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Flying High

Hort Alum Brings Atlanta Airport's Landscape to Life—and Has a Blast Doing It

by JAMIE CREAMER

TIME FLIES—At left, Hartsfield-Jackson Atlanta International Airport landscape manager Abra Lee's philosophy is that a garden should always be full of surprises, and the 2002 Auburn University landscape horticulture alumna has pulled that off in a big way at the world's busiest air-transportation hub with a large floral clock seen by travelers exiting the airport's south terminal onto Interstate 85 north. The clock, 17 feet in diameter, has transformed a dull piece of land that was dotted with a few common shrubs and crape myrtles into a timely work of art. Above, Lee tends to the stunning kaleidoscopic bed of perennials that accents the clock. On a mission to make the airport landscape more sustainable, Lee this year has focused on expanding the size—and boosting the "wow" power—of flower beds throughout the airport's grounds and replacing annuals with perennials, bulbs and shrubs that have interesting textures and blooms. Coming soon to Hartsfield-Jackson's grounds: the addition of topiaries, increased plantings of Japanese maples and substantial use of landscape stones.

NEXT TIME YOU'RE CAUGHT UP IN THE THRONG OF preoccupied travelers rushing through Hartsfield-Jackson Atlanta International Airport, please take time to stop and smell the flowers.

No, seriously. Smell them. Gently touch them, even. Nothing would please Abra Lee more.

"I'm all about wanting this place to feel like a garden," says Lee, Auburn University 2002 horticulture alumna and landscape manager at the world's busiest airport. "When I see somebody feeling the leaves on one of my plants or checking out the flowers, I say, 'YES! That person's getting it!' "

In the four years she has been on the job, Lee has transformed the scenery at Hartsfield-Jackson from blah to, well, in the words of airport interim assistant general manager for Operations, Maintenance and Security Balram Bheodari, "a fresh and welcome level of majestic beauty that we hope brightens the day for our many travelers and employees."

Lee, a perpetually upbeat ball of fire, says she's just making good on what she promised the committee that interviewed her for the job in 2006 she'd do to overhaul the airport scenery if she were calling the shots.

"What I told them was, this place wasn't memorable," the feisty, fifth-generation Atlantan says. "It was bleak, drab. There was no color anywhere, nothing but shrubs and trees, and they all needed trimming and shaping up like you wouldn't believe.

"I mean, you've got 240,000-something people coming through this airport every day, 365 days a year, you want a clean landscape that's fresh and interesting and says 'welcome to Atlanta, welcome to the South,' " she recalls telling the panel. "You've got to make it memorable."

Lee's spunk and her expertise on and obvious passion for all things horticultural earned her the job, and in January 2007, the former arborist with the City of Atlanta hit the ground running as the mega-airport's first-ever landscape manager, responsible for beautifying basically all visible-to-the-public spaces around city-owned Hartsfield-Jackson's 130-acre airport terminal complex that weren't concrete.

"I'm in charge of the high-profile areas, the areas you see when you're dropping people off or picking people up," Lee says.

Please note that, in Lee's book, "in charge" doesn't mean sitting at a desk barking out orders. She's a get-your-hands-and-knees-dirty kind of landscape manager who spends the vast majority of her time outside working alongside her amazing four-person landscape crew, digging, planting, weeding, mulching and pruning the tens of thousands of trees, flowers, shrubs, groundcovers and grasses that grace the airport's grounds and, not surprisingly, fighting a never-ending battle against litter. Trash, she says, is a HUGE problem.

That the airport was serious about sprucing itself up became evident early in Lee's employment, like almost before she'd learned how to find her office. First, she cleaned up the overgrowth around existing trees and shrubs in the landscape. Then came the color.

"The easiest way to liven a landscape up fast is to add some color," she says. "Color creates instant interest, and it can buy you a lot of time."

Of course, the most obvious place to splash some of that color was at the entrance to the sprawling terminal, but that posed a challenge because the entire area was nothing but concrete, including a series of waste-high, round cement bollards across the front. For a couple of years, Lee had to make do with putting flowers around the posts, but last year, she finally got the OK to replace the bollards with large flower pots that now, no matter the season, showcase spectacular plantings that masterfully blend colors, textures, shapes and forms into works of art.

The airport property also has 4,500 square feet of seasonal color beds, and each spring, summer, fall and winter, Lee says, she and her crew plant crateloads of bulbs and a good 10,000 annuals—but only those that are hardy, easy to establish and tolerant of both drought and the South's hot and humid climate. That's in keeping with the xeriscape landscaping approach Lee has implemented at Hartsfield-Jackson. Xeriscape essentially is a landscape designed to conserve water through plant selection and care.

"Any time we put out new plants, we give them all a fair shot, keeping them watered till they've had time to get established, but then they're pretty much on their own," Lee says. "If they can't cut it, we pull them up and throw them on the compost pile. We don't have time to babysit."

Operating sustainably is a top priority at the Atlanta airport, and Lee sees to it that the landscape sets the example. The compost pile, for instance, yields an abundance of bedding material

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View from AG hill

A partnership is a strategic alliance or relationship between two or more people or groups. Throughout the summer I have been impressed by the numerous partnerships that the College of Agriculture has developed over time, and how these partnerships impact our programs. In our teaching program, we have partners who serve as guest lectures for classes, sponsor student events, provide equipment to modernize laboratories and provide co-op and internship opportunities for our students. We have other partners who provide scholarships for our students, which is a direct investment in the next generation of agriscience and agribusiness leaders in Alabama.

Our faculty routinely partner with companies and universities to carry out research programs in the college. This type of partnership allows us to bring the best minds and equipment to bear to solve complex problems, and to rapidly transfer technology to society. Our faculty also have partnerships with companies that lead to direct financial gifts to support their research. Each year, we typically receive $1.8 million in donations from industry partners to carry out much-needed applied research in areas such as integrated pest management, herbicide management, soil fertility and water quality. In addition to this, we routinely receive equipment gifts from various industry partners. This year, we expect to receive $1 million in equipment donations to advance our research and educational programs.

During the past two decades, the college has developed numerous partnerships with universities in other countries, especially in Asia and South America, and more recently in Africa. International partnerships play a critical role in our education, research and outreach missions. These partnerships allow us to recruit top graduate students from other countries. Historically, many of these students return home and become industry and political leaders. As the world become more "flat" through communications technology and global free trade agreements, there are strategic advantages to having international leaders trained at Auburn. These partnerships also allow our scientists to study problems that are difficult to study in the U.S., such as emerging plant diseases or the impact of water quality on production systems. By understanding how other countries generate highly efficient or highly productive systems, our researchers gain insight into how we might redesign our production and processing systems to better compete in the world today.

Finally, partnerships play a critical role in renovating and constructing new facilities in the college. Recently, generous support from partners has allowed us to break ground on the Poultry and Animal Nutrition Center in Auburn and the Alfa Office Building at the Tennessee Valley Research and Extension Center in Belle Mina. Partner support has been vital to Ag Heritage Park, with its wonderful landscaping and new and renovated buildings. Partners in the recently formed Ag Hill Dean's Society (www.ag.auburn.edu/deansociety) will provide much-needed discretionary funding to cover needs that often go unmet.

Throughout the years, partnerships with individuals, companies, state agencies and other universities have played a critical role in the success of the college. Without these partnerships, the College of Agriculture would be in a different place today. Thank you for your partnership and support of the college!

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

(FLYING HIGH, *from page 1*)

and mulch for use across the airport property, and rainfall runoff that collects in three 2,500-gallon cisterns provides more than enough water for irrigation.

Sustainability also is behind Lee's decision to transition the landscape from water-demanding annuals to more groundcovers, perennials, shrubs and small trees, especially ones with eye-catching blooms, interesting textures or unusual characteristics.

Case in point: Passengers waiting to board at one particular gate look out on a softly curved bed that features a dramatic grouping of rare and stunning coral-bark Japanese maples planted amidst a variety of fine-textured plants and grasses.

"This bed is soft and psychologically calming, so it's perfect here because a lot of the people looking at it can be pretty uptight about getting on an airplane, and it helps sooth their nerves," Lee says. "That's not Abra Lee saying that; that's some psychologists somewhere who study those kinds of things."

Already, Lee qualifies as a walking, talking plant and landscape guide, but her near obsession with the green industry keeps her hungry for information and inspiration.

"I read constantly, and I talk with a lot of other gardeners, like my mom and my aunts, who run circles around me when it comes to gardening," she says. "And I don't go anywhere without my camera."

She declares, however, that the lion's share of credit for her success goes to the incredible teachers she had in Auburn's College of Ag—and she insists she isn't just saying that because this is an Ag Illustrated story, she says.

"They so totally prepared me for a job in the real world," says Lee, who, immediately after getting her bachelor's degree, went to work for an Atlanta landscape company. "Everything they taught me was valuable, and there still isn't a day goes by that I'm not using what I learned.

FLOWER POWER—College of Ag alum Abra Lee shows off the purple-themed planter at the entrance to the Atlanta airport's terminal complex. For spring and summer 2011, Lee, chief landscaper at the airport, used a color theme for the planters, filling each with plants, flowers and vines in shades of a specific color and of multiple textures.

"And the thing was, they gave me so much support. They were there for me, and they believed in me at a time when I didn't believe in myself."

That junior semester on academic suspension was not a happy time in the Lee household.

"My parents were furious, as they should have been," Lee recalls. "They said they weren't paying for me to go to Auburn to have a good time. They made it clear this was my last chance, so I better get my head on straight."

So she did. And now . . .

"I am so happy, doing what I do—I can't tell you how happy," she says. "Plants make me happy. I love coming to work. In fact, I don't even consider it 'work,' I love being out here so much, doing what I love."

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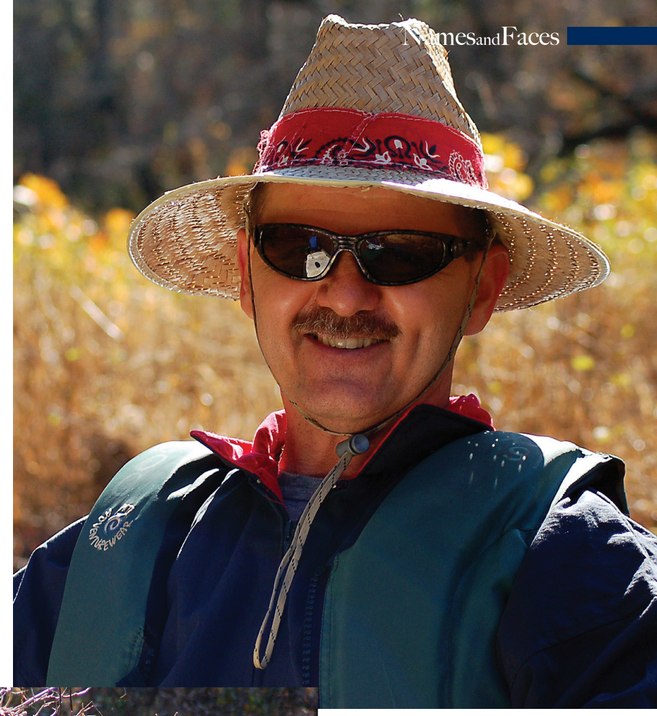


On the Water

Protecting What He Loves

Reutebuch Combines Passion for Water with Job

by KATIE JACKSON

The Tippecanoe River may not flow into Alabama, but its profound effect on a young Eric Reutebuch has certainly benefitted Alabama's own waterways.

It was on the Tippecanoe, which runs through Reutebuch's (pronounced "Rita-boo") home state of Indiana, that he first fell in love with water and all things aquatic—a family passion that was passed down to Reutebuch through his grandfather and father, both of whom were river guides for "city slickers" from Hammond and Gary, Ind., and Chicago, Ill.

A childhood spent accompanying his dad, four brothers and friends on fishing and float trips—what he calls "Huck Finn–like adventures"—on the Tippecanoe ensured that Reutebuch, a research associate in fisheries and allied aquacultures who works in the Alabama Water Watch program, was thoroughly smitten with water and nature.

ON THE WATER—Eric Reutebuch (pictured above) spends every moment he can on the water, which works well since his position as a research associate in the Department of Fisheries and Allied Aquacultures working with Alabama Water Watch requires lots of time around water.

"That's what got me interested in water, aquatic ecology and fisheries," says Reutebuch, whose high school science teacher back in Winamac, Ind. (Reutebuch is actually from Pulaski, but went to high school in Winamac), helped Reutebuch see that he could turn his love of water into a career. When he went off to Purdue University, Reutebuch majored in general biology (graduating summa cum laude), then went to Nepal with the U.S. Peace Corps, where he worked as an aquaculture extensionist.

Though he had not focused on fisheries in college, Reutebuch had lots of experience with terrestrial farming (he had worked for a cattle, hog and row crop farmer during high school and college) and he got a crash course in aquaculture from the Peace Corps. He, in turn, trained Nepali farmers to set up poly-culture fish farms that encouraged farmers to raise ducks, pigs and vegetable crops around their ponds as well as a variety of fish, all providing a sustainable source of income and food for the farmers and their families.

After a two-year stint with the Peace Corps, Reutebuch spent another year traveling, hiking and exploring in Nepal, Northern India, Pakistan and elsewhere in that region of the world. When he was ready to come back to the States he recalled how a Nepali aquaculture specialist, who was an alumnus of Auburn's fisheries and allied aquacultures program, had raved about Auburn's program, so Reutebuch applied and was soon working for now-retired fisheries professor Tom Lovell on fish nutrition issues.

That master's degree work exposed Reutebuch (he won the H.S. Swingle award for outstanding master's students in 1986) to a broad range of fisheries issues, including water quality problems.

In 1987, with the master's degree in hand and married to "the most beautiful Filipino woman, Maria," whom he had met in Auburn, Reutebuch went to the Tifton, Ga., Coastal Plain Experiment Station where he worked on reestablishing a cage- and pond- culture catfish project there. Maria and their new son, Mike, eventually moved to Tifton where the family stayed for about a year and a half, but they wanted to get back to Auburn, so Reutebuch took a 50-percent pay cut to return to Auburn as a laboratory technician for fisheries professor David Bayne on water quality issues.

Reutebuch was soon upgraded to a research assistant's position (and received a much-needed salary increase) and he, along with Bayne and co-worker Wendy Seesock, spent 17 years conducting river, stream, pond and lake studies all over Alabama and into Georgia.

Those studies, supported through an Environmental Protection Agency clean water project, laid the ground work for nutrient standards in Alabama's lakes and also dovetailed nicely with the Alabama Water Watch program, which was established in 1992 at the request of the Alabama Department of Environmental Management.

When Bayne retired in 2006, Reutebuch went to work for AWW (he had been working part-time for AWW since 1996).

"It was a great synergy because we had all this scientific data that we had collected with Bayne and could be used alongside the citizen monitoring data," he says.

Reutebuch has played many roles in AWW and today he helps lead projects targeting the Tallapoosa, Saugahatchee and other watersheds in the state; trains AWW volunteers; and is himself an AWW stream monitor. He also helps obtain grants to work with community organizations to remediate water quality problems and, he says, it is projects such as these that have made significant improvements in Alabama's water quality.

"What sets AWW apart from other science endeavors is the community aspect," Reutebuch says. "It's all about building relationships with stakeholders, such as municipalities, counties, agencies and others. There is a plus-plus/win-win synergy when you link with other programs and you can get so much more done and have more impact that way."

"AWW has impacts at several levels," he says. "There is the basic level of collecting data on streams, rivers and lakes that would never have been monitored because ADEM could not possibly monitor 77,000 miles of rivers and streams in Alabama on its own.

"There is also the impact of going into a community to hold a workshop and showing you care enough to come and teach people," he continues. "We don't just show them how to collect data, but also raise awareness of their watershed health and how just getting involved in water stewardship can positively affect local water quality and affect them as an individual."

"We are all about empowering citizens to get involved in the management of their local watershed," he adds. "We highly encourage people to go after funding for watershed management planning and get involved in advocacy efforts."

AWW's dream is to someday have a citizen monitor on every stream, river, lake and bay in Alabama. "But, ultimately, the goal is protect, restore and improve water quality and water policy in Alabama," Reutebuch says.

And for this son of the Tippecanoe who still loves the water (most of his spare moments are spent fishing, paddling, boating and swimming in Alabama waters), that goal simply makes sense. "People should be concerned about their water. This planet is a beautiful place and we have some gorgeous places to live and recreate. If we didn't have those it would be a pretty sad world."

Leading the Way

College of Ag Student Leaders, Ambassadors Named

Three young women will be leading the way for students in the College of Agriculture this year as Ag Council and Auburn University Student Government Association officers.

Salora Wright will be serving as Ag Council president while Emily Johnson will be vice president for the 2011-2012 academic year. Sarah Beth Worsham will represent the college as SGA senator. All three students are majoring in agricultural communications. Faculty adviser for the Ag Council is Deacue Fields in agricultural economics and rural sociology.

Thirty top College of Agriculture students were also chosen to serve as Ag Ambassadors for the coming year.

Ag Ambassadors for 2011-2012 (*indicates new Ag Ambassador)

Wiley Bailey*
Kayla Blake
Bailey Blankenship
Emily Brennan
Erin Cambier*
Kira Chaloupka
Marilyn Chambliss*
Ashley Culpepper*
Nettie Eakes*
Anna Gore*
Shanté Holley
Ben Johnson
Emily Johnson*
Rachel Knotts
Zac Lee*
Jodi Manord*
Hannah Marsh*
Megan McMurray*
Eli Nichols
Brett Pepper*
Katherine Pittman
Christa Ray*
Chris Strain
Austen Vollenweider
Carla Weissend
Kelly Whippo*
Sarah Beth Worsham
Salora Wright
Will Wright*
Hannah Young*

Officers for the group are Emily Brennan, president; Bailey Blankenship, vice-president; Sarah Beth Worsham, education chair; Eli Nichols, social chair; Carla Weissend, secretary; Kayla Blake, public relations chair; and Kira Chaloupka, treasurer. Advisers for the Ag Ambassadors are Glenn Fain from the Department of Horticulture and Don Mulvaney from the Department of Animal Sciences.

Senior Adds Samford Scholarship to Honors

by JAMIE CREAMER

DIGGING IN—Auburn Plainsman and ag economics/finance senior Jared Batté joins Aubie in breaking ground for the university's new Wellness and Sustainability Center spring 2011.

Jared Batté knows that the competition to get into law school is going to be fierce and that a high GPA and stellar Law School Admission Test score are essential if he's to make the cut.

But the Auburn University senior who is double majoring in ag economics and finance is well aware that impressive scores alone aren't enough: He has to make himself stand out from the crowd of applicants.

And based on the strong résumé he's built at Auburn, that shouldn't be a problem.

Batté, from Manchester, Tenn., came to Auburn fall 2008 on a College of Agriculture scholarship that he says "made it possible for me to even come to Auburn."

He wanted to get plugged in to the College of Ag, so he interviewed for, and was selected as, an Ag Ambassador in 2009.

He moved to the next level this past February, when he was chosen to be an Auburn Plainsman. The 12 female and 12 male students selected as War Eagle Girls and Plainsmen are the university's official hosts and hostesses.

The most recent addition to Batté's list of accomplishments came in April, when he was awarded the prestigious $10,000 W. James Samford Jr. '72 Memorial Scholarship. Samford, great-grandson of Samford Hall namesake William James Samford, was on the Auburn's Board of Trustees from 1987 until his death in late December 2003.

Batté, resident assistant for a campus dormitory, also is in Auburn's Honors College. Under the guidance of ag economics professor Patricia Duffy, Batté will research and write his Honors Thesis on what impact each school's and college's academic advising policies at Auburn have on freshman retention. When he graduates in 2012, he will do so as an Honors Scholar with two majors and a thesis.

Warming Up to Warm Water Ecology

Undergraduate Research Experience Immersing Students in Science *by* DEBORAH SOLIE

One of the top environmental issues challenging current and future global populations is access to safe and abundant potable water. Working to meet this challenge, Alan Wilson, assistant professor in the Department of Fisheries and Allied Aquacultures, brought together a group of 11

TESTING THE WATER—When 11 undergraduate students from across the United States visited Auburn this summer for a Research Experiences for Undergraduates program they spent lots of time on Alabama waters, including helping Auburn scientists with warm-water sampling projects.

undergraduate students from across the United States to Auburn's campus this summer to study warm-water ecology.

"Some models predict that 40 percent of the world's population will suffer water shortages by 2025," says Wilson. "Water shortages are especially challenging in the southeastern U.S., given the on-going explosive population growth and prolonged drought throughout the region. Unfortunately, less emphasis has been placed on the study of warm-water aquatic ecology; we're working to change that."

Wilson received a National Science Foundation Research Experience for Undergraduates grant, which provides a stipend and covers food, lodging and travel and research funds for participating REU students. Headed by Wilson, this REU is a collaborative effort involving Auburn University faculty mentors specializing in diverse but complementary disciplines, including community ecology, fisheries management, aquaculture, evolution, limnology, molecular biology, microbiology, invasive species, fish behavior, outreach, physiology, parasitology and conservation.

"The REU site that we developed provides a unique approach to educating undergraduate students about the techniques and tools used to study warm-water ecosystems found throughout the Southeast, such as reservoirs, farm ponds, streams and estuaries," says Wilson.

From the time fliers went out advertising the REU program to the application closing date more than 100 applications were received from students attending small colleges and large universities from Massachusetts to Alabama to California.

"Having this REU site in the College of Agriculture is important," says Paul Patterson, associate dean for instruction in the College of Agriculture. "It is a prestigious award and garners recognition for research programs at Auburn, it provides a fabulous research and learning experience for the participating students, and it is an excellent tool for recruiting future graduate students."

The primary objective of the REU is to expose participants to different scientific hypotheses, research techniques and ecological habitats and conditions in an engaging, interdisciplinary atmosphere. While the students were on campus they developed an independent research project in association with a faculty mentor. The REU students worked in a variety of field sites throughout Alabama, including ponds at the E.W. Shell Fisheries Center in north Auburn, the Mobile delta and local streams.

"This summer's REU program was incredible," says Wilson. "We had a terrific group of students who conducted cutting-edge research on a variety of topics related to warm-water aquatic ecology. In addition to working hard, the REU students enjoyed many field trips and social activities to enrich their learning experience."

Recruitment for summer 2012 participants in the REU will begin fall 2011. To learn more about the program, go to wilsonlab.com/reu/.

Faculty and Staff Accomplishments

Beth Guertal, a professor in agronomy and soils, will be inducted as a fellow in the Crop Science Society of America in October. Members of the society nominate worthy colleagues based on their professional achievements and meritorious service. Only 0.3 percent of the society's active and emeritus members may be elected fellow.

Plant pathology professors **Joseph Kloepper** and **Rodrigo Rodriguez-Kabana** were selected as inaugural members of the Auburn University Chapter of the National Academy of Inventors. The mission of the new organization is to "recognize and encourage inventors; enhance the visibility of university technology and innovation; encourage the disclosure of intellectual property; educate and mentor innovative students; and translate the inventions of its members to benefit society." Kloepper and Rodriguez-Kabana were recognized at the inaugural luncheon of the Auburn University Chapter of the National Academy of Inventors in May.

Grant Bond, associate director of the AAES's Agricultural Land and Resource Management group, was named an Auburn University Spirit of Excellence award winner in March.

Bill Deutsch, director of Alabama Water Watch in the Department of Fisheries and Allied Aquacultures, was selected as the Water Conservationist of the Year by the Alabama Wildlife Federation. He was recognized at the Governor's Conservation Achievement Awards ceremony in August.

Leonard Bell, food science professor in the Department of Poultry Science, was featured recently on a Birmingham television show about healthy food options. View the clip and story at www.myfoxal.com/story/14715698/the-truth-behind-healthy-restaurant-options.

Joe Kemble, in the Department of Horticulture, and **Jan Garrett**, in the Department of Entomology and Plant Pathology, were featured recently on a WBHM National Public Radio piece about organic gardening. The Auburn University Shellfish Laboratory was also featured on WBHM. To hear both of these stories visit www.wbhm.org/Tapestry/ and click on "June 2011" show.

Fisheries professor **Rex Dunham**, whose research has given the catfish industry a premium hybrid catfish that is a cross between a female channel catfish and a male blue catfish, has filed for provisional patents on technology he has developed to produce hybrid catfish embryos by spawning channel catfish males containing blue catfish testes with normal channel catfish females. The technology will eliminate the need for artificial fertilization to produce channel-blue hybrid catfish embryos and should make the production of hybrid catfish embryos more cost effective and practical.

Chazz Hesselein is leaving his position as Extension horticulturist at the Ornamental Horticulture Research Center in Mobile this fall and moving with his family to Washington state. Hesselein has served at the OHRC since 1994 and has been an integral part of the OHRC staff.

Don Ball, professor of animal sciences and forage specialist with the Alabama Cooperative Extension System, retired this spring after more than 30 years of service to Auburn and ACES.

Wayne Greene, head of the Department of Animal Sciences, was named as the 2011 Alabama CattleWomen's Association Father of the Year. The ACWA president, Evelyn Brown, presented the honor at a Department of Animal Sciences staff and faculty cook-out on June 24.

DAD HONORS—Wayne Greene, head of the Department of Animal Sciences, was named Father of the Year by the Alabama CattleWomen's Association. Pictured above at the award presenation are, back row from left, Alabama Cattlemen's Association Executive Vice President Billy Powell, ACWA Secretary Emily Dent and past ACWA President Lana Slaten; front row from left, ACWA District 4 Director Carol Dent, Greene, ACWA President Evelyn Brown and College of Agriculture Dean Bill Batchelor.

In Memoriam

Albert John Kappelman Jr. of Auburn, a USDA plant pathologist who worked at Auburn University for 27 years, passed away May 31. Memorial donations may be made to the National Multiple Sclerosis Society or Trinity Lutheran Church of Auburn at 446 South Gay St., Auburn, AL 36830.

John L. Parrott of Auburn, retired head of the Alabama Cooperative Extension System's communications department, passed away June 5. Memorials donations may be made to Bethany House at 1171 Gatewood Drive, Auburn, AL 36830.

Norman Davis of Auburn, a professor emeritus of botany who taught and conducted research in the College of Agriculture and Alabama Agricultural Experiment Station from 1958 to 1990 and was co-author of the Guide and Key to Alabama Trees, passed away July 3. Memorial donations may be made to a favorite charity or to the First Presbyterian Church of Auburn at 143 East Thach Ave., Auburn, AL 36830.

Student Accomplishments

Ladarius Lane

Ladarius Lane, a junior majoring in animal sciences/pre-veterinary medicine, has received a Multicultural Scholars Program scholarship. For the past three years, Lane has served as the College of Agriculture's counselor for the SEE program. In addition to being a SEE counselor, Lane also works with prospective students, provides customer service and assists in all aspects of student services work.

Meredith Jedlicka of Marietta, Ga., was given the Dean's Award and served as the College of Ag's graduation marshal for the summer commencement ceremony held Aug. 6. Jedlicka, who graduated cum laude with her bachelor's degree in horticulture, served as an Ag Ambassador and was treasurer of the organization during the 2010/11 academic year. She was also active in PLANET, where she served as vice president, plant sale coordinator, workday coordinator and historian. The Dean's Award goes to a high-achieving graduating senior who has demonstrated leadership and service in the College of Agriculture. Student marshals, selected by a school/college awards committee, have distinguished themselves by service to their school or college. To be considered, students must have completed a minimum of four semesters at Auburn University with a scholastic average of 3.40 or higher and possess qualities of leadership, citizenship, character and promise of professional ability.

Anna Leigh Peek, a sophomore majoring in agricultural communications, was chosen as a FFA National Collegiate Ag Ambassador to participate in a program sponsored by BASF-The Chemical Company, Syngenta, Elanco Animal Health and the National Pork Board as a special project of the National FFA Foundation.

Emily Dent, a senior in agricultural communications, earned a "masters of beef advocacy" designation from the National Cattlemen's Beef Association in June. The MBA program helps beef producers and industry supporters become better equipped to tell their stories.

The Auburn Family Supports Auburn

The final results are in for the 2011 Auburn University Faculty Staff Campaign. The university finished its campaign at a new record participation rate of 71 percent of the faculty and staff making a pledge or gift to the university. Auburn also maintained its leading position in the rate of participation for a fourth year in a row among the SEC schools, outpacing its closest rivals, South Carolina and Vanderbilt, whose participation rate are in the 40-percent range.

Among the schools and colleges at Auburn University, the participation rate was 64 percent. The College of Agriculture finished at 52 percent. During the final weeks of the campaign, the participation rate in the college jumped by more than 10 percent.

According to Paul Patterson, the college's associate dean for instruction who led the college's campaign team, gifts and contributions to Auburn University and the College of Agriculture are crucial to sustaining key missions.

"Private gifts bolster efforts to discover new knowledge, improve lives and help students realize their dreams of completing their college education," Patterson says. "In a time when state and federal support for higher education is waning, private support makes a meaningful difference, as we seek alternative funding sources.

"The College of Agriculture is fortunate to enjoy the support of many friends and contributors," he says. "We are now proud to say that more than half of the faculty and staff in the College of Agriculture personally invest in the college and university."

Several college faculty and staff members assisted with the campaign, including David Weaver, Amy Wright, Kathy Lawrence, Mitchell Pate, Max Runge, Dale Coleman, John Jensen, Yifen Wang, Jane Farr, Lane Sauser, Kelly Terry, Deborah Solie and Katie Jackson.

Some faculty and staff contributors were selected in weekly drawings for the college's most popular T-shirt, the "Grow it, Mow it, Feed it, Heal it, Harvest it, & Live it" shirt. Winners were Patricia Duffy, Jeanie Harry, Eddie Philpot, Jim Novak, Scott Moore and Conner Bailey. Christy Bratcher was also selected at random from among all donors to receive a dinner for 10, prepared by Patterson and college Development Officer Mark Wilton, with entertainment to be provided by Deborah Solie, the college's student recruiter.

A recipe from that event will be featured in the October issue of Ag Illustrated.

"The generosity and support of the College of Agriculture's faculty and staff are much appreciated, as is the strong and faithful support of many friends," says Patterson. "With this support, the college is preparing future leaders and scientists and developing solutions for the challenges we face in our communities and world."

Family Land

Generational Changes

Heir Property Cause of Poverty, Land Loss in Black Belt *by* JAMIE CREAMER

Heir property is land that is owned collectively by the descendants of a property owner who died without a will, and extensive research by Auburn University rural sociologist Conner Bailey and Auburn graduate student Janice Dyer indicates the phenomenon is a major cause of land loss among rural African Americans and a key contributor to the persistent poverty, high unemployment, substandard and abandoned housing, under-used resources and disinvestment that characterize Alabama's 12-county Black Belt region.

In five years of research that has included face-to-face interviews with numerous heir property co-owners in the Black Belt, the Alabama Ag Experiment Station social scientists have documented the serious problems and risks associated with land that has been passed from generation to generation without a clear title and, based on a quantitative analysis of heir property in the Black Belt county of Macon, have determined that as much as $300 million worth of land could be tied up in clouded titles in what is one of the poorest regions in the U.S.

"If that wealth were accessible, it could potentially change the economic, political and social fabric of the Black Belt," Dyer says.

Though heir property exists statewide and in urban as well as rural environments, the majority is in the Black Belt because, after the Civil War, many blacks newly freed from the cotton plantations that had dominated the region in the late 19th century were able to buy or were deeded land there to live on and farm. Few of those landowners, however, had written wills, and when they died, their immediate family members inherited the land communally, according to state laws. That set the heir-property cycle in motion.

"So still today, every time an heir to a piece of land dies intestate, the number of co-owners increases, and each person's share of the estate gets smaller," Bailey says. "The more fractionalized the property becomes, the more complex the issues get, the more difficult using the land productively becomes and the more vulnerable the land is to being bought by someone outside the family."

Heir property is limited as an income source because any use of the land requires the consent and signature of every heir—"not just the ones who may still live on and care for and pay taxes on the land but those who live six or seven states away and have never set foot on the place, too," Bailey says.

LAND TO LIVE ON—Despite the disadvantages and ramifications of holding land communally, Auburn researchers found that heirs to and co-owners of family land often consider having a place to call home and keeping land in the family to be worth the risks. This piece of heir property in Sumter County provides several co-owners a place to set up their mobile homes.

Without full agreement, land that has multiple owners and still has the original landowner's name on the deed can't be used as collateral for loans, isn't eligible for federal agriculture and housing programs and can't be leased for farm or recreational purposes, nor can any timber be harvested and sold from it. And resident heirs should be reluctant to invest their resources in improvements to the land, such as planting trees or building a home, because those trees and that home become the property of all who hold an interest in the land.

FIRST GENERATION—Adam Jones and family gather on the front porch of their Autauga County home for this 1925 picture. Jones, or possibly his father, apparently was among the blacks who had the opportunity to buy land to farm in the early 1900s. If Jones died without a written will, the property passed to his 12 children, with each one inheriting a 8.3-percent interest in the land.

The biggest threats to land ownership are tax sales and forced partition sales. Tax sales occur if annual property taxes aren't paid. The government takes the property and auctions it off to make up for the unpaid taxes, and though the heirs have the chance to pay the taxes first, they may have trouble contacting each other and organizing in time to save the property.

Court-ordered partition sales result when one or several heirs, typically those far removed from the property, decide it's time to sell, even against the wishes of the remaining heirs. The property is auctioned off and sold, usually at a fraction of its true value, to the highest bidder. Although those heirs closely connected to the land may pool their resources in an effort to buy the property, they are seldom able to outbid developers or real estate speculators and the land is lost.

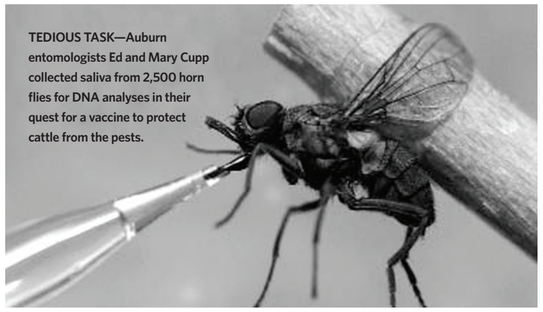
Thus far, the Auburn research has prompted the Alabama Cooperative Extension System to hold a series of 39 workshops for heir property owners around the state to make the landowners aware of their rights, responsibilities and risks. In addition, the American Bar Association has approved a uniform law that individual states can adopt to provide legal protections against land loss by heir property owners.

For more about heir property in Alabama, visit www.ag.auburn.edu/agec/heirproperty.

Tech-Transfer Close to Licensing Auburn-Developed Horn Fly Vaccine

by JAMIE CREAMER

A patented vaccine that an Auburn University/AAES husband-and-wife team of research entomologists developed to protect cattle from horn flies could be on the market soon as a product called FlyVax.



TEDIOUS TASK—Auburn entomologists Ed and Mary Cupp collected saliva from 2,500 horn flies for DNA analyses in their quest for a vaccine to protect cattle from the pests.

Auburn's technology transfer office is in the late stages of negotiating full licensing of the vaccine that Ed and Mary Cupp spent years formulating to TNG Pharmaceuticals, a new business launched by a team of entrepreneurial University of Louisville MBA students. At the world's largest and richest graduate-level business-plan competition at Rice University in April, TNG claimed the $642,000 grand prize with the business plan it has created for FlyVax. The annual competition supports student-created and -managed business ventures based on university-developed research and innovations.

Blood-sucking horn flies feed en masse on cattle, agitating the livestock and causing anemia and weight loss that cost the beef industry $1 billion a year. Insecticides for horn fly control are available, but the pests quickly develop resistance to those products.

The Cupps' revolutionary vaccine immunizes cattle against a salivary factor, thrombostasin, that the biting flies inject into their prey to keep the victims' blood from clotting. TNG says that by significantly reducing horn fly populations in cattle, easy-to-use FlyVax will reduce cattle stress, reduce the use of pesticides and help producers increase beef production and milk yield, improve leather quality and operate more efficiently.

The Cupps, now professor emeriti of entomology at Auburn, retired to Owensboro, Ky., in 2006. Ed Cupp says they have enjoyed working with the MBA students at Louisville in their efforts to make FlyVax available to the cattle industry.

"We're quite excited about their success and hope that eventually the company they formed can bring the horn fly vaccine to market," he says.

$10 Million Project Exploring Southern Pine as Source of Biofuels *by* KATIE JACKSON

The forest products industry in Alabama has great potential to supply the raw materials for a new biofuels industry, but finding the best way to harvest and transport those resources is a major challenge.

According to Steve Taylor, head of the Department of Biosystems Engineering, an Auburn-led consortium is taking the lead on a $4.9 million-Department of Energy flagship grant looking at better ways to do just that. The grant, which is being matched with other dollars to make it a $10 million project, focuses on how to harvest and transport pine trees to a biorefinery to make biofuels.

It involves not only Auburn but also the U.S. Forest Service, Corley Land Services, Tiger Cat, a leading equipment manufacturer, and several other Alabama companies that are supplying chipping equipment, trucking services and biorefinery services.

"The project's focus is to develop and demonstrate forest harvesting and processing equipment and transport systems to deliver southern pine biomass at the lowest possible cost," says Taylor. DOE wanted to develop a system that can harvest large amounts of feedstock—100 million dry tons per year—and be capable of meeting their long-term goals for feedstock cost. Southern pine biomass is one feedstock that is readily available today and has the potential to be produced at levels that can support a significant biofuel industry, Taylor says.

"We proposed a system to grow pine trees just for liquid fuel production, so ours is focused on harvesting standing southern pines," he continues. To that end they are developing new felling and skidding machine specifically designed for high productivity and environmentally friendly harvesting as well as more efficient transportation options that can make the process much more economical.

One year into the three-year project, the team has designed new harvesting machines that should be rolling off the assembly line this summer and in the woods this fall and benchmarking costs and feedstock quality so they can compare the costs of new versus conventional systems. The team is also spending a good deal of time talking to forest landowners and loggers about how they feel about the new growing and harvesting systems.

The next two years will be spent testing these systems in the field and the team hopes that, by the end of the third year, they will have developed a highly efficient system capable of delivering low cost feedstocks that can fuel new businesses in Alabama.

To learn more about this project contact Taylor at 334-844-4180.

VINES AND WINES—Research is under way at the Alabama Ag Experiment Station's Chilton Research and Extension Center in Clanton to determine whether *Vitis vinifera*, grapes that produce popular table wines such as chardonnay, pinot noir and cabernet sauvignon, will grow in Alabama. That isn't possible here now because of Pierce's disease, an insect-vectored and vine-killing disease, but a California breeder has recently developed Pierce's disease-resistant selections that are 87.5 percent *V. vinifera* grapes, and Auburn horticulture associate professor Elina Coneva and CREC director Jim Pitts have planted 100 vines from three of these advanced selections at the center. Coneva, who collected the *vinifera* plants during a California trip funded by Auburn and the Alabama Wineries and Grape Growers Association, will be evaluating the ease or difficulty of growing *vinifera*, just how disease resistant the vines are and the quality of the grapes. The results could give Alabama wineries profitable alternatives to muscadine wine.

Cullars Rotation Marks 100-Year Milestone

by JAMIE CREAMER

ART IN AG—A 40-foot border is all that stands between Auburn's century-old Cullars Rotation and its decade-old Jule Collins Smith Museum. The rotation, which Alabama Ag Experiment Station researchers planted in 1911, is the oldest continuous soil-fertility experiment in the South and the second oldest cotton experiment in the world.

Auburn University's Cullars Rotation, the South's oldest continuous soil-fertility experiment and the second oldest cotton experiment in the world, is a century old this year and still generating data to document the impact that fertilization and soil nutrient deficiencies have on nonirrigated crop yields over the long haul.

The almost-four-acre Cullars Rotation is located on Woodfield Drive, directly behind the Jule Collins Smith Museum of Art on South College Street. The experiment is named for Lee County farmer J.A. Cullars, who, with his brother-in-law John P. Alvis owned and grew cotton on the land in the late 1800s and, in 1911, allowed Alabama Agricultural Experiment Station researchers from nearby Alabama Polytechnic Institute to plant on-farm cotton research plots to test fertilizers, particularly potassium fertilizers.

About 200 such research plots were planted on farms all over the state that year, but the Cullars Rotation is the sole survivor. Today, it's a three-year rotation of cotton, winter clover, corn, winter wheat and soybeans. Among the 42 research plots are those that Auburn agronomy and soils professor Charles Mitchell calls the "no-nothings," because they haven't been fertilized at all for at least the past 100 years.

"And I don't think anybody would have any trouble picking those plots out," says Mitchell, who is in his 27th year as curator of both the Cullars Rotation and Auburn's Old Rotation, located on Lem Morrison Drive just a stone's throw from the Cullars research field.

The Old Rotation, by the way, dates back to 1896 and thus is the oldest cotton study in the world. It is recognized as the first experiment to show that rotating cotton and legumes will support a cotton crop indefinitely.

Mitchell, a self-proclaimed history buff, was successful in getting the Old Rotation placed on the National Register of Historic Places in 1988 and the Cullars Rotation likewise in 2003.

In addition to providing a site for ongoing research, the Cullars Rotation is a valuable field lab for students studying soil and plant science.

"It's the only site in the South where students can actually see plant nutrient deficiencies, especially potassium deficiencies, on five different crops during the course of a year," Mitchell says.

While the experiment bears the name of farmer/landowner Cullars, it is on land long known as Alvis Field, in honor of Cullars' brother-in-law. A decade ago, the lion's share of Alvis Field was selected as the site for the museum—with the stipulation that a 40-foot border be left around the Cullars Rotation to preserve it for ongoing research and demonstration on sustainable crop production on soils of the southern U.S.

Though it isn't every day that you'll find a fine arts museum with corn and cotton growing in its back yard, Mitchell says it makes sense, when you think about it.

"Here you have the museum, with all the glitz and glamour associated with it, and, right across the street from it, have crops growing, showing, in effect, the history of Alabama agriculture," he says.

To learn more about the Cullars Rotation and the Old Rotation, visit www.ag.auburn.edu/agrn/longterm.

Nine New Scholarships Thus Far in Special Campaign

Nine new scholarships have been endowed in the College of Agriculture as part of a university-wide drive to enhance Auburn's efforts to recruit and retain academically exceptional students, and Ag Development manager Mark Wilton says the list will grow before the Auburn Scholarship Campaign ends Dec. 31.

In the campaign, which began Aug. 5, 2010, a first-time endowment donor can establish a scholarship endowment award with $12,500 instead of the standard gift of $25,000. The donor's gift is invested, and the income earned on the investment is paired with an existing Spirit of Auburn or Academic scholarship. The entire amount is awarded in the donor's name

Auburn's Spirit of Auburn and Academic scholarships are renewable, four-year scholarships awarded to incoming freshmen based on standardized college-entrance-exam scores and high-school grade point averages. Spirit of Auburn scholarships are automatically given to qualified incoming students who are residents of Alabama. Academic scholarships are awarded to out-of-state students who meet the criteria; these scholarships can range from $2,500 to more than full tuition annually.

Thus far in the college, the new endowed scholarships that have been established include:

- The Dr. L. E. Ensminger Endowed Scholarship Award in the Department of Agronomy and Soils
- The Richard M. and Jean M. Patterson Endowed Scholarship in the Department of Agronomy and Soils
- The Bobby Durbin Endowed Scholarship in Agronomy and Soils
- The William G. and Molly P. Moore Endowed Scholarship in the College of Agriculture
- The First South Farm Credit Endowed Scholarship in the College of Agriculture
- The Alabama Turfgrass Association Endowed Scholarship Award in Agronomy and Soils.
- The Dr. Michael A. Kronk Endowed Scholarship Award in the College of Agriculture
- The Harvey and Lois Downs Memorial Endowed Scholarship Award in the College of Agriculture
- The Van E. and Catherine D. Wilton Endowed Scholarship Award in the College of Agriculture

The 16-month campaign is entering its final quarter, but that's plenty of time for individuals to take advantage of the special opportunity, Wilton says.

"It offers an increased return on donor investments, and it allows Auburn to provide considerably larger scholarships to the best and brightest," Wilton says. "A scholarship endowment basically provides a continuous, dependable source of funding in perpetuity. It's the gift that keeps on giving."

All gifts to the campaign are tax deductible.

For more information about the Auburn Scholarship Campaign, visit the website at www.auburn.edu/scholarshipcampaign or contact Wilton at 334-844-1198 or wiltomt@auburn.edu.

Where are they Now?

Andy Wendland

Andy Wendland, a 1989 College of Agriculture graduate in agriculture business, has been named the 2011 Alabama winner of the Swisher Sweets/ Sunbelt Expo Southeastern Farmer of the Year award. Wendland, who runs the 6,000-plus-acre Autauga Farming Company, was chosen for his success as a beef cattle and row crop farmer. As the Alabama winner, he now has a chance to become the overall Southeastern Farmer of the Year, which will be announced Oct. 18 at the Sunbelt Ag Expo farm show in Moultrie, Ga. A story on Wendland ran in the December 2009 edition of Ag Illustrated. To read it go to www.ag.auburn.edu/adm/comm/agillustrated/documents/Dec09_AgIllustrated_web.pdf.

Rebecca Balkcom, a graduate of the Department of Agronomy and Soils (B.S., 1994; M.S., 1997), was named Secondary Teacher of the Year for the Auburn City School System. She teaches science at Auburn Junior High School. She also taught a session entitled Genes, Diseases and Biotechnology at the YES Science Camps through the College of Sciences and Mathematics this summer.

Ag Hill Society Membership Growing

Membership in the newly energized Ag Hill Dean's Society is open, and now is the perfect chance to join the society and get a great parking spot for Auburn's upcoming football season as part of the package.

According to Katie Hardy, development coordinator for the College of Ag, the Ag Hill Dean's Society, formerly known as the Ag 21 Dean's Club, is a group of loyal alumni and friends who support the college with annual unrestricted financial gifts.

"These gifts provide resources for enhancing programs that help our faculty and students thrive and help bridge the gap between the cost of educating students and diminishing state support," says Hardy, who has been instrumental in launching the new society.

The society's primary goal is to raise funds that the College of Agriculture dean can use to support academic programs and student scholarships, improve technology and resources for the college, create funding to attract world-class faculty and increase hands-on learning and study abroad opportunities for students.

Memberships are available at three levels of giving, Hardy adds. The new Ag 21 level is offered to young alumni who have been out of school 10 years or less and is available for $500 per year. Foundation-level membership is available for $1,000 per year, and Heritage-level membership is available for donations of $2,500 or more per year.

"The Ag 21 level was created for young alumni who are just starting out in their careers and may not have the financial resources to contribute lots of money, but have a desire to donate to the college and become more involved in College of Agriculture events and programs," Hardy says.

Perks of membership at all levels include special acknowledgement and invitations to Ag Hill Dean's Society events and special access to game-day parking at Ag Heritage Park. "All members of the Ag Hill Dean's Society have a chance to reserve one of the coveted tailgate and parking spots at the park for home football games," says Hardy. While the spot will not be provided for free ($300 per year), membership in the society virtually guarantees a reserved spot for the coming year.

To learn more about the Ag Hill Dean's Society, email Hardy at hardykc@auburn.edu, or call 334-844-1475 or visit www.ag.auburn.edu/deansociety.

Donations Needed to Preserve Ag Heritage Park

Don't it always seem to go
that you don't know what you've got till it's gone?
They paved paradise and put up a parking lot.
—Joni Mitchell, 1970

Earlier this year, university decision-makers determined that the prime location for a brand-new, 1,000-car parking garage was the land at the southwest corner of Samford Avenue and Donahue Drive—specifically, a large chunk of Ag Heritage Park.

Ultimately, and for whatever reason, they chose another site. But while the 30-acre park dodged the bullet this time around, it remains in the crosshairs for future development unless money can be raised quickly to complete the $1.5-million renovation of the old dairy barn into the complex's crown jewel: the Agricultural Education and Alumni Center.

The past decade has seen the College of Ag and the Auburn Ag Alumni Association partner to build Ag Heritage Park into a striking landmark and a popular venue for student, alumni and community events. The new center, the final major project at the park, will include much-needed classroom space for the College of Ag, an area for faculty and alumni activities and educational displays honoring the past, present and future contributions of agriculture to society.

The initial phase of the renovation project is almost done, thanks to work by the college's Agricultural Land and Resource Management team and to donations of materials. However, Bill Gilley, Ag Alumni president, and College of Ag Dean Bill Batchelor say generous contributions from alumni and supporters are crucial to completion of the center and thus the preservation of Ag Heritage Park as a community green space that recognizes the agricultural heritage of Auburn University and the importance of farming.

For more information, contact Mark Wilton, 334-844-1198 or wiltomt@auburn.edu, or Robert Hensarling, 334-844-3596 or hensara@auburn.edu.

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 Department of Biosystems Engineering is in the spotlight.

Spotlight

Biosystems Engineering

Bringing Innovation to Alabama

The Early Years

Before tractors replaced mules and light bulbs replaced lanterns, Auburn University was focused on making life a little easier for rural Alabamians. A leader in that effort was the Department of Agricultural Engineering (now the Department of Biosystems Engineering), which was established at Auburn in the early 1900s and continues to bring innovation to the Alabama landscape today.

According to Steve Taylor, head of the department, the first agricultural engineers were hired on the Plains around 1916 and the Department of Agricultural Engineering was officially established in 1919 when Mark Nichols was named the first department head. At the time Auburn's ag engineering department offered only graduate-level classes, but established an undergraduate program in the late 1930s.

Nichols focused much of his work on terracing systems to control soil erosion and other methods of protecting soils, which led to the establishment of the U.S. Department of Agriculture National Soil Dynamics Laboratory in Auburn.

Faculty in the department also worked on rural electrification, receiving what may have been Auburn's first industry-sponsored grant in the early 1920s from Alabama Power, which had just built its first rural electric line in north Alabama.

Department Head - Steve Taylor

101 undergraduates

25 graduate students

11 faculty members

Undergraduate Degree Options:
Biosystems Engineering
Ecological Engineering
Forest Engineering

M.S. and Ph.D.
graduate degree programs

"Over the years by working on issues such as mechanization of agriculture and forestry, reducing soil erosion and rural electrification, this department has not only helped improve the productivity and profitability of farmers, it has contributed significantly to the quality of life and quality of the environment in Alabama," notes Taylor.

Biosystems Engineering Today

"We are still doing that," he continues. "Today, our research and extension programs focus on biological, forest and ecological engineering, addressing issues such as clean water, preserving ecosystems and restoring watersheds and streams."

But this work is also still aimed at helping farmers, such as developing precision agriculture systems that reduce the impact of chemicals and farming on the land and environment while also helping farmers be more profitable. The same can be said for work in the poultry and forestry sectors as well as efforts to develop biofuels.

As times have changed, so has the department and, through a partnership with Auburn's Samuel Ginn College of Engineering, students are benefitting. That shift occurred in the mid-1980s when students majoring in agricultural engineering became academically aligned to the engineering college.

"Our academic programs are jointly administered through the College of Agriculture and the College of Engineering," explains Taylor. "Having the program in engineering is parallel to most other biological engineering programs in the U.S. and really is critical to the success of the students. They are engineers and they must be immersed in the profession of engineering like all other engineering students."

Though the academic program is shared, the biosystems engineering department remains strongly connected to its rural roots and its outreach and research programs are still tied to the College of Agriculture.

Another shift for the department—its name change from agricultural engineering to biosystems engineering—occurred in 1998 and reflects a national trend.

"Today's programs focus more on the application of engineering to biological systems, including forest and ecological systems," says Taylor. The department puts strong emphasis on meeting the needs of agriculture and forestry with special focus on such issues as bioenergy and improving the management of our water and soil resources. Special efforts are devoted to improving the profitability of the poultry and forest products sectors of the state's economy. Also, research and outreach programs in food engineering have had international impacts on the safety and quality of our food supply.

THE FOREST FOR THE TREES— Biosystems engineering students, such as the student pictured above, receive exceptional hands-on learning experiences on campus and in Alabama's forests, streams and crop fields. Research and outreach projects underway in the department, such as the $10 million southern pine biomass study featured on page 7 that is developing new forest-harvesting technology, are also helping improve management and use of Alabama's natural resources.

Looking Ahead

The department is seeing growth and expansion in its research, outreach and academic programs.

The bachelor's degree in biosystems engineering (formerly agricultural engineering), which has had continuous engineering accreditation since 1954 and recently went through another successful accreditation visit, along with the M.S. and Ph.D. degree programs are gaining in strength and numbers. "With the addition of new degree options such as the ecological engineering option and a new graduate program established last fall, we expect those numbers to continue to grow," says Taylor. The department faculty continue to develop new curriculum pathways that incorporate contemporary topics in biological engineering.

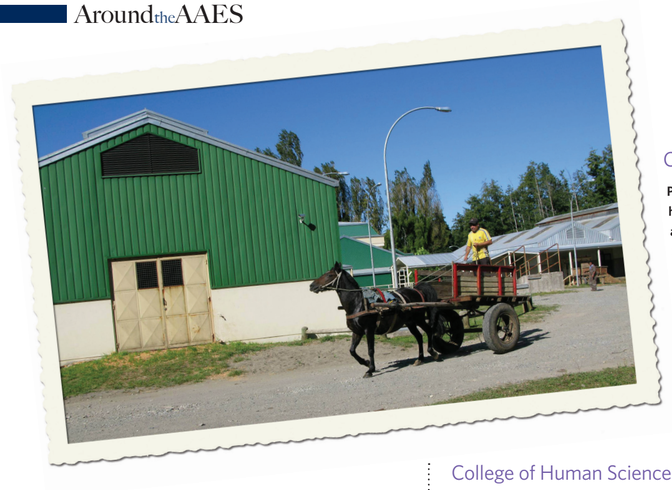
Its research programs also continue to expand and the department has been highly successful in being part of teams that have been awarded major grants, such as a $4.9 million Department of Energy grant (see biofuels story on page 7) and a recent Agriculture and Food Research Initiative competitive grant. Both grants focus on biofuels and both incorporate multidisciplinary teams from other Auburn schools and colleges as well as partners from universities and businesses.

The department also received a $4.6 million National Science Foundation grant that will be used to renovate research laboratories in the Tom Corley Building Annex, which will further enhance its research program.

Biosystems engineering faculty are also involved in a wide range of outreach activities through the Alabama Cooperative Extension System as well as through projects such as the mobile gasifier that helps educate the public about new bioenergy options, not to mention poultry, forestry and environmental projects as well as international projects in food safety.

As the department approaches its centennial in 2019, its programs are highly relevant to challenges faced by Alabama, as well as a growing global population that will demand even more engineering solutions that help provide safe and healthy food, clean and abundant water and renewable sources of energy.

To learn more about the Department of Biosystems Engineering call 334-844-4180 or visit www.eng.auburn.edu/bsen/.



College of Veterinary Medicine

POSTCARD FROM CHILE—A common sight in Valdivia, Chile, is urban draft horses that handle heavy-duty hauling and provide transportation around the city. These horses, as well as Chilean rodeo horses, were some of the four-legged patients seen by Allison Stewart, associate professor in equine internal medicine at Auburn University's College of Veterinary Medicine, who recently participated in a faculty exchange program at the Clinica Veterinario at Austral University in Valdivia. Stewart worked with Austral's equine surgeon Bruno Cavalho, who spent two months in Auburn last year. Read more about Stewart's two-week stint in her own words and view some of her photographs at www.vetmed.auburn.edu/programs-and-centers/international-scholars-program/international-stories/international-scholars-stories/postcard-from-chile.

School of Forestry and Wildlife Sciences

New Degree Established in Natural Resource Management

Auburn University's School of Forestry and Wildlife Sciences has added a new degree to its current program. The natural resource management bachelor of science degree joins the school's existing degree programs in forestry, wildlife ecology and management, wildlife pre-veterinary medicine and forest engineering. The new degree was recently approved by Auburn's Board of Trustees.

The natural resource management degree is designed as a flexible major that includes core natural resource management courses plus a required minor, concentrating coursework on one of many diverse outdoor careers. Examples of a minor that can be embedded in the degree include political science, fisheries, business, recreation and hydrology.

"The addition of this degree fills the needs of students who wish to pursue an outdoor career outside of our current cornerstone majors in wildlife sciences and forestry," said Greg Somers, associate dean of education. "We are very happy to add this choice to our other majors and thank the faculty, employers, staff and students who worked to make this degree a reality."

Flexibility is the hallmark of this 120-hour major. In addition to the variety permitted by Auburn University's new core, the degree has up to 14 hours of free electives to allow students to match coursework to their desired fields of study. The major can also be customized by selections from restricted electives in statistics, economics, management and landscape. Somers said the wide choice of minors provides tremendous freedom in directing the major toward a variety of jobs in natural resource management.

While this flexibility is a boon to students, the major's foundation is its required science, math and management courses. A full year of biology and chemistry is required. Calculus, ecology and basic soil science make up a few of the supportive courses. Geographic information system (GIS) courses and environmental services will also be required of each successful graduate of the program. The restricted electives are designed to make sure that every student has sufficient statistical knowledge, management skills and basic natural resource courses to successfully compete for jobs even in a difficult economy.

College of Human Sciences

New Director of Joseph S. Bruno Auburn Abroad in Italy

Linda Ruth

An architect from Auburn University's McWhorter School of Building Science has been named executive director of the Joseph S. Bruno Auburn Abroad in Italy program in Auburn's College of Human Sciences.

June Henton, dean of the College of Human Sciences, announced the appointment of Linda Ruth, an associate professor in Auburn's College of Architecture, Design and Construction, to the position, effective Aug. 16. Ruth will also carry the title of Joseph S. Bruno Chair.

"Linda Ruth brings a wealth of knowledge and creativity in study abroad programming and no doubt will continue in the tradition of her predecessor, Marilyn Bradbard, by offering students a once-in-a-lifetime experience," says Henton.

Bradbard served as executive director from 2006 until her recent retirement. Ruth joined the building sciences faculty in 2000, where she has been active in outreach initiatives and study abroad programming.

"I am honored to be a part of the College of Human Sciences and excited about the opportunity to direct one of the college's premier programs," says Ruth. "I believe experiencing other cultures truly opens up the world to students and opens students to the world. The structure and level of immersion that is offered by the Joseph S. Bruno Auburn Abroad program is invaluable in the development of well-rounded and globally aware citizens."

CHS@AU was launched in 2002 and became Joseph S. Bruno Auburn Abroad in Italy in 2007, with a $3-million endowed gift from the Bruno family. Since its inception, more than 380 students have participated in the Italy program.

The semester-long program operates year-round in Ariccia, a small community located in the Alban Hills less than 20 miles south of Rome. Students spend a semester deeply immersed in Italian culture through lectures, field trips, and other hands-on experiences designed to enrich their knowledge base and broaden their world views. They also earn 16 credit hours and an international minor.

College of Sciences and Mathematics

Residential Science Program for Incoming Freshmen

HELPING HANDS—Summer Bridge Program participant Alexis McMillan from Fayetteville, Ga., helps a Boys and Girls Club member with a science experiment during a community service field trip. The four-week residential Bridge program provides participants the opportunity to build not only academic skills but also leadership skills and self-confidence through community outreach projects.

A group of 22 highly motivated incoming Auburn freshmen was on campus this summer for the 15th annual Summer Bridge Program hosted by the College of Sciences and Mathematics.

The four-week residential program kicked off June 5 and engaged students from groups traditionally underrepresented in sciences, mathematics and engineering in activities designed to help them make a smooth transition from high school to the Auburn campus.

The program provided these pre-freshmen with the academic growth and social support needed to excel in their chosen career paths. Emphasis is on academic enrichment, enhancement of study and time-management skills, community and network building and career awareness. Activities included sciences and mathematics lectures and workshops and field trips to research, health care and industrial sites.

Bridge program participants took place in a community service field trip to a Boys and Girls Club where they performed hands-on science experiments with club members. While Boys and Girls Club members learned about science, Bridge students strengthened their self-confidence and leadership skills.

Since the program's inception in 1997, more than 400 students have participated and many have graduated in the STEM disciplines, which include sciences, technology, engineering and mathematics.

Extension Economist Talks Pros, Cons of Farmland Investment

If you're among the many investors today considering a purchase of agricultural land for lucrative farm-related opportunities, Alabama Cooperative Extension System economist and College of Agriculture professor Jim Novak offers some food for thought.

The success of farmland investments rides on several factors: what's produced, suitability of the land, markets, whether the farm has government program base acreages, where the farm is, whether there is any competition for renting the land and whether it is pasture land for livestock or cropland.

"Each has its own risks and rewards and at certain times can face tremendous market volatility," Novak says, noting that returns can depend on the vagaries of the weather and markets. Droughts, floods, tornadoes and, in the case of farming in the Southeast, hurricanes are risks faced by farmers.

Potential investors should recognize, too, that in farming, the cost of the land is only the beginning. For example, a 1,000-acre cotton farm may require more than a million dollars in equipment purchases, and that doesn't include additional costs of plants, fertilizers, insecticides, herbicides, fuel and other inputs. Ultimately the cost of operating that 1,000-acre cotton farm may run as high as $2.5 million, Novak says.

For those who, despite the risk and uncertainty, are still interested in farmland as an investment, Novak advises talking to someone who's farmed for a long time, preferably someone who successfully weathered the '80s farm crisis. More than likely, he says, those veterans will attest that farming is great and profitable and satisfying— if you've got a crop to sell.

"If you don't, well, just remember that the bills won't stop coming," he says.

Show Targets Gardeners

Homeowners searching for gardening and landscaping information and ideas can find what they're looking for when they tune in to "Your Southern Garden," a regional educational television show hosted by Walter Reeves and co-sponsored by the Alabama Cooperative Extension System.

Reeves, a retired University of Georgia Cooperative Extension agent and gardening expert, is joined each week by Alabama Extension horticulturist Kerry Smith in the program that airs Saturdays at 3:30 p.m. on public television stations across Alabama.

ALL IN THE NAME—A $5-million, state-of-the-art building at Alabama's 4-H Youth Development Center on Lay Lake in Columbiana has officially been renamed to honor Alabama Cooperative Extension System Director W. Gaines Smith. In a ceremony in August, the 17,500-square-foot Environmental Science Education Building was formally named for Smith, whose vision for the facility came to fruition in 2007 when it opened as the first environmental education building in the eastern United States to attain gold certification in Leadership in Energy and Environmental Design. The facility set new standards for energy efficiency and environmental responsibility and is an example of sustainable awareness in the U.S. The building gives teachers the opportunity to educate Alabama's children about being environmentally responsible and energy efficient in a setting that illustrates the lesson. Smith, an Auburn alum whose Extension career spans 45-plus years, served as interim director from September 1994 through December 1996 and again from July 2001 until May 2007, when he was named director.

Extension Produces New Creed for 21st Century

The Alabama Cooperative Extension System and Extension programs in other states are working to spark a national dialogue about the traits and skills that today's Extension educators must acquire to become effective change agents in this emerging global knowledge economy.

As part of that effort, Extension communications specialist Jim Langcuster has composed a 21st Century Extension Creed that basically functions as an updating of the beloved Extension Workers Creed that W.A. Lloyd, founder of the Extension professionals' organization Epsilon Sigma Phi, wrote in 1922.

"The 21st Century Extension Creed, while affirming our links to the past, also asserts our strong commitment to the emerging values of the current century: mutual respect, openness, creativity and innovation," Langcuster says." I wrote the creed as a way to get Extension professionals focused on the imperative need to transform Cooperative Extension into the knowledge organization it simply must become."

Find the new creed online at www.aces.edu/pubs/docs/E/EX-0125/.

Extension Communications Projects Bring Home Gold

Several Alabama Cooperative Extension System communications and marketing projects claimed top awards during the Association for Communication Excellence in Agriculture, Natural Resources and Life and Human Sciences' 2011 conference in Denver, Colo., in June.

"Backyard Wisdom," a weekly radio show hosted by Extension communications specialist Maggie Lawrence, won a gold award for audio program in the competition's programs and spots category. The program, which has aired since 2004, runs on WTSU public radio in Troy and is accompanied by a blog.

TOP HONOR—Judges in a competition sponsored by a professional ag communications association awarded a gold medal to Extension art designer Bruce Dupree for this painting that represents a series of Depression-era murals.

Art designer Bruce Dupree earned the gold with his "Birmingham Historical Society Mural Exhibit Illustration," an oil painting that depicts how a series of Auburn University–sponsored, WPA-funded agricultural murals would have been displayed at the 1939 Alabama State Fair. The awards program judge called it an "excellent execution of a Depression-era illustration in both style and content."

A third gold was awarded to a poster set that Dupree and communications editor Glenda Freeman produced to promote Extension's "Body Quest," a comprehensive childhood obesity prevention program for elementary youth in Alabama in which youth learn via mobile iPad laboratories facilitated by Extension educators. The judge described the posters as "wonderful illustrations that no doubt will engage elementary school children." Body Quest is funded by Extension and the Alabama Department of Human Resources.

Winning a silver award in the competition was "Thriving: Working Knowledge in Challenging Times," Extension's 2009 annual report. Freeman served as editor and project manager, Dupree as designer and photographer, communications specialist Jim Langcuster as writer and communications and marketing director Carol Whatley as executive editor. The judge called the writing first class, the concepts crystal clear, the design first rate and the photography superior.

These four projects were recognized from among 233 project entries.

ACE is an international group of communicators, educators and information technologists that offers professional development and networking for individuals who extend knowledge about agriculture, natural resources and life and human science.

Calendar of Events

August • 2011

s	m	t	w	t	f	s
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
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September • 2011

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October • 2011

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Now through Aug. 25
The Market at Ag Heritage Park
Thursdays, 3-6 p.m.
Auburn

The Market at Ag Heritage Park is a growers-only farmers market featuring fresh local produce, goat cheese, honey, stone-ground grains, plants, baked goods, educational exhibits, cooking and gardening demonstrations and much more. It is open to the entire community and is held each Thursday through Aug 25.

Contact: Laura Herring at 334-321-1603 or herrilm@auburn.edu

PICKING THE BEST—Shoppers at The Market at Ag Heritage Park can have their choice of the finest of fresh fruits and vegetables from now until Aug. 25 when the market closes for the 2011 season.

Aug. 17
Fall Semester Begins

Aug. 18
Field Day
E.V. Smith Research Center
Shorter

Contact: Greg Pate at 334-727-7403 or pategre@auburn.edu

Aug. 20
Scholarship Recognition Program
10 a.m.
Ham Wilson Livestock Arena
Auburn

This event recognizes all student recipients of College of Ag or related scholarships as well as the scholarship donors.

Contact: Ann Gulatte at 334-844-2345 or gulatam@auburn.edu

Sept. 1
Beef and Forage Field Day
5:30 p.m.
Upper Coastal Plain Agricultural Research Center
Winfield

This event will focus on an ultra-high stocking density grazing. A sponsored meal featuring beef will be served.

Contact: Randall Rawls at 205-487-2150 or rawlsrc@auburn.edu

Sept. 5
Labor Day Holiday

Sept. 9
Open House
2:30 p.m.
Center for Aquatic Resource Management
Auburn

This event celebrates the official opening of the new $9 million-plus Auburn University Center for Aquatic Resource Management that will serve faculty, students and the public and improve understanding of Alabama's rich aquatic systems. Following a ribbon cutting ceremony earlier that afternoon, the center's doors will be open to the public to tour and learn more about its uses. The fish sales room will also be open for those who want to buy shrimp, tilapia and other seafood products.

Contact: David Rouse at 334-844-4786 or roused@auburn.edu

For more information on these and many other upcoming College of Ag and AAES events go to www.ag.auburn.edu and click on the "Calendar" button.

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Recipe File

Go Fig-ure

Fig, Goat Cheese and Proscuitto Make for Tasty Pizza

Katie Jackson, editor for the College of Agriculture and the Alabama Agricultural Experiment Station, has a huge fig tree in her yard that, for about three weeks in the summer, produces more than enough fruit to share with friends and the birds and still have plenty left over for her own family. Jackson wanted to find new ways to serve fresh figs, aside from eating them raw and making them into fig preserves, so she learned to stuff them with almonds and serve them raw or grilled as appetizers (drizzling them with honey makes them even better, she says), but she also stumbled on a pizza recipe that, though it sounds a bit odd, has won over even the most fig-averse of people.

Since this is fig season across the state, we are sharing it with our readers. For those who don't have their own supply of fresh figs out the back door, there should be plenty available at local farmers markets, plus fig preserves can be used in place of the fresh ones for a fig pizza any time of the year.

Fig Pizza

One large (10- to 12-inch) thin pizza crust, homemade or purchased, precooked

Olive oil

1 large sweet onion, thinly sliced and caramelized in olive oil or butter

15 or so fresh figs, washed, stemmed and sliced in half ***or*** a pint of fig preserves*

3 to 4 slices Prosciutto ham, diced

Freshly ground pepper, to taste

Sea salt or other coarsely-ground salt, to taste

2-3 sprigs fresh thyme ***or*** ½ teaspoon dried thyme

½ cup goat cheese

½ cup parmesan cheese, grated or shaved

Brush pizza crust with olive oil. Spread onions on pizza crust to cover. Dollop fig preserves or lay fresh figs, cut-side up, on the onions. Scatter ham over figs. Sprinkle salt, pepper and thyme on this layer. Cover with goat and parmesan cheeses; mozzarella can also be used for an even cheesier pizza. Drizzle with olive oil.

Bake at 400 degrees until goat cheese melts and crust begins to brown around the edges. Serve warm or at room temperature.

*Fig preserves make this a sweeter pizza than do the fresh figs and may need to be rinsed to remove some of the syrup. Dried figs can also be used; to plump, pour boiling water over them, let them sit for 10 minutes or so and then drain off the liquid.