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Farm Life

Family Values

Alum Continuing Agricultural Heritage of Optimism and Innovation

By Leigh Hinton



OUTSTANDING IN HIS FIELD—Andy Wendland acknowledges that cotton is still king of the row crops at Autauga Farming Company, an operation that has been in his family for more than 90 years.

FALL IS ALWAYS A BUSY time of year at Autauga Farming Company, and fall 2009 has been busier than normal.

“We are seriously behind schedule,” says AU ag economics alum Andy Wendland, the fourth generation of his family to farm here. “2009 has been one of the most challenging years in my recent memory.”

But Wendland is not complaining. In fact, he’s looking on the bright side.

“This year certainly wasn’t a perfect year, but I choose to see my glass as half full, not half empty. Farmers have to be optimistic.”

Wendland comes from a long line of optimists—and innovators. For 90 years, the Smiths and Wendlands have reared their families and farmed in central Alabama, growing cotton and soybeans, feed grains (wheat, barley, oats and corn), seed crops, pecans, hay and cattle.

Wendland is proud of his family’s agricultural heritage. His father, “Buzz” Wendland; his grandfather, William Howard Smith; and his great-grandfather, McQueen Smith, have all been pioneers and innovators in their time.

“They were not satisfied with the status quo. If there was a better way to plant, to produce or

(continued on page 4)

Family Traditions

Spanning the Decades

Corleys Part of Biosystems Engineering’s History

By Jamie Creamer

WERE SOMEONE TO pen the history of Auburn University’s Department of Biosystems Engineering, the Corley name would keep popping up all the way through it.

The first Corley to appear, on Page 1 no doubt, would be Tom, and he would play a lead role throughout the document. Then, probably somewhere around Chapter 4 or 5, Frank would enter the picture. Scott would come along in the chapter titled “2005–Present.”

These Corleys, or two of them at least, hail from Socapatoy, a tiny community in Alabama’s Coosa County.

Socatoy—pronounced sock-uh-puh-TOY—isn’t much today, but in its prime it boasted a store, a church, a lot of cotton and timber and a handful of residents, a good many of which were Corleys.

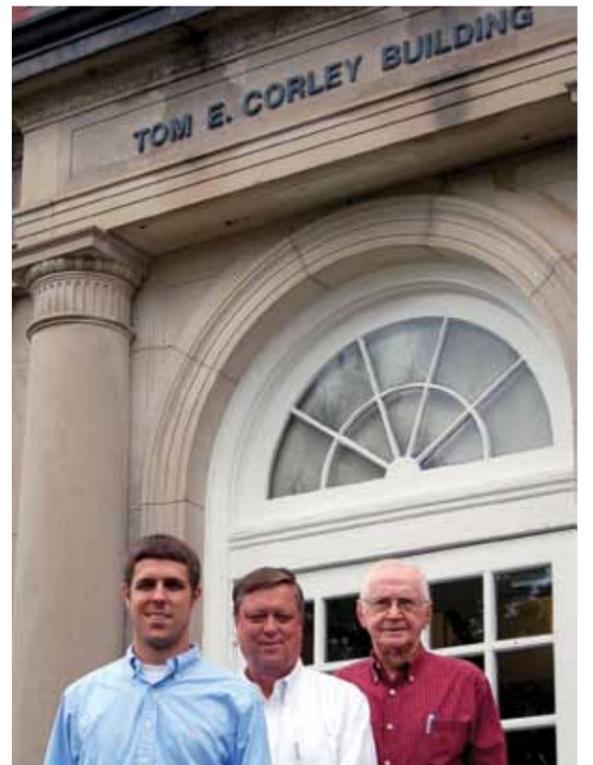
Tom’s daddy had a good-sized cotton crop, and every year, come late summer, Tom and his siblings would sling their white denim cotton sacks over their shoulders and work daylight to dark filling those sacks with cotton, one boll at a time. Tom was a sharp kid, ingenious, a tinkerer, and often out in those hot cotton fields, he’d find himself designing—in his mind, of course—a

machine that would pick cotton and let folks put away their cotton sacks for good.

He finished high school in 1939 and in September hitched his way to Alabama Polytechnic Institute in Auburn to study agricultural engineering. That fall quarter he and the dozen other ag engineering freshmen began their college careers in a brand-new, three-story, no-frills building across from Comer Hall. And the name was as no-frills as the building. For close to 60 years, it bore the ingenious name Agricultural Engineering Building. The name changed in 1998—but more on that later.

Ag engineering majors could opt to follow one of three tracks: soil engineering, rural electrification or mechanical engineering. Tom chose the latter, and in the spring of 1943, he graduated with a bachelor’s degree in ag engineering.

Tom didn’t have much time to celebrate the accomplishment, though, because he walked straight out of commencement ceremonies into the U.S. Army and World War II. After three years of military service, including time in Germany and France, U.S. Army Capt. Tom Corley returned to Auburn and started graduate school. In 1948, he was awarded his master’s degree in agricultural engineering, and this time, he walked straight out of commencement ceremonies into a job as an assistant professor in API’s ag engineering department.



ALL IN THE FAMILY—Three Corleys—from left, Scott; his dad, Frank; and Frank’s uncle, Tom—brave winds and rains to pose on the steps of the Corley Building.

“My starting salary was \$1.57 an hour, and we worked 44 hours a week,” Tom says. “I made \$3,600 a year, and that was pretty decent money for a young man back then.”

As a faculty member, Tom rose through the ranks, from assistant professor to associate professor to full professor and, in the late 1960s, was named assistant director of the Alabama Agricultural Experiment Station.

Throughout his career, Tom conducted pioneering research that led to technological breakthroughs and rapid advances in the mechanization of the cotton industry.

(continued on page 4)

View from Ag Hill



Richard Guthrie
Dean, College of Agriculture
Director, Alabama Agricultural Experiment Station

HAPPY SIGNINGS—Richard Guthrie prepares to sign a kiwifruit agreement with China. Also pictured from Auburn are Ping Hu, second from left; Art Appel, third from left; and Jay Spier, right.

that our college has had with Hubei Academy since the late 1980s when the late horticulture professor Joe Norton began collaborating with Chinese scientists to develop new cultivars of kiwifruit, satsumas and chestnuts. Joe's work has been carried on by Billy, and Jay is poised to continue the efforts when Billy retires.

Billy took with him on this trip an agreement for his Chinese counterparts to sign that officially allows Auburn to jointly release two kiwifruit varieties—Golden Dragon and Golden Sunshine—that can now be commercialized. We have already been contacted by a New Zealand company that wants to grow Auburn's golden varieties.

This past October, at the invitation of Hubei Academy of Agricultural Science, my wife, Kay, and I joined six other Auburn University representatives on a trip to China. Though I have been to China a dozen or more times in the past 23 years, this trip was especially gratifying because it celebrated a long-term relationship with China that promises to grow and expand well into the future.

Auburn Board of Trustee President Pro Tempore Sarah Newton and her husband, Bill, were among our traveling companions along with Billy Dozier and Jay Spiers, both from the Department of Horticulture, and Art Appel and Ping Hu, both from the Department of Entomology and Plant Pathology.

The purpose of the trip was multi-fold, but in essence it served as a formal recognition of the research relationship

Art and Ping went along to conduct field research on termites that infest the wooden posts that support the kiwifruit vines. The project is funded by the Chinese government.

Another big part of the trip was the dedication of a garden that is being developed at Hubei Academy in honor of its long and productive relationship with Auburn. Sarah Newton represented Auburn's administration standing alongside the governor of Hubei Province at the dedication of the Auburn garden on the academy's campus. This garden will be located on a site at the campus where the academy plans to build a new Fruit and Tea Research Institute facility. The garden will be in the institute's front yard, and, while it is primarily an ornamental garden, it also will feature the kiwifruit, chestnut and satsumas that have been so important to Auburn and the academy.

The trip lasted nine days and included visits to two other locations in China, one of which was the city of Danyang to witness Auburn's engineering dean, Larry Benefield, signing an agreement to establish an Auburn University in China. And in Beijing, Ms. Newton signed an agreement to collaborate on an exchange of graduate students in engineering.

It was a productive trip that further strengthens our already exceptional relationship with China, and I am pleased that our college has been such an important player in starting and now continuing this vital partnership.



FISHING FOR PRIZES—Christian Patterson, grandson of College of Ag administrative support associate Martha Patterson, had his rod and reel ready to catch some yummy prizes—candy, not fish—at the 30th annual Fall Roundup and Taste of Alabama Agriculture, held Nov. 7 at Ag Heritage Park on the Auburn campus. Christian was one of the 2,500 or more people who came out to enjoy the food and fun at the event, which raised \$8,767 at the gate to offset the cost of the event and another \$8,899 during the auction, which will be used for scholarships.



TAKING THE WHEEL—Youngsters always seem to have a great time at Ag Roundup and Taste of Alabama Agriculture and these two were no exception. In fact, a corn dog and an all terrain vehicle might have been the perfect combination for Lily and Eli Monks if only they had found the keys.

Orr Tournament Nets \$16,000-Plus



A WINNING COMBINATION—Members of the Landscape Workshop golf team—from left Johnny Hayes, Greg Bond, Jason Cannon and Joey Cannon—pose for a photo during the sixth annual Henry P. Orr Memorial Golf Classic. These guys were the first-place gross winning team. A team from the College of Veterinary Medicine was first-place net winning team. Thanks to golfers such as these as well as generous donors, more than \$15,000 was raised for horticulture students to participate in out-of-classroom experiences.

Thanks to the 72 golfers who teed-up and a grant from the Pursell Institute, the sixth annual Henry P. Orr Memorial Golf Classic, held in November at the FarmLinks Golf Club at Pursell Farms, was another rousing success this year, raising \$15,205.63.

The first-place gross winning team, the Landscape Workshop team, included Joey and Jason Cannon, Greg Bond and John Hayes. The first-place net winning team from the Auburn University College of Veterinary Medicine included Diana Childers, Jimmy Clark, Vernon Miles and Jerry Bavaro.

The event generates funds for the Henry P. Orr Endowed Fund for Horticultural Excellence, which allows horticulture students to gain educational experiences outside the classroom.

A special thanks to the sponsors: Landscape Services Inc.; Skinner Nurseries; Advanced Mower; Alabama Nursery and Landscape Association; Alabama Pork Producers; Blackjack Horticulture; the Auburn University Office of Development and College of Veterinary Medicine; Callaway Gardens Ida Cason Callaway Foundation; Crooked Oaks Hunting Lodge, Green Valley Farms; John A. Floyd Jr.; Landscape Workshop; Plantation Tree Company; Skinner Nurseries Inc.; W.S. Pharr and Company; and Wilton's Catering.

In Memoriam

Olivia Bearden, a student in animal sciences from Shorter, passed away Aug. 19 at Community Hospital in Tallahassee. Donations may be made in her name to Camp-Smile-A-Mile or the Pediatric Brain Tumor Foundation at Children's Hospital.

Making Contact

Want to get in contact with the College of Agriculture, Alabama Agricultural Experiment Station or Alabama Cooperative Extension System? **See below!**

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TASTE-TEMPTING—John Cook, left, a member of the Auburn University Ag Alumni Association board of directors, tempts retired poultry science department head Bob Brewer, center, and College of Ag alumnus Steve Raby with some scrumptious sausage during the 2009 Fall Roundup and Taste of Alabama Agriculture. The sausage was just one of many tasty Alabama-grown or -made products that were featured at the event, which is held every homecoming weekend in Auburn and has become popular for College of Ag alums as well as many other Auburn football fans who are lured in by the smell of great food and the sound of great fun.

Hall of Honor Banquet Planned Feb. 23

Five outstanding individuals in Alabama agriculture will be honored on Feb. 23 when the Auburn University Agricultural Alumni Association holds its 2010 Annual Meeting and Hall of Honor Banquet at The Hotel and Dixon Conference Center in Auburn.

This year's inductees into the Hall of Honor, which pays tribute to living Alabamians for their contributions to Alabama agriculture, are William E. Powell of Montgomery representing the agribusiness sector, William E. Hardy of Auburn representing the education/government sector and Raymond B. Jones of Huntsville representing the production sector. The late Jamey M. Clary of Akron and the late Ross Debrer of Horton will be added to the list of Pioneer Award winners, who are honored posthumously for their impact on agriculture in the state.

Registration for the banquet begins at 5:30 p.m. and the banquet begins at 6:15 p.m. Earlier that day, the Ag Alumni Association Board of Directors will meet in 109 Comer Hall beginning at 1:30 p.m. Tickets to the banquet and awards ceremony are \$50 per person and should be purchased by Feb. 9.

The association also is offering corporate sponsorships that help fund the banquet. Platinum Corporate sponsorships are available for \$2,000. Platinum sponsors receive eight complimentary tickets, a commemorative plaque and recognition in the banquet program and sponsor board. Gold Corporate sponsorships are \$1,000. Gold sponsors receive four complimentary tickets, a commemorative plaque and recognition in the banquet program and sponsor board. Silver Corporate sponsorships are available for \$500. Silver sponsors receive two complimentary tickets, a commemorative plaque and recognition in the banquet program. Bronze Corporate sponsors at the \$250 level will receive one complimentary ticket and recognition in the banquet program.

For more information on banquet tickets and sponsorships, contact Elaine Rollo at 334-844-3204 or rolleme@auburn.edu.

(FAMILY VALUES, from page 1)

to market livestock or crops, they wanted to learn about and employ it on the farm," says Wendland.

William Howard Smith worked with leading fertilizer, chemical and equipment manufacturers of his day to adopt new methods for boosting the farm's productivity. He tested some of International Harvester Company's earliest rubber-tired tractors on the farm and provided livestock and plots of land to be used for Alabama Agricultural Experiment Station research.

Under Buzz Wendland's management, Autauga Farming Company was named Cotton Farming magazine's "National Cotton Farm of the Year." At about the same time, Wendland's forward-thinking approach to beef cattle production also gained media attention. In 1974, Progressive Farmer reported on Autauga Farming's pasture-finished beef program, an approach to

the farm. This approach to selling high-quality feeder calves in truckload lots direct to the buyer evolved into what is now known as the Producers Feeder Calf Sale, considered by many to be the standard by which other sales are measured.

Andy Wendland, too, is always looking for ways to improve the farm's efficiency and productivity.

"We try to be fluid and not be static with the 2,500 acres of row crops we currently farm," says Wendland.

Bear Creek Hunting Preserve, established in 2000 as a branch of Autauga Farming Company, was jump-started when Wendland was looking for new ways to use some of the farm's land that did not lend itself to pasture or row crop production. Bear Creek offers dove shoots in the fall, guided hunts for quail and turkey and has just entered into a exclusive lease agreement for deer hunting.

"Hunting is an important part of the overall picture here and we have many long-term clients who have helped us get off the ground and get established," says Wendland.

From 1984 to 1989, Wendland attended Auburn University, "cramming a four-year program into five years." While there, he met his future wife, Dawn.

"We grew up 30 minutes apart and our parents were acquainted, but we didn't know each other until one of her sorority sisters introduced us," says Wendland. He invited Dawn to AU's homecoming in 1987. The rest, he says, is history.

The Wendland's five children—Katie (age 17), Drew (15), Will Howard (13, and named for Wendland's grandfather), Dan (11) and Emma (7)—attend Autauga Academy, where Dawn teaches kindergarten. Though assisting on the farm is limited to after school, weekends and holi-

days, the whole family does stay involved. Last summer, the Wendland kids pitched in at hay-cutting time: Katie drove the baler tractor while Drew handled bales and cut hay. Will Howard raked and Dan was in charge of "armadillo suppression."

This fall, it's Emma's turn to help out. October through December is calving season, and pastures where the soon-to-be-mama heifers graze need to be checked closely. On fall afternoons after school, Emma and Dawn ride through the pasture near their home and check for newborn calves.

Like his predecessors, Wendland has not shied away from technology, bringing Autauga Farming Company into the digital age with its own Web site, www.ataugafarming.com. On this site he writes about the seasonal activities of farming and muses on farm life and family values:

"I am so thankful to have the privilege of raising my family here on the farm. Just like my parent's grandparents, it is a tradition that is so much more than just a tradition. It truly is a way of life. From the way we view 'work,' which sometimes seems to never end, to the ways we spend our free time together. Farm life really is different, unique, special. It is demanding, yet rewarding. Tiring, but fulfilling."

Wendland knows that the tasks facing him this fall—and year-round, for that matter—would not get done without the labor, dedication and loyalty of the people who work with him, not for him, on the farm. It's a great team that works well together, he says.

What legacy does Wendland want to leave for his children and his children's children?

"My grandad laid a great foundation here on the farm. My dad has built on that and improved it. I hope to be able to continue to build on this foundation of progress and forward thinking so that the next set of farmers in our family will have the same opportunities that I have been blessed with." ☞

engineering. Scott, a senior, could have graduated this month, but he'll stay at Auburn another year to earn a minor in forest resources so he can become a certified engineer and a certified forester.

Scott says no one particular event led him into forest engineering. "It's really all I can ever remember wanting to be," he says.

Scott's well aware of the massive slowdown in the industry now, but he has Frank's upbeat outlook. "I'm with Dad: this energy stuff is exciting," he says. "It's where we're moving."

In 1998, two significant name-changing events occurred in Auburn's ag engineering department. For one, the department changed its name to the Department of Biosystems Engineering to more accurately reflect its numerous program offerings.

For the other, the Ag Engineering Building—the building where Tom Corley spent 42 years of his life as both student and teacher—was renamed the Tom E. Corley Building in recognition of Tom's role in advancing the cotton industry and enhancing Auburn's ag engineering program.

Tom, who still is humbled by that honor, says he's pleased, too, that Frank and Scott have carried on the Corley family tradition in biosystems engineering at Auburn.

He never ceases to be amazed, though, at how dramatically everything has changed since he arrived at Auburn in 1939.

"The fact is, I couldn't get a job here nowadays, because I can't work a computer and I don't have a Ph.D.," he says.

"Listen, when I was a student here, one class taught you how to hitch up your mules. I don't suppose they teach that now." ☞

AG ROUNDUP FUN—The Wendland family enjoys time together, especially at Ag Roundup. From left Dan, Will Howard, Andy, Dawn, Drew and Katie. That's Emma in front.



finishing cattle that was driven by the availability and timeliness of high-quality forages in the Southeast. The article describes Buzz Wendland as being "optimistic" about the program while being "aware of the limitations." He was also instrumental in developing an improved system of marketing feeder calves directly from

(SPANNING THE DECADES, from page 1)

"When I started working at Auburn in 1948, Alabama had a million acres of cotton and 98 percent of it was hand-picked," he recalls. "When I retired in 1984, 98 percent was machine-picked."

Tom was still a good eight years from retirement, though, when Frank, son of Tom's younger brother James, enrolled at Auburn University.

James was a successful logger, and Frank had grown up learning the tools of the trade from a master. His dad had a passion for the timber business, and so did Frank. He was only 16 when he bought his first log truck.

"I loved the work, every aspect of it," Frank says. "The site prep, the planting and managing, road-building, harvesting—I loved it all."

Still, he'd dreamed of going to Auburn long as he could remember, and in September 1976, he did. He enrolled in ag engineering—keeping his pulpwood business going back home to pay his way through—but in truth, his future was foggy. "I was at Auburn, but I had no clear vision of my future, and for a while, I floundered around," he says.

Then he heard somewhere that at the University of Maine, you could get a degree in a field called forest engineering, Bingo.

He told his Uncle Tom about the program, about how that's exactly what he was looking for. Tom sent Frank to the Department of Forestry, where he learned Auburn was in the process of launching a forest engineering degree program. When the program kicked off in 1978, Frank was first to enroll.

"That turned me around," he says. "I got excited about what I was doing, my grades improved."

In 1980, Frank made history when he received Auburn University's first-ever forest engineering degree.

His first job was at a Union Camp-owned sawmill in Chapman, near Greenville in central Alabama and stayed with the corporation several years in positions at facilities around the Southeast. In 1998, Union Camp decided to close a reforestation and forest road operation in Chapman and put it on the market.

Frank pounced on it. With a business partner as a strong financial backer, he formed a company that is now Corley Land Services. He is now sole owner, has about 25 employees and offers a complete range of forest landowner services.

Yes, Frank says, times are tough in the forest industry right now, but he's convinced that the industry's future lies in forest biomass for energy production. In September, the U.S. Department of Energy awarded Auburn University a \$4.9-million grant to advance the concept by designing high-productivity systems for harvesting, processing and transporting woody biomass from pine plantations to biorefineries, and Frank, DBA Corley Land Services, is a key collaborator in that project.

When Frank's in Auburn for a meeting on the grant, he tries to work out a lunch rendezvous with Scott Corley. Scott is Frank's oldest son and is majoring, as you might have guessed, in forest



THE PLAN—Biosystems engineering department head Steve Taylor, right, shows, from left, Scott, Tom and Frank Corley the building's original blueprints.



AGRI-TECTURE—Artist Jeff Schmuki's work, including Chia sculptures and inventions, will be exhibited in Biggin Gallery from Jan. 18 to Feb. 26.



community and environment through one of Alabama's popular pastimes—gardening. Visit our Web site at www.ag.auburn.edu/ArtinAg/ for up-to-date information about the events listed below.

On the Calendar

reclaiming ground

AG GARDEN ART
www.ag.auburn.edu/ArtinAg

PLEASE JOIN THE COLLEGE OF AGRICULTURE, THE College of Liberal Arts and the Department of Art at Auburn University as we continue to explore the intersections of art, culture, ecology and sustainability through our 2010 focus on gardens.

Over the last decade, gardens and food have emerged as hot topics across America. Concerns over climate change, food security and safety, energy independence, social justice and public health have led to a growing interest in alternative food production and sustainable landscape design. These concerns have also spurred a re-evaluation of the function, design and aesthetics of the landscape and a revival in private and community gardens.

Spring semester, artists and scholars will examine and question how we might reclaim our own relationships with our food,

exhibition Jan. 18 - Feb. 26

Agriecture

Biggin Gallery, 101 Biggin Hall

What does the Chia Pet™ have to do with sustainable living? Can grain crops be an art form? Jeff Schmuki, visiting artist in the Auburn University Department of Art, challenges viewers to both confront and collaborate on these and other issues in *Agriecture*.

lecture Jan. 18

The End of Land Art

5:15 PM (CST)*, 005 Biggin Hall

Land Art—what is it, when did it develop and how has it evolved in the contemporary U.S.? Art historian Kelly Wacker lays the groundwork for understanding the progression of the Land Art movement. A reception will follow the lecture.

lecture Feb. 2

Artistic Imagination + Habitat Devastation =

Environmental Restoration

5:00 PM (CST), 005 Biggin Hall

How would you portray Mother Nature? Is she fertile, nurturing and healthy? Or is she frail and tarnished, in need of restoration? Writer, curator, educator and artist Linda Weintraub looks at pioneering efforts of artists who are redefining art for an age characterized by widespread environmental concerns. A reception will follow the lecture.

lecture Feb. 18

Designing to Enable: A Case for Civic Agriculture and

Culture of Resistance

5:00 PM (CST), 005 Biggin Hall

How can a university encourage its students to become involved in their community? What is the social network that makes community gardens sustainable? Matthew Groshek—assistant professor at Herron School of Art and Design in Indiana—provides insights based on his work with his campus administration to create an on-campus community garden. A reception will follow the lecture.

lecture Feb. 26

Armegardden

5:00 PM (CST), 005 Biggin Hall

Can art help create a sustainable future? How can community, empowerment and environmental education counter environmental degradation? Jeff Schmuki discusses ecology, sustainability and a do-it-yourself philosophy as evidenced in his exhibit—*agri-ecture*. A reception will follow the lecture.

lecture March 23

Welcoming the Wild

7:00 (CDT), Location TBA

What is the role of the artist and designer in society at large? Can ordinary citizens make a difference in their local ecologies? Artist, architect, gardener and activist Fritz Haeg, known for transforming American front yards into vegetable gardens, and is the spring 2010 E.T. York Distinguished Lecturer. Haeg will talk about these gardens and detail strategies for weaving wild activities into our existing lives.

discussion April 7

Digging Deeper

5:00 PM (CDT)*, 112 Rouse Life Sciences Building

What happens when artists make the environment their medium? In what ways is the process of agriculture an aesthetic practice? Join moderator Katie Jackson of the College of Agriculture for the continuation of an interdisciplinary conversation that considers the common ground shared by artists, scholars, scientists, agrarians, designers and environmentalists. Faculty from the College of Agriculture (Department of Horticulture), the College of Liberal Arts (Department of Art) and the College of Architecture, Design and Construction (School of Landscape Architecture) dig deeper into the aesthetic, social and environmental issues addressed by gardening.

lecture April 19

Garden in the Kindergarten

4:00 (CDT), 005 Biggin Hall

Did you know that the first German kindergartens contained gardens? How has our understanding of childhood influenced places of play for children today? Join landscape architect Susan Herrington as she traces the development of gardens in kindergartens during the 19th century in Germany and their later transformation in North America.

workshops Spring 2010

Common Ground

What is the common ground between art and science? How do we reclaim and reconnect with our food, community and environment? Workshops and activities for children and adults delve into one of Alabama's most popular pastimes that blends art and agriculture: gardening. Creativity, connection, fulfillment, transformation: all begin when we get our hands in the soil. For the availability of specific workshops, see www.ag.auburn.edu/ArtinAg/.

*CST= Central Standard Time; CDT= Central Daylight Time.

It's a Tie!

Stevenson, Carrias Win Prestigious Novus Award

Two College of Ag students—Abel Carrias in fisheries and allied aquacultures and Lindsay Stevenson in poultry science—had such outstanding academic and research records that the Novus International Research Award selection committee had to call it a tie.

The award was established in 2004 by Novus International Inc., a leading developer of animal health and nutrition programs for the poultry, pork, beef, dairy, aquaculture and companion animal industries. The company established the annual cash award with a \$200,000 endowment to support Auburn College of Ag graduate students who have demonstrated research excellence in one or more of the areas of animal nutrition, metabolism, growth and development or health and disease.

In addition to the award, Novus typically offers recipients paid intern positions within the company based on the needs of the company, and the research expertise of the student.



Lindsay Stevenson and Abel Carrias

Carrias, a native of Belize, who was nominated by Jeff Terhune, associate professor of fisheries and allied aquacultures, earned his bachelor's and master's degrees at Auburn and is now working on his Ph.D. As an undergraduate, Carrias won a prestigious undergraduate research fellowship and began working with Terhune to test a new vaccine for channel catfish. Carrias continued research on that vaccine for his master's degree, then shifted his focus for his Ph.D. to explore the use of bacteriophages—viruses that infect bacteria—to combat bacterial pathogens that affect cultured channel catfish, thus protecting the environment and consumers without the use of antibiotics or chemicals.

Stevenson earned her bachelor's degree from The Ohio State University and her master's degree from Auburn before beginning her Ph.D. work here. Her research focuses on dietary and environmental hormones known as isoflavones that are found in soybeans and that may have both positive and negative effects on human health and can affect fertility in livestock and laboratory animals. Soybean meal is a major component of almost all poultry diets, so her work is trying to discover how isoflavones affect the development of chicks and the reproductive ability of chickens.



TALKING POINTS—Brian Parr, assistant professor in agriscience education, addressed more than 100 high school FFA members from the Central District who visited Auburn University's campus in November for the Premier Agriculture Workshop, known as PAWS, which was hosted by Collegiate FFA. PAWS is a day-long workshop that engages students through leadership activities.

MAKING THE LEAP—James Paul Bailey, a Collegiate FFA member and a sophomore in agribusiness, facilitates an interactive leadership workshop on setting goals. This year's PAWS theme is Reality Rocks!, which uses popular reality show themes throughout the conference to educate students about agriculture and leadership opportunities.



More Distance Ed Classes Being Offered

By Mary-Glenn Smith, Ag Communications Intern

Today more college students are enrolled in distance education classes than ever before. Some students may choose a distance education class to work on their own time rather than going into a class room every day, or perhaps it is the only class available at the time. Whatever the reason may be, the trend of taking classes online is definitely on the rise, but some people may not even know what distance education is.

The Southern Association of Colleges and Schools and the Alabama Commission of Higher Education define distance education as: "A formal educational process using technological delivery in which instruction occurs where students and instructors are not in the same place. Instruction may be synchronous or asynchronous. Distance education may employ audio, video or computer technologies."

People often refer to distance education as distance learning, or e-learning. For a course to fall under the category of distance education, more than 50 percent of the course content must be delivered through some type of distance education mode.

Online learning programs also focus on the inclination of globalization and the need for those already in the workforce to receive higher education in order to compete in the new knowledge market. Distance learning also provides flexible access to quality higher education for nontraditional students who are often juggling work, family and school. In some cases, employed students are often able to receive tuition reimbursement from their employers, which makes pursuing further education more feasible financially.

The College of Agriculture has several distance education courses available to students in almost every department.

Agronomy and soils is currently offering three courses through distance education and has a number of other courses in the works. The courses offered at this time are Basic Crop Science, Basic Soil Science and Turfgrass Management.

"We are also hoping to offer master's of science and master's of agriculture degree programs in agronomy and soils by distance education starting next year," says Dennis Shannon, professor of agronomy and soils who is coordinating the department's distance ed effort.

The entomology and plant pathology department offers two courses through distance learning. An Introduction to Entomology is offered every semester, including summers. The Web-based course, directed by entomology professor Wayne Brewer, usually has 35 students enrolled each semester. The course covers the life processes, importance and occurrence of insects.

General Plant Pathology is another course offered as a distance education class during the summer semester. "I developed this course in 2008, so it has been taught twice," says Kathy Lawrence, an associate professor of plant pathology. The class surveys plant diseases common in Alabama, including symptom recognition, pathogen biology and management of plant diseases.

"Enrollment has increased from three in 2008 to eight this last summer," Lawrence says. "Students have been local and from as far away as Arizona."

Poultry science currently offers two classes as distance education courses. Food Laws and Regulations is open to undergraduate and graduate students. The course covers topics concerning federal and state laws and regulations of food and food production. The history of food law, enactment of laws and regulations, legal research and regulatory agencies are also discussed in the class.

Poultry Health is also available for undergraduate and graduate students. This distance learning class studies the prevention, diagnosis, control and treatment of economically important diseases of poultry.

Several other College of Agriculture departments are currently working toward getting classes approved for distance learning courses.

To learn more about distance education opportunities in the college, contact 334-844-2345.



LIKE RIDING A BICYCLE—Though College of Ag Dean Richard Guthrie, right, says it's been years since he milked a cow, apparently it's like riding a bicycle: once you learn you never forget. Guthrie, who is also director of the Alabama Agricultural Experiment Station, beat out three rival deans—one from Abraham Baldwin Agricultural College, another from the University of Georgia and a third from the University of Florida—in a milking contest held at the 32nd annual Sunbelt Ag Expo in Moultrie, Ga., in October. He is pictured here with his beaker of milk. Not only is he the Southeast's top milking dean, Guthrie has also been given the 2009 Service to Agriculture Award by the Alabama Farmers Federation. More on that in the next issue of Ag Illustrated.

Student Accomplishments

Jessica Braswell, a recent ag economics and rural sociology graduate and a former member of the AU Equestrian Team, was recently named the 2009 Auburn Female Scholar Athlete of the Year. The award was given last spring at the Athletic Department's Top Tiger Award Banquet. Though Braswell is not riding on the team anymore (her four years of eligibility are up) she still works for the team as administrative graduate assistant. She earned bachelor's degrees last spring with a double major in ag business and economics and Spanish international trade.

Three graduate students in the College of Ag were selected to serve as Graduate Student Ambassadors. They include **Sandra Leanne Dillard** from animal sciences, **Matthew Lewis** from fisheries and allied aquacultures and **Tingting Wu** from agronomy and soils. To learn more about them, go to www.grad.auburn.edu/misc/ambassadors.htm.

Auburn's Collegiate FFA chapter made strong showings in several competitive events held during the 82nd National FFA Convention in Indianapolis, Ind., in October. The Auburn team of ag econ junior **Lauren Lewis** (team leader), ag econ freshman **James Paul Bailey**, ag communications sophomore **Caleb Colquitt**, animal sciences/pre-med freshman **Mary Catherine Lewis** and agriscience education major Ben Johnson won the national championship in parliamentary procedure competition. Auburn's debate team—comprised of Mary Catherine Lewis and ag education majors John Wilson, Bradley Cox and Andrew Talley—placed second nationally, and a four-man Auburn team that included Colquitt along with ag education majors Bruce Davis, Richard Dorman and Jay Gibson brought home fourth-place honors in the quiz bowl competition. In addition, the chapter was recognized for its rapid rise to the national leadership level in the past two years and was awarded a gold A.W. Nolan leadership award.



DEAN'S CUP TEAM—Pictured from left are Goculowski, Woodard, SFWS Dean Richard Brinker, Peatman, Nichols, Ruiz-Cordova and Martin, winners of the Dean's Cup.

Matt Goculowski, Stephen Woodard and Molly Martin; assistant professor **Eric Peatman**; undergraduate student **Hunter Nichols**; and research assistant **Sergio Ruiz-Cordova**. Of the more than 100 participants, the overall winner, who set a new course record, was **Jay McCurdy**, a graduate student in agronomy and soils. Go College of Ag!!

The Department of Animal Sciences hosted an academic quadrathlon for Auburn students in mid-October entailing oral presentations, lab practicums and a quiz bowl. Six four-member teams comprised of students from animal sciences, agricultural economics and rural sociology, microbiology and agrisciences education participated. The winning team members were **Carrie Richmond, Amy Bley, Jonathan Quick** and Krista McGukin.

THE WINNING TEAM—A team of three College of Ag and one College of Sciences and Mathematics students took top honors at the 2009 Academic Quadrathlon in October. The winning team included, from left, Carrie Richmond, Amy Bley and Jonathan Quick, all animal sciences majors, and Krista McGukin, a microbiology major.



SUSTAINABLE VIEW—Banners drawing attention to sustainable energy, economics, food supplies and environments were the focus of the College of Agriculture's 2009 Sunbelt Expo display. This year's Expo drew more than 200,000 visitors, many of whom toured Auburn's display building to learn about Auburn's work on such issues as biofuels, bicycle-fueled electricity, pest management, gardening, food safety, economic strategies and much more.

Faculty Accomplishments

David Weaver and **Beth Guertal**, both professors in the Department of Agronomy and Soils, have been named fellows of the Agronomy Society of America. The awards were presented during the ASA annual meeting held in November in Pittsburgh, Penn.



Chris Kerth

Chris Kerth, associate professor in the Department of Animal Sciences, received the American Meat Science Association's 2009 Distinguished Teaching Award at the AMSA's recent 2009 Reciprocal Meat Conference in Rogers, Ark.

Henry Fadamiro, associate professor in the Department of Entomology and Plant Pathology, and a team of collaborators with the Alabama Cooperative Extension System (**Kathy Flanders, Dale Monks, Fudd Graham, Ping Hu, Jackie Mullen, Ed Sikora and Paul Mask**) recently received a \$253,265 grant from the U.S. Department of Agriculture-CSREES Extension IPM Coordination Program to support research and extension activities aimed at promoting integrated pest management in Alabama.

Fadamiro also generated a media buzz this fall. Articles highlighting his research on the use of fire ant venom alkaloids as attractants by parasitic phorid flies to help control fire ant infestations were featured in the Sept. 20 issue of U.S. News and World Report (www.usnews.com/articles/science/2009/09/20/ant-venom-attracts-decapitating-flies.html) and in the Sept. 18 issue of Science News (www.sciencenews.org/view/generic/id/47468/title/Venom_attracts_decapitating_flies). Fadamiro's original journal article on this study is in press and will be published in Naturwissenschaften (German Nature).

Nada K. Nadarajah, senior research fellow in animal sciences, made a presentation in November at the national symposium and annual conference of the Indian Society of Animal Genetics and Breeding in India and visited a research institute in Pune to explore potential collaborations and to implement a meat goat recordkeeping program.

Carolyn Robinson, assistant professor in horticulture, was awarded the 2009 Auburn Alumni Association's Undergraduate Teaching Excellence Award.

Curtis Jolly, professor and chair of ag economics and rural sociology, and **Skip Bartol**, a member of the animal sciences faculty and now an associate dean in the College of Veterinary Medicine, were named Alumni Professors recently by the Auburn Alumni Association.

In the Flow

Restore a Stream, Change the World!

Stream Restoration Project Reaping Many Benefits

By Zach Benson, Ag Communications Intern



HEALTHY STREAMS, HEALTHY COMMUNITIES—Eve Brantley, assistant professor of agronomy and soils at Auburn, and Jof Mehaffey, an ecologist with Goodwyn, Mills and Cawood engineering firm, check out the progress of a stream restoration project located off Highway 280 near Auburn. They are just two members of an amazing team of people who have joined forces to help return the stream to its natural state.

A stream restoration project adjacent to an Auburn-area subdivision has improved a stream, established an educational and recreational area and provided a model illustrating how partnerships can restore streams throughout the state and nation for years to come.

The project began in early October 2008 when Conner Brothers Construction Co. of Auburn realized that a stream on its property located off Highway 280 in Auburn needed restoring. The stream, an unnamed tributary of Saugahatchee Creek that flows through Lee County and on to the Tallapoosa River, had little habitat and severely eroded streambanks.

A Montgomery-based environmental and ecological engineering firm—Goodwyn, Mills and Cawood Inc.—was brought in to work on the project

and soon formed a partnership with the Saugahatchee Watershed Management Plan (SWaMP).

The partnership quickly expanded to include many other groups and organizations from the public and private sectors, including Auburn University and the Alabama Cooperative Extension System. Both Auburn and ACES saw the project as a perfect opportunity to involve students and members of the community in the restoration project, giving them a real opportunity to be a part of the conservation and restoration “solution.”

Through the partnership, about 1,500 feet of the tributary is being restored. Restoration involves the excavation of a new stream channel separate from the original channel. The original channel had become deeply incised (about eight feet deep) because of straightening and land-use alterations and looked like a deep gully. Once a stream becomes incised, it will continue to erode its bottom and sides, transporting sediment, nutrients and organic matter downstream, since all of its energy is confined in a narrow, deep channel.

To restore the stream, a new channel was constructed and erosion control measures were put into place. Ryegrass and switchgrass were seeded on the new slopes to hold the soil until natural vegetation is reestablished. Exotic vegetation, such as Chinese privet and mimosa, were eliminated.

Eve Brantley, an assistant professor in Auburn’s Department of Agronomy and Soils, works on land use change and how it affects water and stream quality. The goal of this project was to improve stream and floodplain functions—things such as increasing aquatic habitat, enhancing nutrient cycling and reducing erosion and sediment transport—and to make it educational.

“One of the main things that this public/private partnership really focused on is working as a team with diverse areas of expertise to implement a project and learn from it. Ultimately, what we’d like to do is protect streams. It’s a lot less expensive to protect our resources than to go back and attempt to recover complex stream and floodplain functions. This is where conservation education comes into the picture,” Brantley says.

Brantley, who is also an Extension water specialist, considers this specific collaboration a huge success that will continue to have amazing benefits. Auburn University students will actively participate in and be mentored by professionals as the stream’s progress is monitored over the next five years. This might not have been the case had the restoration project remained solely under private contract.

One professional who embraced the project’s demands for the sake of continuing education was Jof Mehaffey, an ecologist with Goodwyn, Mills and Cawood. Mehaffey was the visionary behind restoring the tributary and actively participated in helping set up public workshops as the project progressed. From the very beginning, the Montgomery ecologist looked forward to all the partnerships this project represented. One in particular was the opportunity to work with restoration scientists from North Carolina State University.

“NC State was a huge part of the educational component for this project,” says Mehaffey. “They have a lot of experience in this type of stream restoration, so we all gained valuable knowledge from the guys that came down.”

Mehaffey is not the only one who sees the potential benefits of varied partnerships and holding public workshops. Auburn Fisheries and Allied Aquacultures; research associate and SWaMP project co-coordinator Eric Reutebuch defines them as “a vital aspect of a project.”

Reutebuch says the issue is much bigger than one stream restoration project; it’s about taking care of what you have. Working closely with ACES, he’s seen how water conservation practices can substantially reduce and even prevent damage to waterways and water resources.

SWaMP shouldered roughly 25 percent of the Saugahatchee project as it put “on the ground money” in the hands of watershed stakeholders. “I really thought it fit our goals,” says Reutebuch. “The project had a community outreach component and sought to reduce nonpoint source pollution, two things we’re focused on.”

The result: A stream has been restored, an outdoor classroom has been established and a model for teamwork has been created. To learn more about the project and more on water conservation and stream restoration efforts, visit www.swamp.auburn.edu and, under “SWaMP Highlights,” click on the “Saugahatchee Tributary gets restored with SWaMP help” link.

Partners in Progress

The following groups were part of a group of more than 70 volunteers and professionals who worked on the stream restoration project.

- Goodwyn, Mills and Cawood, Inc. (GMC)
- Conner Brothers Construction Co.
- Alabama Dept. of Environmental Management
- Alabama Cooperative Extension System
- Auburn University
- Save Our Saugahatchee, Inc.
- Auburn University Water Resources Center
- Alabama Water Watch
- Alabama-Tombigbee Clean Water Partnership
- Auburn-area landscapers
- Retirement Systems of Alabama
- North Carolina Cooperative Extension System

GREEN CONCRETE—A group of biosystems engineering and building science majors smooths out a pervious concrete parking lot in the Donald E. Davis Arboretum as part of a year-long stormwater-quality-improvement study to determine how effectively the porous concrete captures and purifies runoff. Biosystems engineering assistant professor Mark Dougherty has teamed with faculty in building science and landscape architecture for the project and heads up the water-monitoring aspect of the study. Using an infiltrometer testing device he designed and built, he is periodically testing water quality on both the pervious concrete parking lot and an older asphalt lot. Dougherty will collect data through year’s end and after analyzing the data in a side-by-side comparison, he and his fellow researchers will report the results. If the concrete proves effective, agricultural producers could consider putting it in animal holding areas, for instance, to drain liquids quickly, to separate liquid from solids in manures or to remove specific contaminants from a range of wastewater effluents.



Fish Wastewater Perfect for Plants

By Jamie Creamer



A WIN-WIN DEAL—Left photo, Jesse Chappell, associate professor of fisheries and allied aquacultures at Auburn, scoops a tilapia from a greenhouse-enclosed tilapia-production tank. Chappell and horticulture professor Jeff Sibley are collaborating on a project in which fish wastewater is piped into an adjacent horticultural greenhouse to irrigate and fertilize plants. Right photo, Adam Sleeper, a horticulture graduate student, looks at red verbena that are among the bedding plants, ornamental shrubs, produce and more growing in the adjacent greenhouse. The system can give farmers a dual source of income.

Fish farmers in Alabama who produce tilapia in greenhouse-enclosed tanks can turn the wastewater from those tanks into a new source of on-farm income, say two College of Ag scientists and Alabama Ag Experiment Station researchers.

Jesse Chappell, Extension fisheries specialist and associate professor of fisheries and allied aquacultures, and horticulture professor Jeff Sibley have developed a system in which nutrient-rich fish wastewater from a tilapia tank is piped to an adjacent horticultural greenhouse, where it’s used to irrigate and nourish all manner of plants. So in addition to fish, producers would have high-value,

the tank, how many there are, how big they are, how much water the tank will hold and how much water is in the tank—and determining how those factors impact nutrient levels has been a central element of the study.

Sibley says once all data have been collected and analyzed, the information will be distributed to farmers through printed materials and through educational aquaculture Web sites such as ALEARN (www.alearn.info). The materials, which will include nutrition details as well as how-to information to help farmers set up their own systems, should be available in early 2010.



BREAKING NEW GROUND—Ground was broken at the Hubei Academy of Agricultural Science in China recently for a garden that is being developed in honor of Auburn University’s long and productive research relationship with the academy. Sarah Newton, Auburn University board of trustee president pro tempore, represented Auburn’s administration standing alongside the governor of Hubei Province. College of Ag Dean Richard Guthrie was also on hand for the event. The garden will be located on a site at the academy where a new Fruit and Tea Research Institute facility will be built. Read more about the relationship with China in View from Ag Hill on page 2.

Disturbed or Not, Fire Ants Take the Bait

By Jamie Creamer

For years, Auburn entomologist Xing Ping Hu wondered why the label instructions on most commercial fire ant baits say that for maximum effectiveness, you should sprinkle the bait *around* a mound instead of on *it* and you should treat undisturbed mounds only.

She wondered because she knew that, more often than not, she and countless others across the red-imported-fire-ant belt ignored those instructions—putting bait right on top of stirred-up fire ant mounds—and still the bait destroyed the mounds. So what had led bait manufacturers to give such directions in the first place?

To satisfy her curiosity, Hu set out to find and review the original research those instructions had been based on.

But after an intense search that included a month’s worth of calls and e-mails to all current and retired university, state, federal and industry fire ant researchers in the U.S. that she knew or knew of, Hu came up empty. The data wasn’t there.

So she did some research of her own, and results of her just-completed empirical study shoot down that long-held “do-not-disturb-the-mound” bait-application rule.

She found that fire ants in newly disturbed mounds scarf up bait as quickly as their counterparts in undisturbed beds do, that the baits are equally effective in both quiet and perturbed mounds and that mounds treated in the disturbed state don’t relocate; they die.

Hu also discovered that in both disturbed and undisturbed mounds, the ants devour bait fastest when it’s sprinkled on top of the bed. Depending on the season and temperature, the bait is gone within one to three hours of application.

Trials were conducted at the AAES’ E.V. Smith Research Center in Shorter over the spring and summer, when foraging activity is high. Hu says the project gives fire-ant-bait manufacturers research-based data to consider when refining their labels.

Poultry Plant Surveys, Audits Show Water Waste is High

By Jamie Creamer

Nine billion gallons of water. That’s how much Alabama’s 19 poultry processing companies are estimated to use every year as they process chickens into products for human consumption.

But a just-completed study by Auburn University indicates that simply by enforcing basic, common-sense conservation practices—turning water off when it isn’t being used, for instance—in their plants, processors could reduce water usage as much as 50 percent and prevent millions of dollars from going down the drain.

Auburn poultry science professor Pat Curtis initiated the study two years ago. In phase one, he assessed the situation in Alabama via written surveys in which the 19 broiler processors provided



FLOWING FREELY—Water sprays from nozzles on a feather-picking machine at a poultry processing plant even though the processing line is idle. This plant has six pickers with a total of 252 nozzles. The Auburn water-use auditors concluded that leaving water running at the pickers unnecessarily wastes 18,182 gallons of water daily and 4.7 million gallons—and \$8,299—annually.

detailed information about water use and wastewater discharge at their plants. Results showed the processors use an average of 6.7 gallons of water to process one bird.

Water use by the processing industry in Alabama and nationwide rose sharply in 1998, Curtis says, when the federal government tightened its food-safety regulations for poultry. For processors, complying meant washing poultry carcasses longer and using antimicrobials.

In the second phase of the study, Curtis and a team of “auditors” visited three processing companies in the state to conduct in-plant water-use audits and to detect problem areas. The most common problem the audits showed was needlessly running water—water that employees left on when the processing line was idle, including during breaks and lunch.

The team’s top water-saving and wastewater-discharge-reducing recommendations for the three plants were to turn off water at equipment when it’s not in use, to add cut-offs on gooseneck faucets used in the inspection area and to use dry cleanup on solid wastes instead of washing them down the drain.

Since the time the audits were conducted, one of the three plants has closed due to the economy, but the other two companies have made changes based on those recommendations. The survey and audit results will be the basis for developing water-saving strategies for all poultry processing plants, Curtis says.

Processors who stop the water waste will be helping conserve a valuable natural resource, reducing pollution and saving money.

College of Human Sciences

Brinker Wins Quality of Life Honors



Nancy Brinker

Founding Chair of Susan G. Komen for the Cure, Nancy Brinker, received the 2009 International Quality of Life Award when Auburn University and the College of Human Sciences hosted the 16th Annual International Quality of Life Awards ceremony in December at the United Nations in New York City.

Brinker was fulfilling a promise to her dying sister when she launched a comprehensive fight against breast cancer in 1982. Today, the Susan G. Komen Race for the Cure, symbolized by the pink ribbon, is the world's largest and most successful education and fundraising event for breast cancer.

In addition, Brinker served as U.S. ambassador to the Republic of Hungary from 2001 to 2003 and U.S. chief of protocol from 2007 to 2009. She was named one of TIME magazine's "100 Most Influential People" in 2008 and this past summer was honored by President Obama with the Presidential Medal of Freedom. Brinker serves as goodwill ambassador for Cancer Control for the UN World Health Organization and is a member of the Kennedy Center board of trustees.

The International Quality of Life Awards are sponsored by the College of Human Sciences to honor individuals who have achieved at the highest levels professionally and have demonstrated a strong commitment to empowerment through public policy and educational initiatives to enhance quality of life.

CHS FACULTY HONORS—Francesca Adler-Baeder, right, Extension specialist and associate professor of human development and family studies, and Shari Park-Gates, assistant professor of consumer affairs, received awards at the fourth annual Faculty Awards Celebrating Excellence ceremony. Adler-Baeder received a Distinguished Diversity Researcher Award, given by the Research Initiative for the Study of Diversity and the Office of the Vice President for Research; Park-Gates was honored with an Alumni Undergraduate Teaching Excellence Award, presented on the basis of outstanding teaching of undergraduates from nominations made by department heads, deans, alumni and students.



BEAUTIFUL BERRIES—Native plants like this American beautyberry provide food for many species of birds and encourage wildlife diversity. The value of native plants and the adverse effects of non-native and invasive plants were discussed at a recent class at the Donald E. Davis Arboretum. As part of its mission, the arboretum supports the use of native plants, and class participants were encouraged to consider creating a natural landscape around their homes.

native plant species such as milkweed, American beautyberry, rabbiteye blueberry, black-eyed Susan and oak trees, all of which are aesthetically pleasing and encourage wildlife diversity by providing food and shelter.

In October 2010, Tallamy, professor of entomology and wildlife ecology at the University of Delaware, will visit the AU campus to speak about sustaining wildlife with native plants. Details about his Oct. 19 lecture will be provided soon on the arboretum Web site at www.auburn.edu/arboretum.

College of Veterinary Medicine
Professor to Study Toxicity of Soy Protein Diets

The National Institutes of Health has awarded Benson Akingbemi, associate professor of anatomy at the College of Veterinary Medicine, a \$219,000 grant to study toxicity of soy-based diets.

Soybeans and soy products are the richest sources of isoflavones, which are plant-derived compounds that act like the female sex hormone estrogen. When absorbed into the body, soy isoflavones can disrupt the body's functions by altering normal hormone levels, halting or stimulating the production of hormones or changing the way hormones travel through the body, thereby affecting normal functioning of body organs. The reproductive organs possess especially high levels of binding sites for estrogen and, therefore, soy isoflavones.

Because rats share similar reproductive physiology with humans, they will be used as models for Akingbemi's research, which will determine the need for safety margins regarding use of soy proteins in the diet of infants. Determining the need for safety margins is important because infants tend to have high levels of ingested substances due to their smaller body size, and development of the brain and reproductive tract occurs late in pregnancy and infancy. These peculiar circumstances make infants especially vulnerable to hormone disruption due to ingestion of soy isoflavones, found in widely consumed soy-based infant formulas.

Grants from the Auburn University Biogrant Program and the College of Veterinary Medicine Animal Health and Disease Research Program also support Akingbemi's work.



Benson Akingbemi

School of Forestry and Wildlife Sciences
Zhang Receives National Award from Society of American Foresters



Daowei Zhang

Daowei Zhang, professor of forest economics and policy with Auburn's School of Forestry and Wildlife Sciences, received the Society of American Foresters Award in Forest Science, one of six national awards the society is giving this year. The award recognizes distinguished individual research in any branch of the quantitative, managerial or social sciences leading to the advancement of forestry.

Zhang has received more than \$1.3 million in extramural and competitive research grants in the past 14 years. He has authored or coauthored 64 refereed journal publications, two books—Softwood Lumber War and the forthcoming *Forest Resource Economics*—five book chapters and more than 40 technical reports and proceedings papers. He recently served as a panelist for the Cross-Border Forum on Softwood Lumber organized by the Woodrow Wilson International Center for Scholars and for the 2007 Southern Forest Economics Workshop, in addition to acting as a distinguished lecturer in forest economics and policy at the University of British Columbia.

Zhang and the five other award recipients were recognized during a ceremony at the 2009 Society of American Foresters national convention Sept. 30 through Oct. 4 in Orlando, Fla.



GRIM FORECAST—Extension ag economists at Auburn say the dollar's loss of reserve status and the steep devaluation that inevitably would follow would hit farms across the nation hard.

Dollar's Status Could Impact U.S. Agriculture

The mighty American greenback has fallen on hard times—so hard, in fact, that countries throughout the world are clamoring for its replacement as the world's reserve currency. Were that to occur, it could have major implications for U.S. agriculture, say two Auburn University agricultural economists.

James Novak, an Alabama Cooperative Extension System economist and College of Agriculture ag economics professor, says the dollar's replacement by another currency likely would mean a vastly cheaper greenback, and historically, U.S. farmers have favored cheap money and free trade.

"In terms of farming, economic theory says that devaluation would make our goods cheaper internationally and help us export more," Novak says. But, he says, the dollar's loss of reserve status affects more than the price of farm product; it can have a broad effect on the entire U.S. economy.

"The bright side is that we currently import a lot and while imports would become more expensive, that could potentially stimulate U.S. industry," Novak says. "The dark side is that a potential currency (devaluation) race to the bottom could result from other countries' attempts to maintain market share."

For decades, the greenback's unrivaled status as the currency of preference has provided the U.S. a comparatively cheap line of credit. Loss of this status, Novak says, would make borrowing money more expensive and likewise could undermine federal and state investments in public services, such as education.

And, says Novak's colleague Robert Goodman, loss of reserve status and the steep devaluation that followed could bring other dire consequences.

"For the farming sector, a cheap dollar is not an especially serious problem, except that the U.S. as a whole is a net importer," Goodman says. "As the dollar gets cheaper, it gets harder for us to buy these imports, and our exports are worth less, too."

Some contend that currency imbalances are inherently self-correcting and that, over time, the dollar's plummeting value will entice foreign investors to reinvest in U.S. markets. That's true, Goodman says, but only to an extent.

"It will balance, but the end result will be more economic activity overseas and less activity here," he says. "The U.S. will be poorer than it was, but other countries will be richer than they were. How much richer and how much poorer is anyone's guess at this point."

Wiggins Named 2009 Conservation Educator

Sam Wiggins, Alabama Cooperative Extension System coordinator in Pickens County, has received the Alabama Wildlife Federation's Conservation Educator of the Year Award. He was presented the award recently at the 2009 Governor's Conservation Achievement Awards banquet.

The Governor's Conservation Achievement Awards are considered the most prestigious conservation honors in Alabama. For 30 years, the AWF has presented these awards to individuals and organizations that have made great contributions to the conservation of Alabama's wildlife and related natural resources.

Wiggins has worked tirelessly in support of conservation projects in Pickens County for more than a decade. Since assuming his role as county Extension coordinator in 1991, Wiggins has worked to improve Pickens County residents' conservation knowledge and skills. In the last year, he has held educational seminars on control of cogongrass and understanding carbon credits.

He also has played an active role in Leadership Pickens, a program devoted to growing the county's leaders, and over the years has coached numerous 4-H forestry and livestock judging teams, conducted a variety of seminars and programs on the benefits of outdoor classrooms, helped organizations obtain funding for outdoor projects and worked with the Boy Scouts, 4-H clubs and several public schools across the state on outdoor projects and initiatives.

Also during the ceremony, Candace Thomas, a Tuscaloosa County 4-H'er who uses her marksmanship skills to increase other youths' awareness of wildlife and natural resources conservation, won the Youth Conservationist of the Year Award.

Thomas is a skilled shooting-sports enthusiast and frequently competes in 4-H shooting events. She is president of her 4-H club, and a member of the Tuscaloosa County 4-H Shooting Sports Club, and she served as leader of the Alabama State Champion 4-H Shooting Sports Team. Thomas is committed to encouraging others in the sport, and she spends time at most events passing along tips to help less experienced shooters improve their skills.

Take Vitamins, Drink Tea To Add Years to Your Life



DRINK UP—A recent study links drinking three or more glasses of tea a day to a longer life.

So you want to live longer? Then take your multivitamins and drink more tea to lengthen your telomeres.

Those are the implications drawn by two recent studies into one of humanity's most pressing questions: Why do we age—or, more important, how do we prevent it?

Experts have formulated several theories over the years, says Robert Keith, an Alabama Cooperative Extension System nutritionist and professor of nutrition and food science at Auburn University. All agree that genetics plays a major part in this process, and if you don't factor in chronic diseases such as diabetes and heart disease, exceptionally long-lived people appear to hold one distinct advantage over comparatively short-lived people: Their DNA appears to function more effectively over a longer period.

"There are different theories and thoughts about why we don't live forever, but it essentially boils down to genetics," Keith says. "Basically, it's your DNA and how well it copies over the course of time."

As we age, our DNA gets glitches that undermine its ability to produce body proteins accurately. In recent years, researchers have gained deeper insight into components of our genetic material—components called telomeres—and the role they play in the aging process. Scientists describe telomeres as caps on the chromosome bundles that contain our DNA and genes.

Think of telomeres as plastic caps on the ends of shoelaces that keep them from unraveling. Telomeres serve a similar role protecting our chromosome bundles. And much like the caps on shoelaces, telomeres degrade with time.

"Whenever our genes have to be expressed, the chromosome bundle must become looser so that copying can occur," Keith says. "It tightens again when the process is completed. As we age, our cells multiply, and the telomeres apparently get a little shorter. Over time, they get so short that they cannot keep our chromosome bundles together."

When telomeres unravel, cells and then tissues begin to die, and death eventually follows. "So the idea is that somehow our aging is related in part to the length of these telomere caps on our chromosome bundles," Keith says.

Recent research has shown how oxidative damage and inflammation can contribute to premature shortening of these telomeres, and the two aforementioned studies indicate there are dietary practices we can adopt to prevent the damage and inflammation and subsequently prevent the premature shortening of these telomeres.

One study explored the merits of green- and black-tea consumption among some 2,000 Chinese men and women 65 or older and found that tea drinkers who consumed at least three cups daily had longer telomeres than those who didn't. The tea-drinkers' telomeres, in fact, looked five years younger than of the tea teetotalers.

In the other study, the U.S. National Institute of Environmental Health Sciences investigated the effect of multivitamins on telomere length in 586 women ages 35 to 74. Results showed that the telomeres of regular multivitamin users were almost 5 percent longer than those of the vitamin abstainers.

calendar of events

• January 2010 •

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• March 2010 •

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Jan. 18
Martin Luther King, Jr. Holiday

January through May
Reclaiming Ground: Ag, Gardens, Art
Auburn

This five-month collaboration between the College of Ag and the Department of Art and College of Liberal Arts at Auburn features art exhibits, lectures, workshops and a panel discussion. See more details on page 5.

Contact: www.ag.auburn.edu/ArtinAg or Katie Jackson at 334-844-5887

Jan. 27
Industry Insight: High School Edition
International Poultry Expo
Atlanta, Ga.

The Department of Poultry Science, in conjunction with the U.S. Poultry & Egg Association, is giving high-school students and their teachers the chance to experience the International Poultry Expo firsthand. Companies from around the world and representing all facets of the poultry industry will be on hand at the Expo, which offers an ideal opportunity to educate students about the unlimited career possibilities in the poultry industry.

Contact: www.ag.auburn.edu/poull/prospective-students/Teachers/IndustryInsight.php

Feb. 17
Spring Judging Clinics
Ag Heritage Park
Auburn
9 a.m.

These events, co-hosted by the poultry science, animal sciences and horticulture departments, give students the opportunity to gain experience and practice competing in judging contests before the district events. The clinics are open to all high-school students interested in learning about poultry, nursery/landscape, floriculture, livestock, dairy and horse judging. Each student will be able to participate in two of these six areas.

Contact: www.ag.auburn.edu/poull/prospective-students/Teachers/SpringJudgingClinics.php

Feb. 23
AU Agricultural Alumni Association
Annual Meeting and Hall of Honor Banquet
The Hotel and Dixon Conference Center
Auburn

This event includes a board meeting, a membership meeting and the Hall of Honor awards banquet.

Contact: Elaine Rollo at 334-844-3204 or at rolome@auburn.edu

Mar. 15-20
AU's Spring Break

Mar. 23
Spring 2010 York Distinguished
Lecturer Series
Welcoming the Wild - Fritz Haeg
Auburn

This event is the spring lecture of the York Distinguished Lecture Series and is also part of the 2010 Art in Ag project.

Contact: www.ag.auburn.edu/yorklecture



AMBASSADOR TO THE AMBASSADOR—John Liu, associate dean for research in the College of Ag and associate director of the Alabama Agricultural Experiment Station (pictured with his back to the camera), played the role of an Auburn ambassador when the Chinese Ambassador to the United States Wenzhong Zhou and his wife visited Auburn University in October. Liu, who is also a professor of fisheries and allied aquacultures, took the visitors to his genetic research laboratory, which was one of several tours the couple made on campus. Zhou, pictured at left with Liu's graduate students in the background, came to Auburn at the invitation of Auburn President Jay Gogue to promote international education partnerships.

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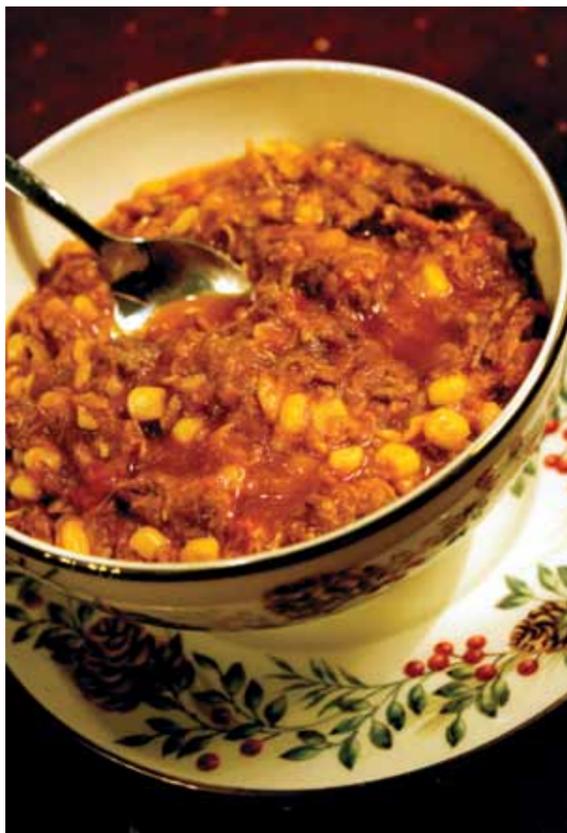
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Recipe File

Yummy! Cold Weather Comfort Food

There's nothing like a warm bowl of soup or stew to take the chill off cold weather, and Pete Holloway, head butcher at the Auburn University Lambert-Powell Meats Laboratory, has a perfect Brunswick stew recipe for some winter comfort food. If you live in the Auburn area or travel through during the week, you can get some of the ingredients for this recipe at the Meats Lab, located on Shug Jordan Parkway in Auburn. The lab's sales room is open Mondays through Thursdays from 2 to 5 p.m. and Fridays 11 a.m. to 5 p.m. You also can sign up for an e-mail sales alert from the lab by sending an e-mail with the message "subscribe aumeatsales" typed into the text to major-domo@ag.auburn.edu or by calling 334-844-1566. And you can find other delicious meat recipes in a Meat Science Association cookbook available through the lab for \$15 by contacting Erin Hunter at 334-844-1516.



Pete Holloway's Brunswick Stew

- 1 pound ground beef
- 1 large onion
- 1 can cream corn
- 1 can whole corn
- 2 cans stewed tomatoes
- 1 can (or 1 cup) cooked chicken
- 1 pound of pulled pork BBQ
- 1 bottle ketchup
- 1 tsp. Worcestershire sauce
- 1 tsp. lemon juice

Brown ground beef and onion together and drain. Combine all ingredients in a slow cooker and cook on low for 6 hours.