



BANANA MAN—Above, one of the 10 “hands,” or large bunches, of bananas harvested from Joe Kloeppe’s front yard on South Gay Street in Auburn. In 2010 Kloeppe planted six varieties of bananas and a total of 12 banana trees. Of the five trees that bloomed, two produced fruit big enough to cut and bring inside to ripen. At left, Kloeppe works in his winter garden. Kloeppe has had a lifelong interest in the science of plants, from his professional career as a plant pathologist to his personal aesthetic in maintaining year-long blooms in his yard.

A Passion for Plants

by LEIGH HINTON

JOE KLOEPPER COULDN’T HAVE been more than 7 or 8 years old when he became interested in the science of plants. His mom and grandmother were gardeners, so it was no surprise when his second-grade science project at Roeland Park Elementary in Mission, Kan., was on plant propagation.

Fast forward through college and graduate school, where he earned degrees in botany and plant pathology, to Auburn University where Kloeppe is still interested in plants—more spe-

cifically the healthy growth of plants. In fact, he is a named professor in plant pathology, an international authority on plant growth-promoting rhizobacteria, bacteria that enhance plant development, and recipient of more than \$10 million in external grant funding since he joined the AU faculty in 1989.

Kloeppe’s interest in plants has carried over into his life outside of work as well, and while his reputation for having a traffic-stopping, head-turningly beautiful front yard may not be international, it has won him accolades from the Auburn Beautification Council.

When Kloeppe moved into his home on South Gay Street in 2005, he knew he wanted to renovate the front yard, remove the overgrown azaleas and create flowerbeds so that the house would be bordered by flowers year round.

“But I learned from previous moves that it is a good idea to be in a house for a year to see patterns of sunshine and lighting before committing to a garden design,” says Kloeppe.

So he worked on the house itself, replacing a small screened porch with a greenhouse, and he met with a landscape designer. As a plant pathologist, Kloeppe knew the key to healthy plants is healthy soil. So he installed a raised bed, which allowed him to “smooth” out a hill in the front yard,

bring in good quality soil and surround his house with flowers.

Within a couple of years, Kloeppe had established the yard with perennials and plantings of annuals and was primed for something new. He had installed a greenhouse and brought in great soil, so he decided to try his hand at growing tropical plants—a dream he’d had since his days as a lad in Kansas.

It just so happened that Kloeppe had been conducting an experiment on the growth of healthy bacteria inside banana stems, and when the experiment was complete in the spring of 2008, he planted one of the leftover trees in his front yard.

To his surprise, the tree bloomed. By overwintering the plant in his greenhouse, he inadvertently gave the banana tree a two-month head start and increased its chances of blooming. In the two seasons since, Kloeppe has experimented with several new varieties of banana trees. In 2010 he planted six varieties and a total of 12 trees. Of the five that bloomed, two produced fruit big enough to cut and bring inside to ripen.

“I have one new banana variety to try next year and am always on the lookout for new and strange things. If anyone has a banana that bloomed this year, I would love to get a

(continued on page 2)



YEAR-ROUND BEAUTY—In addition to the perennials that adorn his front yard, Joe Kloeppe’s garden is a showpiece for two plantings of annuals each year. Snapdragons and pansies bloom throughout the winter while vinca, impatiens and begonia adorn his yard from late spring through fall. He is still experimenting with other annuals, such as hibiscus, to provide height and color.

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View from AGhill



As the year 2010 marked the first year of a new decade, 2011 represents the next foot-step in time. Leaders are often faced with trying to determine where the world is heading over the next 10 years in order to move their organization in a direction that will make a difference. This is often a difficult challenge. Think back to the year 2000.

How many of us would have predicted that during 2000-2010 we would experience record high energy prices, record high commodity

prices and an economic transformation in Asia? Consider some headlines from the Jan. 7-8, 2011, Financial Times: “India Fears Food Price Surge will Stall Economy,” “Farmers Wanted” and “How Can We End Europe’s Energy Squeeze?”

These types of news articles reflect a new world dynamic that emerged during the last decade and will dominate agriculture during the next decade. The world is growing rapidly! Experts predict that the 7 billionth person will be born this year. The global middle class is increasing rapidly and creating an increasing demand for food and energy. It is likely that the dominant issue facing the agricultural community over the next decade is dramatically increasing food production to satisfy global demand.

One of the difficult challenges for agricultural researchers will be declining state and federal funding that drives research. During the past several years, agricultural experiment station budgets have decreased more than 20 percent in many states. A renewed commitment to greater fiscal responsibility by the new Congress further threatens to erode federal funding for agricultural research and outreach at a time when global demand is rapidly increasing.

These are tremendous challenges for our agricultural and global community. What will 2020 bring us? While no one knows for sure, the Alabama Agricultural Experiment Station is thinking about that future. This year we will initiate a strategic planning process to ensure that we are targeting our limited resources in areas that are most beneficial for Alabama farmers.

Bill Batchelor


DEAN, COLLEGE OF AGRICULTURE
DIRECTOR, ALABAMA AGRICULTURAL EXPERIMENT STATION

(A PASSION FOR PLANTS, *from page 1*)

sucker next year. Maybe we can start a ‘banana exchange’ in Auburn!” Klopper says.

When asked if he has advice for those of us who like to garden but don’t quite have his green thumb, Klopper says don’t garden unless you really enjoy it.

He adds that to have beautiful plants you need healthy soil and recommends the following for the heavy clay soils found in this region: Dig up the area you want to plant to a depth of about 2.5 to 3 feet; replace half of the clay with good loamy soil or a combination of peat-based potting mixes and wood chips; and mulch the area during the summer with grass clippings and in the fall with leaves.

When it comes to growing tropical plants, Klopper suggests trying anything and everything at least once. If it works well, grow it again the next year; if it doesn’t work, he says, just rip it out. 



GREENHOUSE GRANDEUR—One of the first renovations Joe Klopper completed after moving into his house on South Gay St. in 2005 was replacing a small screened porch with a greenhouse, which has allowed him to try his hand at growing tropical plants. His specialty: banana trees. While the first cold snap kills banana trees back to the soil line, Klopper keeps the plants alive in his greenhouse over winter, thus giving them a head start and increasing their chances of blooming and producing fruit when they are returned to his yard in the spring.

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Expansion

New Aquatic Resource Center to Serve Many

by KATIE JACKSON

Research, teaching and outreach—the three primary missions of Auburn University—will be well served when the new \$9 million-plus Auburn University Center for Aquatic Resource Management opens later this year.

Construction of the center, located at the E.W. Shell Fisheries Research Center on Alabama Highway 147, began in April 2010 and is expected to be completed by this summer. Funded primarily by monies from the National Oceanographic and Atmospheric Administration, the facility will serve many purposes.

“The center provides a unique opportunity to conduct research and expand our capabilities in all aspects of the land-grant mission of teaching, research and outreach,” says David Rouse, head of the Department of Fisheries and Allied Aquacultures.



ANOTHER BRICK IN THE WALL—Workers brick up the front of the new laboratory building at Shell Research Center. The laboratory will provide a great deal more space for research and study.

“We’ve known for a number of years that we needed to upgrade our facilities at the Shell Center, which has provided a great resource for outdoor work, but modern research is calling for more controlled studies,” says Rouse.

With that need in mind, efforts began in 2004 to secure funding for the new facility, and when NOAA funding came through in 2007, plans began to actually build a new facility. Ground was broken in January of 2010 and the official start date for construction was April 19, 2010. The LEED-certified facility is expected to be completed by June. July will be spent equipping and furnishing the building with plans to officially open its doors in August.

The facility includes a more than 20,000-square-foot administration building and another 17,000-plus-square-foot laboratory building, offering a total of more than 37,000 square feet of “under roof” research, teaching and outreach space.

The administration building will house offices for the Shell Research Center staff, a reception/visitors’ education area, a teaching lab and hatchery space, a new sales room with fish processing space and a large multi-purpose room for classes or other group meetings. A major portion of the floor space will be dedicated to a new fish holding area where fish from research ponds will be sorted, weighed and counted as needed depending on the project. The adjacent laboratory building will be home to more labs, fish tanks and lots of “flex” space where researchers can set up a wide range of studies.

According to Rouse, the facility can be used for multidisciplinary research on everything from fish health and genetics to environmental stresses and water quality to new fish and seafood processing options. But it will also be a fine teaching tool.

“Our faculty members are really excited about the two classrooms,” says Rouse. “More than 18 of the classes we teach have a component that involves this facility so it has always been a huge part of our teaching program, but it has always been a problem moving students or specimens back and forth from the main campus. Now, we can bring classes to the ponds,



DIRECT RESULTS—Randell Goodman, director of the Shell Center, and David Rouse, head of the Department of Fisheries and Allied Aquacultures, survey the work on the new facilities.

take fish or microorganism samples from the ponds and bring those samples right into the center for the students to study.”

The new buildings will also make the Shell Research Center more accessible to the public, which Randell Goodman, director of the Shell Center, says will be a true joy.

“We already have hundreds of guests here each year,” says Goodman, including people who come to buy fresh and frozen fish products from the sales room, school and civic groups who tour the facility and lots of drop-in guests who are simply curious. To accommodate and educate these visitors, the administrative building’s reception area will be filled with kiosks and displays offering a wide range of information such as aquariums filled with live fish, virtual tours of the research station and historic information about Auburn’s world-class international fisheries and allied aquacultures program.

Goodman also sees this as an environmental education resource for the public. The Shell Center, which includes 1,850 contiguous acres and 377 research ponds, is part of 3,330 total acres in north Auburn owned by Auburn University and managed by the fisheries department. This area is part of the watershed that supplies the fisheries center and much of Auburn, with water. Protecting water supplies and watersheds worldwide has become a pressing issue and this facility can help in that effort through multidisciplinary research and teaching, but also through outreach education efforts.

“I think the new center will really increase our presence and our opportunity to serve students, faculty and also the community,” says Goodman, adding that he hopes the local community will use the facility. For example, he sees the facility as an ideal spot for Alabama Water Watch and other community groups to meet and train. “We are excited about the possibilities and that this facility will be a real community asset.”

Though initial funding from NOAA will cover construction costs, more funding is needed to furnish and equip the building. The College of Agriculture and Auburn University’s main administration are helping with that effort. Scientists who use the facility will be paying for their specific laboratory needs through their own research monies. However, they also hope donors will help with the effort by providing funds or in-kind donations for equipment.

To learn more about the center or how to make donations to it, contact Rouse at 334-844-4786 or roused@auburn.edu.



ICHTHYOLOGICAL EXPANSION—Work is moving swiftly on the center’s new administration building, in the foreground, and the laboratory building behind. Construction is scheduled to be completed in June of this year.

Faculty and Staff Accomplishments

Claude Boyd, Butler Cunningham Eminent Scholar in the Department of Fisheries and Allied Aquacultures, has been named a fellow of the American Association for the Advancement of Science, a highly prestigious honor recognizing AAAS members for their meritorious efforts to advance science or its applications.



Claude Boyd

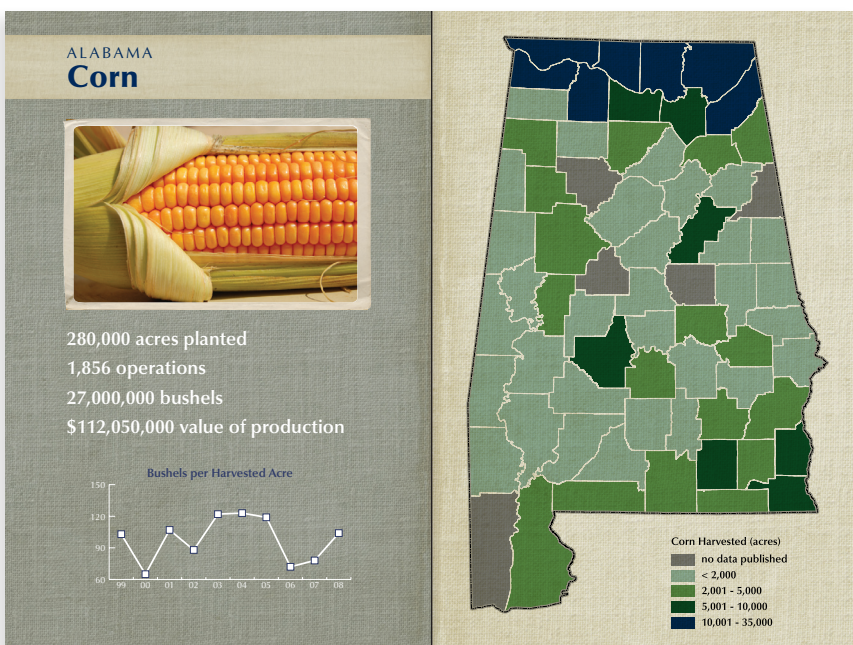
Valentina Hartarska, an associate professor in the Department of Agricultural Economics and Rural Sociology, was an invited speaker at a seminar organized by the Finance and Private Sector Development Group at the World Bank on Nov. 23 in Washington D.C., where she presented her work on Scope Economies in Microfinance. Hartarska also met with the Financial Economics Group to discuss various research initiatives in microfinance and economic development.

A Global Water Watch program in Brazil—the ChildFund project—recently won second place in the prestigious Premio Furnas Ouro Azul (Furnas Blue Gold Award) competition’s NGOs and Community Associations category. Global Water Watch is an international organization patterned after the Alabama Water Watch program, which is led by fisheries and allied aquacultures research fellow **Bill Deutsch**, who also leads the global program. To see a photo of the award go to http://fcc2009.emktsender.net/ver_mensagem.php?id=TH|1050|49694|100805170806898466857. To learn more about Global Water Watch go to www.globalwaterwatch.org/.



Daniel Mullenix

Daniel Mullenix, a master’s candidate in biosystems engineering, was one of 10 young professionals named to the American Society of Agricultural and Biological Engineers 2011 “New Faces of ASABE” class. The honor was bestowed on up-and-coming ASABE members, all 30 years of age or younger, who have distinguished themselves with outstanding early-career achievements in agricultural and biological engineering. Profiles of the honorees are available at www.asabe.org/pr/eweek/faces/index2011.html.



JUST THE FACTS—How many dairy farms are in Alabama? What’s the average size of an Alabama farm? How many acres in your county are forested? You’ll find these and a world of others facts and figures packed into a new pocket-sized booklet simply titled “Alabama: Agriculture and Forestry.” Within the publication’s 40 pages, you’ll find the most current Alabama crop, livestock and forest data available from the National Agricultural Statistics Service as well as from Alabama Agricultural Experiment Station publications and forest industry resources. Published in September 2010, the attractive booklet is a joint effort of the Alabama Agricultural Experiment Station, Alabama Cooperative Extension System, Alabama Farmers Federation, NASS and Auburn University’s College of Agriculture and School of Forestry and Wildlife Sciences. To request a free copy of the publication (AAES Special Report No. 9), call 334-844-4877 or e-mail agcomm@auburn.edu.

Food Science and Sustainability

New option and minor offered by College of Ag

One of the many challenges of the 21st century will be efficiently feeding the world’s growing population—a population that is expected to increase by 32 percent during the next 30 years. The College of Agriculture is responding to this challenge by preparing future scientists with skills to meet the rising need for food and fiber.

Food science, an option available through the Department of Poultry Science, began enrolling students in September 2010; in the works for 2011 is a new minor in sustainable food systems, to be offered through the Department of Agricultural Economics and Rural Sociology.

In the food science option, students study food safety, the nutritional value of food, food quality, food plant management and the development of new products and processes. Students also take part in a summer-long internship in the food science industry.

“Most people don’t realize the science and technology that goes into developing food products and that the food manufacturing industry is one of the country’s largest,” says Leonard Bell, professor of poultry science and acting coordinator of the food science program.

Don Conner, head of poultry science adds, “Strengthening our efforts in food science will enhance Auburn’s existing programs in agriculture and will uniquely position the college to more effectively address critical issues from the farm to the fork.”

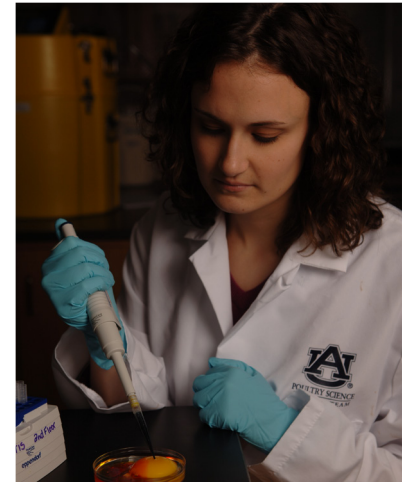
Graduates from the food science option are prepared for employment in the manufacturing and distribution of food products; in quality control, research and development of new food products; and by government agencies concerned with food safety and regulations.

During the fall 2010 semester, 10 undergraduate and five graduate students were enrolled in food science. Enrollment is expected to grow to 30 to 40 undergraduate and 15 to 20 graduate students in the next few years.

“The College of Agriculture is committed to increasing enrollment growth to meet future industry demands and global needs,” says Paul Patterson, associate dean of instruction.

In addition to the food science option, the planned minor in sustainable food systems represents another college initiative to prepare students to meet emerging agricultural and societal issues. The proposed minor would include an introductory course on food systems; selected plant, crop and animal science courses; an agricultural issues and policies course; and a research-based, capstone class covering sustainable agri-food systems.

“A minor in sustainable food systems gives us an opportunity to open up a discussion with students from a variety of fields to talk about alternative ways to produce food,” says Norbert Wilson, associate professor in agricultural economics and rural sociology and head of the committee to develop this minor. “I believe there is broad student interest across the university in sustainable food systems. We all want to be able to feed our children now and in the future.”



ANOTHER OPTION—Food science majors study issues ranging from food safety and quality to new-product development.

Ag Week Plans Taking Shape

Ag Week, the annual event when Auburn is “All Ag,” is planned for March 28 through April 1 and promises to offer many special activities.

At press time, the Ag Week details were still being ironed out, but the activities will include Ag Hill Picnic, a Contemporary Ag Program young alumni speaker and an etiquette dinner for students, to be held on March 29 at The Hotel at Auburn University and Dixon Conference Center.

The highlight of the week will be Ag Industry Day (www.ag.auburn.edu/goplaces/agindustry) on March 31 when high-school students from across Alabama will converge on campus to learn more about the College of Agriculture and Auburn University. High schools have until March 17 to register and companies may register to have booth spaces any time. This year the event will be held in the Auburn Student Center on the central Auburn campus. Registration begins at 8 a.m. The program will begin at 9 a.m., with students dismissed at 10:15 a.m.

The special guest speaker for Ag Industry Day is Temple Grandin, an animal scientist at Colorado State University who, despite being diagnosed at a young age with severe autism, has gone on to be an internationally recognized authority on animal handling and welfare, a best-selling author and the subject of an Emmy Award-winning HBO movie.

For more information on Ag Week, contact Kate Derby at gkd0001@auburn.edu or Audrey Johnson at alj0002@auburn.edu.

Temple Grandin will Present Spring 2011 York Lecture

Temple Grandin, an internationally distinguished animal scientist, best-selling author and one of Time magazine's 2010 "heroes," will present the spring 2011 York Distinguished Lecturer address on March 31 at 7 p.m. at the Auburn University Student Center ballroom.

A native of Massachusetts who, at the age of 2, could not speak and had signs of severe autism, Grandin—with her mother's unerring support, overcame amazing odds and obstacles to not only earn a Ph.D. but also to become a leading scientist, international speaker and consultant addressing issues ranging from livestock equipment design to animal welfare to autism.

As a professor of animal sciences at Colorado State University, Grandin's research focuses on the design of livestock handling facilities and animal welfare issues to reduce animal stress and losses at packing plants. Today, half the cattle in the U.S. and Canada are handled in equipment she designed for meat plants. She also has worked with companies worldwide—in the United States and Canada to Europe, Mexico, Australia, New Zealand and other countries—to develop more humane and efficient ways to handle livestock.



Temple Grandin

In addition, Grandin developed animal welfare guidelines for the meat industry and has consulted for McDonald's, Wendy's International, Burger King and other companies on animal welfare issues.

Along with her research and outreach efforts at Colorado State, Grandin also mentors several graduate students and teaches courses on livestock handling and facility design.

Her book, *Animals in Translation*, was a New York Times best seller. Other popular books authored by Grandin are *Thinking in Pictures*, *Emergence Labeled Autistic*, *Animals Make Us Human*, *Improving Animal Welfare: A Practical Approach* and *The Way I See It*.

Grandin has received numerous awards from the livestock and meat industry, academia and organizations concerned with the humane treatment of animals. She is a past member of the Autism Society of America's board of directors, and she lectures throughout the U.S. on her experiences with autism. Her articles and interviews have appeared in the New York Times, People, Time, National Public Radio, 20/20, The View and the BBC. She was also honored as a hero in Time magazine's 2010 "The 100 Most Influential People in the World" issue.

An HBO-produced movie about her early life, which starred Claire Danes, was released in early 2010 and won seven Emmy Awards later that year.

Grandin's York presentation at Auburn is free and open to the public. To learn more about the York Lecturer series and Grandin's address, go to www.ag.auburn.edu/yorklecture.



MAJOR MOTIVATION—Temple Grandin, a professor of animal sciences at Colorado State University, has drawn from her experiences as a person with autism to promote humane livestock-handling processes.

AG illustrated

Readership Survey

The Office of Ag Communications and Marketing wants to know what you think about Ag Illustrated. We are looking to expand our presence on the Web, and we want your opinions. Please take a moment and fill out the survey online at surveymonkey.com/s/agillustrated.

Thanks for taking the time to let us hear from you!

Imagining Animals Wildlife Videographer Shows Animals' Points of View

A professional videographer best known for capturing the natural environment from wild animals' points of view will be in Auburn April 6 to show and talk about his unusual animal-borne imaging projects in a presentation titled "Nature Holds My Camera: The Video Art of Sam Easterson."



PERSPECTIVES—Footage of bison roaming the range was captured by a video camera mounted on one of the animals in the herd.

Easterson's fascination with observing the world through the eyes of the animal kingdom began in 1998, when, in a project commissioned by a Minneapolis museum, he gave humans a glimpse into life in the ovine world by outfitting an entire flock of sheep with helmet-mounted video cameras. Intrigued by that basic concept, he began designing and constructing video cameras of all shapes and sizes, mounting the cameras on wild animals and plants and producing videos to offer people an insider's view of nature.

In 2007, he phased out his animal-borne imaging efforts and now captures footage by implanting cameras in natural environments. He also is working on plans to open what will be the New Natural History Museum and an accompanying website, where people can explore new ways of observing nature.

Easterson's work has been displayed in museums across the country and has been featured on the Discovery, Animal Planet and Sundance cable channels. The artist also has been a guest on *Late Show with David Letterman*.

He is a graduate of The Cooper Union for the Advancement of Science and Art in New York and holds a master's degree in landscape architecture from the University of Minnesota. In addition to working as a video naturalist, Easterson has worked as a museum professional in the U.S., Canada and New Zealand.

For more information on Easterson's visit and the Art in Ag project, go to www.ag.auburn.edu/artinag. This program is made possible by grants from the Alabama State Council on the Arts and the National Endowment for the Arts.



HELLO WORLD—An Eastern mole outfitting with a video camera breaks through the soil.

New Lespedeza Cultivar Ideal for Ground Cover, Live Mulch

The Alabama Agricultural Experiment Station has released a hardy new sericea lespedeza cultivar that makes an excellent choice as a ground cover for rights of way, embankments and roughs on golf courses.

The cultivar, AU Pixie, has an attractive cascading appearance, is drought tolerant and can grow in soils with low acidity and fertility levels, says Jorge Mosjidis, the Auburn University agronomy and soils professor who developed the cultivar.

AU Pixie is so named because, while other sericea lespedeza cultivars reach 40 to 45 inches high at maturity, its maximum height is only about 20 inches, Mosjidis says. As it grows, AU Pixie's outer stems bend downward and spread in a loose, low-growing ground cover.



THE LATEST LESPEDEZA—The AAES' newly released AU Pixie is the eighth sericea lespedeza cultivar developed by Auburn, but while the other releases improved the plant as a forage crop, the new, low-growing cultivar shows value as a ground cover and a live mulch. Jorge Mosjidis, an Auburn agronomy and soils professor whose expertise is in plant breeding, developed AU Pixie.

A perennial warm-season legume, AU Pixie adapts to a wide range of soil types and can be grown throughout Alabama and in other regions where sericea lespedeza is commonly grown, Mosjidis says.

As is the case with other sericea lespedeza varieties, AU Pixie helps protect soil from erosion, adds organic matter to the soil, is rarely affected by disease or insects and, as a legume, adds nitrogen to the soil.

In addition, Mosjidis says, the cultivar can be used as live mulch. In trials conducted in Milstead in east-central Alabama in 2006-07, pumpkin yields in fields where AU Pixie had been planted between rows were 34 percent higher than in conventionally planted pumpkin fields. The AU Pixie fields also produced 30 percent more pumpkins than the bare-soil fields.

AU Pixie can be planted after the last frost in the spring with a grain drill to a depth of ¼ inch and at a planting rate of 20 to 30 pounds per acre.

As a perennial, AU Pixie's stems and foliage die after the first hard frost in the fall. Plants are dormant during the winter, and new growth starts the following spring. Plants will regrow after cutting.

AU Pixie is the eighth improved sericea lespedeza cultivar the AAES has released since its first, Serala, in 1962. The most recent before AU Pixie was the 1997 release of AU Grazer, the first grazing-tolerant sericea lespedeza.

For more information on AU Pixie, contact Mosjidis at 334-844-3976 or Jim Bostick, Alabama Crop Improvement Association, at 334-693-3988. A brochure is available online at www.aes.auburn.edu/comm/pubs/agronomy/aupixie.pdf.

Oyster Farmers Could Have Profits in the Bag with New System

by JAMIE CREAMER

Researchers from Auburn and Louisiana State universities say an innovative, Australian-developed oyster-farming system in which oysters grow in mesh bags suspended in ocean waters could help oyster farmers along the Alabama, Mississippi and Louisiana Gulf Coast boost their harvests and, in turn, stimulate the region's economy.

"This could be an important addition to a traditional coastal industry by providing business opportunities to those already in the oyster industry as well as other coastal residents," says Bill Walton, Auburn aquaculture and fisheries specialist based at Auburn's shellfish lab on Dauphin Island.

Walton and John Supan, oyster specialist with the Louisiana Sea Grant Program and LSU AgCenter, led the joint research project and after extensive trials have determined that the bag-grown, off-bottom oyster culture system not only is successful in the northern Gulf but that it offers some advantages over the traditional approach of harvesting the mollusks from reefs at the bottom of the ocean.

One major advantage, the researchers say, is the high survival rate bag-grown oysters enjoy because they are out of reach of their bottom-dwelling predators. For growers, that high survivability translates into complete harvests of planted oyster seed. The approach also allows greater control over the natural variability that dominates bottom harvesting and, as Walton says, "It's clean, green and energy efficient."

Walton says his work now focuses on "testing different types of gear," namely, the types of containers that the oysters are grown in.

"The adjustable long-line system with the hanging baskets is one system of gear," he says. "But we're also using mesh bags that float right at the water surface, larger plastic-coated wire mesh cages that also float at the surface and mesh cages that sit on the sea floor."

"Oyster farmers have found many ways to raise oysters, and we want to see which ones work best, both in terms of yield and profit."

The goal of the research project, Walton says, is industry adoption of off-bottom oyster culture to supplement the traditional harvest.

Although the research began before the Deep-water Horizon disaster, the oil spill has prompted increased interest in oyster culture, Walton says.

"We have received more calls and questions about oyster farming in the last four months than we have combined over the prior 12 months," he says. "The spill has created a window of opportunity where traditional oystermen are eager, even desperate, to find ways to get back to working on the water as soon as possible."

Funding for the project is provided by the National Sea Grant College Program and the Mississippi-Alabama Sea Grant Consortium.

For more information, contact Walton at billwalton@auburn.edu.



BAG-GROWN OYSTERS—First-year oyster "seed" fill the bottom of a basket-like mesh bag that will hang below the ocean surface as part of a new oyster-farming system that could help revive the Gulf Coast economy.

College, Hort Department Strengthen Ties with Chinese Institute

The Department of Horticulture lab located at 251 Funchess Hall and commonly known as simply the horticulture lab is now the USA-Sino Joint Research Center for Aquatic Vegetables and Ornamentals as part of a new memorandum of understanding between Auburn's College of Agriculture and the Wuhan Vegetable Research Institute in Wuhan, capital of China's Hubei province.

A delegation including four Wuhan city officials, a professor from the research institute and the manager of a food company in Wuhan was in Auburn in January to sign the memorandum, which also renamed Wuhan Vegetable Research Institute's Aquatic Vegetable Division the Sino-USA Joint Research Center for Aquatic Vegetables and Ornamentals.

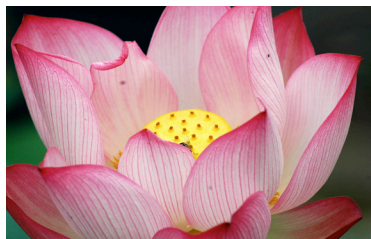
Lotus is the catalyst that sparked the relationship between the horticulture department and the Wuhan center. It was while visiting the Wuhan institute in 1998 that Auburn horticulture professors developed an interest in the aquatic plant, and in 2001, professor Ken Tilt and others launched the Auburn University Lotus Project to investigate the aquatic plant's potential as a

profitable alternative crop for farmers, particularly in the Black Belt, and the local market potential lotus would have as a food, medicinal and ornamental plant.

Tilt says the College of Ag's horticulture department and the institute already cooperated on aquatic vegetable and ornamental research and information exchange, particularly regarding lotus, under an academic interchange agreement.

"This new agreement, however, strengthens both institutions' commitments to collaborate in research and extension programming and to jointly seek funding opportunities for international research and extension efforts to discover, develop and release new aquatic crops that can help improve the health and economies of people in the U.S. and in China," Tilt says.

On hand for the signing ceremony was Laura Bancroft from Ten Mile Creek Nursery in Hartford. The south Alabama nursery, an industry collaborator in the lotus project, became Alabama's first commercial ornamental lotus operation in 2008. Today, the Bancrofts ship thousands of blooming lotus each spring to a wholesale nursery in the northeast, market cut lotus flowers to an Atlanta floral distributor, harvest lotus biomass for use in the cosmetic industry and offer an online retail store for home gardeners.



ONE OF HUNDREDS—Auburn's large collection of lotus cultivars includes this one, named Space Lotus 36.

Precision Ag Technologies Yield Big-Time Savings for State's Farmers

by JAMIE CREAMER

When Alabama Agricultural Experiment Station scientists at Auburn University began investigating precision agriculture technologies 15 years ago, a key question was at the heart of the research: Would investing in the technologies be cost-effective for Alabama farmers?

Thus far, the researchers say, the answer is a resounding yes.

John Fulton, Auburn biosystems engineer and precision ag specialist, says the estimated 60 percent of farmers across the state who have adopted precision farming technologies or site-specific management strategies on their collective 1.1 million acres saved an estimated \$10 million on crop inputs in 2009, largely by reducing overlap when applying fertilizer and pesticides.

Producers who incorporated variable-rate technology, guidance systems, automatic section controls and other precision ag tools into their operations also reported significant savings in time and labor due to the improved efficiency the technologies provide, Fulton says.

In addition to lowering farmers' production costs, precision agriculture allows these producers to farm in more environmentally sustainable ways.

"They have reduced the overall amount of pesticides and nutrients they apply to cropland and pastures by an average of 10 percent," Fulton says. "Precision farming means inputs can be applied on an as-needed basis, which can mean fewer trips across fields, and that can reduce the risks of soil compaction, erosion and chemical runoff into surface water."

Precision agriculture is an ever-evolving approach to farming in which producers use GPS, aerial images, geographic information systems software and sensors installed on farm machinery to gather detailed information about how soil fertility, terrain, weed populations, crop yields and other conditions affecting crop growth vary within a given field.

That information, Fulton says, is helping farmers document their field operations and develop a more refined understanding of their operations' potential and limitations and make decisions that will improve production and profitability.

In Lawrence County, grain farmer Don Glenn and cotton producer Larkin Martin were among the first farmers in the state to enter the age of precision ag years ago, and both say the tools of precision farming have helped boost productivity and profitability on their operations significantly. They also acknowledge that the precision ag research at Auburn has been priceless, as has the training and education efforts of Alabama Cooperative Extension System professionals.

"The (Alabama Precision Ag Program at Auburn) has provided invaluable assistance in cutting through the marketing hype to show what really works in the field," Glenn says, and Martin, who believes the practical use of precision agriculture will be crucial part of any successful agriculture op-



RIGHT ON THE MONEY—Don Glenn, who was one of the first farmers in the state to invest in precision ag equipment and systems, explains the navigational technologies that provide repeatable, centimeter-level accuracy for his field operations. Precision ag has helped Glenn reduce input costs, save time and labor and increase efficiency, productivity and profitability on his Glenn Acres farm in Hillsboro.

eration in the future, says that researchers' work to quantify the value of the various precision ag tools and Extension's efforts to keep Alabama farmers informed "have brought and should continue to bring real value to agriculture in Alabama."

Auburn scientists calculated the estimated savings realized through use of precision ag technologies based on the number of farmers they consult, the number of farmers enrolled in National Resources Conservation Service precision ag programs and the average savings for various technologies that have been determined through research, Fulton says.

For more information on precision ag, visit the website alabamaprecisiononline.com.

(Extension communications and marketing specialist Jim Langcuster also contributed to this article.)

Study: Measurements, Math Best Way to Estimate Horse's Heft

by JAMIE CREAMER

Weight-guessing booths at county fairs can be fun for fair-goers, but when it comes to horses, guessing their weight is no game. How much a horse weighs is a need-to-know factor for calculating the animal's feed



A WEIGHTY ISSUE—A regular measuring tape runs the length of a horse as part of a study conducted by Auburn University equine scientist Betsy Wagner. In the study, Wagner determined that a mathematical formula that uses horse measurements is the most accurate way to estimate how much a horse weighs.

and nutrition needs, administering correct dosages of medication and monitoring the horse's condition, and even long-time horse owners and large-animal veterinarians who might think they can size up a horse just by looking at it can be off by as much as 200 pounds.

The only sure-fire way to determine the exact heft of a horse, of course, is with an equine weigh scale, but because such scales usually aren't available, a couple of generally accepted weight-estimation methods can be used.

One of those approaches is to measure around the horse's heart girth, or rib cage, with

an equine "weight tape" that is calibrated based on pounds instead of inches. The other is to use a regular soft tape measure to determine the horse's girth as well as its length from the point of the shoulder to the point of the buttock and then plug those measurements into a mathematical weight-estimation formula.

Which is the most accurate?

Definitely the latter, says Auburn University equine scientist Betsy Wagner, and though many have assumed that to be the case, she has the research and the numbers to back that up.

In a just-completed study, the assistant professor traveled to six horse farms around the state and used both estimation methods on a total of 145 adult horses representing 20 different breeds. She also weighed each horse on a portable equine weigh scale.

Her analyses showed that weight estimates calculated using the formula—which, for the record, is girth squared times length divided by 330—came to within 42 pounds of the actual weights. Estimates with the weight-tape method were off by an average of 145 pounds.

"Estimates that far off the mark can jeopardize the health and well-being of horses because they might be getting too much or not enough feed or given medications or sedatives at dosages that are too high or too low," Wagner says.

As a for instance, Wagner recently took her horse in for dental work, and though the average weight of an adult quarter horse is 1,100, her horse tipped the scales at 1,300.

"If she had received the sedative at a dosage rate for an 1,100-pound horse, she probably would have gotten a little testy before they finished the work," she says.

Accurate weight estimates also are important in forecasting how much hay will be needed over the winter, she says.

Wagner, who involves her students in her research as much as possible, has begun a similar study on miniature horses and currently is searching for subjects for that project's second phase. Anyone who owns miniature horses that could be included in the study can contact Wagner at 334-844-7503 or elw0001@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 our inaugural installment, the Department of Animal Sciences is in the spotlight.

Spotlight

Animal Sciences

A Hands-on Department

Teaching - A High Priority

"One of our biggest strengths is the faculty's engagement with teaching," says Wayne Greene, head of the Department of Animal Sciences. "Their engagement has been a driving force in stimulating the growth of a student-centered program."

According to Greene, the department has experienced significant increases in student numbers each year since 2000, a fact that he attributes to faculty involvement and lots of practical learning experiences for their students.

"Many of our incoming students don't have lots of hands-on experience with large animals, so we strive to expose them to that early on," says Greene. "We have implemented programs and a practicum in the department to help those students feel at home with a large animal and with science."

Other efforts to expose students to the "real world" of animal sciences include spring break and summer tours around the state and region to visit farms and livestock-related facilities and businesses. The tours are funded through donations from industry and from students paying their own way. Students also have access to many clubs and competitive team opportunities that provide additional chances to work with animals—and with people.

But another reason for the department's exceptional growth is that every student who takes an animal science course, whether majoring in animal sciences or not, is made welcome in the department.

Department Head - **Wayne L. Greene**

465 undergraduates

(representing about 50 percent of the College of Agriculture's undergraduate student enrollment)

15 graduate students

19 faculty members

Degree options:

Animal Production/Management
Equine Science
Muscle Foods
Pre-veterinary/Pre-professional

Among the faculty members who have a profound influence on students is Dale Coleman, associate professor of animal sciences who has won many college and campus-wide awards for his teaching and advising.

"Dale is engaged with our students from the time they arrive for Camp War Eagle to when they walk across the stage to get their diploma," Greene says. He adds that four junior faculty members who have joined the

department since 2006—assistant professors Betsy Wagner, Christy Bratcher, Soren Rodning and Terry Brandebourg—have also brought new energy and ideas into the department.

And others are always looking for ways to engage students in classes. For example, professor Keith Cummins has developed and is teaching a new class, *Animals and Society*, that Greene thinks will have campus-wide appeal.

"So many people in today's society don't understand the role that animals play in food and products and health, so *Animals and Society* is a good class for students across campus," he says.

Another area of great interest and growth in the department's student enrollment is the equine science major, which began in fall 2006 and is drawing many new and nontraditional students to the department.

Reaching Out

The department's outreach program is, in Greene's opinion, another bragging point. He notes that the Alabama Cooperative Extension System's animal sciences and forages team, under the leadership of animal sciences associate professor Lisa Kriese-Anderson, is especially strong.

"In my opinion, this team is second to none in Extension programs in Alabama," he says. "We have done some really unique things in conjunction with other Extension programs in the region, such as the Master Cattleman program and organizing regional meetings with other states."

Kriese-Anderson and her team helped host a USDA faculty forum to talk about extension and research issues and needs involving more than 13 southern states. "That would not have happened had it not been for the faculty in our department standing up and saying we need some cross-state interaction," Greene says.

Paying Attention to Needs

According to Greene, animal agriculture in Alabama and throughout the nation has changed significantly in the past 15-20 years, but those trends suggest a bright future for the animal sciences program.



HANDS-ON EXPERIENCE—Students in a fall 2009 beef production lab weigh a yearling bull in a hydraulic squeeze chute on a set of electronic scales and prepare to vaccinate the yearling. The dosage is based on the animal's weight.

Among the opportunities he sees is taking advantage of Alabama's significant forage resources. He notes that Alabama's abundant supply of forages can be used to raise stocker calves, produce grass-fed beef and perhaps even support smaller-scale grazing dairies.

Horses provide another great opportunity. "One in 20 Alabama households owns or rents a horse, and the state's horse industry supports much of the community feed store industry in the state," he says. In addition, the economic impact of horses is far-reaching. Horse owners who take their horses to shows and trail rides boost the state's economy by spending money on transportation, lodging and food. And even stay-at-home horses provide economic impacts by supporting veterinary services, tack stores and the like.

Greene also sees potential for expanding the state's goat industry, an effort being led by Tuskegee and Alabama A&M universities, with support from Auburn research fellow Nada Nadarajah. And Greene sees chances to expand Alabama's meat and dairy product industries as well.

New Knowledge, New Careers

To tap into these opportunities, research is needed to explore new ideas and solve big problems. Faculty in the department are helping pave the way for future scientific breakthroughs related to such issues as animal production and health, meat and dairy production and processing.

For example, animal sciences professor Jacek Wower is making amazing breakthroughs in the field of biochemistry, Brandebourg is working on issues related to muscle growth and biology. Other Auburn animal scientists are finding ways to use pigs as research models for studies that may benefit human and animal health.

"The job market for animal sciences graduates is good," says Greene, noting that several state and regional companies are hiring now. He says that, while many students come to animal sciences for the pre-veterinary/pre-professional major, many of those students find other career niches outside veterinary medicine.

"Of the students that come in with an interest in veterinary medicine, at least half of them will change their minds," he says. Many of those will continue to pursue a degree within animal sciences or may transfer to other departments in the College of Agriculture. And for those who do go on to veterinary college or pursue advanced degrees in pharmacy and other professions, their success rate is high.

The Future

The long-range plan? Greene hopes to build the department's graduate program, an effort being headed by professor Russ Muntifering. This is the source, says Greene, of the next generation of scientists and teachers who will be so vital to society.

He also hopes to enhance the department's research programs to come up with ideas and solutions that will help the animal industry as well as consumers. And he is looking at new options for animal science students, such as developing a companion animal major that could train students for careers in the pet industry.

To learn more about the department, go to www.ag.auburn.edu/ansc/ or contact the department at 210 Upchurch Hall, Auburn University, AL 36849 or 334-844-4160.



THE EQUINE OPTION—The animal sciences department began offering an equine science option in 2006. As of fall semester 2010, 75 of the department's total 480 students were enrolled in the program.

College of Sciences and Mathematics

COSAM Student Group Explores Alabama Caves

The Society for Conservation Biology, a student organization in the College of Sciences and Mathematics, went on an overnight cave trip to Jackson County in October. Led by Jim Godwin, zoologist with Auburn University's Environmental Institute and an expert on the biota of several caves in the area, the trip introduced students to the dynamic ecosystem found in Alabama's caves.



CAVE TOURISTS—Society for Conservation Biology members pose at the mouth of one of the caves they visited.

Cave life is very diverse in Alabama, according to Godwin, Jackson County, has more obligate cave species—those organisms that are restricted to the conditions present in caves, such as darkness and temperature moderation—than any other county in North America.

Students saw cave crayfish, wood rats, bats such as Eastern pipistrelles and a few spiders.

“The overall purpose was to provide an opportunity for these students who are interested in conservation to observe an environment that few people get to see,” says Godwin. “These caves represent a biologically important environment in the state, but it's not something you can easily experience because you generally need someone to show you where it is, what it is and lead the way.

The caves in Jackson County were carved from flowing water and many of them are up to as 400 million years old. Some of the caves are connected by miles of passageways.

“It was such a wonderful trip,” says SCB member Kelly Ervin. “I only wish we could go on an adventure like that every weekend.”



CARBONKEEPERS—Longleaf pine forests maintained by fire on Eglin Air Force Base are typical of the areas that will be studied by SFWS scientists on a Department of Defense-funded project to develop a plan for sequestering carbon in longleaf pine forests on military bases. Photo courtesy of John Butnor, USDA Forest Service.

is funded through the defense department's Strategic Environmental Research and Development Program. Auburn's role in the study is to determine the amount of carbon stored in trees and in important ecosystem components such as ground cover and coarse woody debris.

“Longleaf pine forests offer opportunities to sequester carbon and mitigate carbon dioxide emissions because longleaf pine is a long-lived tree species,” Samuelson says, “and the Department of Defense is focusing on restoration and protection of longleaf pine ecosystems.”

Longleaf pine ecosystems are among the most diverse in temperate North America, but only 3 percent to 5 percent of the longleaf forest prior to European settlement now exists, she says.

The five-year study will be conducted at Fort Benning in Georgia, Fort Polk in Louisiana and Camp Lejeune in North Carolina. Researchers expect to launch the study in March 2011 and to deliver recommendations to the Department of Defense in 2016.

School of Forestry and Wildlife Sciences

Auburn Gets \$1.8 Million to Study Pine Forests on Military Bases

The School of Forestry and Wildlife Sciences has been awarded \$1.8 million from the U.S. Department of Defense to help develop a plan for sequestering carbon in longleaf pine forests on military bases—thus reducing the amount of carbon in the atmosphere.

Lisa Samuelson, director of the Center for Longleaf Pine Ecosystems in the SFWS, will lead the project that includes as collaborators the USDA Forest Service's Southern Research Station and the University of Florida. The overall grant for the study is \$2.4 million.

The project, “Developing Tools for Ecological Forestry and Carbon Management in Longleaf Pine,” is

College of Veterinary Medicine

Veterinary Medicine Breaks Ground for New Teaching Hospital, Educational Wing

The Auburn University College of Veterinary Medicine broke ground on a new Small Animal Teaching Hospital and educational wing in a ceremony in early December. The new facilities will be built on the lawn adjacent to Overton Auditorium-Goodwin Student Center on the site of the classroom building expansion.

“We've added on as much as we can,” says William Brawner, a clinical sciences professor at the college and chair of the Small Animal Teaching Hospital building committee. “We're growing, the demand for veterinary research is growing and we have both physically and programmatically outgrown the current hospital.”

The educational wing will be built first, with completion planned for spring of 2012. It will include 34,000 square feet for educational use and provide three new classrooms. The veterinary college plans to increase its class size to 120 students from the current 95.

Phase two, construction of the new Small Animal Teaching Hospital, has a targeted completion date of 2014. The new hospital will feature approximately 200,000 square feet of clinical, examination and client-use space and will include services such as community practice, critical care, oncology, neurology, imaging and orthopedics.

Dean Timothy Boosinger of the College of Veterinary Medicine opened the groundbreaking ceremony with a welcome and introductions.

“Auburn's College of Veterinary Medicine has a 118-year history of outstanding service to the advancement of animal and human health,” says Boosinger. “This project will enable us to continue as leaders in veterinary education for many years to come.”



NEW DIGS—Members that broke ground for the new facilities included, from left, Auburn University President Jay Gogue, College of Veterinary Medicine Dean Timothy R. Boosinger, campaign leadership team chair Ron Prestage, Auburn University Board of Trustees President pro tempore John G. Blackwell, Auburn University Trustee Gaines Lanier and hospital building committee Chair William Brawner.

College of Human Sciences

Consumer Affairs Receives \$10.5 Million of In-Kind Grant for Product-Development Software

The Department of Consumer Affairs in the College of Human Sciences joins the College of Engineering and the College of Architecture, Design and Construction in sharing the benefits of a generous \$195.5 million Siemens software grant, the largest in-kind gift in the history of Auburn University. Given through the Siemens PLM Software's Global Opportunities in Product Lifecycle Management Program, the \$10.5 million consumer affairs portion of the gift includes product development software, training and specialized software certification programs.

Auburn's apparel merchandising, design and production management program is one of only 13 endorsed nationally by the American Apparel and Footwear Association. The curriculum consists of an integrated course of study that encompasses the entire supply chain. The new software, which will be incorporated into the consumer affairs apparel curriculum, will be used to introduce students to product design, development and manufacturing processes technology used by the world's leading manufacturing companies.

“Siemens PLM Software provides Auburn University access to product lifecycle management technology, which otherwise would be out of reach for the academic community, giving students a distinct advantage by being able to use the same PLM technology widely used by leading multinational manufacturing companies around the globe,” says Hulas King, director of Global Community Relations and GO PLM Programs at Siemens PLM Software. “The experience gained in the use of these tools better prepares students for today's highly competitive manufacturing jobs requiring full knowledge of modern technologies and tools.”

Scholarship Recognizes Family's Love for Auburn, Ag

by JAMIE CREAMER

Vernon Preuit Crockett and his son, Vernon Dewees, shared two major passions: Auburn University and farming. And now, the son's widow and three children have honored the memories of the two Auburn alumni by establishing the Vernon Crockett Family Scholarship in the College of Agriculture at Auburn.

"Auburn and agriculture have done so much for this family," says Mary Lynda Crockett, who lost her husband of 44 years in 2009. "It is a privilege to use some of the fruits of my husband and my father-in-law's labors to help educate agriculture students at Auburn for years to come."

Mrs. Crockett, sons Chip and John and daughter Marianna Crockett Odom established the endowment as a \$125,000 charitable trust, a planned gift that will generate an income stream for Mrs. Crockett until her death, at which time Auburn will receive the remainder of the donation and award scholarships from the interest the fund earns. Until that time, however, Mrs. Crockett will provide \$1,000 annually for a Vernon Crockett Family Scholarship, the first of which was awarded fall semester 2010 to poultry science/pre-vet freshman Sara-Abbie Adcock from Woodland. Mrs. Crockett was on hand for the scholarship recognition ceremony and had the pleasure of meeting the scholarship's first beneficiary.

The scholarship is in memory of not only Vernon and Dewees Crockett but of Vernon's sister, the late Frances Crockett Wann, as well. She and Vernon were teens when, in the late 1930s, the Dust Bowl wiped out the family's farm in Texas and they and their parents moved to northwest Alabama's Colbert County to start anew. Both graduated from Alabama Polytechnic Institute, Vernon Crockett in 1938 with a civil engineering degree and Miss Crockett in 1941 with a degree in elementary education.

As soon as he earned his degree, Vernon Crockett entered the U.S. Army Corps of Engineers and traveled across Europe helping restore sanitary services in towns ravaged by World War II. After returning home from the war, he went into practice as a civil engineer in Sheffield. His career took a turn in the late 1950s, however, when, after the deaths of his father and his uncle, he was left to take over the family farming operation, Forest Hill Farms.

Dewees Crockett, an only child, worked alongside his father, and after graduating from Auburn in 1963 with an agricultural economics degree, he became a full-time partner in the farm.

Under the father-and-son management team, Forest Hill Farms soon was recognized as a productive and progressive 3,000-acre enterprise in cattle, hogs, corn, wheat and cotton and went on to become the first private farming operation in north Alabama to have success growing soybeans commercially.

In 1965, Vernon Crockett died, and eight years later, Dewees decided to bow out of the farming profession and leased Forest Hill's fields and pastures to relatives who farmed. He then worked for several years as landscape supervisor at the University of North Alabama in Florence before going into business as a professional photographer. Mrs. Crockett, who has a bachelor's degree in English and art from Judson College and a master's in education from Bank Street College of Education and Parsons School

of Design in New York and who had been a first-grade teacher, wound up working with her husband in his photography business.

The Crocketts' oldest son, Chip, ushered in the family's third generation of Auburn graduates—and second generation of College of Ag alumni—in 1993 when he received a biosystems engineering degree that put him on a path to his current job as chief of stormwater management in the Alabama Department of Environmental Management's water division. Though his brother, John, graduated from the University of North Alabama, sister Marianna earned her communications degree at Auburn in 2000.

In the late 1990s, Dewees Crockett was diagnosed with a chronic illness, so he and his wife decided to make good on a long-time dream, and in 2005 they moved to a beautiful new home on Lake Martin in Alexander City.

"Auburn brought us to Lake Martin," Mrs. Crockett says.

Mrs. Crockett says that, though her husband left the farm in 1972 and sold off most of it in 1980, "throughout his life, he remained devoted to his family and their roots in agriculture."

In the agreement establishing the Vernon Crockett Family Scholarship, Mrs. Crockett and her children note the purpose of the gift: "It is (our) hope that the education of professionals in agriculture will be enabled by this gift and that the field of agriculture will be as enriched as our lives have been by the people it memorializes. The worth of their lives, their devotion to family and their devotion to Auburn is inestimable."

For more information on planned giving, contact the College of Agriculture's development office at 334-844-1475 or wiltome@auburn.edu.



A LASTING MEMORIAL—Mary Lynda Crockett holds a photograph of her late husband, Dewees Crockett, as she stands on the deck of her home on Lake Martin. She established the Vernon Crockett Family Scholarship in the College of Agriculture at Auburn to honor the memories of not only her husband but his father, Vernon Preuit Crockett, and his aunt, Frances Crockett Wann.

Plans Set for Hall of Honor Inductions

Plans have been finalized for the 2011 Hall of Honor banquet, to be held Feb. 22 at The Hotel at Auburn University and Dixon Conference Center in Auburn beginning at 6:15 p.m. to honor five distinguished Alabama agriculturalists.

Three men—Jerry Newby of Athens who is representing the agribusiness sector, Dallas Hartzog of Headland representing the education/government sector and Harold Pate of Lowndesboro representing the production agriculture sector—will be inducted into the Auburn University Ag Alumni Association's Hall of Honor, which honors living Alabamians who have made significant contributions to Alabama agriculture.

Newby is a Tennessee Valley farmer and president of Alfa Insurance and the Alabama Farmers Federation. Hartzog is a retired Alabama Cooperative Extension specialist whose work on peanuts has been a boon to farmers in the Wiregrass and throughout the state. Pate is a leader in the state and national cattle industry who founded a now internationally known Charolais herd.

In addition, John Cottier, a long-time Auburn University faculty member, and B.W. Buck Appleton, an early leader in Alabama poultry industry, will be honored with Pioneer Awards, which are given posthumously to Alabama agricultural leaders.

Tickets to the Hall of Honor banquet, which is held in conjunction with the Ag Alumni Association's annual meeting, are available for \$50 per person and opportunities are available for corporate sponsorships of the

event. Sponsorship levels include: Platinum at \$2,000 (includes 8 tickets), Gold at \$1,000 (includes 4 tickets), Silver at \$500 (includes 2 tickets) and Bronze at \$250 (includes 1 ticket).

For more information on the Hall of Honor awards and upcoming banquet, contact Elaine Rollo at 334-844-3204 or rollome@auburn.edu.

In Memoriam

Jerry Russell Crews, 57, of Auburn passed away Nov. 29, 2010. He was retired from the Alabama Cooperative Extension System at Auburn University, having served as an agricultural economist and faculty member in the Department of Agricultural Economics and Rural Sociology for 27 years.

Jacqueline M. (Jackie) Mullen, 65, retired supervisor of the Auburn University Plant Diagnostic Laboratory, passed away on Jan. 23 at her home in Auburn. Donations may be made in her memory to the American Cancer Society (P.O. Box 22718, Oklahoma, Okla., 73123-7108) or to the Mercy Fund (Auburn United Methodist Church, P.O. Box 3135, Auburn, Ala., 36831).

The Nose Knows

Extension Offers Seafood Safety Training

For Orange Beach-based charter boat captain Ben Fairey, attending a recent Alabama Cooperative Extension System seafood safety training workshop wasn't a luxury; in the aftermath of the economically devastating Gulf oil spill, it was a necessity.

"This training is key for us," says Fairey, one of about 75 Alabama charter boat captains and seafood processors who have completed the workshop. "We have to regain our customers' trust, and this gives us new skills that we need to reassure the people who come aboard to fish that their catch is safe to eat."

In the workshops, seafood processors and charter boat captains are trained in how to use their sense of smell to detect petroleum taint in seafood, as a precautionary measure in addition to the extensive, ongoing testing of seafood.

"Now I can tell folks their catch is safe to eat, and I have the training and certification to back it up," says Fairey, who has posted his certification certificate in the cabin of his deep-sea-fishing boat, *Necessity*. "When all I can smell is the briny smell of the Gulf, I know it's good."

Kristin Woods, a regional food safety Extension agent in southwest Alabama, says workshop leaders also work with seafood processors to enhance their food safety plans.

"We want to give these people who earn their living from seafood the tools to deal with ongoing concern about seafood safety," Woods says. "The workshop shows processors ways they can strengthen their food safety plans to ensure that the products they produce remain safe. Consumers are still responding to media stories about the oil spill and need to be informed about the testing and controls in place to ensure Gulf seafood is safe to eat."

Woods' colleague Amelia McGrew says the sensory training has been an eye-, or, more appropriately, a nose-opening experience for the participants.

"People were surprised to learn they could smell diesel or Louisiana crude oil taint at levels of 20 and 40 parts per million," she says. "Some who are more sensitive can smell it in as little as 10 parts per million."

Actually, Gulf seafood is the most extensively tested seafood in the world right now, says Bill Walton, a marine fisheries Extension specialist.

"Our seafood is safe to eat," Walton says. "It's tested more than ever, and that testing is ongoing."

He says the sensory seafood safety training gives seafood processors and charter boat captains an additional way to assure customers that the seafood is good to eat, and Fairey, as one whose livelihood has taken a severe blow because of the oil spill, is hoping those customers get the message soon.

"Late June was really bad," says Fairey, who's been in the charter boat business for a quarter of a century. "I was out of business because waters were closed to fishing. Our customers should be absolutely confident that we are doing everything we can to guarantee safety. I think this training is an important element of this."



A WHIFF OR TWO—Veteran charter boat captain Ben Fairey of Orange Beach says the training Extension is providing in sensory evaluation of Gulf seafood will be a key to the recovery of Alabama's seafood industry.

Exotic Kudzu-Eating Insect Invades Alabama

An article in the February 2010 *Ag Illustrated* reported that an exotic kudzu-eating insect never before sighted in the U.S. had been discovered in north Georgia and noted entomologists' concern that the invasive bug might also enjoy feeding on valuable farm crops in the Southeast.

That concern is proving legitimate, as Georgia soybean farmers can attest. And now, this plataspid shield bug, or *Megacopta cribraria*, has crossed the border into Alabama.

Charles Ray, Alabama Cooperative Extension System entomologist and Auburn University research fellow in entomology, says kudzu bug specimens were collected in Cleburne and Cherokee counties in northeast Alabama in late fall 2010, and he says that, based on Georgia's experiences last year, it's a pretty safe bet the plataspid shield bug is already present in the two counties' neighbor, Dekalb County.

The insects were feeding on kudzu when first sighted in Georgia in October 2009. Though the discovery of an insect that eats kudzu sounded good, it raised a red flag for scientists, because kudzu is a legume and thus is a relative of sorts to some agronomic crops, including soybeans, peanuts, alfalfa and clover.

"It seems to have already reached economically damaging levels on soybeans in Georgia," Ray says.

In addition to having a serious impact on Alabama agriculture, the insect also apparently can be a headache for homeowners, says Xing Ping Hu, an Extension entomologist whose work focuses on household pests. As is true with the familiar Asian lady beetle, the Kudzu Bug is attracted to homes, especially the south and southeast sides of light-colored homes, in cold weather. Hu says they can appear in swarms by the thousands.

"The news we have from Georgia colleagues is that it is currently flying in large numbers to homes and is becoming a nuisance pest," she says.

Ray and Hu have begun tracking the plataspid shield bug's movement in Alabama and are urging farmers and homeowners throughout the state to be on the lookout for it. The adult is about two-tenths of an inch long and has a humped body, beak-like mouthparts and hardened forewings that cover a pair of soft hind wings it uses to fly. When crushed, the insect releases an unpleasant, bitter smell.

"If anyone finds this insect, I want to know about it and the location," Ray says. "If it's on a plant, it would be very helpful to know what type of plant as well."

To report sightings, contact Ray at 334-844-3836 or raychah@auburn.edu; Hu at (334) 844-6392 or huxingp@aces.edu; or your county Extension office.



RAISING A STINK—This insect's scientific name is *Megacopta cribraria*, but it's commonly known as the kudzu bug, the plataspid shield bug, the lablab bug or the globular stink bug. It is called that latter name for a very good reason.



MURALS, MURALS ON THE WALLS—Ten colorful, Depression-era murals that noted Mobile artist John Augustus Walker painted for an exhibit at the 1939 Alabama State Fair have been fully restored by Alabama Cooperative Extension System art director Bruce Dupree and are now on permanent display at Auburn University's Jule Collins Smith Museum of Fine Art. Known collectively as the Historical Panorama of Alabama Agriculture, the murals were commissioned by Extension and partially funded by the Works Progress Administration to show state fair-goers how agriculture developed in the state and how the latest innovations in farming would carry agriculture into the future. To read more about the mural restoration project, go to aces.edu and search for "murals."

New Extension Program To Target Beginning Farmers

The state's three land-grant universities have been awarded a \$675,000 National Institute of Food and Agriculture grant to create a program that will provide training, mentoring and whole-farm planning services to beginning farmers and ranchers.

Paul Brown, associate director of the Alabama Cooperative Extension System, says that, as was the case in preparing the grant application, the three institutions—Auburn, Alabama A&M and Tuskegee universities—will work together closely in developing the Consortium for Agricultural Newcomers Access to Learning.

According to regulations of the federal CANAL-funding Beginning Farmer and Rancher Program, a beginning farmer is one who has no more than 10 years' experience operating a farm or ranch. Brown says CANAL's goal will be to provide such individuals with tools that can help ensure their farming operations will be viable and sustainable.

Alabama's CANAL program is expected to reach at least 300 beginning farmers through a variety of Extension efforts, Brown says, adding that several community-based groups such as the National Young Farmers Education Association, the Alabama Sustainable Agriculture Network and the Alabama Green Industry Training Center will be important partners.

Plans include the establishment of a mentor academy in which veteran farmers would be trained as counselors to help newcomers get started on successful business paths. Brown took the lead in bringing the three universities together to pursue the CANAL grant.

Calendar of Events

February • 2011

s	m	t	w	t	f	s
		1	2	3	4	5
6	7	8	9	10	11	12
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March • 2011

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April • 2011

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24	25	26	27	28	29	30

Feb. 22
Hall of Honor Banquet
6:15 p.m.
The Hotel at Auburn University and Dixon Conference Center - Auburn

This event, held in conjunction with the Auburn University Agricultural Alumni Association's annual meeting, will honor five Alabamians who have made significant contributions to agriculture. Tickets to the banquet are \$50 per person. Corporate sponsorship opportunities also are available.

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

Feb. 25
Inside Ag Hill
Auburn

This event is designed for incoming students who have been admitted to the College of Agriculture to expose them to college life at Auburn.

Contact: Deborah Solie (334-844-8900 or das0002@auburn.edu) or visit www.ag.auburn.edu/adm/student/prospective/events/insideaghill.php

March 8
Children's Field Day
Beef Teaching Unit
Auburn

This event brings second and third grade students to the Auburn campus to participate in science and ag-related projects.

Contact: Student Services office (334-844-4768) or visit www.ag.auburn.edu/goplaces/events/artinagfieldday.php

March 11-19
Sicily Trip

This spring break trip will take College of Agriculture students on a food and farming systems tour of Sicily.

Contact: Joe Molnar (334-844-5615 or molnadj@auburn.edu) or visit www.ag.auburn.edu/oia/studytours/

March 28-April 1
Ag Week
Auburn

This event offers a week-long celebration of the College of Agriculture including an Ag Hill picnic, special events for students and a blood drive.

Contact: Kate Derby at gkd0001@auburn.edu

March 31
Ag Industry Day
8 a.m. - 10 a.m.
Student Center Ballroom
Auburn

This event brings high school students from across Alabama to the Auburn campus to learn more about career options in the fields of agriculture and natural resources. Keynote speaker for the event will be Temple Grandin, who will also present the York lecture that evening.

Contact: Deborah Solie at 334-844-8900 or das0002@auburn.edu or visit www.ag.auburn.edu/adm/student/prospective/events/agindustryday.php

March 31
Temple Grandin
7 p.m.
Student Center Ballroom
Auburn

Temple Grandin, an internationally known animal scientist and award-winning author, will present the Spring 2011 York Distinguished Lecturer Series.

Contact: Deborah Solie at 334-844-8900 or das0002@auburn.edu or visit www.ag.auburn.edu/yorklecture

April 15
Spring Open House

This event is open to high school students interested in learning more about degree options in agriculture and natural resources.

Contact: www.ag.auburn.edu/adm/student/prospective/events/agopenhouses.php

April 27-28
14th annual Ag Classic
Auburn

Ag Classic has become one of the greatest traditions within the College of Agriculture providing alumni and friends a reason to visit Auburn, share in a little friendly competition and mostly enjoy lots of fun and fellowship. In addition to competitive fishing, clay shooting and golf tournament events, Ag Classic includes a social hour, dinner and auction.

Contact: Katie Hardy at 334-844-1475 or hardykc@auburn.edu or go to www.ag.auburn.edu/adm/development/agclassic/

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

Chilly-Weather Chili

Owsley's Favorite Chili Features Pork with Lots of Spices

As Frank Owsley sees it, wintertime means chili time, and during the cold-weather months, hardly a week goes by that the Auburn animal scientist and extension specialist doesn't have a pot of the hearty chow simmering on his stove. Here, Owsley—who, in addition to his expertise in meat animal quality assurance and environmental stewardship in animal agriculture, is an authority on pork production—shares his time-tested recipe for pork chili.

The recipe allows plenty of room for adjustments in the heat and thickness of the chili. As for what kind of pork, Owsley says any cut of the other white meat will work, but his personal favorite is fresh ham.

Actually, the seasonings in the chili work well with beef or venison, too, but the three meats bring noticeably different results. Pork, says Owsley, enhances the spices, letting their flavors come through at the expense of the meat's flavor, as compared to beef, which gives a meaty taste to the spices, and venison, which produces a drier, "gamier" product.

Frank Owsley's Pork Chili

(Serves 6 to 8)

- 2 pounds pork, coarsely ground or cut in ½- to 1-inch cubes
- 2 tablespoons vegetable oil
- 3 tablespoons chili powder, or more to taste
- 1½ teaspoons salt
- ½ teaspoon pepper, or, for hotter chili, substitute cayenne pepper or diced jalapeno and/or habanero peppers to taste
- 1 teaspoon ground Mexican oregano
- ½ teaspoon dried basil
- 1 teaspoon ground cumin
- 2 tablespoons flour, optional (see Note)
- 1 clove garlic, minced
- 1 large onion, chopped
- 2 cups water
- 1 tablespoon lime juice



Frank Owsley

In a Dutch oven, brown meat in oil; drain and rinse. Return pork to pot; add all dry ingredients and mix well. Add onions, garlic, water and lime juice, blending well. Bring to a boil, then reduce heat and simmer, covered, for 2 hours.

Note: Add the 2 tablespoons flour with the dry ingredients if a thicker chili is desired.

To see other recipes from Ag Illustrated and our college of ag family, go to www.ag.auburn.edu/recipes.