be tested over multiple years.

"The top 50 percent of lines remain in the test for next year and new ones are added," Chen says. "The longer a line stays in the test, the better the chance it will be released as a new variety. I believe some of those 38 advanced breeding lines will become new varieties we can release."

The West Texas breeding program also is ongoing. Chen says another 500 breeding lines and 30 advanced lines will be evaluated there this year.

Licensing Deal Moves AU-Patented Kiwifruit into Marketplace

by JAMIE CREAMER

PROLIFIC PRODUCER Another bumper crop of Golden Sunshine kiwifruit hangs on the trellised vines at the AAES' Chilton Research and Extension Center in Clanton. AU Golden Dragon kiwifruit ripen in late August, AU Golden Sunshine in mid-September and AU Fitzgerald around Oct. 10.

Auburn University–patented kiwifruit varieties are now on the market, offering home gardeners across central and south Alabama a new and refreshing fruit possibility and the region's produce farmers a promising high-value specialty crop.

Included among those varieties are a "traditional" kiwifruit—the fuzzy, egg-shaped fruit with bright-green, seed-studded flesh and a distinctive sweet-tart taste—and a couple of yellow-fleshed varieties characterized by smooth skin and a smooth, sweet flavor. They are the "goldens."

"The first gold kiwi I had, as soon as I tasted it, I knew it was something that would be a hit," says Wayne Bassett, owner of Beck's Turf and The Wildlife Group in Macon County. So strongly did he believe in the fruit's potential that, working through Auburn's Office of Technology Transfer, he licensed the patented varieties and now has exclusive rights to sell the kiwifruit vines through a newly established entity, Gold Kiwi Group LLC.

The kiwifruit varieties available from Gold Kiwi Group include AU Golden Dragon and AU Golden Sunshine—the gold-fleshed cultivars, obviously—and the green-fleshed AU Fitzgerald. Also available are the pollinators for these three female plants: AU Golden Tiger for Golden Sunshine, AU Arthur for Fitzgerald and, for Golden Dragon, an existing kiwifruit variety called Hortkiwi meteor. Bassett says one male will pollinate up to four females.

Kiwifruit, which are native to China, are vines that can reach up to 25 feet, so they must be grown on trellises to support the sheer weight of the branches and, when they start bearing in year three or four, the fruit. Tips for building the support structures as well as information about each variety and the how-tos of planting, fertilizing, irrigating and pruning kiwifruit vines, whether two or 200, are provided on Gold Kiwi Group's website at http://growaukiwi.info. The information is based on extensive research Alabama Ag Experiment Station researchers launched in 1985.

Spearheaded by now-retired horticulture professor Billy Dozier, Auburn's kiwifruit research project was aimed at determining whether the subtropical fruit could be grown in Alabama, not merely in home landscapes, but as a commercial crop for fruit and vegetable producers.

The initial research was limited to traditional green-fleshed kiwifruit varieties, but in the early 1990s, Dozier and team added two golden varieties—Dragon and Sunshine—that had been developed at Hubei Academy of Agricultural Sciences' Institute of Fruit and Tea in China to the scientific trials. As was the case with the green-fleshed varieties, the goldens proved, and continue to prove, hardy and prolific.

The golden cultivars' outstanding performance in Alabama, along with their sweeter, smoother taste and fuzz-less skin, have made them the scientists' and, in taste tests, consumers' kiwifruit of choice and the ones Dozier predicts will be the mainstay of a commercial kiwifruit industry in the state, should one be established.

Making the two golden fruits even sweeter is the nutritional analysis conducted by Auburn horticulture's Floyd Woods, an associate professor specializing in post-harvest physiology.

"It is known that kiwifruit in general are nutritional powerhouses—extremely high in beta carotene, polyphenols and vitamins C and E—but we compared AU Golden Dragon, AU Golden Sunshine and an industry-standard golden variety against two green-fleshed varieties and found the antioxidants of the yellow-fleshed kiwifruit provide significantly higher cellular protection from free radicals than the green-fleshed," Woods says.

The AAES' Chilton Research and Extension Center in Clanton has been home base for the kiwifruit project, but broader field trials indicate Auburn-patented kiwifruit varieties can be successfully grown from Birmingham southward to Fairhope and from East Texas to South Carolina.

"Basically, anywhere peaches grow, you can grow kiwi," he says.

For information on purchasing AU-patented kiwifruit vines, contact Gold Kiwi Group at info@goldkiwigroup.com or 1-800-288-4291.

School of Forestry and Wildlife Sciences

New Index Can ID Future Flood Threats

FLOOD PREVENTION Associate professor Latif Kalin uses a hydroacoustic current meter to measure how fast and deep the water in Eightmile Creek in Prichard is during a flood event. Kalin and colleagues have developed a method for identifying sensitive areas in a watershed that, if they were to be developed, could contribute to downstream flooding.

A team of researchers at Auburn has developed a new tool to help communities identify flood-generating areas in a watershed and use that information to minimize flood threats in future development.

The scientists—associate professors Latif Kalin in forest hydrology, Puneet Srivastava in biosystems engineering and Charlene LeBleu in landscape architecture—tested their method in coastal Alabama's Eightmile Creek watershed, which includes parts of Prichard, Mobile and Chickasaw in Mobile County.

Using aerial photographs, topographic data and land-use and soil maps, they created a watershed model and an index that assigned numbers to different areas of the watershed that drain into Eightmile Creek. The numbers indicated how much an area would contribute to flooding if it were to be developed for agricultural, residential, industrial or other uses.

The Mississippi-Alabama Sea Grant Consortium–funded study indicated that not all streets, parking lots and other impervious surfaces contribute equally to flooding. Some might even have less impact than pervious areas.

"What eventually drives peak flows is the complex interaction of land use, topography, surface roughness, soil properties and travel time of runoff generated from different parts of the watershed to the flood-prone area," Kalin says.

The index was developed to provide science-based information to assist the city of Prichard in updating its comprehensive plan, but the method can be used in other watersheds to create indices specific to those areas.

College of Sciences and Mathematics

Davis Arboretum Offers Stormwater Tour

EASING THE FLOW Arboretum curator Dee Smith points out a rain garden that was installed at the facility to manage stormwater runoff by catching rainwater where it falls.

The Donald E. Davis Arboretum has installed an 11-stop, self-guided tour that showcases best practices for handling stormwater in the landscape.

"We've had a lot of these practices in place at the arboretum for some time, but they weren't interpreted in any way so that people could see what's being done," says Dee Smith, arboretum curator. "On the tour, some of the stops describe water capture, and some are about controlling the flow of water."

The stormwater tour demonstrates nontraditional methods for dealing with stormwater; highlights the arboretum's use of below- and above-ground water tanks in the landscape; displays methods for slowing, trapping and channeling water; and shows how stormwater, when not properly managed, is destructive.

Patrick Thompson, arboretum specialist, says the tour is designed to inspire people to use more sustainable practices on their own landscapes, resulting in a healthier watershed.

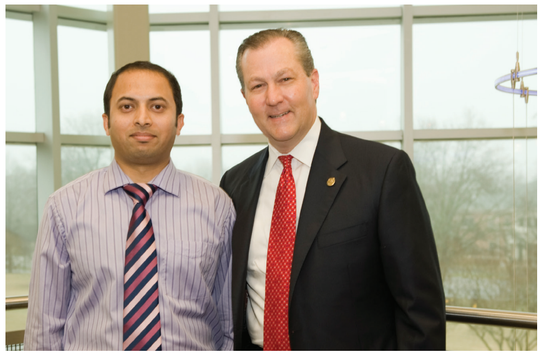
"Water in the arboretum goes to Chewacla Creek, the Saugahatchee Creek, the Tallapoosa River and all the way down to the Gulf of Mexico," Thompson says. "Efforts we take locally affect our downstream neighbors. We need to keep our watersheds healthy so that we will have good water to drink and grow."

The tour is open to the public. Tour maps are available at the arboretum pavilion. Each stop along the tour also includes QR codes that can be scanned with a smartphone, providing additional information about each stormwater feature.

For more information about the tour or to download the map, visit the arboretum website at www.auburn.edu/arboretum.

College of Veterinary Medicine

Auburn Cancer Research Initiative Awards Fellowship



FIRST FELLOW Alabama House Speaker Mike Hubbard, R-Auburn, presented the first Speaker Mike Hubbard Fellowship in Cancer Research at Auburn University to Farruk Kabir, a graduate student in the College of Veterinary Medicine. Kabir's research focuses on genetic mutations that cause breast cancer.

The Auburn University Research Initiative in Cancer in the College of Veterinary Medicine has awarded the inaugural Speaker Mike Hubbard Fellowship in Cancer Research at Auburn University to graduate student Farruk Kabir. As a Hubbard fellow, Kabir will continue his current research in the Molecular Genetics Laboratory on the mutations that cause breast cancer.

"Mr. Kabir's ultimate goal is to contribute to the advancement of genetic studies of breast cancer, focusing on defects in genes that normally suppress cancer cell growth and on recently discovered small regulatory RNA molecules that can also suppress cancer growth," says Bruce Smith, AURIC director. "He is pursuing his work by studying breast cancer in dogs, a disease that is nearly identical to breast cancer in women."

The endowed fund was created to recognize an outstanding student pursuing a doctoral degree in cancer research. The offices of the associate deans for research in the College of Veterinary Medicine and the Harrison School of Pharmacy also contributed to the fellowship, which provides one year of stipend support. The fellowship is renewable for up to three years, but renewal is competitive and requires demonstration of progress toward the graduate degree.

A Bangladesh native, Kabir earned his bachelor's and master's degrees in biochemistry and molecular biology from the University of Dhaka. He was admitted to Auburn's Cellular and Molecular Biosciences interdisciplinary graduate program in 2009 and is enrolled in CVM's biomedical sciences graduate program under the mentorship of R. Curtis Bird, director of the Molecular Genetics Lab.

The Hubbard fellowship was named for Alabama House Speaker Mike Hubbard of Auburn, who was instrumental in establishing AURIC.

College of Human Sciences

LASTING CONTRIBUTIONS Jimmy Pursell of Sylacauga holds the 2012 Lifetime Achievement Award that he and wife Chris, center, were presented during the College of Human Sciences' International Quality of Life Awards ceremony in New York City in December. The award recognized the Pursells, who were pioneers in advanced-technology fertilizers for the green industry and whose FarmLinks LLC in Fayetteville is the world's only demonstration and research golf course, as entrepreneurs, civic leaders and philanthropists who have made significant and lasting contributions to the well-being of citizens, families and communities locally and around the world. Shown with the Pursells following the presentation are College of Human Sciences Dean June Henton, left; Auburn University Provost Timothy Boosinger, right; and Achilles Armenakis, the James T. Pursell Eminent Scholar in Management Ethics in the College of Business, who introduced the Pursells during the ceremonies.

Editor's Note: In this and future issues of Ag Illustrated, we will highlight each of the College of Agriculture's eight academic departments. For this installment, the Entomology and Plant Pathology is in the spotlight.

Departmental Spotlight

Entomology and Plant Pathology

Improving Lives Through Plant Protection, Pest Management

by WENDY REED

PEST MANAGEMENT The goal of Auburn's Department of Entomology and Plant Pathology is to identify, understand and manage pests and diseases that can destroy crops and otherwise negatively impact quality of life. Through its strong graduate degree program, the department focuses on preparing the next generation of scientists to meet such challenges in the future.

The College of Agriculture's Department of Entomology and Plant Pathology was not officially established until 1999, but it traces its roots back to 1896, when the Board of Trustees of what is now Auburn University established the Office of Experiment Station Entomologist.

In the 117 years since, Auburn entomologists and plant pathologists have been advancing the agricultural principles of the Morrill Land-Grant Act to make life better for citizens of Alabama and beyond by tackling issues tied to pests and crop production.

"What we do touches everyone everywhere—everyone," says department chair Arthur Appel. "Everybody eats."

The department's goal, Appel says, is "identifying, understanding, and managing pest organisms in different environments, whether that's out in a farmer's field, in somebody's house or on a golf course."

It was crop protection that led Auburn, in 1908, to hire boll weevil expert Warren E. Hines as chair of the first entomology department in the new College of Agricultural Sciences. Based on a concept Hines had had success with in Texas, he employed the state's first county demonstration agents—including the nation's first black county agent—to improve farming methods, encourage diversification and teach farmers cultural control of the boll weevil.

In 1917, Auburn botany and plant pathology professor Wright Gardner organized a statewide academy of scientists with the goal of stimulating the scientific community of Alabama and emphasizing research at Auburn, and a century of agricultural achievements resulted.

Pioneering insect physiology and chemistry research in the 1960s led to the identification and synthesis of the sex pheromones of the lone star tick and cabbage looper, and from this work came the development of insect lures, traps and, ultimately, the new field of insect chemical ecology.

In the '70s, Auburn scientists discovered that a fungal endophyte in pastures was causing fescue toxicosis, a condition that causes malnourishment in cattle and spontaneous abortions in horses, among other damaging symptoms. The result was the development of fungus-free fescue that has saved cattle producers across the South hundreds of millions of dollars.

Another milestone occurred later that decade, when plant pathologists at Auburn became the first scientists to define rhizobacteria, beneficial bacteria that colonize plants' roots and promote growth and reduce pest vulnerability.

Two decades later, entomologists at Auburn began a research project that resulted in development of a horn fly vaccine for cattle. The vaccine, once available, will protect cattle against blood-sucking horn flies, which cause cattle to become anemic and lose weight and cost the beef industry $1 billion a year. The revolutionary vaccine will also reduce cattle stress, reduce the use of pesticides and help producers increase beef production and milk yield, improve leather quality and operate more efficiently.

Throughout its history, the department has contributed to the prevention and treatment of cotton rust, peanut fungal infections and lesser cornstalk borers; to various advancements in fertilizers and insecticides; to the development of integrated pest management systems that reduce pesticide use; and to multiple other innovations and cultivation strategies that fortify crops for better planting, harvesting and storage.

Department Head - Arthur Appel

15 full-time faculty members

33 graduate students

Graduate Degree Programs
Master of Agriculture
Ph.D.

Undergraduate Degree Minors
Entomology
Plant Pathology

Currently, molecular toxicology research within the department is aimed at unraveling the genetics of insecticide resistance in mosquitoes.

"We are getting down to the point of looking at gene sequences that cause changes in resistance levels of insects to different insecticides," Appel says. "We can now determine DNA sequences all the way to protein channels and note how they've changed shape and rendered insecticides ineffective."

Appel, an urban entomologist, predicts that, as the nation becomes more populated and less rural, density-dependent pest problems will increase, as will insect-transmitted disease. Auburn's Department of Entomology and Plant Pathology, he says, is preparing the next generation of scientists to meet those demands head-on.

"We are training scientists today who will lead the way in solving tomorrow's problems," Appel says.

The majority of the research conducted in the department requires an advanced command of science. As such, the department has a graduate program only.

"Although undergraduates may minor in entomology or plant pathology, the research-based curriculum of our master's and Ph.D. programs require a level of biology most high school students haven't mastered," Appel says.

Under the tutelage of faculty that Appel says "absolutely love teaching," graduate students in the department flourish and regularly garner awards for their research and are perpetuating the department's mission of improving the quality of life for citizens of Alabama and beyond by tackling issues tied to pests and crop production.

Faculty Accomplishments

Agronomy and soils professor **Beth Guertal** was named the 2012 Dr. William H. Daniel Award winner by the SportsTurf Managers Association. The Daniel Award is given to an individual who has made significant contributions to the sports turf industry through his or her research, teaching or extension outreach.

Betsy Wagner, associate professor of equine science in the Department of Animal Sciences, received the Outstanding Young Animal Scientist Award in Education from the American Society of Animal Science Southern Section during the organization's annual meeting in February in Orlando.

Jim Novak, professor and Extension economist in the Department of Ag Economics and Rural Sociology, was presented the Southern Agricultural Economics Association's Lifetime Achievement Award during the organization's 2013 annual meeting in Orlando in February.

The Alabama Certified Crop Advisor Association's board has honored agronomy and soils department head **Joe Touchton** with a plaque and an honorarium in recognition of his 20 years of voluntary service to and leadership of the group.

Animal sciences professor **Russ Muntifering** has been elected to the American Society of Animal Science Board of Directors, representing the Southern Section.

Agronomy and soils associate professor **Scott McElroy** was presented the Early Career Outstanding Scientist Award from the Weed Science Society of America at the organization's annual meeting in Baltimore in February.

Student Accomplishments

Lauren Terry, a senior majoring in animal sciences' production/management option, was crowned Miss Rodeo USA 2013 during the 43rd International Finals Rodeo in Oklahoma City, Okla., in January.

Auburn linebacker **Ashton Richardson**, who graduated with a 3.95 GPA and a degree in animal sciences/pre-vet in December, won the 2012 Bobby Bowden Award, presented by the Fellowship of Christian Athletes.

Department of Entomology and Plant Pathology graduate students **Tolulope Morawo** and **Ting Yang** had winning presentations at the recent annual meeting of the Entomological Society of America in Knoxville.

Horticulture graduate student **Yilanna Hu** placed second in competition for the 2012 U.P. Hendrick Award for best Journal of the American Pomological Society papers submitted by horticulture students.

A four-member student team from the Department of Animal Sciences won third place in the Academic Quadrathlon competition held Feb. 1-3 during the Southern Section of the American Society of Animal Science's annual meeting in Orlando. Team members include juniors **Sarah Dickinson** and **Katie Hill**, sophomore **Ryan Clark** and freshman **Kaitlyn McCombs**.

Jay McCurdy, a doctoral student in agronomy and soils, has been named one of three winners of the 2013 Watson Fellowship, a program funded by a partnership between the Toro Company and the Golf Course Superintendents of America Association's philanthropic organization, the Environmental Institute for Golf.

Auburn's Poultry Science Club was named the 2013 Club of the Year at the International Production and Processing Expo, formerly the International Poultry Expo, in Atlanta in January. Club historian and poultry science junior **Hannah Fisher** was in charge of the Auburn group's application and club scrapbook. Other officers are senior **Maggie Lawson**, president; junior **Clara Fisher**, vice president; sophomore **Sarah Stephenson**, treasurer; senior **Andrew Thompson**, communications chair; and junior **John Killen**, sergeant at arms.

College of Ag, AAES Honor Top Faculty, Staff

Twenty College of Agriculture/Alabama Agricultural Experiment Station scientists who landed a combined $11.4 million-plus in grants and contracts over the course of a year were honored as 2012 Grantsmanship Award winners and 21 other faculty and staff received top awards during the college/AAES' annual awards program Dec. 6 at the Jule Collins Smith Museum of Fine Art.

Recipients of the Grantsmanship Award, which is presented to researchers who secure at least $250,000 in extramural grants and contracts during a fiscal year, included Conner Bailey and Sam Fowler from the Department of Agricultural Economics and Rural Sociology; Eve Brantley, agronomy and soils; Ed Sikora, Henry Fadamiro, Joseph Kloepper and Kathy Lawrence, entomology and plant pathology; Sushil Adhikari, Oladiran Fasina, Puneet Srivastava and Steve Taylor, biosystems engineering; Jesse Chappell, Allen Davis, Terry Hanson, Carol Johnston, John Liu, Jim Stoeckel, Steve Szedlmayer and Bill Walton, fisheries and allied aquacultures; and Patricia Curtis, poultry science. Individual totals ranged from $250,000 to almost $2.6 million.

Top college/AAES research honors for the year went to entomology professor Nannan Liu and fisheries and allied aquacultures assistant professor Ash Bullard, who received the Director's Senior Research Award and the Director's Junior Research Award, respectively. On the academic front, agronomy and soils professor Beth Guertal won the 2012 Dean's Award for Advising Excellence, while horticulture assistant professor Carolyn Robinson and poultry science associate professor Shelly McKee each received the Dean's Award for Teaching Excellence. Agronomy and soils' Brantley took home the Dean's Award for Excellence in Extension and Outreach

Bill Daniels, associate professor in the Department of Fisheries and Allied Aquacultures, was presented the 2012 Richard L. Guthrie Award for Achievement in International Agriculture, while a newly established honor, the High-Impact Paper of the Year Award, went to agricultural economics associate professor Valentina Hartarska.

AND THE WINNERS ARE The College of Ag and AAES closed out 2012 with a ceremony in which 41 faculty and staff earned top awards for their outstanding efforts throughout the course of the year.

The College of Agriculture's 2012 Project Team Award was presented to nine faculty and staff involved in Pond to Plate, an initiative the Department of Fisheries and Allied Aquacultures launched in 2009 to improve the profitability of Alabama's catfish industry by reducing waste at every level of the value stream. Team members include, from fisheries, John Jensen, Jesse Chappell, Terry Hanson, Jeffery Terhune, David Cline and Luke Roy; from biosystems engineering, Yifen Wang and Shaoyang Liu; and, from the College of Business, Terri Lawrence.

Also at the awards program, five College of Ag/AAES staff members received Employee of the Year honors. Winning in the teaching/research/outreach professional category were research associate Brenda Wood and natural resource program adviser John Owen, both in the Department of Agronomy and Soils. In the professional/managerial category, winners were Kelley Terry, contracts and grants specialist in biosystems engineering and the AAES, and, from the E.V. Smith Research Center in Shorter, director Greg Pate and associate director Shawn Scott. The 2012 Diversity Award, meanwhile, was presented to Cynthia Channell-Butcher, academic program administrator in horticulture.

For more information about each award, go to http://www.ag.auburn.edu/dean/awards/.

NEWEST MEMBERS Three men who have made lasting contributions to Alabama agriculture were inducted into the Auburn University Agricultural Alumni Association's Ag Hall of Honor in a ceremony Jan. 31 in Auburn. The inductees were Tommy Paulk of Decatur, second from left; Philip Martin of Enterprise, center; and Robert Brewer of Auburn, second from right. With the honorees are College of Agriculture Dean Bill Batchelor, left, and Bill Gilley, outgoing association president. Paulk, president and CEO of the Alabama Farmers Cooperative, was the inductee from the agribusiness sector; Martin, a Coffee County row-crop and dairy farmer who has held many leadership roles in the agriculture industry in Alabama, was the production-sector honoree; and Brewer, the education/government-sector inductee, was on the faculty of Auburn's Department of Poultry Science for 32 years. Also during the induction ceremony, the alumni organization presented its 2013 Agricultural Pioneer Awards posthumously to the late Everett Easter of Limestone County, a key figure in the electrification of rural Alabama, and Samuel Hinote of Robertsdale, a trailblazer in the state's farm-raised catfish industry. The Easter and Hinote families were on hand to accept the awards. The 2013 banquet was the 30th annual Alabama Agricultural Ag Hall of Honor induction ceremony.

Budding Chef Chalks Up Skills to Days in 4-H

For Anniston native Rachel Sarro, cooking skills came naturally, and were first learned at the hand of her mother, 4-H regional Extension agent Ruth Sarro, and then further developed through years of Alabama 4-H competitions.

Recently, the 19-year-old Sarro, a student at the Nashville-based International Culinary School at The Arts Institutes, had the chance to showcase those skills when she was selected as one of eight of the school's students to be a part of Food Network's nationally televised show, "Great American Food Truck Challenge."

For the show, Sarro and a fellow culinary school student were on a team called Pop-A-Waffle. Sarro's team made chicken and waffles, a strawberry shortcake waffle, fried pickles and lemonade and won that episode with sales totaling $3,173.

The show was filmed in and around Nashville.

"The highlight of my experience was meeting and getting advice from show host Tyler Florence," Sarro says. "He's one of my favorite chefs, so it was an honor to get advice from him.

"It was a lot of work, and a lot of fun to see how a television show is filmed," she says. "You have to work well with people when you're in very tight quarters like a food truck, but it's the experience and not the winning that's important."

Sarro also is featured in a national television commercial for the International Culinary School that was filmed as a food truck team competition. In the commercial, Sarro and her teammate won the competition with a Latin-inspired meal of fish vera cruz with shrimp sosrito and pineapple virgin mojitos.

As a 4-H youth, Sarro entered and won various cooking competitions, including second place in the National 4-H Poultry and Egg Conference's 2011 Chicken Que contest.

"I wouldn't be living my dream as a chef if it were not for 4-H," Sarro says. "4-H gave me the confidence and leadership skills to be successful."

AWAITING THE VERDICT Rachel Sarro and her teammate stand prepared to answer a judge's questions about the Latin-inspired dishes they prepared as part of a commercial for The International Culinary Institute. Sarro, a student at the school, says 4-H equipped her with the cooking and leadership skills that are allowing her to reach her goals.

Soil Conservation Changes Face of America

by JIM LANGCUSTER, ALABAMA COOPERATIVE EXTENSION SPECIALIST

The Lewis and Clarke expedition into the sprawling prairies and thickets of the Western wilderness may be romanticized today, but some 200 years ago, it was an undertaking inspired by hard political reality.

President Thomas Jefferson, who had just completed purchase of the vast region known as Louisiana, dispatched the two explorers to take an inventory of the resources in this virgin land to determine what could be exploited by a young farming nation as it pushed relentlessly into the deep reaches of the so-called Western backcountry.

DUST AND DEVASTATION Abandoned farms were a common sight in the Midwest in the 1930s as the Dust Bowl worsened. This 1938 photo of a deserted farm north of Dalhart, Texas, is courtesy of the Library of Congress, Prints and Photographs Division, and is credited to Dorothea Lange, a photographer for the federal agency then known as the Farm Security Administration.

And for more than a century, Americans did exploit, until nature began pushing back with a vengeance, says Charles Mitchell, an Alabama Cooperative Extension System agronomist and Auburn University professor of agronomy and soils.

"There was nothing we couldn't exploit, and we did," Mitchell says.

Even as early as the 1860s, a few foresighted statesmen had perceived that Americans were dealing with limited resources, thinking that was reflected in the Morrill Land-Grant Act of 1862, which established a network of agricultural schools to impart scientific farming methods to young farmers.

"Congress perceived that we were running out of land and that we had to come up with some way of sustaining agricultural production with the resources we had," Mitchell says.

Fifteen years after the Morrill Act, Congress passed the Hatch Act, which established agricultural research stations in each state. With that, scientists, including the late John Duggar of what was then Alabama Polytechnic Institute, began laying the groundwork for what we know today as sustainable agriculture.

"His (Duggar's) basic premise was that we could sustain cotton production by following a few simple practices—rotating crops, keeping the land covered in winter," Mitchell says. "That underscored that, so long as land remained productive, we could sustain agricultural production."

Duggar is remembered for affirming that "agriculture will come into its own when her fields are green in winter."

Unfortunately, few farmers then were heeding the calls of Duggar and other conservation-minded scientists, and by the 1930s, the proverbial chickens had come home to roost in the Midwest, in the form of a decade-long drought made worse by farming practices that paid little heed to the environment. Precious topsoil that had accumulated over centuries crumbled in the summer heat and was blown hundreds of miles by brisk prairie winds.

The worsening effects of this Dust Bowl drove 25 percent of the population of the Great Plains off their farms—an environmental tragedy explored recently in "The Dust Bowl," a four-hour PBS documentary by filmmaker Ken Burns. When historians contend that the Dust Bowl changed the face of America, they are not exaggerating.

The Deep South, blessed with plentiful rainfall, escaped the Dust Bowl effects, but plowing was nonetheless eroding topsoil at an alarmingly rapid rate and exacting a heavy environmental toll.

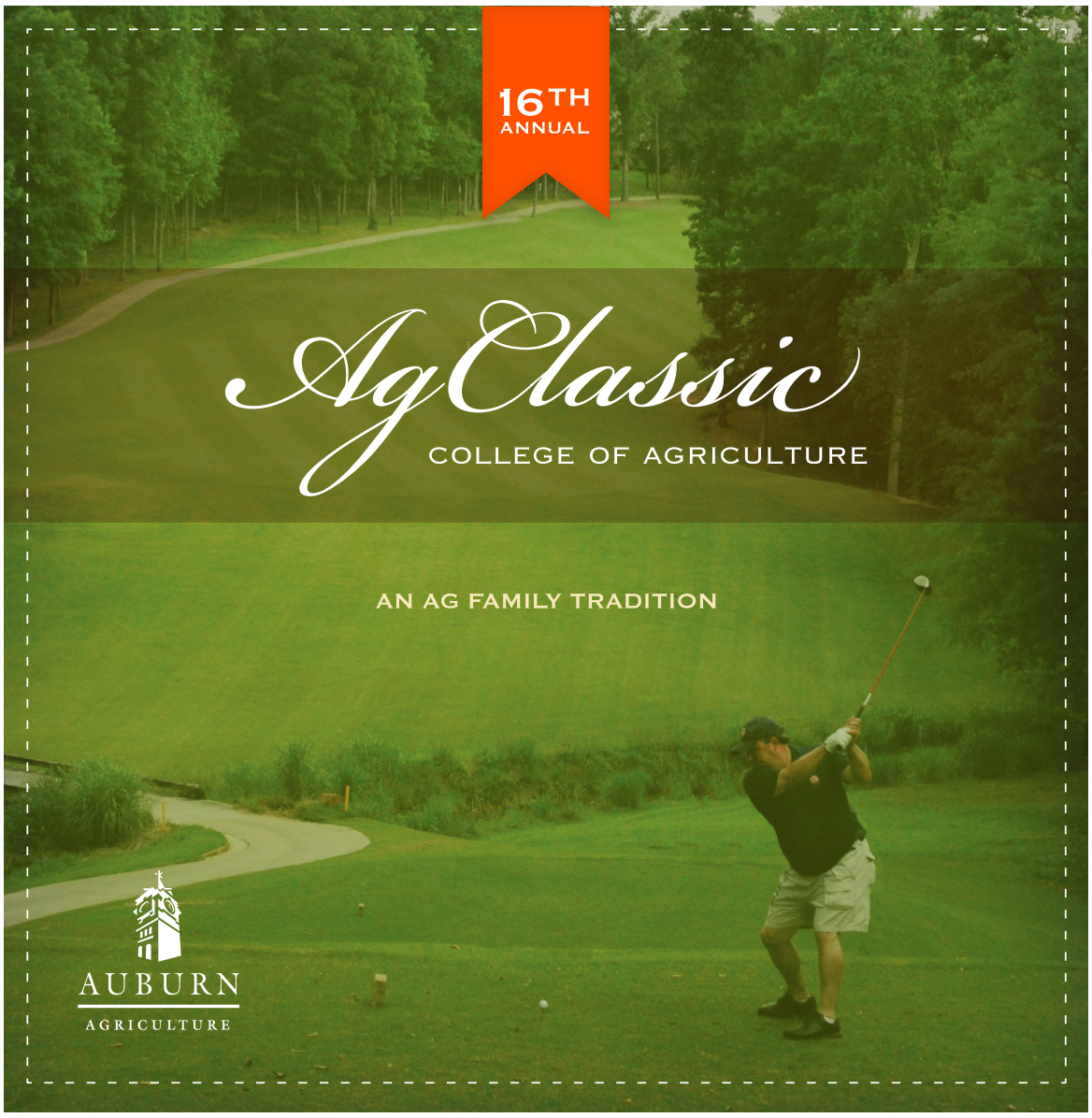
"By the 1930s, Alabama farmers had 5 million acres of cotton under cultivation and about that much corn," Mitchell says, adding that "irresponsible farming practices had ravaged the land, much as they had in the Midwest."

In the South, though, instead of being blown into the wind, topsoil was being washed by ample rains into lakes, rivers and streams, and after more than a century of row-crop agriculture, much of the state's soil had settled at the bottom of the Gulf of Mexico.

The Dust Bowl forced national policymakers to see the nation's soil reserves in a way they had never fully perceived them: as a national security issue, because without adequate reserves, the nation couldn't sustain farming. In 1935, the Soil Conservation Service, now known as the Natural Resource Conservation Service to reflect its expanded mission, was established to provide farmers incentives to preserve eroding topsoil.

William Puckett, Alabama NRCS director, says that, from the beginning, the agency has operated on the principles of Hugh Hammond Bennett, the pioneer of soil conservation and the first Soil Erosion Service administrator, who always emphasized that direct interaction between a farmer and a government employee was typically not the best way to propagate good soil conservation practices.

Instead, Puckett says, soil conservation districts were organized to serve as an intermediary between farmers and the agency employees, underscoring that soil conservation efforts represented as much an innovation in mindset as they did in technology. Efforts that initially aimed at securing soil and sediment control have since been expanded to conservation efforts targeted to soil, water, air, plants, animals and energy.



Ag Classic set for April 19

The 16th annual Ag Classic Golf Tournament is set for Friday, April 19, at Moore's Mill Club, a private, 18-hole championship golf course that stretches almost 7,000 yards. The format will be a four-man scramble, with prizes awarded to the first-, second- and third-place teams. Participants may register as teams or individuals. Lunch will be served at the Moore's Mill Pavilion immediately following the tournament.

Ag Classic is one of the College of Agriculture's favorite traditions. It brings alumni and friends to Auburn for fun and fellowship and ultimately strengthens support for the college and fosters lifelong relationships among friends and supporters. In addition to the golf tournament, Ag Classic events include a social hour, a dinner and an auction. Proceeds benefit the College of Agriculture General Gift Fund.

The registration deadline for this year's Ag Classic is Friday, April 5. Learn more at www. ag. auburn.edu/development/agclassic/.

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Recipe File

Guacamole

Adaptable, But Great As Is

Before Paul Patterson returned to his hometown and his alma mater in 2009 to serve as associate dean of instruction for the College of Ag at Auburn, he and his family spent 14 years in the Phoenix area, where he was on the faculty and later a dean at Arizona State University.

So maybe it was there, in the heart of New Mexican–cuisine country, that he came across this winning formula for delicious guacamole. Wherever the recipe originated, Patterson, whose culinary talents are many, says this recipe is the one his four daughters follow—albeit "loosely"—when making guacamole.

"It varies every time we make it, based on what's in the refrigerator," he says. They'll substitute red onion for the shallot, for instance, and they omit the tomato unless they happen to have one on hand.

Patterson says there are a couple of keys to outstanding guacamole: One, only dark, ripe avocados that are soft to the touch should be used, and, two, it should be served immediately. If, however, the latter isn't possible and the dish must be stored a short time, Patterson suggests placing two avocado pits atop the prepared guacamole, covering tightly with plastic wrap, refrigerating and serving ASAP.

Guacamole

5 ripe Hass avocados
Juice of 2 small limes
4 cloves garlic, finely chopped
1 shallot, finely chopped
1/2 bunch cilantro, chopped
1 teaspoon cumin
1 small tomato, diced (optional)

Halve and pit avocados;* scoop pulp out into a medium bowl. Using a fork, mash pulp to desired creaminess/chunkiness level. Add lime juice, garlic, shallot, cilantro, cumin and tomato. Mix lightly with a spoon. Serve immediately with chips or as a topping or side dish.

*To prepare avocados: Slice the ripe fruit lengthwise around the pit. Twist the two halves apart. Strike the pit that remains in one of the halves with the blade of your knife and twist to remove.