Developing Safer Sports Turfs

A focus on agriculture and natural resources programs at the University of Tennessee Institute of Agriculture
Dear Friends,

As I write this letter, the Institute of Agriculture is preparing to launch its 2009 field day season. Each year I am proud and amazed at the wide range of valuable information that our AgResearch and Extension personnel share at these public events that so exemplify our land-grant mission. The interests of farmers, agri-businesses and consumers alike are served through topics as varied as beef and forage, healthy hardwoods, and fruits of the backyard. You can learn more about these events, their dates, and locations at www.agriculture.utk.edu/.

In this tightening economy, we are all having to operate with constrained resources. Now, more than ever, your support of the Institute is important to our students, faculty, and programs. Our Campaign for Tennessee continues, and this issue of Tennessee Land, Life, and Science celebrates the generosity of J.E. and Ann Moss, and John and Cathy Henton. Contributions small and large make a difference to our success. I encourage you to consider us in your plans. To learn more, please contact our Development Office at 865-974-5779 or on the Web at http://agriculture.tennessee.edu/ development/.

All the best,

Joe

Joseph A. DiPietro
UT Vice President for Agriculture
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POWERFUL PLANTS GROW IN AN ENERGY GARDEN

UT Gardens Interim Director Dr. Sue Hamilton has a new passion: growing plants that generate power. Working with Dr. Sam Jackson of UT’s Office of Bioenergy Programs, she is developing an Energy Garden at the UT Gardens in Knoxville that will be a showplace and learning center starting this summer.

“It’s going to include everything from switchgrass and miscanthus to soybeans, sunflowers, and even algae,” Hamilton says. “We’ll have interpretive signs that help people learn more about the importance of these crops. The garden seems like such a natural synergy with all that’s going on in UT’s Biofuels Initiative.”

The garden, which takes its inspiration from that initiative, as well as the U.S. National Arboretum’s Energy Garden in Washington D.C., will join the UT Gardens’ new rose, meadow, and kitchen gardens—the latter a collaboration with Director John Antun of UT’s Culinary Institute.

You can learn more about these ventures and sign up for the monthly UT Gardens e-newsletter at http://utgardens.tennessee.edu/.

WANT TO CONNECT WITH FRIENDS FROM YOUR YOUTH? TRY THE TENNESSEE 4-H ALUMNI WEB SITE

If you grew up a 4-H’er in Tennessee, you probably have great memories and lifetime friends.

The Internet may not have been around when you were reciting the 4-H Pledge as a youngster, but now you can reconnect with your 4-H past online. The Tennessee 4-H Foundation wants you to know there is a 4-H Alumni Web site available where the past and present members meet to promote the organization and encourage alumni involvement.

You can log on at http://tn4halumni.org.

The Web site includes names and contact information of past 4-H members, information about joining the 4-H Alumni Association, the opportunity to donate to 4-H, links to 4-H activities and events, and stories of former 4-H members and what they’re doing today.

“Our motto is ‘Continuing Service,’” says Mark Gateley of the State 4-H Office. “Just because you’re not a kid anymore doesn’t mean you can’t be a part of 4-H. The Alumni Association provides a way for people to give back to the 4-H program and stay connected with friends they made years ago.”

JOIN US FOR AG DAY SEPTEMBER 26TH

The Institute’s annual alumni bash is set to begin four hours before kickoff on the agricultural campus in Knoxville. Watch for a mailing that has more details.

“Each year, people return to Ag Day from all over the country to show their support for agriculture and learn more about the Institute’s activities,” says Professor Dan McLemore, co-chair of the event. “I hope you’ll mark your calendar now and join us in welcoming our friends and other alums back to campus.”

Need to update your mailing address?

Please drop us a line
at agalumni@tennessee.edu
or call UTIA Marketing and Communications at 865-974-7141.
A specialized Tennessee National Guard team recently started a yearlong deployment in war-torn Afghanistan. They plan to have a big impact—but with farming, not firepower.

The team is part of the Guard’s Afghan Agribusiness Initiative, started last year to capitalize on the farming knowledge many Guard soldiers have from their civilian jobs. As U.S. forces work to rid the country of terrorists and rebuild Afghan security forces, the initiative focuses on getting their agricultural industry back on track after years of war and occupation that started with the Soviet invasion in 1979.

Tennessee is one of only a few states chosen to participate in the program, according to Col. Jim Moore, B.S. Agricultural Education, ’80, the team commander. They are working in Paktya Province on the Pakistan border. Late last summer Col. Moore contacted UT Extension for help in preparing his team for this assignment.

The result was a workshop on how to work with farmers in another country to improve agricultural productivity. Methods of doing rapid agricultural assessments were emphasized, as were Afghan culture topics such as land ownership patterns and irrigation water control to the role of religion. Fruit tree and vineyard pruning and management were also demonstrated. — George Smith

You can explore a Web site developed to aid the National Guard troops with their agricultural work in Afghanistan: http://trend.ag.utk.edu/afghanistan.html.

Sudanese outreach

Coming to a strange land where you don’t know the culture or language has to be one of the hardest things you can do. But that’s the reality for many Sudanese refugees who have migrated from their war-torn country to Tennessee.

UT Extension has a program to help these immigrants adapt to life here. Sumner County Extension agent Theresa Allan teaches a cooking class to Sudanese women and their children who now live here. The women need to know new shopping techniques, new food preservation, new plans, and how to prepare for their families.

“The people are simply lovely,” says Allen, “and they have great pride, love for their families, and they seem very appreciative to be here and to learn what America means.”

Middle Tennessee has a large Sudanese population—about 10,000 people in the Nashville area. Many of the immigrants came to the U.S. as a result of a relocation effort by the United Nations. You can watch a video about UT Extension’s outreach to the refugees at www.agriculture.utk.edu/news/VideoReleases/ . — Chuck Denney
Developing safer, higher-performing sports turfs

The high school quarterback is in the shotgun formation. The center snaps the ball.

As he drops back to pass, the signal caller trusts his left tackle to protect his blind side, but the lineman loses his footing on the worn turf, and a blitzing linebacker comes smashing through. The quarterback's only hope now is that when he lands on his back, the ground will be forgiving.

It's a scenario played out on hundreds of fields across Tennessee, whether the game is football, soccer, baseball, or golf. University of Tennessee Institute of Agriculture researchers and Extension specialists are working to make sure the turfgrass athletes play on is of the highest quality.

“We try to focus our efforts on making fields safer,” says Dr. John Sorochan, a turfgrass specialist with UT’s Department of Plant Sciences.

Sorochan and his colleagues Dr. Tom Samples and Dr. Jim Brosnan work to come up with management programs for those who take care of sports fields—everything from Neyland Stadium in Knoxville down to local parks where kids play football and soccer. Institute specialists have also served as turf consultants to the Tennessee Titans and the Philadelphia Eagles of the NFL.

The experts offer advice on the cultivation of turf varieties, irrigation, cutting heights of grass, and soil composition. The goal is to have a dense turf stand that offers a more consistent, uniform playing surface. Sports playing surfaces are safer when the turfgrass gives athletes sure footing and cushions them when they fall.

“We want to prevent injuries from when they hit the ground,” Dr. Sorochan says. “But also when that quarterback plants his back foot to throw, we don’t want him slipping.” Sorochan says many lower extremity injuries such as torn ACLs and twisted ankles can be blamed on turfgrass that is worn or simply doesn’t offer stability.

While a playing field can be too hard, it can also be too soft—and that also can cause sports injuries. If an athlete tries to run through a soft turf stand it can put additional strain on ligaments and joints. Institute turf specialists work to find the right blend of turf varieties to suit a particular sport. The specialists often recommend adding a sand base to soil to promote proper turf growth and drainage and to mix recycled tires into the soil to make turf last longer.

That's the situation at Neyland Stadium, where 12 inches of sand serve as a root zone underneath the turf at Shields-Watkins Field where the Tennessee Vols play on fall Saturdays. The stadium got a new variety of turfgrass for the 2007 season called Patriot Bermuda, and if you’ve ever had the opportunity to step on it, you can feel how spongy it really is.

“You've got 300-pound linemen wanting to beat each other up, and they’re beating up the grass at the same time,” Sorochan says. “If one of those guys gets hurt, we don’t want it to be because of the turf.”

UTIA specialists also helped develop the turf at Haslam Field where the team practices, which receives considerably more wear and tear than inside the stadium. The specialists are using recycled tires there for upkeep of the playing surface and for safety reasons.

But most of us will never score a touchdown in the checkerboard end-
zones of Neyland Stadium. We play our recreational sports in parks and school yards, and that gets much of the focus of Institute specialists. Many school fields, for instance, are cared for by custodians and coaches, and while they may not be turf experts, Institute advice is readily available to them. But Sorochan would like to see this involvement go a step further. "I would really like to see school systems hiring our graduates in turf management to oversee sports fields. They could really educate the coaches about making their fields safer."

As for that Saturday morning youth soccer game, Dr. Sorochan loves to see kids active in sports, and he believes safer turfgrass will encourage participation. "If we can prevent children from suffering injuries by improving playing conditions, maybe they'll stay active the rest of their lives," he says.

**AND FOR GOLFERS, A BETTER LIE**

It's a critical question that golfers ask themselves several times a round. How's my lie?

For those of you who don't play this game that can be both joyous and confounding, the lie is how the ball comes to rest in the grass. If it's sitting pretty, propped up nicely in the fairway on a beautiful patch of turf, then you have the opportunity to hit a good shot. If the lie is so-so, well, even Tiger can't be bothered to hit this shot for you.

But a bad lie shouldn't be the result of a poorly maintained course, and that's where turfgrass specialists with the Institute come in. The turf experts work with superintendents across the state and country to help them come up with better management practices for their fairways and greens, with recommendations about warm-season grasses that are drought tolerant and disease resistant. Some of the well-known Tennessee courses our experts work with include Tennessee's Honors Course in Ooltewah and Legends Course in Franklin.

"We really focus on attractiveness and playability," says Sorochan. "We also want courses that are environmentally beneficial to the community."

Sorochan says Institute specialists study turf varieties for golf courses that can use wastewaters normally high in salts for irrigation, which recycles water and saves community resources. He says a good turf stand can actually take pollutants out of the atmosphere, such as carbon. When a green absorbs carbon, the process actually improves its overall health and appearance.

Turfgrass is the largest irrigated crop in the country, and it's especially critical in this economy for courses to be well maintained to keep customers coming back. "The big thing is the greens," Sorochan says. "People want nice greens where the putts roll smoothly." - Chuck Denney
As members of 4-H, young humans pledge their hands for larger service. Hannah Wolters, an 11th grader from Culleoka in Maury County, is using her hands to help her young canine friend Sarge pledge his paws.

Hannah is a volunteer puppy raiser for Southeastern Guide Dogs, an internationally accredited guide dog school headquartered in Palmetto, Fla. Sarge is a goldador puppy that the school assigned to Hannah for basic training. Legally, the puppy is assigned to Hannah’s mom, but everyone knows that Hannah and Sarge are doing all the work.

Because Hannah is home schooled, she has the opportunity to devote her time 24/7 to Sarge’s training, which goes well beyond the basics of “sit” and “stay.” Without the benefit of distracting toys like balls or sticks or bribes of treats, Hannah has leash-trained Sarge to be a model citizen. With his “puppy-in-training” harness and cape, Sarge accompanies Hannah almost everywhere she goes—including to Walmart, church, and 4-H meetings and events.

Sarge is Hannah’s second charge. Her first was a Labrador retriever named Esther. Hannah was 14 when she started raising 8-week-old Esther. “I call Esther the Wild One. She was super hyper, and no one thought she would graduate guide dog school,” Hannah says. She all but beams when explaining how her Wild One is now the constant companion of Robert Christie, a 24-year-old student who has a vision impairment.

Was it hard to give up Esther? Will it be hard to relinquish Sarge? With a very mature perspective, Hannah says no. “These puppies are raised for a purpose, so the goal is for them to serve that purpose,” she says.

Hannah learned about purposeful service in part from 4-H. She is president of the 4-H Sigma Lambda Chi Club in Maury County. At the 2009 4-H Congress, Hannah was a state finalist for the Citizenship Award and the 11th Grade Public Speaking Contest. Although she didn’t bring home top honors, it was still quite an accomplishment to compete at the state level for multiple awards, according to Steve Sutton, interim director of Tennessee 4-H Youth Development.

Hannah’s parents, Tim and Dee Wolters, use the 4-H Program as part of their home-schooling curriculum. Hannah and her siblings, Aaron, Rachael, and Bethany have all participated—from service projects such as scavenger hunts for the local food bank to participating in competitions like sheep raising, shooting, and sewing.

The Wolters family comprises six of some 307,000 members and volunteers statewide who are keeping the Tennessee 4-H tradition alive and thriving.

–Patricia McDaniels

Tennessee 4’H’er Hannah Wolters is an official service dog puppy raiser.

Robert Christie is assisted by Hannah’s former puppy, Esther.
It used to be that Tennesseans wanting a degree in landscape architecture had to leave the state to obtain one. But that changed last fall when UT launched its own Master of Landscape Architecture (MLA) program.

“People would go out of the state to earn the degree and few would return,” says Plant Sciences Associate Professor Curtis Stewart. “In Tennessee we have a shortage of landscape architects.”

With his help and that of other faculty in the program, that situation will soon start to change. Ten students in the inaugural class are finishing the first of three years in the professional degree program, which is jointly operated by UT’s College of Agricultural Sciences and Natural Resources and College of Architecture and Design.

While architects generally design physical spaces such as buildings, landscape architects address a broad range of issues. “Anything from stormwater control and flooding to water quality, utilization and protection of public lands to how to properly plan communities, we cover all of that and more,” Stewart says. “That’s what makes landscape architecture so interesting.”

Maudy Budipradigdo says she initially planned to study architecture. “But when I heard that UT was launching the MLA program, I waited a year so that I could be a part of it. I like how it addresses the environmental problems that we’re dealing with now, such as global warming and scarcity of natural resources.”

Student Beth Hawkins is one of two students with undergraduate degrees in cultural anthropology. She says she was drawn to the program for its emphasis on sustainability. “I am really concerned about environmental conservation. That’s at the top of my concerns, it’s not just about aesthetics.”

And that suits Professor Stewart just fine. “When we sat down to craft the program, we discussed how we wanted our graduates to contribute to society.

“With the rich natural resources that surround us, we felt there was a niche for us, being the flagship university and being situated where we are. We wanted to be responsible designers using sustainable practices, to look at the rural and cultural uniqueness of this region, and incorporate that into the program.”

Another asset is that MLA students collaborate with architecture students, learning how both disciplines can serve each other.

Because demand for professional landscape architects is hot, Stewart and his colleagues are excited about what lies ahead for the program and its graduates.
University of Tennessee Extension acts to ‘triage’ farmers, consumers in financial crisis

Throughout the state, University of Tennessee Extension agents are helping people deal with job loss, reduced income, and other financial setbacks and threats associated with the tightening economy.

UT Family economics specialists Dena Wise and Ann Berry of Extension Family and Consumer Sciences have developed a curriculum titled, “Tough times, tough choices: You’re not alone in a financial crisis.” The resource sheet identifies agencies and organizations that can assist individuals in working with creditors and finding services to help with day-to-day living, and may help individuals avoid fraudulent schemes and those seeking to take advantage of the financially ailing.

“I see UT’s Institute of Agriculture as a triage agency in this instance, responding to the circumstances that people find themselves in and acting to ensure their situations don’t get worse,” says Wise. “Extension agents can take the curriculum and expand it with resources specific to their communities.”

Through in-service and computer-based training, Wise and Berry have disseminated other resources to agents and expect to continue to do so in the foreseeable future.

“There’s a need,” Berry says. “The economy is leading to so many rapid changes in public policy, financial regulations, tax incentives and even in credit overdraft protection at banks. All of this points to the importance of heightened outreach and education by UT Extension.”

Some UT Family and Consumer Sciences agents such as Beth Bell in Dyer County are establishing or working with county-based coalitions of financial officers from banks and community volunteers. These groups coordinate services and some mentor people in need.

Led by UT Extension Agent June Puett, the Hamilton County Extension office conducted a “Save Green, Go Green” event at Hamilton Place Mall in response to the current economic crisis. Approximately 2,000 people participated in hands-on activities, interacted with representatives from 20 community agencies and businesses, and learned about saving money and the environment. Through media exposure, more than two million youth and adults were reached with positive financial and environmental messages as the county celebrated Tennessee Saves Week leading up to the event.

UT agricultural agents are also heavily involved. In Claiborne and Union counties, UT Extension Agent and County Director Mike Heiskell is incorporating risk management and budgeting information into the production meetings he leads.

“About six weeks ago, we covered it in a vegetable production meeting, and next week, I’ve got a meeting on beef marketing that has a risk management portion,” Heiskell says. He also plans to cover the topic in forage production, which is so integral to cattle production, but he has clients who say they can’t even afford to fertilize their pastures this year.

“I’m going to provide them with information on fertilization by soil test results and show them it can save them money or make them money,” Heiskell says.

“Tennessee farm families are experiencing significant financial stress,” says UT Agricultural Economics Professor Clark Garland. “Farmers are being negatively affected by rapid declines in many farm product prices, increasing and widely fluctuating farm input prices as well as conditions in the general economy.”

Garland says Extension’s MANAGE program can be of particular assistance. MANAGE is designed to help farm families carefully evaluate their individual financial situation and assist them in improving their quality of life. Ten area farm management specialists across the state use computer financial planning software to plan individually with farm families.

Although MANAGE will not remove uncertainty of the future, it can provide farm families with a clear...
understanding of their current financial situation and help them evaluate their alternatives for the future. Seven Extension agents across the state serve as contacts for farm families in dealing with stress. For assistance, farm families may contact their local UT Extension office or call the toll-free MANAGE Information Line at 800-345-0561.

In Nashville, UT Extension Central Region Program Leader Jim Stewart sees diversification and efforts to add value as two other keys to survive in this economy.

“Our agents and the Center for Profitable Agriculture are focusing on how producers can bring more of a dollar spent on agricultural goods back to the farm. How do we make the farmer’s chunk of that dollar bigger? The answer is adding value,” Stewart says. “We’re working with a lot of our farmers on several aspects of value-added farming, from direct marketing, to processing their own products, to using more of their byproducts.”

And just like diversifying a portfolio when investing in the stock market, Stewart says diversification in farming is always a good idea. “Diversifying the farm is the real key to staying in business. We’re working with farmers to not have all their eggs in one basket. The more they’re diversified, the less risk they carry, so we’re really emphasizing that.”

“I’m hearing from our personnel across the state that they are all highly engaged in helping citizens deal with the financial realities that we find ourselves in,” says UT Extension Dean Tim Cross. “In times like these, the value of Extension in helping improve the lives of citizens is very apparent.”

UT Extension operates in each of Tennessee’s 95 counties as the off-campus division of the UT Institute of Agriculture. It is an educational and outreach organization, funded by federal, state, and local governments, that brings research-based information about agriculture, family and consumer sciences, and resource development to the people of Tennessee where they live and work.


–Margot Emery

To win a statewide contest, Chattanooga youths Tanner Stone, left, and Jaylin Benford crafted an attention-getting video jingle about the importance of saving money and using credit carefully. You can watch them perform on YouTube (www.youtube.com) by searching Credit N Loans and then subscribing free to the UT Extension Channel.

–Chuck Denney
ESTATE COMMITMENT WILL AID COLLEGE FOR YEARS TO COME

Known as ‘Dr. John’ to veterinary students and alumni for some three decades, Professor John Henton and his wife, Cathy, have played a central role in the life of UT’s College of Veterinary Medicine. Above and beyond his celebrated, award winning teaching career in equine reproduction, John has served the college as director of Continuing Education, a capacity in which he’s planned countless well-prepared courses and conferences for veterinarians, each with personal touches provided by him and Cathy.

In addition, the Hentons have been the hosts of many tailgate barbecues for students and alumni, home-cooked breakfast and lunch buffets for continuing education participants, Thanksgiving dinners for students away from their home communities, and truly special alumni reunion dinners including long-stemmed roses for the alumnae in attendance.

These are but a few examples of how this couple personally treats the people who come to the college. The Hentons understand that the activities that take place at the college and their home are like pebbles tossed into a pond, with ripples of influence that reach far beyond the initial events. It’s clear that they care deeply about the College of Veterinary Medicine and its people. Long-time colleague and friend, Dr. Dennis Geiser, reflects, “When I think of Dr. John and Cathy, the words that come to mind are relationships and hospitality, quality and value, commitment and dedication.”

When they’re not busy with college-related activities, Cathy enjoys beadwork, creating striking handcrafted jewelry. She and John move seasonally between their farms in Michigan and Tennessee, and John continues to build a cabin on the Michigan farm property, a project for the summer months there.

Recently, the Hentons provided a legacy of love, care, and devotion to the college when they made a very generous estate commitment of $1.5 million focused on the people in the Department of Large Animal Clinical Sciences. Their gift will provide professional development opportunities for faculty, staff, and researchers to ensure that the department can continue to attract and retain top-quality people in service to the mission of the department and college. Learning of the Henton’s estate plans for the college, Geiser remarked, “It’s no surprise to me that John and Cathy have made such a generous commitment to the college by investing in people, the same people who will ultimately train and mold those they are most passionate about, the students.”

– Claire Eldridge

Much-loved CVM supporters “Dr. John” (in blue) and Cathy Henton (in stripes) pose with college alumni and students at the 2008 Ag Day gathering. The two have donated to the annual barbecue for the event over two decades in support of the college.
If your garden typically looks less than ideal, UT Institute of Agriculture researchers say it may have nothing to do with the greenness of your thumb.

"Choosing the proper plants for your site is really the most important part," says UT AgResearch Horticulturalist Jason Reeves. "Choosing plants that are not adapted to our environment is a big problem. Once you’ve chosen the proper plant, you’re odds of being successful have greatly increased."

And that’s where researchers like Reeves come into play. Each summer, they test dozens of plant varieties at the UT Gardens located in Knoxville and at the West Tennessee AgResearch and Education Center in Jackson. By evaluating plants for disease, heat and humidity tolerance, and quality of blooms and foliage, UT is eliminating the unknown. And by collecting data from two very different regions of the state, Tennessee gardeners benefit from a comprehensive study.

"Homeowners want to know what does well in their area and what varieties they should be choosing to grow when they go to the garden center," says Reeves. "Same thing with industry breeders who want to know if they should market their plants in Tennessee."

Most of the work at the gardens is done with annual flowering plants. However, there is considerable research on no-spray roses, as well as trees and shrubs. Researchers monitor these plants throughout the year, compiling detailed reports that provide growth rates, flower production, and heat tolerance as well as information about growing conditions.

"This ‘laboratory garden’ research aids the economic growth of Tennessee’s green industry and is essential to the success of in-state commercial growers and landscapers," says West Tennessee REC Director Dr. Bob Hayes. "The gardens’ beautiful backdrops also serve as classrooms for gardeners who want to learn how to spend their money wisely when planning landscaping projects."

Researchers recommend a visit to the gardens so you can see firsthand the plants growing. Surrounded by vivid colors and artful landscaping, you may forget you’re on a fact-finding mission, but when you leave, you’ll be better prepared to choose the right plants and be on your way to greening up your garden...and your thumb.

The UT Gardens in Knoxville and Jackson are official All-America Selections Test and Display Gardens and American Conifer Society Reference Gardens. They are open daily to visitors during daylight hours. You can visit http://utgardens.tennessee.edu for more information as well as trial results for each garden. - Ginger Trice

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Julie Hogg formed a non-profit arboretum in Alpharetta, Ga. She gave up its leadership to be a CASNR student, but when the group’s new president had to leave, “there were too many good synergies for me not to go ahead with it. So I took the reins back, and it’s just worked out really well.”

“The new non-profit organization that she leads is responsible for designing and maintaining specimen trees in parks in Alpharetta, one of Atlanta’s most far-flung suburbs. Although growing in its operations, the Alpharetta Arboretum has already received a prestigious honor: the Georgia Urban Forest Council recognized it as the Outstanding Civic Organization for 2008.

Hogg coordinates the work of a six-member board that includes the president of Alpharetta’s convention and tourism bureau, a city councilman, the chair of the city’s tree commission, a member of the city’s Parks and Recreation Commission, and its former arborist. At the university, she has been in a student project that is helping to plan a LEED-certified visitor education center for the UT Gardens, an addition that Hogg says would benefit everyone.

For her own future, Hogg sees a continued association with the Alpharetta Arboretum. “I’d really love to see us have our own arboretum and botanical garden one day—to be a real place for people to go. I’d love to establish us to that point.”

With her talent and organization, that seed of an idea seems likely to flourish.

- Margot Emery
Uniting people and plants

Some people seek opportunity. For others, opportunity finds them. In Holly Mixon’s case, it was the latter that led to a career that is growing, both literally and figuratively.

Mixon, an ’07 graduate of Plant Sciences with a concentration in Public Horticulture, landed a position with a high-end landscaping firm in Florida. At Austin Outdoor, Mixon is the account manager for the Treasure Coast District, based in Port St. Lucie, Fla.

In her new position, Mixon schedules, supervises, and leads crews. In addition, she works with customers, designs work with seasonal arrivals, and even puts together a newsletter.

“Austin Outdoor gives me the opportunity to pursue my passion for interacting with both people and plants. I love having a job that I can leave at the end of the day knowing that I helped to make our surroundings more beautiful,” she says.

The Paris, Tenn., native began her career as an Extension environmental horticulture agent with IFAS Extension at the University of Florida in Indian River County. After nine months, there were rumblings of budget and staff cuts due to changes in funding for the university. Mixon decided to send out her résumé to prospective employers just in case.

As a recent college graduate with less than a year of professional experience, she wasn’t too sure about landing another job on par with her Extension position. Soon, though, she received a call from Austin Outdoor, and they asked her to come by for an interview. Everything went well, and Mixon was offered a position with the company. At the time, it wasn’t an easy decision for her. “I initially delayed accepting,” she says. “I loved my Extension job so much that I didn’t want to leave and move to a new town.” Austin Outdoor contacted Mixon again, and she accepted the job of assistant account representative.

“I fell in love with the company,” Mixon says. She’s been with Austin Outdoor since April 2008. After only a few months, she was promoted to account manager. “We’re passionate about customer service. It’s fun to work for a company that has such a people-centered focus.”

A typical day for Mixon can include both office and field work. “I generally begin by assuring that our maintenance crews arrive safely to our different properties and start their work assignments. I assist them with any questions or problems that they may have throughout the day.” She also spends a good part of her day visiting Austin’s different properties and troubleshooting any issues that may come up in the field.

Mixon’s projects have received awards from the Professional Landscape Network, or PLANET. Work done by Austin Outdoor at Tesoro, an upscale golf club in Port St. Lucie, won two awards for environmental improvement. The Tesoro project also received three awards from the Florida Nursery, Growers, and Landscape Association.

Mixon says that her education and experiences at CASNR were an essential part of her success. “The faculty at CASNR is amazing,” she said. “They give you wonderful opportunities to increase your knowledge and experience in your field of study.”

Dr. Sue Hamilton, director of the UT Gardens, says it’s no surprise to see Mixon’s career thriving. “Holly is the perfect example of the type of student we seek to attract and graduate from UT, especially in our public horticulture program. She embodies scholarship, leadership, and passion for her field.” –Doug Edlund
The sound of sirens has been replaced by the sounds of dogs barking and horses neighing, but it’s still the sound of medicine for Tinsley Youmans, a fourth-year veterinary student at the UT College of Veterinary Medicine. After graduating with a degree in anthropology from the University of Georgia, Tinsley worked as an emergency medical technician (E.M.T.) and in the emergency room at a local hospital. Then veterinary college, and the whole new world it offers, beckoned her.

“I really enjoy working with animals, especially large animals,” Youmans says, “but my ultimate focus is on human health and the impact animals can have on it.” Youmans has always been drawn to public health. She enrolled in the college’s dual Doctor of Veterinary Medicine (D.V.M.) and Master of Public Health (M.P.H.) program, which was first offered in 2004.

Youmans hopes her dual degree will one day help incorporate the idea of human and veterinary medicine working together to promote the “one medicine” concept. “I like the variety of options you can pursue in veterinary medicine where the education really does provide an opportunity to have a true comparative medicine degree. But public health, especially infectious disease, epidemiology, looking at the spread of zoonotic diseases (diseases that can be passed between animals to humans) — that is the flip side of veterinary medicine where human and animal health coincide.”

It generally takes veterinary students an additional two semesters after receiving their D.V.M. to complete the 42 hours necessary for an M.P.H. Once her coursework is complete, Youmans hopes to perform her M.P.H. internship with the Knox County Health Department.

For the past 10 years, the veterinary college has worked with the Knox County Community Action Committee’s Office on Aging to deliver pet food to senior citizens enrolled in the county’s Mobile Meals program. Before she entered her fourth and clinical year in veterinary medicine, Youmans coordinated the college’s effort in the community service project. It seemed a natural fit for someone who had worked with many elderly people in the human health care setting.

“We delivered pet food to people who were disabled and elderly in Knox County. Many of these people don’t have a lot of contact within the community, and their pets are truly their lives, their main source of companionship,” Youmans says. It was during her work with Feed-A-Pet that she came up with an idea that earned her first place in a national writing competition. In 2007 she received the Hill’s Pet Nutrition, Inc., Innovations in Public Health Award, which is coordinated by the Association of American Veterinary Medical Colleges.

“While making pet food deliveries, I noticed flea infestations at some residences. If pharmaceutical companies could donate flea and tick control to the Feed-A-Pet program, it would dramatically increase the quality of life for the humans and their pets.” Youmans is hopeful the idea will eventually come to fruition.

In reflecting on her work as an EMT and as a veterinary student, Youmans believes both human and veterinary medical professions would be better served if they were more closely integrated. “When you think of infectious disease, veterinarians play an important role in the surveillance and detection of zoonotic disease. This will become increasingly important as many zoonotic infectious agents could be responsible for food poisoning outbreaks, bioterrorism, and agroterrorism.”

Once she finishes school, Youmans hopes to work in private practice for a few years before exploring the possibilities within public practice. “In practice, half of what you do is for the animals, the other half is ultimately for the humans.” She sees that human-animal bond as a strong draw.

–Sandra Harbison
Taking a bite out of dog bites

“Nothing is more seemingly innocent than a child and a dog,” says Dr. Michael Sims, professor with the UT College of Veterinary Medicine. “Yet before you can blink, that can go from something cute and inspiring to a tragedy that can change a child’s life forever. Dog bites occur every 40 seconds, and many of them are preventable.”

Every year in the U.S. approximately 4.5 million people are bitten by dogs. The Centers for Disease Control and Prevention estimates almost 800,000 of those bites are serious enough to require medical attention and half of them are to children under 18. Injury rates are highest among children aged 5-9 years of age.

“Of the things that injure children, water accidents, athletic injuries, and dog bites are way up on the list,” explains Sims. Dog bites can also carry a tremendous price tag. A State Farm Insurance spokesperson has indicated the total claims cost of dog bites is about $2 billion annually. To reduce the number of dog bites, Sims helped create a dog bite prevention program for the college.

In past years, CVM offered the class for children each spring, but this spring volunteers with the college’s Human Animal Bond in Tennessee started taking the program into area classrooms they regularly visit with their dogs. “In one visit, they can educate more kids than we could with a class held at the college and with less expense,” says Sims.

The lessons are built around RUFUS, a rather slow, approachable spokes-dog who has never met a bowl of dog food he didn’t like. Even the letters in his name represent lessons for kids: Respect, Understanding dogs, Friendly dogs, Unfriendly dogs, and Staying away from some dogs. The key is to keep the message simple, non-threatening, and fun to learn. Kids, naturally drawn to RUFUS, are taught how to behave around dogs in various situations.

The college is creating a complete package to approach the problem on several levels. A dynamic Web site offers a section with games and activities for kids, as well as a section for adults. Brochures and a DVD have been produced, too. Initially, the goal is to put a DVD in the hands of every first grader in Knox County, one of the counties in Tennessee with a high incidence of dog bites. The college is also creating a teacher’s packet. The program is scalable and geographically independent and veterinarians and pediatricians can also use the information in their waiting rooms or for public presentations.

For more information about the college’s dog bite prevention program, visit www.vet.utk.edu/dogbiteprevention, email dogbiteprevention@utk.edu or call 865-974-8387 and ask to speak with Dr. Sims. - Sandra Harbison

REMEMBER WHAT RUFUS SAYS...

“ALWAYS USE GOOD MANNERS AROUND DOGS.”

Rufus’ Top 4 Rules

Rule #1 Never go up to or try to pet a strange dog without the owner’s permission.
Rule #2 Never run from a strange dog. Walk slowly away and don’t stare at the dog.
Rule #3 If you are on the ground and a strange dog comes near you, be like a log.
Rule #4 If you are standing up and a strange dog comes near, stand still like a tree.

Presenting the back of your hand for a dog to sniff is a good way to introduce yourself to a friendly dog.
UT Research Foundation honors 14 Institute patent recipients

The UT Research Foundation has honored 25 men and women in the Knoxville area who have been issued recent patents by the U.S. Patent and Trademark Office (USPTO) for discoveries that have the potential to transform the lives of the people of Tennessee, the region, and nation.

The scientists include 14 researchers from UT’s Institute of Agriculture, along with 12 UT Knoxville scientists and one from the UT Medical Center. In all the researchers have achieved a total of 16 patents for their intellectual properties.

Patents are awarded for unique technologies and ideas that are the result of scientific research and discovery. Patents help protect inventions that can benefit society. The process for receiving a patent is both lengthy and grueling. Fewer than 10 percent of the patent disclosures made at UT are eventually granted patents from the USPTO. As a result, the scientists responsible for the research that makes it through this process are among the most innovative and dedicated individuals in the university system.

“AgResearch at the UT Institute of Agriculture is in the business of discovery and innovation to solve critical issues facing farmers, families, and agricultural entities across the state, region, and nation,” said Dr. Joe DiPietro, UT vice president for Agriculture.

“Tangible benefits of our research activities are new jobs and income streams, innovative products for the home, and a healthier, richer environment through the wise use of agricultural and natural resources.

“The hard work of our scientists has measurable impacts on society. In their quest for knowledge, there are many successes, but there’s lots of defeat. I am grateful for their willingness to be persistent.”

Inventors from the Institute who were issued patents are:

Dr. Shigetoshi Eda, Brad Elliott, Cathy Scott (B.S. Plant Sciences, ’96), and Dr. C. A. Speer, Department of Forestry, Wildlife, and Fisheries, for a more effective method of diagnosing infectious diseases. This test has been found useful for detecting specific bacteria that cause Johne’s disease in the small intestine of animals such as cattle, sheep, goats, deer, antelope, and bison. Lost productivity due to Johne’s disease is estimated to cost the U.S. dairy industry $200 million to $250 million annually.

Drs. Bob Trigiano and Mark Windham, Department of Entomology and Plant Pathology (EPP), for a dogwood tree named “Missy’s Appalachian Morning.” This new dogwood variety, whose seeds are sterile, will be used in future research for patent protection to control the improved genetics that UT scientists are putting into dogwood trees. The tree is named in honor of Malissa “Missy” Ament, M.S. EPP, ’96, who helped with the discovery.

Drs. Bob Trigiano, Alan Windham and Mark Windham of the Department of Entomology and Plant Pathology and UT Extension for a new dogwood tree variety called “Appalachian Joy,” named after Alan’s wife, Joy. The tree is a showy, high-performing dogwood that is resistant to powdery mildew and features extra bracts, making the tree look fuller and larger.

Dr. John Wilkerson, F. H. enry Moody (B.S. Ag Engineering, ’96, M.S. Biosystems Engineering, ’98), and John Hancock (B.S. Ag Engineering, ’99, M.S. Biosystems Engineering, ’03), Department of Biosystems Engineering and Soil Science, and Dr. Melvin Newman, Entomology and Plant Pathology, for a control system for high-speed fluid dispensing. A prototype was developed to help farmers reduce the amount of pesticides they apply to cotton, but this invention is good for all crops and has other potential industry-wide applications. This approach cuts the cost of production for cotton and other crops by as much as 50 to 75 percent and also reduces the amount of pesticides put in the environment.

Dr. Bob Conger, emeritus, Department of Plant Sciences, a Plant Variety Protection Patent for ‘Persist’ orchardgrass. ‘Persist’ does exactly what its name says, outperforming other cool-season orchardgrass varieties. When measured against the check variety, it achieved a ~80 percent stand six years beyond planting compared to a 10-20 percent stand by the check variety. ‘Persist’ has performed well at the southern adaptation range for cool-season grasses. It is now being grown in the U.S. and recently was adopted in Argentina, which is known for producing premium quality beef.

You can learn more about the work and achievements of AgResearch scientists at http://taes.tennessee.edu.
The enemy of my enemy is my friend. This ancient proverb is known as a model for international diplomacy. It also enjoys status as a viable strategy for survival in nature. Sharks are known to ignore pilot fish as a potential meal because the smaller predator feasts on parasites that plague the bigger fish. In the plant kingdom, futuristic research at the UT Institute of Agriculture is proving that some plant species, too, though rooted in the ground, are genetically wired to rely on flying insect friends for protection.

Take rice, fall armyworms, and parasitic wasps. Dr. Feng Chen and his previous Ph.D. student Joshua Yuan, along with a team of collaborators from the Department of Entomology and Plant Pathology and the Max Planck Institute for Chemical Ecology in Germany, have proven that chemicals emitted by injured rice plants serve as calls for help.

The scientists showed that female wasps “smell” chemicals given off by rice plants that have been munching on by hungry fall armyworms and fly toward the plants in search of the armyworms. When found, the unfortunate armyworm is killed and its carcass used as a host for the wasp’s eggs. In other words, the rice plant signals that it needs protection, and the wasp benefits by finding a suitable host for her eggs. The armyworm doesn’t fare so well, but the situation is a classic example of indirect defense.

Identifying chemicals compounds associated with indirect plant defense and isolating their genetic origins are hot topics in plant research. This work holds great potential for scientists to discover natural, biological pest controls for commercial cereal crops like maize, wheat, and sorghum. Biocontrols are attractive to producers and consumers as they can reduce production costs for growers, who won’t need as much expensive pesticide, and therefore reduce the amount of chemicals introduced to the environment.

“The chemical signals released by the injured rice plants are received by the wasps in a manner similar to pheromones. They are both ‘infochemicals,’” says Chen.

Using a state-of-the-art integrated genomic approach, Chen and his co-authors identified and characterized a number of critical genes for synthesizing such infochemicals in rice. The study lays a foundation for further understanding of indirect defense in rice and other cereals. The team’s findings also provide important knowledge and tools for examining whether genetic modifications can help a plant’s ability to synthesize infochemicals and therefore help commercial-scale populations naturally protect themselves. Synthetically producing the natural compounds and applying them as “natural” pesticides may also prove to be economically and environmentally sound.

“We worked with rice because it is the only cereal crop whose genome has been fully sequenced,” says Chen. “The rice plant can serve as a model for other commercial crops commonly produced in Tennessee like corn, wheat and other grasses,” he explains.

Chen’s work in integrated genomics may enhance the natural protections for important cereal crops, such as switchgrass, in Tennessee as well as solve potential problems with energy crops before they become an issue.

-Patricia M. Daniels
Feedback is the most effective medicine for any organization, including the veterinary teaching hospital at the UT College of Veterinary Medicine (UTCVM).

UTCVM is in the business of educating veterinary students, the business of making new discoveries, and the business of providing quality medical care. Its key customers are many and varied: students, clients, practitioners, employers of its graduates, and research funding agencies.

As part of its performance excellence program, the college is soliciting feedback from those key customers and has created an Alumni-Practitioner Advisory Council (APAC), a group of 14 private veterinarians from the state’s geographical regions to serve as a primary forum for improving contact and interaction between practitioners and the college. Dr. Dennis Geiser, assistant dean for Organizational Development and External Affairs at the college, says he hopes that this outreach initiative will enable the college to obtain quality feedback on its programs and services to enhance UTCVM performance.

“The APAC is a liaison between the practicing veterinarian and the college.” Geiser adds that it’s an opportunity to get the customers involved in the process. “In order to improve, we have to go out and ask our customers to evaluate us. Ask them how we can improve on services and programs they use.”

In less than a year’s time, the APAC has already affected change. Based on practitioner’s comments and evaluation of UTCVM’s referral process, the small animal hospital has named a referral coordinator, revamped its referral process, developed a Web site for referring practitioners, re-worked its fax referral and communication system, and is now discussing the creation of an etiquette manual for receiving referrals for house offcers and faculty.

“Fabulous” is how Dr. Allison Fields (UT D.V.M. ’99), a veterinarian at the Volunteer Veterinary Clinic in Hendersonville, Tennessee, describes the APAC. Fields represents the Middle Tennessee/Nashville region on the council and says the group offers another dimension in the college/referring veterinarian relationship.

“The APAC has been and will continue to be a wonderful way to amplify the communication between referring practitioners and the college. It also creates an environment of teamwork when it comes to patients’ care.”

According to Fields, the changes go deeper than processes. APAC affects attitudes. “Practitioners, whether they are alumni or not, are aware of the college’s interest in maintaining a good working relationship. That speaks volumes.”

The doctor is in...and ready to listen
Veterinarians across the state are assisting UT’s College of Veterinary Medicine in refining its operations, to ensure that its services are of the highest caliber possible.
Team strives to boost Mid South’s disaster preparedness

As a farm manager, Wayman Chapell devoted his career to looking after the best interests of producers. One day the Memphian was thinking about the hazards that could befall farmers in the Mid South.

“I was just wool gathering, really, that our food supply is out there on the farm and so is our fiber supply, and how does a farmer know how to protect his business if an earthquake happens or someone drops a dirty bomb on the Memphis-Arkansas bridge and a radiation cloud starts spreading?”

“How does he protect his cattle? Does he put them in a barn or load them up and try to haul them away?” asks the ’51 agricultural economics graduate. “No one knows what to do.”

What was needed, he decided, was a set of comprehensive guidelines to inform farmers about steps to take in the event of natural and manmade disasters. With Bob Abbott, chairman of the Memphis Agribusiness Council, Chapell approached Shelby County UT Extension Director Mike Dennison, and an initiative was born.

Dennison joined with council members to spearhead an effort to safeguard the livelihood of farmers. Although their effort began before 9/11, the work was aided after that tragedy by funding from a U.S. Department of Homeland Security Memphis Urban Area Security Grant.

The funding allowed Dennison and members of the Agribusiness Council to purchase rescue and disaster response equipment for Fayette, Lauderdale, Shelby and Tipton counties in Tennessee. The equipment, which ranges from portable corrals and cattle chutes to livestock trailers and personal protective equipment, is intended for use by Disaster Animal Response Teams and other first responders.

Next they developed an inch-thick notebook of detailed disaster management plans for the agricultural community in the six-county Memphis urban area (four Tennessee counties, Crittenden County, Ark., and Desoto County, Miss.).

“Our goal is to have a notebook in every community in each of the counties so that if something happens, there will be at least one person in the community who knows what to do,” says Dennison.

“Ideally we think that this manual ought to be on all farmers’ bookshelves,” adds Chapell. “If a disaster happens, they’ll know it’s there and they can go check it.”

Dennison hopes the disaster management manual can serve as a model for other communities. While copies are limited, Dennison and Hamilton County Extension Director Ray Burden have placed the content online at http://eastern.tennessee.edu/ag/download/EMERGENCY%20PAREDNESS/Agricultural%20Disas-ter%20Handbook.pdf. Both men say that it’s best to print the material and update it regularly so that when an emergency strikes, it’s readily at hand.

The final component of the emergency planning has been a public service campaign aired on Memphis television and radio stations that urges people to include their companion animals in their disaster preparedness plans. “We’re also distributing window stickers that people can use at their homes to indicate to first responders how many pets are inside,” Dennison says.

In this and other ways, UT Extension and its partner agencies are working to help Mid Southerners be more prepared. While Homeland Security funding has ended, the alliance is searching for other support to sustain and expand their initiative.

“That’s what we’d like to see done,” says Chapell. “This work needs to continue.” — Margot Emery
ARE INCIDENTS OF FOODBORNE ILLNESSES BECOMING MORE COMMON?

I believe what we’re seeing is a combination of factors. We’ve always had problems with food poisoning microorganisms, but we’ve become much better at detecting and tracking them. Also our population is changing, with greater numbers of people susceptible to E. coli, Salmonella, Listeria, and other pathogens. We’re talking about elderly, infants, and people with weakened immune systems, such as cancer survivors. Another issue is the centralized nature of our food production system. A giant food processor might supply product to 500 other companies. That exponentially magnifies the impact of what might be a single error on the part of one company.

SOME PEOPLE SAY IRRADIATION MIGHT MAKE FOOD SAFER. WHAT’S YOUR TAKE?

When used appropriately, irradiation can be extremely effective, but it probably won’t work for everything. It can cause an off taste to some products, such as meat, depending on the level used. Many consumers balk at it, and it can be resource intensive.

WHAT ABOUT NATURAL PRESERVATIVES?

That’s what I’ve been studying for 30 years, and I think they have a world of promise. In our department, we’re looking at essential oils of spices, at extracts that occur in animal-based products, such as compounds from egg whites, and at packaging using chitosan, which is derived from shellfish. We’re focusing on encapsulating some of these compounds to control their sensory impact and to target specific microbes.

CAN THERE BE A MAGIC BULLET THAT MAKES FOOD TOTALLY SAFE?

No. The only way to be totally risk free is to test 100 percent of the food, and then there’d be nothing to eat. And food itself is so heterogeneous. You could have gone to the peanut plant where there was the outbreak of Salmonella, taken 100 samples, and they all might have come out negative and yet they still could have had the outbreak. Even with a gallon of milk, you can take four samples and each will be different. There are inherent risks, and then we add to them by wanting everything to be easy, fast, convenient, and available year-round. So that means we must balance our risks with our desires.

CNN LISTED FOOD SCIENCE AND TECHNOLOGY AS ONE OF THE COOLEST FIELDS TO BE IN. WHY?

Everybody needs food, and with a degree in our field, you get to learn about its chemistry, microbiology, and physical attributes. Our graduates can do 25 different things with their degrees, from food product development, chemistry, and microbiology, to quality control and management, to food packaging. It’s an exciting field to be in. Our graduates are in high demand.

WHAT’S YOUR FAVORITE PROCESSED FOOD?

You know, practically all foods are processed. For example, even lettuce sold in bags is considered processed, and many raw vegetables have been sprayed with sanitizers to reduce dangerous microbes or lightly coated with wax to extend their freshness. If you’re talking canned foods, my favorites are spinach and beans.
Learning on the farm... in Memphis
Memphis may be an urban center, but it’s also home to a gem of a 1,000-acre demonstration farm known as the Agricenter. There, UT Extension Agent Tim Roberts oversees wide-ranging educational outreach programs for kindergartners through 12th graders. Some 4,000 youth from northern Mississippi, eastern Arkansas, and western Tennessee converged on the center in 2007 for lessons in all things agriculture. Even more youth are expected this year.

“We really want the students to understand where products originate from,” Roberts says. “Not just milk, eggs, and vegetables, but also forest products. We want to make some connection with the things they use everyday. The hamburger they’re eating came from a cow that grazed on a pasture, for example, and not just from Wal-Mart.

“In this way, we think if they can make those associations, they’ll understand and have a better appreciation of agriculture as they become adults.”

Roberts is also able to gear his outreach programs to key in on concepts the students need to learn for state standardized tests. “We feel we can aid teachers in helping them teach what they’re having to teach for these tests in a different setting. Here their students can touch concepts, they can feel them, they can even smell things at times, as they look and learn about different things. We’re hoping that, through these experiences, we can help students bridge that gap between the book and actually learning and experiencing concepts.”

You can learn more about the year-round educational programs that UT Extension offers at the Agricenter, at the center’s Web site, www.agricenter.org. Program information is listed on the education drop-down menu. Schools are able to take part in the programs, in part, through funding from companies such as Cargill, Delta and Pine Land, Dunavant Enterprises, DuPont, Helena Chemical, and Monsanto.

–Margot Emery

KIDS GAIN LESSON IN EVERYTHING COWBOY

It’s not all that easy to rope a steer— even if it has a hay-bale body, no legs, a plastic head and you are standing still.

But after landing her lasso three times in the loose dirt of the Shelby Show Place Arena, 6-year-old Mackenzie Kuykendall made an extra effort to concentrate. This time she roped it, and smiled.

It was one of the lessons that the first-grader and about 15 other students from Sea Isle Elementary in Memphis learned at “Cowboy Up,” a free educational program that Agricenter began promoting this year to teach kids about the history and trappings of cowboys.

Show Place Arena Manager Mike Pierce, who also goes by “Cowboy Mike,” leads the program, hoping to teach city kids to appreciate agricultural life, he said.

“I really, really love it,” Mackenzie said, after stroking Pepper, Pierce’s horse.

The group of 6- and 7-year-olds gasped and whispered “Oh, wow!” as they filed into the arena and saw Cowboy Mike riding the stallion in circles and twirling a lasso.

“It hasn’t been that long ago that people your age grew up on farms and ranches,” said the 30-year-old Pierce, who grew up on a ranch in Martin. He told them he spent most of his life working rodeos and horse shows and raising cattle.

“Who were the first cowboys?” he asked the young group, pausing before loudly whispering “Mexicans.”

“Mexicans!” they answered.

“Where do people think all cowboys come from?” he asked.

“Texas!” they answered.

After he asked why, a child shouted, “People are wild in Texas!”

The program was born off-the-cuff last year when a teacher who attended a rodeo there asked Agricenter officials to create a lesson for students, said Tim Roberts, Agricenter instructor and UT Extension agent.

After hosting about four or five school groups, Agricenter decided to officially offer the program this year to kindergarten and first-grade students.

Becky Pinlac, a CLUE (Creative Learning in a Unique Environment) program instructor at Richland Elementary and Sea Isle, said she began taking students to Cowboy Up after hearing about it from another teacher.

“First of all, it’s free... and it’s hands on,” Pinlac said. “When we do our articles on cowboys this sums it all up.” –Pamela Perkins, Copyright, The Commercial Appeal, Memphis, TN. Used with permission. (http://www.commercial-appeal.com)
UT Extension outreach programs add value to Tennessee’s number one ag industry: beef

Cattle and calf operations remain Tennessee’s leading agricultural industry, with a total inventory valued at $1.31 billion as of January 1. Sustaining and enhancing that important industry is the goal of UT Extension beef outreach programs.

As they help to make beef producers more profitable, the Extension programs deliver important associated benefits such as achieving a higher standard of living for farm families and greater economic returns to their local economies. More profitable farms also mean more viable and sustainable family farms.

This year, the Master Beef Producer Program celebrates its fifth year of providing training to the state’s cattlemen and women. The program is an outcome of the Beef Cattle Improvement Initiative, a UT and beef industry alliance that began in 2000 with the purpose of provide leadership to move the beef industry ahead in Tennessee.

“With the Master Beef Producer Program, we cover managing and planning for success, genetics, carcass traits, forage production and feeding, reproduction, herd health, marketing, cattle handling and behavior, environmental issues, managing the cow herd, and food safety,” says coordinator and professor Jim Neel.

“We look at everything associated with cow-calf operations,” he emphasizes. “Our goal is to improve the quality of beef and animal health, the stability of our beef cattle farms, and to maintain Tennessee beef as a low-cost, high-protein food source.”

As of December 2008, 5,547 producers had completed the program, many encouraged by its partnership with the Tennessee Department of Agriculture’s Agricultural Enhancement Program. On average, producers indicated they expected a $2,000 to $6,000 gain to their operations from the knowledge they learned, with some citing a figure as high as $10,000.

“In addition to qualifying for 50 percent cost share through the Ag Enhancement program, the Master Beef Producer program is a great way for producers to expand their knowledge of cattle management and to increase their profitability,” says Tennessee Agriculture Commissioner Ken Givens. “I encourage farmers to take advantage of this outstanding educational resource.

“Both the Beef Quality Assurance and Master Beef Producer programs help individuals and the industry as a whole by making sure producers have access to the most current research and information they’ll need to be successful in a very competitive market.”

Producer David Horton raises cattle with his wife, Laurie, in the Mifflin-Beech Bluff communities in Madison County. Horton says he’s gone through the Master Beef Producer Program twice and intends to go a third time.

“I’m a business man, and I’m a cattle farmer because I want to be. It’s my...
passion,” he says. “The Master Beef Producer Program gives me access to expert information and it also allows me to meet a lot of cattle producers with common thoughts and purposes. It’s been great.”

With a contact made through the program and his local ag Extension agent, Milton Orr, producer Rick Keller of Greeneville now puts together mixed loads of cattle and sells them to an out-of-state buyer. The arrangement adds a 30-to 50-dollar value a head to the cattle and assures a steady market for a cooperative effort made up of about 400 people.

Orr says he customizes the Master Beef Producer curriculum to meet his clients’ needs, as do the other UT Extension agents and specialists across Tennessee who teach the program. “Right now I’ve got one producer who’s 78 years old who has a couple of hundred head and one guy who’s lived in the county three months and doesn’t own a cow. You get all sides.”

Veterinarians and nutritionists are also involved in teaching the material. “That underscores how everyone tied to the cattle industry believes in the importance of this program,” emphasizes Neel. He and others are now expanding the Master Beef Producer curriculum and placing it online.

THE BEEF QUALITY ASSURANCE PROGRAM

Also focused on helping producers produce a higher quality product is the Tennessee Beef Quality Assurance Program. Many UT Extension agents help teach the certification program with agribusiness representatives and members of the Tennessee Cattlemen’s Association. UT Professor and Beef Cattle Extension Specialist Clyde Lane is state coordinator and has helped to craft new national standards for the BQA program.

Since March 2000, when certification began, some 13,000 Tennessee producers have received BQA training.

“The real driver for this is the access to Tennessee Agricultural Enhancement Funds,” Lane says, “but we know if producers sit through this program, they will learn things that help them improve how they manage their cattle and also improve the quality of the product that consumers will see.”

Producer Jerry Greene raises cattle with his wife, Ginger, in Dickson, Hickman, and Williamson counties. He says the BQA program works for them. “When we sell our calves and say we’re BQA certified, I’ve had buyers say they like to hear that.”

Lane and the agents who deliver the BQA programming add to its subject matter each year, covering vaccination choices and administration, trailer safety, cattle handling, and many other issues.

“The BQA has led me to do a lot of networking in ways that I never would have dreamed about before,” Lane notes.

THE TENNESSEE BEEF CATTLE IMPROVEMENT INITIATIVE

Initiative coordinator Dr. Emmit Rawls, professor of Agricultural Economics, says the Tennessee Beef Cattle Improvement Initiative (TBCII) has had a similar impact on his career.

“Personally, it’s been exciting.” Through the TBCII, Rawls has coordinated a number of ventures focused on improving the prof tability and quality of Tennessee’s beef industry. These include cattle marketing alliances and sales, a demonstration to show producers the advantages of weaning calves prior to sale, beef cattle and crop newsletters and podcasts, and teaching about price-risk management to educate producers about controlling feed costs while also managing the selling price of cattle.

Rawls takes pride in the Tennessee Beef Evaluation Program. Through this, producers send cattle to southwestern Iowa where they are finished in custom feedlots. In return, cattlemen receive individual data on gain and carcass traits, which helps them optimize their breeding and management programs. “We want to help them do everything possible to produce beef that consumers want,” Rawls says. “This program is instrumental in that.”

Another facet of the TBCII has been a 16-county improved genetics demonstration where 800 cows were heat synchronized and artificially inseminated with semen from superior sires. The calves’ performance was then measured to demonstrate their value to producers’ herds. Although that effort took place five years ago, Rawls continues to hear from producers who have adopted the practice—and benef ted— with their herds.

“We’re dealing with lower prices now, which we’ve seen across the past three years,” Rawls notes, “and higher production costs. We’ve seen some reduction in our beef herds because of the economic situation people are facing in feed, fertilizer, and fuel costs.

“The importance of our beef outreach programs are that they continue to get out information to producers that helps improve the prof tability and value of their operations and helps to sustain them. That’s more important now than ever.” – Margot Emery
It’s a good thing Amy Ladd is not afraid to roll up her sleeves and get to work. She has plenty to do as coordinator for the Center for Profitable Agriculture’s GROW-10 Program, and expectations are running high.

Ladd leads the new UT Extension effort designed to enhance opportunities in 10 rural Tennessee counties—counties struggling with high unemployment and poverty rates and lower-than-average median household incomes. The 10 counties targeted by the program are Giles, Hickman, Houston, Humphreys, Lawrence, Lewis, Maury, Perry, Stewart, and Wayne. Strong interest on the part of local county Extension agents was a major factor influencing which counties were included in GROW-10.

With nearly $200,000 in USDA Rural Development funding through 2010, GROW-10 hopes to provide assistance and training for at least 25 small business entrepreneurs and to reach an additional 350 entrepreneurs through group efforts at conferences, county meetings, and educational tours. Rob Holland, director of the Center for Prof table Agriculture, says Ladd has already made contacts in each of the targeted counties.

The goal is to jump start new enterprises by providing technical assistance to farmers and potential value-added entrepreneurs. “The new program couldn’t come at a better time,” says Holland, “The current economic conditions necessitate even stronger business strategies and detailed analyses of new farm enterprises.”

GROW-10’s primary educational focus is direct marketing, agritourism and farm-to-market networks. Ladd is meeting with county Extension agents and other partners, preparing promotional materials and planning educational opportunities in the GROW-10 counties. The program is already helping vendors of value-added products like jams, jellies, and baked goods at the Hickman County farmers’ market.

Hickman County Extension Director Troy Dugger says the idea is to increase the number of vendors in the farmers’ market as well as ensure that vendors abide by state regulations regarding the safe preparation of foods for retail sale. State law requires that such vendors be trained in the safe preparation of foods and that goods be prepared in inspected and certified domestic kitchens.

“The GROW-10 Program is providing information on establishing a shared-use kitchen in Hickman County,” Dugger explained. “Many potential vendors don’t have the resources to have their private domestic kitchens certified.”

GROW-10 is also helping research issues related to liability and cooperation of local government and business. “The project has involved Hickman County Economic and Community Development Director Daryl Phillips and members of the Chamber of Commerce,” Dugger said.

Other GROW-10 projects include exploring agritourism opportunities in Wayne County and a farmers’ market in Stewart County. Since most of the projects are just getting underway, Ladd hopes to have success stories to share in a year or so.

Ladd is no stranger to agriculture and entrepreneurial activities. She spent her childhood summers on her grandparent’s farm, and her family operated a number of small businesses. “Starting a successful small business is no easy feat,” she testifies. “My family has a long history in owning and operating ventures, each with their own successes and failures.”

Personal experience, Ladd believes, gives her a unique perspective to help agri-entrepreneurs start out on a solid foundation.

Ladd and her husband Jason also have entrepreneurial dreams. They own an agritourism operation in Rutherford County. The connection between her personal ambitions and GROW-10 fascinates her. “The opportunity to help farm families start great value-added agricultural enterprises is very gratifying. It’s wonderful to work with people who share the same sense of pride and passion about their work.”

Located in Maury County—one of the targeted counties for GROW-10—the Center for Prof table Agriculture is an educational outreach partnership between University of Tennessee Extension and the Tennessee Farm Bureau Federation. For more information about the CPA, visit the Web site http://cpa.utk.edu
Agriculture was a common thread in the lives of J.E. and Ann Moss, but the two didn’t actually meet until later in life, on a trip to Hawaii. As a widow and widower, they did not expect to find love in their late 60’s and 70’s, but their shared background and experiences made them a good pair.

As the Mosses thought about their legacy and funding their lives together, they began a 39-year relationship with the University of Tennessee Institute of Agriculture. J.E., a retired superintendent of schools for Rutherford County, recognized the need for higher education in a state with strong agricultural ties and wanted to do something to support it.

In 1969, as the Mosses were selling a large portion of the family farm, they decided that one of the best ways to meet their financial and philosophical goals was to create a Charitable Remainder Trust with UT. This financial arrangement, based on a portion of the property sale, supplied them with a lifetime income, a tax deduction, avoided capital gains, assisted their estate plan, and provided a tremendous future benefit for the Institute of Agriculture.

J.E. and Ann stipulated that the funds from this endowment benefit the Institute in two very important ways:

1. Needy and deserving students will have the opportunity to receive a first-class education on an undergraduate or graduate level.

2. Funds will be available to provide special awards for outstanding faculty and staff members for excellence in teaching, research, or extension programming.

J.E. passed away in 1988, and soon after Ann entered into another Charitable Remainder Trust with the university. According to Ann’s niece Joan Hooper, Ann was very happy with the income received from the two charitable remainder trusts because they afforded her a good standard of living and funding for her health care in her later years.

Ann Moss passed away in August of 2008, leaving the remaining proceeds of her Charitable Remainder Trust for the Institute to fund the J.E. Moss Endowment.

The funds from J.E. and Ann’s Charitable Remainder Trusts will be a tremendous benefit to the Institute of Agriculture for years to come. College of Agricultural Sciences and Natural Resources Dean Dr. Caula Beyl says that “Students, staff, and faculty will benefit greatly from the generous vision of J.E. and Ann Moss and their dedication to providing scholarships and awards for excellence in teaching and research. The impact of this positive legacy on higher education in agriculture at the University of Tennessee will be magnified by every student and educator that is a recipient of their charity.”

J.E. and Ann Moss have given $1,171,540 to the University of Tennessee Institute of Agriculture through the benefits of their charitable remainder trust. We thank them for their generosity and years of support.

– Rhodes Logan
Alumni dream jobs

INSTITUTE GRADUATES MAKE THEIR MARK IN REMARKABLE PLACES

LARRY CUNNINGHAM
CHIEF LENDING OFFICER CHATTANOOGA AG CREDIT AND SEED STOCK PRODUCER OF POLLED HEREFORD CATTLE.

Chattanooga Ag Credit serves more than 2,300 farm families in 12 southeastern Tennessee counties. “We are a farmer-owner cooperative providing loans to help farmers, ranchers, agribusinesses, and rural homeowners grow financially,” says the B.S. ’81 Animal Science graduate. “Our goal is to allow people the opportunity to share in farm life and farm values by providing them funds.” Away from the office Cunningham spends time on his 200-acre family farm raising Registered Polled Herefords. Farm life is even more special since he and his wife, Michelle, had twin boys in August. Cunningham is a past president of Tennessee 4-H Foundation and currently serves as president of the Tennessee Beef Industry Council, which oversees the Beef Checkoff Program. The program adds value to the products produced by the state’s beef producers through research to ensure product safety, marketing promotions, and product development. One product the Checkoff developed is the wildly popular flat iron steak.

MARK JARRARD JR.
RESEARCH TECHNOLOGIST, GODIVA CHOCOLATIER, INC.

Jarrard develops new ideas for Godiva and scales them up to commercialized chocolates and products. In his work, the B.S.’04 Food Science and Technology graduate finds inspiration from all over the world “in addition to trying things that aren’t normally associated with chocolate, and, nope, I can’t tell you what those things are, either.” In addition to prototyping, Jarrard is part of Godiva’s Global Ingredient Supply Chain strategy, meaning “I get to make sure we use the best ingredients in all of our locations.” He says that he never grows tired of chocolate, although he admits his wardrobe feels a bit tighter these days.

HEATHER BLACKMONT
CLINICAL EMBRYOLOGIST, CAROLINA CONCEPTIONS

As the supervisor of an in-vitro fertilization lab, Blackmon says her favorite part of the job is “holding an eight-cell embryo in my arms nine months later.” The ’02 M.S. Animal Science graduate learned IVF techniques from Institute animal reproduction specialists Drs. Lannett Edwards and Neal Schrick while supporting herself with an off-campus job and keeping up with her studies. Today she remains involved in animal agriculture. “I do a lot of cattle work. Every opportunity I get I go play with the cows. Cattle are definitely my first love and sometimes a lot easier to work with than the ladies. I often joke around in my job that I wish I had a stock chute.”

GLENN KIRKSEY
LARGE ANIMAL VETERINARIAN, NOTCHEY CREEK VETERINARY CLINIC

In Madisonville, Tenn., Kirksey’s practice is 80 to 90 percent dairy work, serving farmers in six counties. He stays busy from sunup to 7 p.m. in the summertime, handling milking emergencies, but the work has its rewards. “I was raised on a farm and grew up around cows. I was motivated to learn everything I could through school about bovine medicine.” After earning his B.S. in animal science (’95) and DVM in ’00 from UT, he attended Pennsylvania State’s Dairy Production and Medicine Course. “Food animal production is very vital. I’ve always thought it was very important to help these producers out on their farms.” Also in his clinic are wife Misty Kirksey, DVM in ’00, Kristina Barber Stroud, DVM ’05, and Marty Bilderback, DVM ’77 Auburn.

GARY STOCKDALE
OPERATIONS MANAGER, DOLLAR GENERAL TEAM, PROCTOR & GAMBLE

As a P&G account executive, Stockdale, B.S. Agricultural Economics, ’06, M.S., ’07, is responsible for distribution at Dollar General from the time one of the company’s products leaves the backroom in a Dollar General store until a shopper purchases the item at checkout. His work spans everything from total store design to ensuring that “we have the right products with the right quantity and in the right placement in every DG store.” Stockdale says he enjoys the dynamic nature of the positions he’s held with Procter and Gamble and the dedication of the people he works with. During his 11-year career, he’s sold products like Olay, Old Spice and Ivory, as well as conducted analytical analysis for business units and teams. “This type of environment continually challenges and forces you to grow as a person, both professionally and personally.”
Tell us about your dream job at agalumni@tennessee.edu
FarmHouse and UTSLA plant tree in memory of Dr. Smalling

Members from FarmHouse Fraternity and the Student Livestock Association planted a Cherokee Brave Dogwood in memory of Dr. John D. Smalling after his passing, on Mrs. Elsea Smalling's farm in Blount County.

Members and alumni from both organizations felt that it was the least they could do in honor of such a great educator and mentor. Assistant Professor Smalling taught Animal Science from 1961 through 1999 and continued to guest lecture until recently.

Brian Rouse, B.S. Animal Science, ’92, credited “everything I learned about livestock and their handling to Dr. Smalling.” Former students say that Smalling had an assertive style of teaching that encouraged active learning. Alumnus Phil Warf eld, B.S. Animal Science, ’84; M.S. Ag and Extention Education, ’88, commented that “Dr. Smalling was a great man among great men.”

Mrs. Smalling expressed her gratitude for the tree—Dr. Smalling’s favorite cultivar—and said it would serve daily as a reminder of what her husband meant to the students at UT.

-Jon Mixon