December 2012
Volume 9, Issue 4

AUBURN UNIVERSITY COLLEGE OF AGRICULTURE

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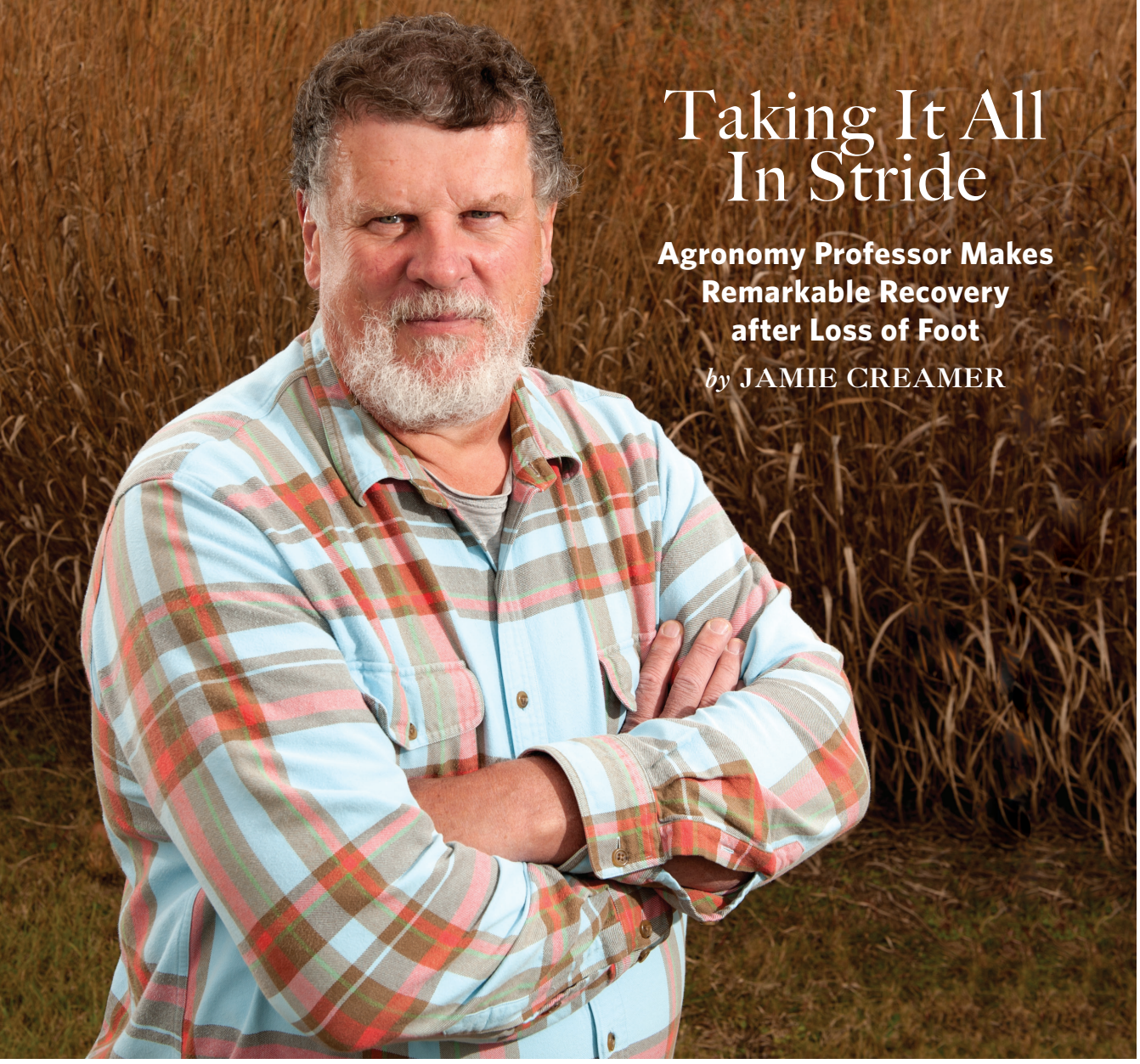

Taking It All In Stride

Agronomy Professor Makes Remarkable Recovery after Loss of Foot

by JAMIE CREAMER

IN THE BLINK OF AN EYE A farming accident that left Edzard van Santen, professor and plant breeder in the Department of Agronomy and Soils, an amputee is a grim reminder of how risky an occupation farming is, even for people who, like van Santen, have been around farming and farm equipment all their lives. Van Santen says "a moment of inattention" was all the time it took for a tractor-mounted cutter bar to slice through his left foot on the morning of Nov. 10, 2011. Since the accident, every day has been one of thanksgiving—thanksgiving for life—in the van Santen family. Above, the entire family was in Auburn to celebrate Thanksgiving Day 2012, including Vicky and Edzard van Santen holding grandsons Carl Hierath and Peter van Santen, respectively, and, standing, from left, Tilman and Christina Hierath, Katharina van Santen, Matt Robinson and Anna and Jakob van Santen.

"The only disability in life is a bad attitude."
—Scott Hamilton, Olympic Gold medalist

EDZARD VAN SANTEN LOVES A GOOD PLAY ON WORDS— "I never turn down a great pun," the Auburn University agronomy and soils professor says—which is why he intends to name the new switchgrass cultivar he'll be releasing sometime in the next year 'My Left Foot.' Because that's what it cost him to develop the new cultivar: his left foot.

It was a grisly 2011 farming accident at the Alabama Agricultural Experiment Station's Upper Coastal Plain Ag Research Center that rendered van Santen physically impaired, but it very well could have rendered him dead, and that close call has done a lot to change the brusque and burly German native's perspective on life.

"I have happily embraced 'handicapped' status," says van Santen. "It certainly beats my other option."

You could say that van Santen has taken his new standing as an amputee in stride—puns intended—and in so doing has written a remarkable comeback story in which a man admittedly "infamous for my patience," has learned a lot about life, priorities and relationships and taught those around him volumes about determination, willpower and attitude.

The accident happened shortly after 9 a.m. Nov.10 a year ago on the outskirts of Winfield in northwest Alabama. Van Santen, a plant breeder, and the crew at the 735-acre Upper Coastal Plain research station were harvesting a quarter-acre research plot of 6-foot-tall switchgrass when van Santen, in what he describes as "a moment of inattention," stepped in front of a razor-sharp hay-cutting blade.

The tractor-mounted cutter bar caught his leg from behind, just above the ankle, slicing through bones, muscles, nerves and two of the leg's three major arteries. There was blood. Lots of blood. And this is the point in the story where van Santen thanks the Lord that UCP director Randall Rawls keeps his cell phone on him and that research assistant Van Dubay wears leather belts, because those two factors saved his life.

Rawls, who was driving the tractor, had just put the thing in gear when he heard a loud moan and turned to see van Santen drop to the ground. Immediately, he cut the engine, dialed 911 on his cell and sent Sandy Burleson and Cecil Parish, research technicians at the center, out to the main road to direct the ambulance to the accident scene.

Meanwhile, Dubay, a 2007 Auburn horticulture alumnus who was relatively new to his job with van Santen, was to the side of the tractor when he saw van Santen go down, was yanking off his belt to be used for a tourniquet, untangling van Santen's foot from the blade and basically holding the victim's foot and leg together while Upper Coastal Plain research technician Roy Akers pulled the makeshift tourniquet tight.

In what seemed to be hours but in fact was less than 10 minutes, the Marion County EMTs were on the scene, transferring van Santen from field to ambulance and on to Winfield's Northwest Medical Center, which already had arranged for the victim to be airlifted to UAB Hospital's level 1 trauma center.

It wasn't until the ambulance pulled away that the reality of what had just happened began to dawn on Rawls, Dubay and the rest of the crew.

"The instant it happened, we all just sprang into reaction mode," Rawls says. "I was real calm through it all, but once they put him in the ambulance, I pretty much fell apart.

"We all knew basic first-aid around here, and we have a first-aid kit, but no amount of training could have prepared us for that."

"It was bad," Dubay agrees. "What hit me the hardest was that this had happened to someone I knew."

As soon as Rawls and Dubay gathered their wits, they headed to the Winfield hospital and were there when van Santen was wheeled out of the emergency room—where doctors had stabilized his vital signs and begun replenishing the blood he had lost—and into the waiting medical helicopter bound for Birmingham.

"And do you know what he said?" Dubay asks incredulously. "He told us to get back to the station to finish harvesting that switchgrass. Like we were in a frame of mind to do that."

(To those who know him, that was classic van Santen—stern, brusque, no-nonsense, direct. As long-time agronomy and soils colleague David Weaver says, "Edzard tells you exactly what he thinks. There is no 'fake' Edzard.")

At UAB Hospital, van Santen was wheeled straight to the trauma center's operating room for what would be the first of five surgeries in a span of four and a half weeks. The initial operation was to thoroughly clean the wound, stop the bleeding and fixate the foot, which was still partially attached, with several pins until a future course of action was decided.

"They had a pin through my heel, one through the top of the foot and one through my shin," van Santen recalls. "I came out of there looking like an Erector Set."

Vicky van Santen wouldn't have cared if he had looked like Lincoln Logs, as long as he was breathing. It had been mid-morning at Auburn's College of Veterinary Medicine that she had

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AUBURN AGRICULTURE
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View from AGhill

2012 has been a year of challenges in the agricultural world. The U.S. experienced one of the worst droughts in history, one that drove corn and soybean prices to record highs. This dramatically increased the costs of livestock feed and had a major impact on the profitability of the Alabama poultry and catfish industries. The Alabama Legislature responded by establishing an irrigation incentive program to help ensure farmers across the state have tools available to combat drought in the future. The U.S. drought has driven up the price of food around the world, but prices have remained below the record highs set during the 2007-2010 period. In spite of the drought, U.S. and Alabama farmers have managed to do their part in feeding a growing world.

This year, more than 4 million babies were born in the U.S. and more than 125 million worldwide. Half of the world's population is under age 30, and 26 percent is under 15 years of age. 2012 marked a pivotal year in terms of diversity in the U.S. For the first time, more than half of the children here under the age of 1 are members of minority groups, and by 2030, more than half of college-bound students will be minority students. Will this changing demographic translate into changes in consumer food choices or career choices? How will this impact the food industry? What does the College of Agriculture need to do to prepare for this transition?

2012 also brought the issue of how we grow food under increased scrutiny. In April, Burger King pledged to sell only cage-free eggs and pork by 2017, following similar decisions by McDonald's and Wendy's. In California, residents proposed, then voted down, Proposition 37, which would have mandated labeling of genetically engineered food. We are also seeing increased interest in locally grown food, with the implications that the consumer prefers the taste of locally grown food, and they perceive that it is safer. All in all, the U.S. consumer is changing. What implications does this have for the food system? What do food companies need to do to adapt to the changing preferences of consumers?

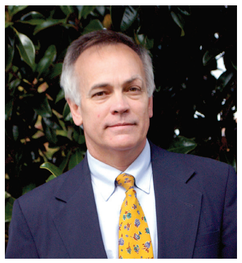
As we move into a new year, the College of Agriculture at Auburn is committed to understanding these changes and how to adapt to them.

I wish you and your family a happy holiday season.

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

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

Sibley Named New Horticulture Department Head



Jeff Sibley

Jeff Sibley, an Auburn University alumnus and faculty member, is the new head of the Department of Horticulture at Auburn, effective Nov. 1.

Sibley received his bachelor's and master's degrees in horticulture from Auburn in 1984 and 1994, respectively. He joined the department as a research assistant in 1994 and, after completing his Ph.D. in horticulture from the University of Georgia in 1997, was hired as assistant professor. He was promoted to associate professor in 2001 and full professor in 2006.

From August 2008 to December 2009, he also took on an additional, university-wide role when he served as acting associate dean of Auburn's Graduate School. In 2010, he was named the Barbara and Charles Bohmann Endowed Professor of Horticulture at Auburn University.

He succeeds Dave Williams, who had led the department since 2006 and has returned to his position on the faculty.

ALUM ELECTED Jerry Newby, left, outgoing Alabama Farmers Federation president, passes the gavel to Jimmy Parnell, a fifth-generation Chilton County farmer and a College of Ag alumnus who was elected president of the organization during its 91st annual meeting in early December. Parnell, who earned his bachelor's degree in agricultural business and economics from Auburn in 1985, raises cattle and runs a timber business with his father and two younger brothers. He has a long history with the federation at both the county and state levels and says that, as president, he will work to strengthen agriculture's position as the state's largest industry.

Making Contact

COLLEGE OF AGRICULTURE:
Dean's Office 334-844-2345 | www.ag.auburn.edu

ACADEMIC DEPARTMENTS:
Agricultural Economics and Rural Sociology 334-844-4800 | www.ag.auburn.edu/agec
Agronomy and Soils 334-844-4100 | www.ag.auburn.edu/agrn
Animal Sciences 334-844-4160 | www.ag.auburn.edu/ansc
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Fisheries and Allied Aquacultures 334-844-4786 | www.ag.auburn.edu/fish
Horticulture 334-844-4862 | www.ag.auburn.edu/hort
Poultry Science 334-844-4133 | www.ag.auburn.edu/poul

ALABAMA AGRICULTURAL EXPERIMENT STATION:
Director 334-844-2345 | www.aaes.auburn.edu
Assistant Director 334-844-8727
Director of Outlying Units 334-844-5611

AAES-AFFILIATED SCHOOLS AND COLLEGES:
College of Human Sciences 334-844-3790 | www.humsci.auburn.edu
College of Sciences and Mathematics 334-844-5737 | www.auburn.edu/cosam
College of Veterinary Medicine 334-844-4546 | www.vetmed.auburn.edu
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ALABAMA COOPERATIVE EXTENSION SYSTEM:
Director's Office 334-844-4444 | www.aces.edu

Details

Ag Illustrated is a quarterly publication of the Auburn University College of Agriculture and the Alabama Agricultural Experiment Station. It is compiled and published through Ag Communications and Marketing, the College and AAES information office. This publication is printed on Sappi® Opus Matte paper, which is 10 percent recycled and is Green Seal certified.

Subscriptions to Ag Illustrated are free and are sent automatically to Ag Alumni Association members. To become a member, go to www.ag.auburn.edu/adm/alumni/. To subscribe, fill out the form below or visit our website at www.ag.auburn.edu/agillustrated. You may also contact us about subscriptions or other editorial issues at Room 3 Comer Hall, Auburn, AL 36849; 334-844-5887; or agcomm@auburn.edu.

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Editors/Writers
Jamie Creamer
Leigh Hinton

Designer
Hannah Dixon

Photographers
Jamie Creamer
Ashley Culpepper
Hannah Dixon
Jeff Etheridge
Melissa Humble
Maggie Lawrence
Vicky van Santen
Katie Williams

Contributing Writers
Ashley Culpepper
Latha Bhavnani
Candis Hacker Birchfield
Tara Lanier
Maggie Lawrence
Jessica Nelson
Paul Patterson
Anna Leigh Peek
Amy Weaver

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Production Under Way at Auburn's New $7.1 Million Feed Mill

by JAMIE CREAMER

Auburn University's new $7.1 million Poultry and Animal Nutrition Center, a state-of-the-art academic and research feed production facility located on a 50-acre site north of the main campus, officially opened Friday, Nov. 16, with a ribbon-cutting ceremony led by university administrators and representatives of the poultry and feed mill industries.

"The new Poultry and Animal Nutrition Center at Auburn is the result of a great partnership between the university and agribusiness," Auburn President Jay Gogue said.

The feed mill has had strong industry support since plans began taking shape in early 2008, when a technical advisory committee that included poultry nutritionists and feed mill personnel was formed to provide input on the facility's design and equipment. Thus far, more than 40 corporations have donated to the facility, including $750,000 in equipment.

The feed mill opens as the nation observes the 150th anniversary of the 1862 Morrill Land-Grant Act, which established a system of public universities to provide practical educations to the sons and daughters of America's working class. Auburn and the more than 100 other land-grant universities nationwide have a three-fold mission of teaching, research and outreach. Auburn officials say the Poultry and Animal Nutrition Center is poised to enhance programs in all three areas.

UP AND RUNNING Top photo, poultry science department head Don Conner, standing, right, and Auburn poultry research unit director Mitchell Pate, second from right, join with unit staff and poultry science students to show off the new $7.1 million Auburn University Poultry and Animal Nutrition Center, located in north Auburn. Above, cutting the ribbon on the new facility during a Nov. 16 ceremony are, from left, Johnny Adams, executive director, Alabama Poultry and Egg Association; Randall Ennis, CEO, Aviagen Inc.; Bill Batchelor, College of Ag dean/Alabama Agricultural Experiment Station director; Conner; William McLean, CEO, The Essmueller Company; Jimmy Sanford, Auburn Board of Trustees member; and Jay Gogue, Auburn president. Right, poultry science students, from left, Clara Fisher, Curran Gehring, Peyton Gilbert, Andrew Thompson and Forest Aldridge study the computer control display for the state-of-the-art facility.

Housed inside a 12,500-square-foot steel building, the new feed mill is comprised of nine prefabricated modules, each 40 feet long by 8 feet wide by 9 feet and 6 inches high, that were manufactured in Minnesota, trucked 1,100-plus miles to Auburn on nine flatbed trailers and then assembled on site in stacks of three.

The modular design is "a small-scale adaptation of a commercial mega-facility" and is ideal for teaching, says Don Conner, head of the Department of Poultry Science at Auburn and the driving force in moving the feed mill from an idea to reality.

"Students can come in here and stand in one place and see every step of the milling process and how all the pieces work together," Conner says. "Students want and need hands-on, real-world experience, and they're going to get that here.

"One of our department's key missions is to serve the industry, and producing outstanding employees is one of the ways we do that," Conner says. "The experience students get working and learning at the feed mill will equip them with the knowledge and skills the industry is demanding."

The feed mill, in fact, will be operated primarily by students, as part of the poultry science curriculum.

"We're in the process of putting together an introduction-to-feed-milling course, and we're going to move labs in some of our existing courses out here as well," Conner says. "We also are going to develop more aggressive courses that eventually will be part of a degree program in feed mill management."

That's good news to Auburn poultry science alum Mitchell Pate, who headed Sylvest Farms Inc.'s feed milling division in Montgomery for 16 years before returning to Auburn in 2006 as director of the Poultry Research Unit.

"The industry is losing feed mill managers; we need the next generation," Pate says. "I am very excited about the nutrition center and the impact it will have on the poultry industry and on Auburn University."

As director, Pate also is overseeing the move of the feed mill—and, subsequently, the Poultry Research Unit's poultry houses and processing plant—to the north Auburn campus from South College Street, where the facilities have been located for almost four decades. That property abuts what is now the Auburn Research Park, and Auburn's master land-use plans call for the feed mill, poultry houses and processing plant that comprise the research unit to be relocated to the north Auburn campus, which is home to several Alabama Agricultural Experiment Station programs, including the Department of Fisheries and Allied Aquacultures' 1,600-acre E.W. Shell Fisheries Center. The feed mill is the first poultry science building at north Auburn.

But the old feed mill was well past its prime, Conner says.

"It served us very well, but it is so outdated now that it had become ineffective for teaching purposes," he says. "Research has been extremely limited at the old location, too. The new feed mill will be a huge jump for nutrition research at Auburn."

Research is where the new facility's scalability is especially crucial. Patterned after California Polytechnic State University's Animal Nutrition Center, which Hopkins, Minn.–based T.E. Ibberson Company designed and built in 2008, Auburn's Poultry and Animal Nutrition Center is built to scale and is scalable by factors of five, 10, 12 and 15. That will allow research conducted at the feed mill to be translated for any size commercial feed mill.

And there is an urgent and growing need for advanced research in animal nutrition.

"In Alabama and globally, the agriculture sectors face daunting challenges in the future, and as demands on our resources continue to soar, animal nutrition will become a huge global issue," Auburn College of Agriculture Dean and Alabama Agricultural Experiment Station Director Bill Batchelor says. "The feed-milling industry will be more essential than ever, as the need for feeds that optimize poultry, livestock and fish production increase."

Auburn research will focus on getting as much nutritional value out of feed as possible, not only for poultry but other agriculturally important animals. And feed produced at the facility will be used as food for the university's 20,000-bird research flock and livestock research animals. In addition to Auburn scientists, researchers from private corporations will be allowed to contract use of the feed mill for some projects.

Conner says the feed mill also will be used to host continuing education workshops and short courses for people in the industry.

In addition to Conner, Gogue and Batchelor, others participating in the opening ceremony were Auburn Board of Trustees member Jimmy Sanford; Alabama Poultry and Egg Association executive director Johnny Adams; Randall Ennis of Huntsville, an Auburn poultry science alumnus and CEO of Aviagen Inc., the world's premier poultry breeding company; and William McLean of Laurel, Miss., CEO of The Essmueller Company, a leading manufacturer of feed mill equipment.

Ag Careers

Field of Opportunities

Employment Outlook Bright for Those with Ag Degrees

by ANNA LEIGH PEEK

In January 2012, an article posted on Yahoo.com created a stir in the agricultural community nationwide. Titled "College Majors That Are Useless," the piece by blogger Terence Loose listed agriculture, animal science and horticulture as three of the five most worthless degrees out there in terms of job prospects.

Based largely on employment projections from the U.S. Department of Labor and the author's personal opinion, Loose's list of "dud degrees" was a classic case of "don't believe everything you read on the Internet."

In fact, across the nation, colleges of agriculture are seeing enrollment numbers increase, and a key factor fueling that growth is the highly promising employment outlook for ag majors, says the Auburn University College of Agriculture's Paul Patterson.

"Nationally, we are seeing an increased demand for graduates with degrees in agriculture, as agribusiness firms try to both gear up for a projected growth in global demand and replace retiring baby boomers," says Patterson, associate dean for students.

Another phenomenon, however, is at play, too: a growing desire by students to find solutions to some of the world's most pressing problems, such as hunger and obesity.

"Students are recognizing the tremendous global challenges we face with regard to food supplies, energy needs, human health and the environment and are seeing majors in agriculture as a way of preparing themselves to make meaningful contributions," Patterson says.

Both factors figured into Auburn sophomore Courtney Ennis's decision to major in poultry science.

"I chose my degree because I think agriculture is extremely important to the world," Ennis says. "It's what feeds, clothes and houses everyone. I know I can help make a difference by studying in this field.

"I know that in today's society, it's getting harder and harder for people to find jobs," she says.

"With agriculture, I don't think I'll have to worry too much about that."

Garrett Dixon, a College of Ag junior majoring in the "useless" field of animal sciences, echoes that thought.

"When times get tough, people will make choices on what they can and cannot afford," Dixon says. "There are many luxuries that we enjoy that we can do without, but food is not one of them."

The numbers indicate Ennis and Dixon are right. Several degrees in Auburn's College of Agriculture—including poultry science, horticulture, turfgrass management and agricultural communications—boast 100 percent job placement of graduating seniors, and the rate is high among food science and environmental science graduates, too.

This past spring, world population topped the 7 billion mark, and experts predict the number will grow to 9 billion by the year 2050. Analysts say that, in order to meet a population growing at this rate, agriculture will have to produce 100 percent more food than what was produced in the year 2000. This challenge is what draws many students to the College of Agriculture. Given today's uncertain economy, high unemployment and rising college costs, students want marketable degrees that lead to good jobs and rewarding careers, and they're finding that in ag.

"The word 'agriculture' has so many meanings today—it is more than just cows, sows and plows," says Amanda Martin, student services coordinator in the college. "The students involved in our programs want to make a difference in their communities, in their states and in the world, and our programs in the College of Agriculture allow them to do just that."

Take Joshua Carter, for instance. Carter is a junior who this fall changed his major from pre-med in the College of Sciences and Mathematics to agronomy and soils in the College of Ag.

"I came to Auburn wanting to make a difference in the world by studying diseases of humans and pursuing a pre-med degree, but now I'm learning about diseases of plants and the importance of agricultural science," Carter says. "What I've discovered is that this is a vitally important applied science that has far-reaching and profound effects on human health.

"In the College of Agriculture, I not only saw a difference in the material I was learning, but in the people as well," he says. "I've had nothing but supportive and friendly experiences with both the professors and students. It's a great atmosphere in class, out of class and even in the clubs that I'm a part of."

WIDE OPEN Growing demands on global food and energy supplies and the environment are adding value to degrees in agriculture. The College of Agriculture at Auburn University is headquartered in Comer Hall, at left, which sits high atop Ag Hill. Comer has been the symbol of Auburn agriculture since it was built in 1910.

Horticulture sophomore Savannah Duke agrees.

"My first impressions with the people in my department just made my choice even easier," Duke says. "Everyone wanted to help me get settled in and succeed."

One concept that sets the College of Agriculture apart from all other colleges and schools at Auburn is its academic advising system. All Auburn undergraduates have academic advisers within their colleges and must meet with them at least once a semester to register for the next semester's classes. While in other colleges and schools across campus, non-faculty employees serve as advisers to students who have been assigned to them on an alphabetical basis, College of Ag advisers are actually faculty members in students' specific fields of study. Since many advisers also teach their advisees, this provides a great deal of interaction between faculty and students.

"Many of the faculty are like my second parents," says junior animal sciences major Hannah Taylor. "They know what is going on in my life and what my career aspirations are and are there to help me accomplish them."

The College of Ag's advising system is beneficial for both students and faculty, says agricultural economics professor Patricia Duffy, who has been advising students since she joined the College of Ag faculty in 1985.

"We have the chance to really get to know our students so that they're more than just names on a roll or grades, and then when they need reference letters or letters of recommendation, they know they can come to us," Duffy says. "And because we know our students, that helps us pick up on warning signs or red flags—say, a good student suddenly starts making poor grades—that indicate there's an issue or a problem that needs to be dealt with, and we can be there to help them through those times."

Although advising as many as 15 or 20 students through an academic year is a time-intensive task, it has its rewards, Duffy says.

"We get to know some really neat people that we might not have if we only had them in a class," she says. "We watch them grow and mature, and a lot of times, the relationships don't end when they graduate. I have several former advisees who, if they're in Auburn, will come by to visit."

POSTHUMOUS HONORS College of Agriculture Dean Bill Batchelor presents a proclamation that posthumously awards the late William E. "Bill" Hardy Jr. the title of professor emeritus to Hardy's widow, Linda. Hardy, who passed away in October 2011, served as a faculty member in the Department of Agricultural Economics and Rural Sociology at Auburn for almost 39 years, as well as associate dean for instruction for the College of Ag from 2000 to 2007. In an additional memorial tribute to Hardy, First South Farm Credit renamed its endowed scholarship in the college the William E. Hardy First South Farm Credit Scholarship.

Three State Ag Leaders To Enter Hall of Honor

by ASHLEY CULPEPPER

The Auburn University Agricultural Alumni Association will pay tribute to five distinguished individuals for the positive impacts they have had on Alabama agriculture during its 2013 Alabama Agricultural Hall of Honor Banquet, set for Thursday, Jan. 31, at The Hotel at Auburn University and Dixon Conference Center in Auburn at 6:15 p.m.

Three of the individuals—Robert N. Brewer of Auburn, Philip Martin of Enterprise and Tommy Paulk of Decatur—will be inducted into the association's Hall of Honor, which recognizes living Alabamians who have made significant contributions to the state's agriculture industry.

Brewer, the honoree in the education/government sector of agriculture, was a faculty member in the Department of Poultry Science at Auburn for 32 years, serving as department head from 1987 to 2000. Martin, selected as the inductee in the production sector, has served many leadership roles within Alabama's agriculture industry, including 31 years as president of the Coffee Country Farmers Federation Board of Directors, nine years on the Alabama Farmers Federation State Board and 55 years on the American Dairy Association of Alabama Board. Paulk, president and CEO of the Alabama Farmers Cooperative, is the inductee in the agribusiness sector.

Also during the banquet, the association will present its 2013 Agricultural Pioneer Awards to the families of the late Everett C. Easter of Limestone County, an early leader in bringing electricity to rural Alabama, and the late Samuel I. Hinote of Robertsdale, a trailblazer in the state's farm-raised catfish industry. The Pioneer Awards are given posthumously to individuals who played a role in shaping Alabama's agriculture industry.

Tickets to the 2013 Hall of Honor banquet are $50 per person; opportunities for corporate sponsorships of the event are available. For more information on corporate sponsorships or the awards and banquet, contact Elaine Rollo at 334-844-3204 or rollome@auburn.edu.

The Ag Alumni Association established the Hall of Honor in 1984. The awards banquet is held each year in conjunction with the association's annual meeting. Learn more about the Agricultural Hall of Honor at http://www.ag.auburn.edu/alumni/hall-of-honor/.

College Announcements

Faculty Promotions

LaDon Swann was selected as director of marine programs in the Department of Fisheries and Allied Aquacultures.

New Hires

Two new faculty have joined the College of Agriculture in recent months, including **Matthew Catalano**, an assistant professor of quantitative fisheries biology in the Department of Fisheries and Allied Aquacultures, and **Jennifer Johnson**, Extension specialist and assistant professor in the Department of Agronomy and Soils.

THE LOOK, THE FEEL OF COTTON Charlie Burmester, director of the Tennessee Valley Research and Extension Center in Belle Mina, shares a handful of freshly ginned cotton with youngsters who were among the 1,500 Auburn fans who attended the 2012 Fall Roundup and Taste of Alabama Agriculture Nov. 3, Homecoming Saturday, at Ag Heritage Park. Using a mini cotton gin, Burmester spent the morning demonstrating to Roundup-goers how a gin works to separate cotton fibers from their seeds. Burmester's cotton exhibit was one of 58 food and informational booths at Ag Roundup. Roundup organizers say an early kickoff for Auburn's homecoming football game affected attendance this year, but even so, the event's live and silent auctions raised $10,500 to be used for College of Agriculture scholarships, sponsor donations totaled $8,550 and ticket sales generated about $6,000. Ag Roundup is co-sponsored by the College of Agriculture and the Agricultural Alumni Association at Auburn, along with corporate partners Milo's Tea, John Deere, TriGreen, Snead and SunSouth.

College of Ag Enrollment Continues to Grow

by PAUL PATTERSON, ASSOCIATE DEAN FOR INSTRUCTION

Undergraduate student enrollment in the College of Agriculture reached record levels again in fall 2012, continuing an upward trend that began in 2000. The official college enrollment is 1,011 undergraduate students and 264 graduate students, for a total of 1,275.

The undergraduate enrollment includes 51 students in the environmental science bachelor's degree program, administered by the Department of Agronomy and Soils and conducted in cooperation with Auburn's colleges of Engineering and Sciences and Mathematics. That is up 25 percent from a year ago. Students majoring in food science programs, which became part of the college in 2011, are counted in the 72 undergraduate and graduate students enrolled in the Department of Poultry Science.

The reported enrollment does not include the 132 undergraduate students enrolled in biosystems engineering. Faculty members in this department are in the College of Agriculture, but this accredited engineering program is administered through the College of Engineering. The official graduate enrollment number also does not include the record 23 graduate students in biosystems engineering and eight master's degree students in the interdisciplinary rural sociology program, in which College of Agriculture faculty serve as mentors.

The Department of Animal Sciences continues to have the largest undergraduate enrollment in the college with 505 students, up more than 10 percent from a year ago, followed by horticulture with 132 students and ag business and economics with 126 students. The Department of Fisheries and Allied Aquacultures continues to have the college's largest graduate program, with 90 master's and doctoral degree students. The Department of Agronomy and Soils has 37 graduate students.

In fall 2012, undergraduate enrollment decidedly tipped toward women, who account for 546, or 54 percent, of the 1,011 students enrolled. This shift in the gender balance has progressed steadily in recent years. Among the 251 students classified as freshmen, 157 are women. In the senior class, 163 are men and 140 are women. African American enrollment moved up slightly in fall 2012 to 3.2 percent of undergraduate enrollment.

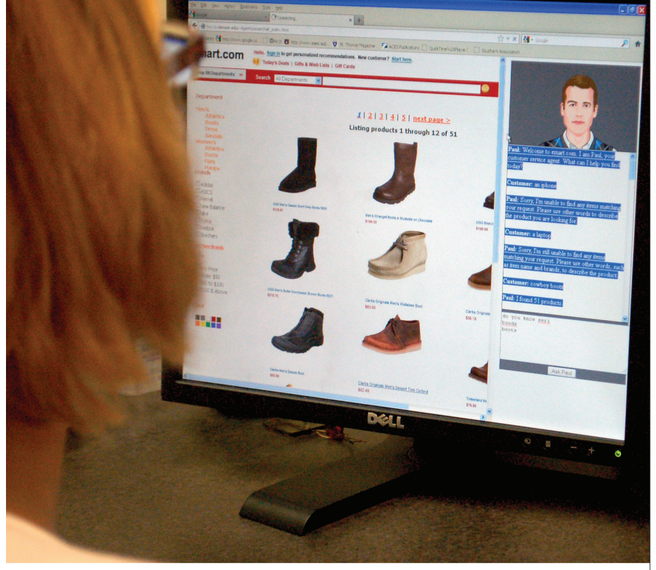
The College of Agriculture is working to increase student enrollment. Our global society faces great future challenges related to food production and the environment in a world with a rapidly growing population. There is an urgent need to prepare the next generation of leaders and scientists to address these future challenges.

Relevant Research

Internet and the Aged

Tool May Help Elderly Access, Process Health Info Online

by JAMIE CREAMER



HELLO, MY NAME IS . . . An Internet user interacts with "Paul," an online conversational agent developed by two Auburn University consumer scientists. Research the scientists have conducted indicates that senior citizens are more comfortable using the Internet when such a tool is incorporated into a site.

Incorporating talking avatars into websites that offer health and medical information could help senior citizens improve their well-being and enhance their quality of life, AAES consumer scientists at Auburn theorize.

In research focused on elderly and the Internet, Wi-suk Kwon and Veena Chattaraman have found that people in the 65-plus category are more trusting of and less stressed out using e-commerce websites that featured conversational agents—virtual "people" images programmed to interact with users both verbally and nonverbally.

"Our research has generated promising evidence that a conversational agent significantly enhances older adults' perceptions of social support, trust and hedonic and functional benefits of websites," Kwon says. "That, in turn, results in less risk perception and user anxiety and leads to increased Internet use."

If that is so for e-commerce sites, it could also be the case with online sources of valuable health and medical information, Kwon says.

"E-health tools are drastically changing how health care information is communicated and managed, and improving older adults' abilities to access this information can be very beneficial for them because of the growing number of health issues they tend to face as they age," Kwon says. "Our goal is to reduce the critical cognitive and social-psychological barriers that hinder older users in Web-based environments."

To accomplish that, Kwon and Chattaraman are designing conversational agents with interactive cognitive and affective aids to help the elderly access, process, comprehend and more accurately remember complex e-health information.

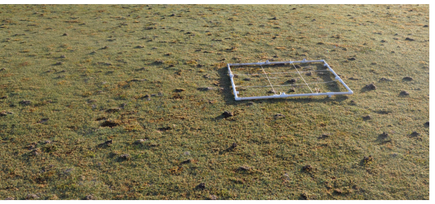
"This enhanced cognitive and affective information processing could lead to potentially transformative and empowering experiences for older Americans, improving their quality of life through information access," Kwon says.

The researchers say all of the over-65 subjects who have volunteered to be a part of the research project have been recruited from participants in Auburn University's Osher Lifelong Learning Institute, the Lee-Russell Council of Governments' Area Agency on Aging and the Adult Activity Center at the Opelika Sportsplex.

Research Reveals Secret Lives of Mole Crickets

by JAMIE CREAMER

Research that Alabama Ag Experiment Station entomologist David Held is conducting in labs at Auburn is shedding new light on the secret lives of mole crickets, and his findings could eventually lead to improved strategies for controlling the costly pests.



DIG THIS DAMAGE That mole crickets and their subsurface tunneling behaviors cause serious destruction is obvious at this Gulfport, Miss., golf course. Sandy soils, such as those along the Gulf Coast, are the insects' preferred habitat. Auburn entomologist David Held, who specializes in pests that attack turfgrass and ornamental plants, is conducting research that could help lead to improved mole cricket control techniques.

Other than surfacing during the mating season, and then at night, mole crickets spend virtually all their lives underground, and thus the general public may not be familiar with the insects. But in southwest Alabama and, indeed, from the Texas Gulf Coast to Florida and now into the coastal Carolinas, the tunnel-digging mole cricket is the number one insect pest of turfgrass, inflicting serious damage on golf courses and sod farms and in lawns and pastures. And control is costly, from $70 to $140 per acre annually.

In the research, Held and David Bailey, a graduate student working on the project, have studied the insects' tunneling behavior by way of 3-D models they developed using soil and 14-inch PVC pipes. Their experiments have uncovered new insights about mole crickets' extensive tunnel systems and the tunnels' impact on movement of water through soil plagued by mole crickets.

"Mole crickets have giant forelegs that they use to move through the soil, sort of like they're swimming or doing the breaststroke, and that kind of sweep means the tunnels they dig actually are two to three times bigger than the insects themselves," Held says. "They're also displacing significant amounts of soil, from 1.7 to 7 ounces per insect in about a week of tunneling, and that is creating large spaces all through the soil."

The tunneling research also has scientifically confirmed the general assumption that mole crickets prefer sandy loam soils to clay, but it has challenged scientific anecdotes contending that tunnels created by immature mole crickets are not permanent or are not as extensive as those dug by adults.

"We found no difference in the tunnels made by adult and immature mole crickets, except that adults' tunnels are wider in diameter and slightly longer," Held says.

Held's work on mole crickets' tunneling behavior is part of a larger National Science Foundation–funded project in which he, former College of Ag soil physicist Navin Twarakavi and Auburn environmental engineer Prabhakar Clement are investigating how mole crickets and their subsurface tunnels impact soil-water interactions, primarily infiltration, runoff and the movement of contaminants through the soil.

In a separate but related study funded in part by the Alabama Turfgrass Research Foundation, the Auburn scientists also have challenged assumptions regarding the feeding habits of mole crickets. In essence, Held and entomology graduate student Yao Xu found that while the insects do eat plant roots, stems and leaves, they prefer protein.

"Grass is convenient for them, and they can sustain themselves on it, but they incorporate a great deal of meat into their diets," Held says. And in dietary tests in which one group of mole crickets was fed protein only, another protein and plants and a third plants only, the protein group grew significantly larger and faster than the other two groups, especially the one on the meatless diet. That knowledge is valuable in continuing efforts to control the pests.

"Pesticides used to be broad spectrum, where they basically got rid of all the insects in the soil, but now they're more specific," Held says. "That means there are a lot more insects in the soil than there used to be, and that gives mole crickets a lot more meat to feed on."

The two mole cricket species that plague the Gulf Coastal Plain are the Southern and the tawny. Adult mole crickets range in length from 1 to 2 inches, and though they do feed on and injure managed turfgrass and pastures, it's their tunneling behavior that causes the most significant damage, reducing the aesthetic quality and health of turfgrass and, on golf courses, interfering with the roll of the ball.

Mole cricket infestations are usually spotty and localized. The visible signs of damage are irregular raised mounds or ridges of soil and dying grass.

Scientists Explore West Nile Virus, Urbanization Links

KNOWN VECTOR A *Culex quinquefasciatus* mosquito lands on a human finger in this photo from the Centers for Disease Control. The species is the primary transmitter of West Nile virus in the Southeast. Auburn researchers are examining the links between increased urbanization and populations of disease-carrying mosquito species.

Against a backdrop of the second largest West Nile virus outbreak to hit the U.S. since the first case was reported in 1999, two Alabama Agricultural Experiment Station researchers in Auburn's School of Forestry and Wildlife Sciences have been awarded a $240,000 U.S. Forest Service Urban and Community Forestry Program grant to investigate the links between urbanization and the mosquito-borne disease.

Through the study, "Impact of Forest-to-Urban Conversion on Human Health," Clinton-McClure professor Graeme Lockaby and associate professor Latif Kalin aim to improve the tools for forecasting areas at high risk for the virus. They will do so by gathering refined information to determine which environmental factors enhance the habitat for mosquito species that carry West Nile and using that data to develop risk maps for some areas of the Southeast.

Lockaby, who also is director of the Center for Forest Sustainability at Auburn, has conducted extensive research in recent years on how urbanization—defined as the conversion of forest and agricultural land to developed or urban environments—impacts water quality and has found a direct link between poor water quality and increased mosquito populations, including the species that transmit the potentially fatal virus.

"Precise data linking land-use change and West Nile virus risk is lacking, however, and many of the environmental factors associated with the disease remain unclear," Lockaby says. "What we as a natural resources unit bring to the table is the ability to do a very detailed analysis of the landscape, including aspects that may contribute to risk."

Working with Lockaby and Kalin on the project are postdoctoral fellow Krisztian Magori and assistant professor Wayde Morse, both in the School of Forestry and Wildlife Sciences, and researchers with the forest service's Southern Research Station, the University of Alabama at Birmingham's Department of Epidemiology, the Centers for Disease Control and the Georgia Department of Community Health.

Magori, a quantitative disease ecologist, says previous research actually gives conflicting evidence on what ecological conditions present the most risk for mosquito-borne diseases such as West Nile virus.

"We are trying to bring together data sets of water quality and hydrology, land-use and land-cover changes and occurrences of West Nile virus to see if there is really a link between urbanization and mosquito-borne diseases, how we can best describe that linkage and what we can do about it," Magori says

He and Lockaby also will identify the specific water chemistry that is most conducive to breeding mosquitoes associated with the virus.

"This is about predicting risk," Lockaby says. "We don't want to just say bad water quality probably means more mosquitoes. We want to show a numerical relationship in order to help prevent infection."

As of late November, more than 5,200 cases of West Nile virus disease in humans had been reported across the U.S. for 2012, with the death toll at 236. West Nile virus is a mosquito-borne illness and is not spread from person to person. There is no specific medication or vaccine for the virus.

About one in 150 people infected with West Nile will develop severe illness. Symptoms can include high fever, headache, neck stiffness, stupor, coma, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks, and neurological effects may be permanent.

Researchers Aim To Make Fish Ponds More Profitable

AT YOUR LEISURE Recreational fish ponds can be money makers for their owners, but management recommendations that two Auburn aquatic ecologists are developing should help make pay-to-fish operations even more profitable.

Some 280,000 recreational fish ponds dot Alabama's landscape, claiming close to 650,000 acres and providing a significant source of income as part of pay-to-fish operations and fishing resorts located throughout the state. Two Auburn fisheries scientists are in the midst of Alabama Agricultural Experiment Station–funded work aimed at helping pond owners improve the management and profitability of those ponds.

"Given that pond fishing businesses are most often found in some of the most economically challenged parts of Alabama, any support that can help them enhance their fish pond populations and attract more anglers would be significant," says Rusty Wright, Extension specialist and associate professor in the Department of Fisheries and Allied Aquacultures.

In the project, Wright and departmental colleague Dennis DeVries, professor, are specifically focusing on two management practices commonly used to improve the growth and abundance of largemouth bass and bluegill in recreational ponds. The first is stocking threadfin shad as a supplemental prey fish for largemouth bass; the second is adding pelleted feed for bluegill.

"These enhancement techniques are often used, but it is not consistently clear whether they work or how they act in a pond food web," Wright says. "This research will help us make better science-based recommendations as to the addition of pellet feeding and the stocking of threadfin shad."

For largemouth bass, the addition of threadfin shad as a prey species translates into a more abundant, calorically rich and easily caught food source, Wright says; however, shad species can have a negative effect on the abundance and growth of other prey species, such as bluegill, through competition for food.

To offset that competition, or to enhance ponds without shad, pond owners often feed the bluegill with pelleted feeds. Direct feeding of bluegill can improve growth and increase egg production. Plus, feeding in a specific location can lure bluegill to anglers.

In general, however, study of the potential impacts of pellet feeding has only been partially tested scientifically, and often in laboratory settings. Wright says such research is best carried out in the field, where conditions are the same as those pond managers are going to experience. For their project thus far, he and DeVries have conducted a pond experiment at the E.W. Shell Fisheries Center and have sampled fish from established ponds at the fisheries center as well as some that are privately owned.

"We get a lot of questions about pond management, and our main goal in this research is to truly determine the efficacy of these practices, to refine rate recommendations for stocking and feeding and to understand how the enhancements work," Wright says. "Our science-based assessment of pond enhancements should help pond managers avoid spending money on overfeeding or excess prey fish additions."

College of Veterinary Medicine

Frederic J. Hoerr Named Interim Dean

Frederic J. Hoerr, Auburn University College of Veterinary Medicine professor emeritus and former director of the Thompson-Bishop-Sparks State Diagnostic Laboratory, has been named interim dean of the College of Veterinary Medicine.

Hoerr will serve in the position until the search for a permanent dean is completed.

"We are very fortunate to have a person with Dr. Hoerr's academic and managerial experience in the role of interim dean of the College of Veterinary Medicine," says Timothy Boosinger, who served as CVM dean from 1995 until being named interim provost for the university in June 2011 and provost in June 2012. "Dr. Hoerr continues to support the academic mission of the college in many important areas, such as poultry diseases, multispecies medicine and diagnostic pathology."

Hoerr first joined Auburn University in 1980 as affiliate faculty when he became a veterinary diagnostic specialist with the Alabama Department of Agriculture and Industries, C.S. Roberts Veterinary Diagnostic Laboratory.

In 1987, Hoerr was named director of the state diagnostic laboratory and professor of avian pathology at Auburn. Under his leadership, the Auburn diagnostic laboratory was built and, in 2011, was accredited by the American Association of Veterinary Laboratory Diagnosticians.

Hoerr retired in February 2012 with 31 years of service to the Department of Agriculture and Industries and Auburn University.

A diplomate of the American College of Veterinary Pathologists and the American College of Poultry Veterinarians, Hoerr served as president of the American College of Poultry Veterinarians and the American Association of Avian Pathologists.

Hoerr received a D.V.M. degree from Purdue University in 1976 and a Ph.D. in 1981. In 2011, Purdue University School of Veterinary Medicine presented Hoerr its distinguished alumnus award.

College of Human Sciences

Henton Cited as a 'Champion of Change'

HAILED AS CHAMPION June Henton, dean of the College of Human Sciences, was selected as a Champion of Change for her role in promoting food security by fighting hunger at home and abroad.

June Henton, dean of the College of Human Sciences at Auburn University, was recognized at the White House in September as a Strengthening Food Security Champion of Change.

Henton and 11 other leaders were selected for using innovative approaches to ensure that no man, woman or child goes hungry and for inspiring others to do the same. This was the first time that the program recognized a group of individuals for efforts in promoting food security.

"Today's champions are examples of the groundbreaking work being done to tackle hunger at home and abroad," Agriculture Deputy Secretary Kathleen Merrigan says. "These individuals are making improved access to healthy food a reality for millions of individuals in need."

Henton is founder of Universities Fighting World Hunger, a global alliance of more than 300 higher education institutions that began in partnership with the United Nations' World Food Programme in 2004 as the Auburn University War on Hunger. She currently serves as executive director of the newly established Alabama Agricultural Experiment Station–based Hunger Solutions Institute, formerly the International Hunger Institute, at Auburn, which provides leadership for the global alliance.

The Champions of Change program recognizes individuals, ranging from educators to entrepreneurs to community leaders, for the work they are doing to serve and strengthen their communities.

HOG WILD Agricultural damage by wild pigs is a challenge faced by farmers worldwide.

School of Forestry and Wildlife Sciences

Moroccan Government Awards Ditchkoff Grant for Wild Pig Research

Steve Ditchkoff, William R. and Fay Ireland Endowed Distinguished Professor in Wildlife Sciences, has been awarded an $80,000 grant from the government of Morocco to study methods for the trapping and removal of wild pigs in that country.

Wild pigs are native to Morocco, but the agricultural damage they cause has been a growing threat to small farmers in the region, Ditchkoff says.

"There are parts of the country that are much closer to subsistence agriculture," says Ditchkoff. "So agricultural damage from wild pigs is impacting not just income, but the ability to feed the family and entire villages."

In a pilot study, Ditchkoff and Mark Smith—SFWS associate professor—will investigate how best to control the Moroccan pigs and will provide educational materials for farmers whose livelihoods are being decimated by the animals.

The project developed after Ditchkoff spoke at a summit in Morocco earlier this year as the premier U.S. expert on wild pigs. The meeting brought together key players in agriculture and forestry in Morocco, including the top ministry officials in those areas. The small panel of international experts also included one speaker from Spain and two from France, and each country's representative presented both the unique challenges and current research from their home region.

The trapping method Ditchkoff and Smith will study is called "whole sounder removal," a system developed by Ditchkoff and graduate student Rob Holtfreter. The technique capitalizes on the territoriality of family groups, or sounders, by removing the entire group of breeding females and their young at one time. For more information about the system, go to http://www.wildpigconference.com/proceedings09/holtfreter1.pdf

College of Sciences and Mathematics

SCANNING THE OAKS A tripod-mounted terrestrial light-detection and ranging, or T-LiDAR, scanner sends out a laser beam to scan the Toomer's oaks and produce a three-dimensional replica of the two trees that will help experts assess the trees' health and document their history. Luke Marzen, professor in the College of Sciences and Mathematics, and School of Forestry and Wildlife Sciences professor Art Chappelka conducted the tree scan with loaned equipment, but the results prompted them to purchase T-LiDAR equipment for Auburn with funds they and building science associate professor Paul Holley were awarded in an internal grant through Auburn's Office of the Vice President for Research. The three faculty members are using the T-LiDAR scanner in various projects. Marzen and Chappelka, for instance, are collaborating on a USDA Forest Service–funded study to investigate ways the scanner can be used to collect detailed information about the crown area and density of trees as well as above-ground biomass.

Entrepreneurship

At Your Service

Catering Helps Collegiate Cattlemen, Cattlewomen Raise Funds, Learn Business Skills

by ASHLEY CULPEPPER

For even the most experienced cook, feeding several hundred people at one time would be a daunting task. But for members of Auburn's Collegiate Cattlemen and Cattlewomen, catering meals has become a regular occurrence and is proving to be a significant source of income to support the organization's activities and goals.

"Since August, we have served about 15 events, from a 10-person York Lecture dinner to 750 people at Ag Discovery Adventure," says Carla Weissend, animal sciences/pre-vet senior and current president of Collegiate Cattlemen and Cattlewomen.

DINNER IS SERVED A recent event catered by Auburn's Collegiate Cattlemen and Cattlewomen featured prime rib on a bed of risotto and grilled asparagus, followed by fruit-topped pound cake for dessert. The group photo, at left, includes, first row, from left, Autumn Brown, Kourtney Keck, Samantha Belanger, Tabitha Welch and Jordan Wicks; second row, from left, Staci DeGeer, Erin Beasley of the Alabama Cattlemen's Association, Carla Weissend, adviser Christy Bratcher and Evelyn Brown of the Alabama Cattlewomen's Association; third row, from left, Alex Tigue, Andrew Gilliland and Justin Waits.

Sophomore animal sciences major Autumn Brown is vice president of catering and, as such plans and organizes each job.

"The catering is a whole category by itself," says Brown. "There are so many things you have to think about. It really is like running a business."

Students are in charge of processing, cutting and cooking the meat and of preparing side dishes and buying supplies for each catered event. Barbecue pork, cheeseburgers, macaroni and cheese and potato salad are some of the more popular items on their menu, but Weissend says they can serve just about anything, from a plated meal of prime rib, risotto and grilled asparagus to a whole hog tailgate.

Training is provided to students before taking part in any food process along the way.

"It is a good learning experience, because there are safety guidelines you have to follow," says Christy Bratcher, animal sciences assistant professor and club adviser since 2008.

As adviser, Bratcher has guided the Collegiate Cattlemen and Cattlewomen through a major transition that began in 2011 when the club changed its name from the Meat Science Association to Collegiate Cattlemen and Cattlewomen in an effort to better fit the interests of Auburn agriculture students and to attract new members.

"Meat Science Association is just not an attractive name," Bratcher says.

The name change was effective, and Weissend is proof. The new name encouraged her to join.

"I was a Junior Cattleman," she says, referring to a partner organization of the Alabama Cattlemen's Association, "and I want to be an Alabama Cattleman one day, so I realized this was my way to bridge the two."

With the new name, the organization grew from 10 members to 39 members. With this growth, Bratcher and officers of the Collegiate Cattlemen and Cattlewomen realized the catering business needed to grow as well.

Staci Degeer, one of Bratcher's Ph.D. students, spent countless hours developing a streamlined business model and researching other catering options in the area to ensure competitive pricing. With that done, Bratcher encouraged the Collegiate Cattlemen and Cattlewomen to expand the business by taking on more events.

"It's good to work with anyone because if you do a small event, that may lead to a bigger event in the future," Bratcher says. "Word gets around."

In fact, word of the versatility and work ethic of Collegiate Cattlemen and Cattlewomen has gotten around. Weissend remembers a week where the club had eight catering events in 10 days. "I put it out to the club asking for their help," said Weissend, "and the club stepped up to the challenge. We had more than enough people to cover each event."

Catering gives the members of Collegiate Cattlemen and Cattlewomen experience in meat processing, event planning, budgeting and working with a team. But there's more to it than the work experience.

"Catering events provide you an opportunity to bond," Weissend says. "You are working, but you are having fun and making memories."

The purpose of the business is not only to gain experience and make memories, but also to raise funds for travel to beef industry events. In spring semester 2012, 10 Collegiate Cattlemen and Cattlewomen traveled to the National Cattlemen's Beef Association Convention in Nashville, Tenn., using catering funds and sponsorships from the Alabama Cattlemen and Cattlewomen.

The benefits of attending the convention are both educational and professional. Brown, who had joined the organization only weeks before the 2012 convention, can attest to that.

"We sat through lectures and guest speakers about the beef industry in the morning, and then we had socials to meet professionals in the beef industry," she says. "It was my favorite trip."

The 2013 National Cattlemen's convention is in Tampa, Fla., in February, and Bratcher hopes to increase the size of Auburn's delegation. With that goal in mind, the club has stepped up its fundraising efforts, including the catering, to help reduce club members' out-of-pocket costs for the trip. In years past, the organization raised about $6,000 a year. This year, from August to October alone and from catering alone, the organization brought in more than $6,000, making this its biggest year to date. The organization also has a website, where T-shirts, license plates and holiday sausage boxes can be purchased.

As the club continues to grow and develop, members, such as Brown, have grown as individuals as well.

"Cattlemen's has helped me see that event planning is something I want to do, rather than researching," she says.

The future is bright for Auburn's Collegiate Cattlemen and Cattlewomen, as Bratcher, Weissend and Brown agree they want to see the organization and its catering continue to grow. Weissend put her vision for the club simply.

"Whether you come from a cattle background, or you want to know more about the meat you eat, or you're interested in the cattle industry—we don't care, we want you there."

For more information on the organization, go to their website www.auburn.edu/student_info/cattlemen/ or contact Christy Bratcher at clb0012@auburn.edu.

Faculty and Staff Accomplishments

Professors **Allen Davis** in the fisheries and allied aquacultures department and **Henry Kinnucan** in agricultural economics have been awarded alumni professorships by the Auburn University Alumni Association. The association also named **Shelly McKee**, poultry science associate professor, as one of three 2012 Alumni Undergraduate Teaching Excellence Awards recipients.

Biosystems engineering professors **Steve Taylor** and **Oladiran Fasina** and assistant professor **Sushil Adhikari** received campus-wide recognition as winners of the President's Outstanding Collaborative Units Award for their work on a seven-member team with the Center for Bioenergy and Bioproducts.

Elina Coneva, associate professor of horticulture, and Extension entomologist Ayanava Majumdar received the 2012 Achievement Award from the National Association of County Agriculture Agents during the 2012 Annual Meeting and Professional Improvement Conference.

Wes Wood, agronomy and soils professor; **Russ Muntifering**, animal sciences professor; and **John Liu**, fisheries and allied aquaculture professor, College of Ag associate dean for research and AAES associate director, have been named to the 2012 list of SuperProfessors by FacultyRow, a professional and social network for academics.

Conner Bailey, rural sociology professor, is co-editor of a new book, "Confronting Ecological Crisis in Appalachia and the South: University and Community Partnerships," published by the University Press of Kentucky in July.

Student Accomplishments

Ashton Richardson, a senior in animal sciences/pre-vet and a linebacker for the Auburn Tigers, was named a 2012 Rhodes Scholarship finalist. Richardson has an overall 3.94 GPA and is a student in Auburn's Honors College.

Mark Durham, a 2010 Auburn agronomy and soils graduate who now is pursuing a master's degree in plant pathology, has been named the 2012 recipient of Bayer CropScience's Graduate Recruitment and Development Program award.

Wiley Bailey, a junior majoring in agricultural communications, was elected National FFA Southern Region vice president for 2012-13. Bailey also received the American Farmer Degree, the highest degree bestowed upon an FFA member, at this year's convention.

Brady Peek, a sophomore in agronomy and soils, claimed third place and a $150 cash award in the speech contest held during the annual meeting of the Students of Agronomy, Soils and Environmental Sciences.

Staci Degeer, animal sciences Ph.D. student working under the guidance of assistant professor **Christy Bratcher**, is one of only 12 graduate and senior-level undergraduate students worldwide to be selected by the International Stockmen's Educational Foundation to attend the International Livestock Congress in Denver in January.

Auburn University's Soil Judging Team won the 2012 Southeastern Regional Soil Judging Contest and will advance to the national competition in the spring. Team members, all agronomy and soils majors, include seniors **Andy Svyantek** and **Jordan Toombs**, juniors **Josh Carter** and **Morgan Lepage** and sophomores **Kristen Pegues** and **Jenna Platt**. Agronomy and soils alumni professor **Joey Shaw** is in his 15th year coaching the team.

Leanne Dillard, a Ph.D. student working under professors **Russ Muntifering** and **Frank Owsley** in the Department of Animal Sciences, is the 2012 recipient of the Novus International Research Award.

Casey Randle and **Alexandra Hawkins**, animal sciences/pre-vet students, have been selected as Alltech Student Ambassadors for 2012-2013.

In Memoriam

Aaron Heffelfinger, 24, a senior in the Department of Horticulture, died Friday, Sept. 28. A native of Madison, he attended Calhoun Community College before transferring to Auburn fall semester 2009.

Kenneth Stuart Rymal, 89, of Auburn, passed away in August. He was retired from Auburn University, where he was a professor in the Department of Horticulture.

Julian Luigi Dusi, 91, of Auburn, passed away Aug. 28. He was an emeritus professor of the Department of Biological Sciences at Auburn.

(TAKING IT ALL IN STRIDE, *from page 1*)

been called out of a Ph.D. candidate's dissertation defense and given a message that her husband of 33 years had been in an accident.

"I knew he and Van had left early that morning for Winfield, so I was thinking a traffic accident," says the professor of pathobiology. "Then I was told that his foot had been cut off—which wasn't exactly right, because it wasn't completely severed—and finally I talked to Van, who told me he was conscious, and I was just glad to know he was alive and had no internal injuries."

Fortunately, Christina van Santen Hierath, the eldest of the van Santens' three children and herself a 2003 College of Ag agronomy and soils/biosystems engineering alumna, and her then-6-month-old son Carl had just arrived in Auburn from their home in Germany a couple of days before the accident, and she and the van Santens' youngest, Katharina, a grad student at Emory University, drove their mother to Birmingham. They were there when van Santen woke up from the surgery.

"I honestly didn't know how I would react when I finally saw him, but his positive attitude was unbelievable; it pulled me through," Vicky van Santen says. "He was so upbeat. He knew what it was going to take to get past this. People would say, 'Oh, you've done great through this,' but I was doing great because he was doing great."

Two days later, surgeons operated again to ensure there was no infection, and then they gave van Santen his options: They could do restorative surgery, in an attempt to save the foot, or they could amputate. The physicians clearly explained the pros and cons of both options, and to the van Santens, the cons seemed to outweigh the pros on the restoration option—it would involve four surgeries over a 12-month period, leave the left leg about 1 inch shorter than the right and carry the inherent danger of associated infections.

"We also learned that, if you have to amputate, it's better to do it earlier than later, because you're in better physical shape," van Santen says.

"So I asked Vicky, 'It comes down to this: How much do you like my left foot?'"

The amputation was performed Nov. 16, with surgeons removing van Santen's foot up to about 4 inches above the ankle.

"It wasn't any big production," van Santen says. "No crying; no looking back; no sitting around trying to figure out exactly how the accident happened, no what-if this or what-if that. The damage had been done. There was only one way to go, and that was forward."

The van Santens—all of them—were at home in Auburn for Thanksgiving 2011, not only the two daughters and grandson Carl but also son Jakob and his family, including baby Peter, who had traveled from Wisconsin.

LIFESAVERS Edzard van Santen and the crew at the Upper Coastal Plain Ag Research Center—including, from left, Sandy Burleson, Roy Akers, van Santen, Randall Rawls, Van Dubay and Cecil Parish—pose in front of the plot of switchgrass where the farming accident that left van Santen an amputee occurred in November 2011. Van Santen credits the five people with saving his life.

"Having my two grandsons around was the best 'medicine' I could have asked for," van Santen says. "Their smiles made my frowns disappear."

Though exactly two weeks after the fateful day at Winfield, Thanksgiving 2011 was the merriest for the van Santens—a true celebration of life and loved ones and blessings untold. The only "negative": Van Santen is a serious cook, baker, host and server, and for the first time ever, he had to sit on the sidelines while others took care of those duties.

"Instead of serving people, I had to be served, and I was not happy with that situation," van Santen says. "But I was glad I was alive to be served."

Only once, briefly, in the weeks following the accident did depression threaten to wrap its suffocating cloak around van Santen. It was the second week in December, when a trip back to Birmingham to his medical team revealed van Santen had a staph infection in the wound. He was hospitalized, put on round-the-clock intravenous antibiotics and on Dec. 12 underwent a fourth surgery in which surgeons had to shorten his leg 2 more inches to remove necrotic tissue. The van Santens were told that if in three days the infection had not cleared up, his leg would have to be amputated above the knee.

"Those were very tense, dark days—the not knowing what was going to happen," van Santen says.

Pardon the overused phrase, but "faith, family and friends" pulled van Santen through that spell, and in follow-up surgery Dec. 15, surgeons found no sign of infection. Van Santen was on his way.

His recovery from that point on was one for the record books, thanks in large part to wife Vicky being right beside him every step of the way.

By the time he got fitted with his prosthesis in mid-January, he already had some lofty goals.

"I told the occupational therapist I wanted to be able to walk two miles by my birthday," he says.

His birthday's May 3; he logged his first two-mile walk the last week in March. By that time, he was also swimming close to a mile most days. He was driving even before he got his prosthesis; he reacquainted himself with his bicycle; and he never stopped working. In fact, he was on his laptop from his hospital bed in UAB less than 48 hours after the accident.

"My left foot may be gone," he wrote in a Nov. 13, 2011, memo to College of Ag faculty and staff and his graduate students, "but my mind is not, so graduate students, there will be statistics questions during your final seminar."

Notice there's been no mention thus far of the pain van Santen endured at the time of the accident, through the many surgeries and throughout the recovery. That's because there really wasn't much to speak of, van Santen says.

"It was uncomfortable at times, yes, but I'd say that on a scale of one to 10, it never got above a five," he says, adding that he has an uncommonly high pain threshold.

Van Santen says the events of the past 13 months have taught him at least two extremely important truths.

"I've learned that a lot of things aren't nearly as important as I once thought they were," he says. "And I learned that I married the right woman."

Inaugural Ag Discovery Adventure Deemed Big Success; Plans Under Way for 2013

By all indications, the first-ever Ag Discovery Adventure, held the last Saturday in September at Auburn University's E.V. Smith Research Center near Tallassee, was a winner, drawing almost 700 children and adults from across central Alabama for an encounter with 21st-century agriculture.

"Without question, it was a success," says Greg Pate, E.V. Smith superintendent and a lead organizer of the inaugural event. "We were thrilled to see this kind of turnout in our first year."

A collaborative venture by Auburn's College of Agriculture, the Alabama Agricultural Experiment Station and the Alabama Cooperative Extension System, the free, four-hour field day featured high-tech farm equipment, a corn maze, cotton bales, baby chicks, honey bees and an "Are You Smarter Than a Farmer?" game show and signs bearing ag facts and figures.

Dozens of Extension specialists and College of Ag faculty, staff and students volunteered to staff the many activities and displays.

John Fulton, one of the originators of the Ag Discovery Adventure concept, says the event's goal was to educate children and their parents about agriculture and commodities in Alabama and generate a better understanding of the processes involved in bringing farm products to the market, and he believes that goal was accomplished

"There was excellent information provided to the public about the good things the ag community does for Alabama and for the global population," Fulton says.

The success of the inaugural Ag Discovery Adventure made one thing clear: This will become an annual event.

"The comments from everybody who worked the day indicated the program was well received, and I've gotten numerous emails, Facebook messages and phone calls asking us to please do it again next year," E.V. Smith's Pate says. "But the best motivator for continuing next year was the smiles of children who saw baby chicks hatch, picked cotton, made cider or caught their first bug."

Pate says that, already, vendors are signing up to participate in and provide financial support to next year's Adventure, and organizers are gathering new ideas.

"As far as I can see, the potential is huge," Pate says.

Sponsors for the inaugural Ag Discovery Adventure included the Alabama Cotton Producers, Alabama Soybean Producers, Alabama Wheat and Feed Grain Producers, Alabama Farmers Federation, Alabama Poultry and Egg Association, Alabama Cattlemen's Association, Alabama Agribusiness Council, SunSouth, Atlantic and Southern Equipment, Y102 and Cumulus Broadcasting, Circle L Farms, Double C Precision Ag Inc., Ted Kretschmann, Kudzu Rock Farms, Baleigh Mosely, Pioneer Seed, Southwest Dairy Producers of America and Southeast United Dairy Industry Association Inc.

DISCOVERING AGRICULTURE Top photo, poultry science professor Joe Hess helps an Ag Discovery Adventure attendee hold a baby chick. Visitors also had the chance to witness chicks hatching. Bottom photo, John Jensen, fisheries and allied aquacultures professor emeritus, welcomes a group of folks to the event, held Sept. 29 at the E.V. Smith Research Center in Shorter.

Retired Extension Specialist Ball Honored for Service to Ag

Don Ball

The National Association of County Agricultural Agents has presented its Service to American and World Agriculture Award to Don Ball, a retired forage specialist with the Alabama Cooperative Extension System and agronomy and soils professor in the College of Agriculture. The award, which Ball received at the organization's national meeting in Charleston, S.C., is given to an individual who has had significant impacts on agriculture in the U.S. and abroad.

Ball, who received his degrees from Western Kentucky University and Auburn University, began his career in 1976 as an Alabama Extension forage crop agronomist and served in that role until his retirement in 2011.

Over the course of his career, Ball produced more than 1,000 professional, forage-related bulletins and circulars, information sheets and popular magazine and trade- and technical-journal articles and authored two books, including "Southern Forages," a 322-page publication that has become the most widely distributed practical forage book in the world. He also was an invited speaker at more than 2,000 meetings worldwide.

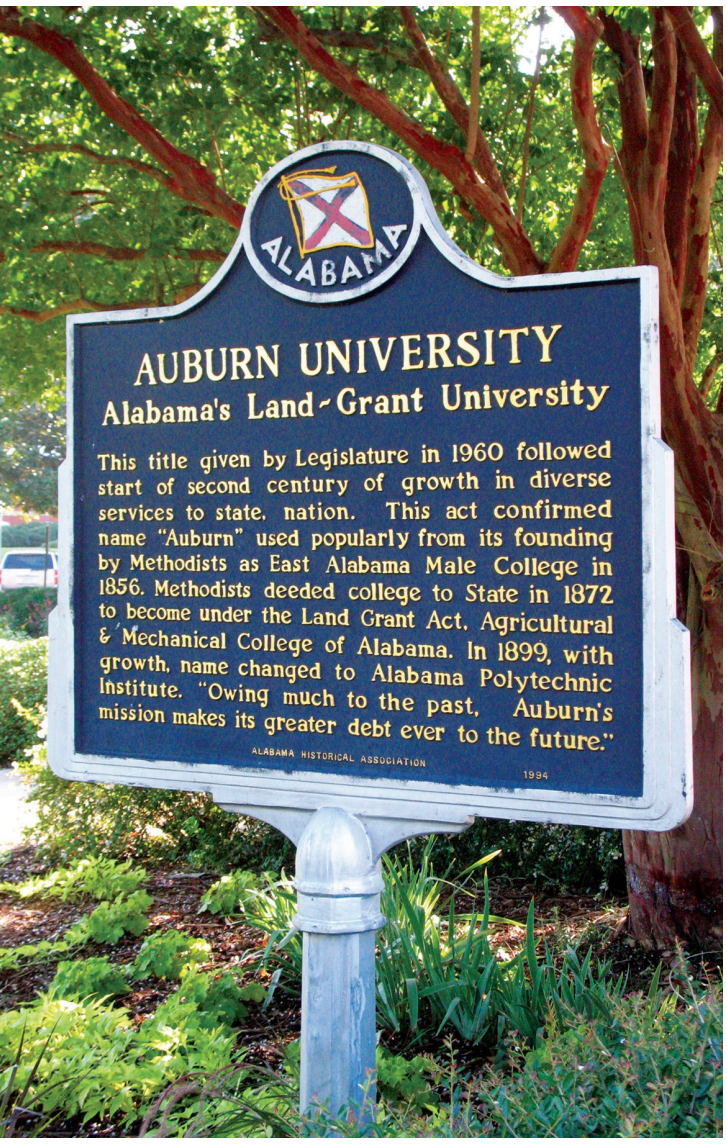
Gary Lemme, director of Alabama's Extension system, says Ball was most deserving of the high national honor.

"Don Ball has impacted the profitability and reputation of Alabama's beef industry through his farmer-friendly forage and grazing programs, and has mentored farmers, Extension educators and scientists in the state, the nation and the world," Lemme says.

For Ball, the source of the service award was humbling.

"What makes it particularly special for me is the organization from which this award originates," Ball says. "Most members of the NACAA around the nation are highly dedicated professionals who work hard and make wonderful contributions to their communities, to their states and to society in general, and my respect for them greatly enhances my appreciation of this award."

Earlier this year, Edzard van Santen, a colleague of Ball's in the Department of Agronomy and Soils at Auburn, paid tribute to the retired forage specialist by releasing 'AU Don,' the first ball clover variety ever developed. Selected for yield, hardiness and a more uniform distribution of growth, AU Don ball clover offers cattlemen and other forage producers a legume that tolerates drought and flood, reseeds even under heavy grazing pressure, germinates at cooler temperatures than other annual clovers and has a seeding rate of only two pounds per acre. The variety is being exclusively marketed by Fairlie Seed Company in Commerce, Texas.



Revolutionary Land-Grant College Act Marks 150 Years

One of the most transformational events in this nation's history occurred 150 years ago this year with the passage of legislation that established a system of public colleges that would teach agriculture, the mechanical arts and military tactics to the sons and daughters of working-class Americans, expanding access to higher education beyond the privileged few to the nation's citizenry at large.

Under the Land-Grant College Act, introduced by U.S. Rep. Justin Morrill of Vermont and now also known as the Morrill Act of 1862, each state was granted 30,000 acres of federal land per member of Congress, based on 1860 census data. For Alabama, the allotment was 240,000 acres.

The Morrill Act called for each state to sell the land and use the proceeds to finance and maintain at least one college where "the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts . . . to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

Ten years after the act was signed into law, the Alabama Legislature—faced with competing proposals from several colleges across the state, including one in Tuscaloosa— selected East Alabama Male College in Auburn as the first land-grant college in Alabama and the South and changed its name to Alabama Agricultural and Mechanical College.

Today, a century and a half after President Abraham Lincoln signed the land-grant bill into law, Morrill's vision is still at work at Auburn and the nation's 100-plus other land-grant universities. Auburn continues to be defined by the land-grant traditions of serving its citizens through academic, research and outreach programs and preparing Alabamians to respond successfully to the challenges of a global economy.

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Recipe File

The Ultimate Pancake

Family Will Flip Over Gooey Apple Breakfast Treat

Get out your cast-iron skillet for this oven-baked apple pancake, one of agronomy and soils professor Edzard van Santen's many culinary specialties. Since first giving the basic recipe a whirl 15-plus years ago, van Santen has fine-tuned the spice blend and created a gooey upside-down breakfast delight that's a must-have when his three grown children come home for a visit.

Upside-Down Apple Pancake

Filling:

3 Granny Smith apples
4 tablespoons butter
1 tablespoon brown sugar
2 teaspoons ground cinnamon
¼ teaspoon *each* ground nutmeg and ground cloves, if desired

Batter:

1½ cups all-purpose flour
3 teaspoons baking powder
1 cup buttermilk
4 eggs
⅛ teaspoon *each* vanilla extract and ground cardamom, if desired
Maple syrup

Quarter apples, remove cores and slice each quarter into thirds. Melt butter in a 10-inch cast-iron skillet* over medium-high heat, being careful not to brown or overheat. Add apples and stir to coat with butter. Add brown sugar and spices and stir thoroughly. Turn off heat, leaving skillet on the burner.

In a large mixing bowl, combine flour and baking powder; in another bowl, combine buttermilk, eggs and vanilla and cardamom, if desired. Add wet ingredients to flour mixture and mix well. Batter will be slightly thicker than regular pancake batter. Pour batter over sautéed apples in skillet and place skillet in a preheated 350-degree oven. Bake for 35 to 40 minutes, until a toothpick inserted in center comes out clean. Remove from oven. Run a knife around the edge and turn upside down on a large plate or platter. Pour generous amount of maple syrup over pancake. Slice and serve.

*If cast-iron skillet is unavailable, apples can be sautéed in a regular skillet, then transferred to a baking dish, topped with batter and baked as directed.