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On Oct. 1, I began what I believe will be the most enjoyable and rewarding part of an already wonderful career in higher education.

As the sixth vice president of the Division of Agriculture, Forestry and Veterinary Medicine at Mississippi State University, I am following individuals who brought diverse experience and expertise to the job. My background includes research and teaching in the areas of microbiology, biochemistry and related fields. Most recently, I served as director of the Idaho Agricultural Experiment Station, as well as associate dean of the College of Agricultural and Life Sciences at the University of Idaho.

During the interview process at MSU this past summer, I had the opportunity to meet many of the faculty, research scientists, Extension personnel and support staff of the units that make up the division. This included personnel on campus and at the four research and Extension centers in the state. Since coming on the job, I’ve met many more and continue to be impressed with everyone’s dedicated service to the university and state.

I’ve also had the opportunity to visit with members of many of our constituent groups, including agricultural producers, Farm Bureau, Delta Council and elected officials, as well as many of the individuals who participate in the outreach activities of the division.

The current economic environment poses challenges for Mississippi State University. State funding cuts require that we evaluate all of our operations for ways to reduce spending without sacrificing support for the clientele we serve.

The academic programs provided in the division prepare students for careers that include production agriculture, food science, veterinary medicine, agribusiness management and forestry, among others. Maintaining the faculty and other resources needed for our academic programs has been and will continue to be a top priority.

MSU is a national leader in agricultural research, and we will continue to maintain a high level of research excellence through careful management of the research funds we receive from the state and from federal and private sources.

Serving our citizens in each of Mississippi’s 82 counties is a crucial component of MSU’s Extension Service. The support the Extension Service receives from county boards of supervisors helps us serve the citizens of each county.

We will continue to reach out to constituents throughout the state via our communication resources, including Landmarks magazine, Farmweek on Mississippi Public Broadcasting, the interactive video links at each county Extension office, and the division Web site, MSUcares.

An important part of my role is to work with our university leadership, the Mississippi Legislature and other funding partners at the local, state and national levels to make sure the Division of Agriculture, Forestry and Veterinary Medicine at MSU has the resources needed to continue its education, research and outreach missions.

I look forward to meeting many more of you as I perform this role in the months and years to come.

Gregory A. Bohach
“Don’t tell them you’re a Rebel,” Tommy Walker whispered to his son’s badly injured dog, Tayson, as they approached the entrance to Mississippi State University’s College of Veterinary Medicine.

That was a remarkable statement from a 1983 University of Mississippi pharmacy alumnus. Athletic competition between Ole Miss and Mississippi State can deeply divide families and friends into opposing camps, particularly in November when the Egg Bowl rolls around. But a crisis, like the one the Walker family faced now, brings calm and reason to the most heated of sports rivalries.

Tommy eased his SUV into the parallel parking spot by the emergency door at the veterinary facility. It was twilight that first Sunday in December 2008. Normally, Tommy would be at home relaxing in his easy chair with his wife, Robin, as they watched TV and played tug-of-war with Tayson.

Tayson belongs to Preston Walker, the eldest of their three sons. Preston, who graduated with a degree in criminal justice from Ole Miss in 2007, was now a young Marine stationed in Japan waiting deployment to active duty in Iraq. Preston and Tayson had been inseparable since his sophomore year at Ole Miss. He took the dog when a friend had to find her pet a home when she could no longer keep it in her apartment.

When Preston would stop at a local restaurant in Oxford, he always had Tayson in tow. Tayson always charmed his way into a free taco. And of course, Tayson would curl up around Preston’s feet when the Walker family would come back after a home game to discuss how the Rebels played. Tayson also got along well with Preston’s girlfriend, Carolyn, and was quite accepting when the two got married.

Preston’s commissioning as a Marine meant he would be separated from Carolyn and Tayson while he went through basic school. Carolyn had entered physical therapy school at the University of Tennessee Medical Center in Memphis and could not keep the dog because the apartment complex did not allow pets. Tommy and Robin decided that Tayson would come live with them for the time being.

The energetic, 6-year-old Labrador mix adapted well to his temporary home. He had new playmates, and he also had plenty of fresh air and running room on their property. This satisfied Tayson’s quest for adventure and wandering spirit.

Although other houses in the neighborhood were within short walking distances, the thick brush and woods bordering the Walker’s lot kept many wild creatures hidden from view. The dogs often wandered into this thicket, but they never ventured too far.

The Walkers had gone to church in Byram early one morning, and they left Tayson outside with their two dogs, Buddy and Sassy. Upon their return, they were puzzled that the dogs had not come out to greet them, as they always did. When Tommy parked the car, his heart skipped a beat. Tayson lay motionless in the front seat, blood all over his body, the grass and the trailer’s side. His back legs, belly and throat were covered with deep slashes, cuts and puncture wounds.
Tayson had been in a fight for his life and had barely escaped. Their other two dogs were unharmed, but they were wary and quiet. The couple dashed madly inside to search for a blanket. Tommy put all his skills as a pharmacist to the test to keep Tayson alive. He and Robin wrapped up Tayson to keep him warm while they prepared him for the ride to the Emergency Animal Clinic in Jackson.

“The bond between Preston and Tayson was one way of staying close to Preston while he was away,” Robin said. “This was in the forefront of our thoughts that day.”

The staff at the clinic encouraged Tommy to go home while they assessed Tayson’s injuries. He left, dreading the conversation he might have to have with Preston. The Walkers were determined to do all they could to save Tayson’s life. After a couple of hours, the clinic summoned Tommy back.

“The veterinarian said that the staff had done all they could for our dog,” Tommy said. “Then, he said, ‘If you want to save this dog’s life, you need to take him to Mississippi State.’ I didn’t even flinch.”

The medical staff put Tayson in the passenger seat, attached his IV inside the door and wished Tommy good luck. The duo headed to Bulldog Country.

“The staff told me to keep Tayson awake and conscious by talking to him constantly,” Tommy said. “While I talked nonstop, Tayson would look at me and roll his eyes every now and then.”

One of Tommy’s friends at MSU is Dr. Diana Eubanks, assistant clinical professor at the College of Veterinary Medicine. Eubanks, whose specialty is canine dentistry, met him in the reception area. While attendants wheeled Tayson into the trauma room, Eubanks assured him the medical staff would do all they could.

“Judging from the location and the extent of his wounds, we suspected that Tayson was trying to get away from his attacker,” Eubanks said. “He had lost a significant amount of blood and was in considerable pain. But despite it all, Tayson was a very brave patient, and we knew that we had to save him.”

The effort would be a great struggle. Tayson had a weak pulse, low blood pressure and a rapidly beating heart, all symptoms of hemodynamic shock. He also needed blood transfusions because of his blood loss. But, the dog had developed a condition that caused his blood to lose its ability to clot. This would complicate treatment.

“Animals that suffer traumatic injury or stress can develop this life-threatening syndrome,” said Dr. Kent Hoblet, CVM dean. “Some of them cannot survive because their body cannot maintain an adequate supply of blood necessary to sustain life.”

Veterinary intern Ryan Taggart examined Tayson and assessed the dog’s initial condition. The medical team administered oxygen and fluids, along with pain medication, to stabilize him and protect his kidneys. They monitored his heart rate and blood pressure to make sure he could sustain x-rays of the chest and abdomen. The team then flushed his wounds and treated him with antibiotics before taking him to the intensive care unit.

“Most of the damage in bite cases like Tayson’s involves the crushing and shearing of tissue below the skin,” Taggart said. “Severe trauma in this way can be life threatening, and we were concerned about whether Tayson would be able to overcome his injuries.”

With Tayson now stable, Tommy drove home. Later, when father and son were able to talk, Tommy told Preston about the day, especially how the wonderful State people had reacted so quickly once Tayson arrived at their door.

“I told Preston that while recovery would be a long process, I felt that Tayson might have a good chance because of the care given him by the veterinary school staff,” Tommy said.

Preston had some good news of his own. He said he would be home soon to see the family before going overseas. He joked that would now include a few trips to Mississippi State.

Tayson began his slow recovery. Veterinary medical students assigned to intensive care often soothed the dog and even climbed into his cage when Tayson could not sleep. They fed him soft food and chicken broth to speed his healing. The turning point came when Preston walked through the doors of the veterinary college two weeks later.

“Preston and I drove to MSU, and the staff brought Tayson into one of the holding rooms,” Tommy said. “I cannot describe the pure joy I felt seeing those two reunite. That visit did much to reassure Preston, and it also did much to help Tayson recover.”

Almost a year later, Tayson is back to his old self, although he does not venture outside as much as he once did. Much of the incident is a distant memory. Preston has now finished a tour in Iraq and is back in Okinawa awaiting orders for a second tour, this time aboard a ship in the Pacific. The Walkers have not forgotten the kindness bestowed upon them by the Mississippi State family.

“Ole Miss is good at some things, and Mississippi State is good at some things,” Tommy said. “I would not hesitate to tell anyone to take their injured animal to Mississippi State to get the best care if that is what’s needed.”

When the Rebels go to the “Dawgs,” they have good reason.
Heavy showers can dump enormous amounts of rain in a short time and cause dangerous municipal flooding around businesses, homes and streets.

Robert Kröger knows the value of managing ditch vegetation for maximum protection of property and safety considerations. He is a new assistant professor and water management specialist with Mississippi State University’s Forest and Wildlife Research Center.

Kröger was part of a team that recently evaluated Jonesboro, Ark., which, like many cities, experiences heavy storms that cause flooding from rainwater runoff. City leaders began developing a storm-water management plan with help from Kröger and scientists with the Arkansas Biosciences Institute and the U.S. Department of Agriculture – Agricultural Research Service.

Part of the reason for flooding is that low-lying Jonesboro is situated in three watersheds. Even with about 300 miles of ditches designed by the Federal Emergency Management Agency (FEMA), the area cannot keep up with the amount of water moving through during some storms.

“The goal of the project was to provide reliable information on the FEMA drainage ditches in need of urgent attention,” Kröger said. “We evaluated more than 50 sites, and team members quickly noticed that many drainage canals had become heavily vegetated with water-loving wood species. While some could be properly maintained by city workers, other canals were too thickly congested with trees such as willows, sycamores and sweet gums.”

Kröger said a maintenance strategy for all the ditches could be developed by understanding what types of vegetation were in the ditches and their proportion compared with grasses.

Woody species often collapse into a drainage canal, where they create debris dams. These dams and the woody debris caught along the edges of drains and box culverts during deluges are among the leading causes of municipal flooding problems.

“Our efforts, combined with planning by residents, city council members and other administrators, have contributed significantly to Jonesboro’s improved storm-water management plan,” Kröger said.

Jerry Farris of the Arkansas Biosciences Institute said the new comprehensive plan assigns rankings to the ditches: those suitable for drainage, those with intermediate woody vegetation growth and those requiring constant maintenance.

“The system allows planners to monitor and manage ditches that are prone to tree growth,” Farris said. “Integrated management of mechanical drainage controls, along with herbicide treatments that stabilize the growth of native plant species, should lead to a sustainable and achievable maintenance of drainage canals for Jonesboro.”

Kröger and Farris agreed that the proven Arkansas plan could serve as an example for other municipalities interested in formulating similar strategies.
Southern pine beetles kill an estimated 12 million cubic feet of the state’s pine forest annually. Research efforts usually focus on early-detection methods and control mechanisms, but a new program at Mississippi State University is looking at taking preventive measures to stop the destructive pest.

“Only proactive management activities such as periodic thinning, which is reducing the number of trees in an area, can help mitigate the threat of the southern pine beetle,” said Andrew Londo, MSU forestry professor and Extension coordinator. “Thinning not only reduces the likelihood of a southern pine beetle attack, but also increases overall forest productivity and health.”

For that reason, the U.S. Forest Service has initiated a region-wide southern pine beetle prevention program. Its goal is to reduce forest pest damage on privately owned forestlands across the South. Conducted by the Extension Service in collaboration with the Mississippi Forestry Commission and the Department of Plant Pathology and Entomology, the project includes landowner education and financial incentives for foresters and loggers.

“We have conducted 84 education programs for more than 3,000 landowners, foresters and loggers since 2006,” Londo said. “These workshops helped familiarize participants with the five southern pine beetles and their biology, identification and management. At the end of the workshops, we offered a cost-share incentive program for landowners.”

The southern pine beetle cost-share thinning program is an incentive for landowners to thin their pine trees and reduce the overall threat from the beetles.

“We have had 140 landowners owning more than 7,000 acres enrolled in the incentive program,” Londo said. “We continue to sign up landowners for assistance to manage their forestlands.”

Two new components of the program, funded by the American Restoration and Recovery Act, provide payments to loggers and consulting foresters.

“The goal of the act is to create new jobs and retain current jobs to stimulate the U.S. economic recovery,” said Andy Ezell, forestry professor and department head. “Loggers have been hit hard during the economic downturn, and we anticipate these funds to help them during this period.”

Loggers and consulting foresters who assist in thinning operations for landowners enrolled in the existing program will receive payment through the grant.

“Consulting foresters provide an essential service for private landowners in the preparation of forest management plans,” Ezell said. “As with loggers, consulting foresters will receive payment for plans prepared for landowners enrolled in the program.”

Londo said landowners, loggers, foresters and Mississippi forests benefit from the prevention program, and the threat of southern pine beetle hazards is reduced, which is beneficial for all involved.
As Mississippi’s sweet potato industry continues to grow, researchers at Mississippi State University are developing even more innovative and effective strategies for growers.

Sweet potatoes have been grown in the Southeast since 1648 and are an important crop for Mississippi. The state’s soil and climate produce quality sweet potatoes. The industry has grown steadily, and today there are more than 90 sweet potato operations within 40 miles of Vardaman, which is located in the northeast Mississippi.

“Mississippi is second in the nation in planted sweet potato acreage,” said Benny Graves, executive secretary of the Mississippi Sweet Potato Council. “It is the No. 1 vegetable crop in the state.”

Sweet potatoes have become a popular food around the country and overseas. Mississippi sweet potatoes are sold everywhere east of the Rocky Mountains and exported to Canada and the United Kingdom.

“People have come to realize the value in eating such a nutritious food. Baby boomers are switching to healthier foods, and sweet potatoes fit perfectly into their diets,” Graves said. “The vegetable is also being used in baby food and frozen casseroles. Sweet potato fries are a rising food trend and are on many restaurant menus.”

A large national and international demand for sweet potatoes has made Mississippi’s crop even more important. That is why researchers at MSU are focusing their efforts on developing systems and strategies to increase sweet potato production and profitability.
Pontotoc Ridge-Flatwoods Branch Experiment Station associate research professor Mark Shankle said MSU has secured a number of important sweet potato research grants.

“We are growing about 20,000 acres of sweet potatoes in the state,” Shankle said. “With the nationwide demand for the crop, we could expect to see our acreage increase. That expectation makes this an opportune time to focus on research that will benefit the industry.”

One such project is the model-based decision support system. A multistate grant for $2.8 million was awarded by the U.S. Department of Agriculture to researchers at MSU, Louisiana State University and North Carolina State University, as well as Extension specialists in California. LSU is the lead institution on the study.

“The study is basically about how different practices and environmental conditions influence the yield and quality of the crop,” said Ramon Arancibia, a professor at the Pontotoc station. “We are going to analyze how certain factors and conditions contribute to or affect storage root initiation and growth of sweet potatoes. If the storage root is not initiated and enlarged, then the root will remain as a feeding root with no commercial value.”

The researchers are developing a computer model that will allow sweet potato growers to input their current growing conditions — such as weather, soil moisture, number of nematodes, and timing of fungicide and herbicide applications — to help predict how their crops will turn out. The information provided by the computer model will enable growers to make the best management decisions for their crops.

“The modeling system is based on an approach called Bayesian networks. It is able to quantify risk and assists users in making decisions,” said Arthur Villordon, associate professor at LSU’s Sweet Potato Research Station. “It is really a very interesting approach. NASA has used it as a decision support tool for the space shuttle’s propulsion system.”

Arancibia and Villordon said the project will last at least three years, and growers in the participating states will be involved.

“Some of the growers have already seen the prototype and are realizing its potential,” Villordon said. “We want to make this system as user-friendly as possible, so their input is very important.”

Sweet potato growers also need new research on postharvest practices to help them reduce the incidence of disease and increase the quality of their crop. Arancibia and his colleagues are embarking on a new study with USDA grant money through the Mississippi Department of Agriculture and Commerce to help growers find solutions to postharvest problems.

“The after-harvest curing process is important because it can heal injuries the sweet potatoes get during harvesting, but there are certain conditions needed to make this a more effective process,” Arancibia said. “The sweet potato is a tropical vegetable and needs warm conditions to thrive. Some of the harvest and postharvest temperatures in Mississippi can be on the cold side, so we are looking at increasing temperatures in storage facilities to accelerate the healing process and reduce disease incidence.”

Arancibia said higher temperatures might also increase metabolic processes, giving the sweet potato an even sweeter taste.

“If the metabolic process is halted by cold temperatures, the potato does not reach its true taste potential,” Arancibia said. “Better curing practices benefit growers, as the sweet potatoes can be marketed for possessing certain culinary characteristics such as having a sweeter taste.”

The postharvest storage project has just gotten under way, and many Mississippi growers are already participating in it.

The key to successful sweet potato research is grower participation. MSU Extension specialists are the liaisons to the growers and help recruit and conduct research projects. Extension agent Bill Burdine and Extension plant pathologist Alan Henn were the first in the state to initiate and engage growers in sweet potato end rot disease research.

“Because of the damage end rot can cause, we began looking at using biological materials that can be applied to protect the crop during storage,” Burdine said. “We’ve had good grower participation. They benefit from the research, as it helps put dollars back into the industry.”

Burdine and Henn also have been conducting studies on controlling nematodes, which can be destructive to sweet potato crops. Burdine said their work with growers has led to determining thresholds and finding more profitable solutions for controlling the destructive pest.

“Our priority has been having biweekly meetings with growers to update them on research and other pertinent information,” Burdine said. “This type of communication is important for us and them. We get immediate feedback on projects and get to share information on a regular basis.”

Burdine said the meetings are even more important this season, as heavy rains have affected much of the crop.

Shankle said more research is on the horizon, and innovative projects are already under way.

“Mississippi State researchers are looking at the possibility of using sweet potatoes in ethanol production,” Shankle said. “Some grades of potatoes are not used and may be left in the fields or discarded. Ethanol production could be a way to make use of those excess potatoes and open new markets for producers.”

The new knowledge being brought to growers is needed to aid in the continuing success of Mississippi’s sweet potato industry.

“Growers have a financial stake in all of this,” Graves said. “The Sweet Potato Council has a long history with Mississippi State’s researchers and Extension agents. The research they develop and put in the hands of our growers is vital to the industry.”
When 25 young performers walked onto the stage of the Ronald Reagan Building and International Trade Center’s atrium in Washington, D.C., to perform June 25, 2009, it was an experience most of them had not even dreamed about a few months earlier.

Individually, they are high school students from small Mississippi towns and farms. Collectively, however, they are Southern Sounds, an ensemble of talented young people brought together by the Mississippi 4-H organization’s creative arts program. Since 2008, members of Southern Sounds have performed at the annual Congressional Awards Ceremony program in Washington and at other events around the nation and throughout Mississippi.

“I joined 4-H Southern Sounds in June 2009, and it has already given me amazing opportunities,” said keyboard player Kameron Jackson of Pearl River County. “I have been able to experience things that most teens never will, including the chance to travel to Washington, D.C., to play for the ceremony. It was really awesome! We performed for many members of Congress who attended the ceremony, as well as several leaders in the entertainment industry and the Gold Medal recipients.”

A typical performance by Southern Sound includes comedy skits, traditional gospel songs, a patriotic medley, rock and roll tunes, and selections from hit Broadway musicals, such as Hairspray. It even includes a Taekwondo demonstration.
“I am continually amazed by the incredible talent I see in our young people,” said 4-H youth development specialist Linda Mitchell. “There are few venues in Mississippi outside of school and church to showcase this talent. 4-H Southern Sounds offers an opportunity for youth to come together and interact with others from across the state who want to be part of a musical and drama group.”

Mitchell helps recruit and coach members of Southern Sounds as part of her duties as a 4-H youth development specialist. Auditions for the group are held each summer during 4-H Club Congress at Mississippi State University.

Southern Sounds was the first nonprofessional group invited to perform in Washington, D.C., for the United States Congressional Gold Award Event. The Gold Award is the highest honor given to youth by the U.S. Congress. The award is based on setting and achieving goals in four program areas — volunteer public service, personal development, physical fitness, and expedition/exploration. The audience for the Gold Award ceremony typically includes national business leaders, members of Congress, cabinet members and professional entertainers.

“Because they are from all areas of the state, the members of Southern Sounds have to work hard during our limited rehearsal time to improve their skills and to perfect their performance,” Mitchell said. “They are one of the best examples of teamwork I’ve seen. With only minimal direction from me, they select the playlist, master the lyrics and music, create the choreography, share the leads and put together the show. And not just any show, but a foot-tapping, hand-clapping, audience-pleasing performance every time.”

The time and dedication the group puts into developing a show that brings audiences to their feet also provides personal rewards for the members, said Marylade Koch, whose daughter Meredith joined the group in 2009.

“What she likes best is being with other artists in an environment where she finds friendship and support for her specific interests,” Koch said. “Through the practice of creative performing arts, members learn valuable life skills. These teens know Southern Sounds promotes teamwork, not competition.”

Meredith Koch agrees with her mother, adding that being able to connect musically is important, especially for teens in small communities.

“As a teen living in a small Mississippi town, I know finding other musicians can be tricky,” she said. “People say they can play but when the time comes to do something musically, they are nowhere to be found. Imagine my surprise when I discovered 4-H Southern Sounds, a performing-arts group of musicians, dancers, singers and actors. I was amazed that such a program could not only boast a great opportunity for young artists, but was located in my state — Mississippi.”

Other members of the group are quick to point out a different kind of benefit that comes from connecting with teens with similar interests.

“The friendships and memories made with this group will forever be remembered,” said Rachel Smith of Grenada County. “We’ve changed from a group of kids from different counties in Mississippi to a group of friends. We evolved and learned a little more from each other.”

**4-H Southern Sounds Performers**

Justin Armstrong — Attala (Martial Arts)
Kyle Buford — Leflore (Master of Ceremonies)
Tyler Camp — Itawamba
Rebecca Cleveland — Itawamba
Avery Dilworth — Union (Drummer)
Teresa Engle — Grenada
Kayla Fuentes — Oktibbeha
Will Gentry — Pontotoc
Kameron Jackson — Pearl River (Keyboard Player/Songwriter)
Meredith Koch — Marshall (Guitarist/Songwriter)
Brittany Mann — Lafayette
Zach Moody — Union (Guitarist/Songwriter)
Corbin Moore — Grenada
Kelsy Reed — Grenada
TreMarcus Rosemon — Grenada
Lindsey Shields — Itawamba
Chelsi Smith — Lee
Rachel Smith — Grenada (Bass Player)
Katelin Wallace — Tishamingo
Katie Beth Walton — Grenada (Choreographer)
Hannah Whitlock — Pontotoc
Brooke Wilson — Itawamba
Mike Jackson — Pearl River (Sound Tech)
Linda Mitchell — Director

**4-H Agents Who Provide Support**

Beth Randall — Lee
Jan Walton — Grenada
Marie Rogers — Itawamba
A Mississippi State University program is doing its part to address rising childhood obesity rates by educating young children about healthy living, aiming to stop obesity before it starts.

The Garden-Based Learning Program for Preschoolers began in January at Emerson Family School in Starkville. It is a pilot project developed by Chiquita Briley, Mike Hall, Diane Tidwell and Brian Trader of MSU’s departments of Food Science, Nutrition and Health Promotion and Plant and Soil Sciences to teach preschoolers aged 3 to 5 about nutrition, health, gardening and physical activity.

“The goal of the project is to reduce the incidence of childhood obesity by introducing children, parents and educators to healthy food options and physical activity. “When you ask a young child where food comes from, they usually answer, ‘the store,’” said Brian Trader, assistant professor of plant and soil sciences. “The gardening component of the...
program helps teach kids about where their food really comes from.”

Early in the year, each child received his or her own packet of seeds to plant in one of the three gardens at Emerson. They helped maintain the gardens and learned about the different flowers, herbs and vegetables as they watched the plants grow.

“We introduced the preschoolers to vegetables to help them learn about eating fresh, nutritious foods, and the herbs are used to introduce them to different flavors used in cooking,” Trader said. “In the flower garden, we grow sunflowers, butterfly bushes and other plants that attract interesting insects and hummingbirds. The experience in that garden helps them interact with nature and learn more about the environment.”

Every two weeks, the children enjoy a tasting session. They have been introduced to fruits and vegetables such as beets, oranges, melons, cucumbers, summer squash, potatoes, romaine lettuce and Swiss chard.

Chiquita Briley, assistant professor of food science, nutrition and health promotion, and senior-level undergraduate students use age-appropriate techniques to help the children understand the importance of healthy eating.

“The lessons are very visual. The children remember more when you introduce the color, shape and size of the fruit or vegetable,” Briley said. “The lessons they learned previously are reinforced during the next session. They seem to remember a lot of what they’ve learned every time we review previous material, and they can easily grasp new concepts.”

Making trips to the school gardens helps the children stay active and learn the importance of being outside in the fresh air, but there are more activities that help get them moving.

“We choose kid-friendly songs and games such as the ‘Hokey Pokey’ and ‘Farmer in the Dell’ to encourage physical activity,” said Diane Tidwell, associate professor of food science, nutrition and health promotion. “They learn about the importance of physical activity and increasing their heart rates while having fun.”

The children are not the only ones learning; teachers and parents also benefit from the program.

“Children bring lessons home to their parents. When they have the terminology, they can ask for healthy alternatives for snacks and meals,” Briley said. “We are in the process of developing a parent component for the program to help them become more involved in what their children are learning.”

Trader said the children are becoming more aware of the botanical world and are expressing interest in gardening with their families.

“After getting some exposure in the garden, students start noticing gardens outside the school environment,” Trader said. “We’ve had students who now talk about helping in their grandmothers’ gardens. It is really nice to see how these lessons carry over.”

The staff at Emerson has embraced the lessons taught in the program and plans to continue it after the pilot project comes to an end.

“This program has been a real plus for us because the kids enjoy it and they have all learned so much,” said Susan Fulgham, preschool coordinator at Emerson. “The MSU faculty and students involved in the project have provided us with the information and tools to incorporate the program’s lessons into our preschoolers’ regular curriculum.”

Trader said the goal is to expand the program to more schools across the state.

“We applied for a grant that will give us the resources to start new programs,” Trader said. “The more opportunities we have to increase children’s understanding of healthy lifestyles, the better chance we have at curbing obesity and unhealthy behaviors.”
Although he has never before lived or worked in Mississippi, the new vice president for the Division of Agriculture, Forestry and Veterinary Medicine at Mississippi State feels right at home.

“My career has taken me to West Virginia and Idaho, as well as Minnesota,” said Vice President Greg Bohach. “People often have a perception of what a state is like and that perception is not always positive, but when you go there it’s entirely different. The first thing I found here is that Mississippians are very proud of their state, and for good reasons.”

On Oct. 1, 2009, Bohach began his duties as the sixth vice president of the division. He previously served as director of the Idaho Agricultural Experiment Station at the University of Idaho. Other positions during his 21-year career at the University of Idaho included associate dean of the College of Agricultural and Life Sciences and director of the Idaho Center for Host-Pathogen Interaction Research.

By Bob Ratliff

“It is crucial in times like these to establish a process to evaluate our priorities for teaching, research and outreach and keep them in tune with what the state needs.”

GREG BOHACH
A native of Central City, Penn. (population 1,200), Bohach said farmers and others who depend on agriculture, forestry and natural resources for their livelihoods in every state are facing similar issues.

“While there is not a complete overlap in the commodities produced, the basic concerns are the same whether you’re talking about row-crop agriculture, livestock production, forestry or other enterprises that depend on the land,” he said. “Air quality, water quality, the rural/urban interface and government policy are issues in every state.”

The need to keep agriculture, forestry and other rural enterprises profitable is a priority for the new vice president.

“It’s clear that in Mississippi, as in other states, the long-term family in agriculture is disappearing,” Bohach said “There is just not as much opportunity there as there was for past generations. As a result, MSU and other land-grant universities need to focus on developing technology and marketing strategies to make agriculture more profitable compared to other livelihoods, and keep people in agriculture.”

Mississippi State, he added, is effective in delivering research results to clientele.

“MSU has a really good balance between technology development and technology transfer,” he said. “That is important because as a land-grant university, MSU’s mission includes balancing the fundamental research that’s done in the lab with the needs of the people who will apply that research in their particular enterprise.”

Effective management of resources, both on and off campus, is another strength of the university and one that is essential in providing necessary services during tight economic times, he added.

“The division’s research facilities on campus and out in the state provide support to major industries,” Bohach said. “The National Warmwater Aquaculture Laboratory at the Delta Research and Extension Center in Stoneville, for example, is a major resource to the state’s catfish industry, while the College of Veterinary Medicine’s Poultry Research and Diagnostic Laboratory in Pearl provides diagnostic and other services to the state’s poultry industry. These types of facilities and services make a real difference to the Mississippians engaged in the industries they serve.

“I’m also really impressed with and want to continue to strengthen the relationships MSU and the division have with other agencies and schools,” Bohach added. “The partnership we have on a variety of projects with USDA’s Agricultural Research Service is a win/win situation for all involved.

“Joint research projects and other areas of cooperation with Alcorn State University and the University of Mississippi are also important because each institution has its own areas of emphasis, and cooperation to take advantage of those strengths will help make the most of available resources,” he said.

The new vice president emphasized that traveling the state and talking to division personnel and to the clients they serve is one of his priorities.

“We are a land-grant university, and as such, we need to be out and about the state. While emails and phone calls are important, I think that one-on-one interactions work much better.”

When Bohach assumed his duties at MSU in October, the university was in the second year of cuts to state funding, and more budget cuts are expected. As a result, he is establishing a plan to lessen the cuts’ impact both within the division and on the clientele it serves.

“It is crucial in times like these to establish a process to evaluate our priorities for teaching, research and outreach and keep them in tune with what the state needs,” he said “At the top of my list of priorities is support for our academic programs in the division and for the research, both basic and applied, that the state and the nation must have for economic growth.

“Another top priority is to continue the already strong commitment the division has to Mississippi communities, youth and families,” he added. “I know many states have de-emphasized Extension at the county level, but our programs still have a strong presence in each of Mississippi’s 82 counties, and that direct university link to the people of the state remains at the heart of our land-grant mission.”
In the Neighborhood

Communities all over the state have benefited from the services of the Mississippi State University Extension Service and Mississippi Agricultural and Forestry Experiment Station. Researchers and Extension specialists have made community involvement a priority. Getting to know their clients has helped them better provide their wide range of services. The following pages include stories of some of the people Extension and MAFES like to call their neighbors.

Nikolas and Family

In July, Nikolas and his family went on a fishing expedition near Soldotna, Alaska — a dream trip provided by the Catch-A-Dream Foundation.

Nikolas is a 14-year-old boy with a brain tumor. His father, Mark, is enthusiastic about the trip and what it did for his son.

“Catch-A-Dream was much more than a dream to us,” Mark said. “It was faith, love of country, respect for the land, respect for nature, family values and much more. I could not have been more pleased, impressed or satisfied. Our trip was one that will live on forever in our minds and hearts.”

The Catch-A-Dream Foundation is a nonprofit organization that provides special hunting and fishing expeditions to young people aged 18 and under with a disease or condition that will become terminal if not cured or interrupted. Participants and their families get the all-expense-paid hunting or fishing trip of their dreams.

“This is a charity that not only makes a difference in the lives of hurting families across the nation, but it’s an effort that uses our natural resource to make that impact,” said Marty Brunson, a professor with MSU’s Extension Service and director of the foundation.

“We work with young people who have a health threat to their life before they turn 19,” Brunson said. “Not all are at the terminal stage at the time we serve them. Some are cured, or their disease is sometimes interrupted or slowed down. But all are under the threatening cloud that this could be fatal.”
Chris Bell, of Lawrence, is a cattle farmer who uses a wheelchair, the result of a 2005 medical procedure that went wrong. He lives alone and with help from his son and friends, runs a 100-head cow/calf operation, raises hay, produces honey, and raises and trains border collies.

The Mississippi AgrAbility Project helped coordinate the people and resources necessary to equip Bell’s tractor with a wheelchair lift and to install remote-controlled, solar-powered gate openers on his pasture gates and hand controls on his tractor.

“The lift on the tractor enables me to help rake and bale hay and do the work necessary on the tractor,” Bell said. “It’s exhilarating, and it probably helps with my mental attitude and the physical side as well. I can’t totally do things by myself, but I can at least participate.”

Emily Knight, a Mississippi AgrAbility coordinator, said AgrAbility helped link Bell to the people and resources he needed to find the tools that made it possible for him to keep working on the farm.

“We connected him to what was available,” Knight said. “AgrAbility put him in touch with a company in Indiana that sells lifts that allow a person in a wheelchair to drive a tractor. The Mississippi Department of Rehabilitation Services purchased some gate openers with solar panels that allow him to open and close his gate without having to get down from the tractor.”

Knight said AgrAbility is an educational program bridging the gap between rehabilitation and agriculture. AgrAbility has served more than 100 people who work in agriculture or live in a rural setting and who face a disability that could make them leave their way of life or occupation.

The Mississippi AgrAbility Project is a five-way partnership between the Mississippi State University Extension Service, MSU’s T.K. Martin Center for Technology and Disability, the Mississippi Department of Rehabilitation Services’ Vocational Rehabilitation Division, the Alcorn State University Extension Program and the Methodist Orthotics and Prosthetics Lab.

“We try to help people find the possibilities that exist for somebody who is working in agriculture and who is disabled,” Knight said. “Our goal is to keep them employed or involved in the work they enjoy.”
For almost 25 years, a Winston County self-help cooperative has been doing what its name implies — helping people help themselves — by providing educational information and establishing partnerships with experts.

A partnership with the MSU Extension Service and College of Veterinary Medicine is an important part of the co-op’s monthly programs. The partnership also makes it easier for specialists to assist producers when needed. Such was the case when the co-op hosted a recent cattle field day for its members.

Held at the co-op’s 40-acre farm east of Louisville, the field day highlighted ways leaders of the cooperative use the resources of the MSU Extension Service and the College of Veterinary Medicine to make a difference in the rural community. During the event, participants watched as several heifers were tested to see if they were pregnant and in good health.

“These animals will be given to some of our members for care, so we’re working with Extension and the MSU College of Veterinary Medicine to make sure that we have good health management on the animals here on our farm,” said co-op president Frank Taylor.

Taylor works closely with MSU throughout the year to serve the needs of co-op members. He schedules field days and regular meetings, and the subject matter covered can extend far beyond livestock.

Livestock health management is a primary topic because producers need replacement heifers for their herds. One of the heifers at the farm, a lively 2-year-old, has been important to the co-op because the animal will soon be given to a co-op member for care.

“We have grandparents, children and grandchildren involved in our cooperative,” Taylor said. “We are teaching them skills to help them become successful.”

Both Allen and Janice are volunteer 4-H leaders with the MSU Extension Service 4-H program, and two of their four children are in 4-H. They work closely with their Extension agents and are innovative and willing to experiment with new technology to improve their business.

Among the innovations used at Eubanks Produce are black plastic mulch and drip irrigation. Soil fumigation is used to combat insects and diseases before crops are planted.

“We embrace whatever helps us be successful,” Allen said. The farm employs as many as 175 migrant workers, but its permanent staff of seven includes a full-time food safety inspector.
Mississippi 4-H Council President Chelsi Smith is a modern young woman who uses computers, PDAs and texting to reach members, yet relies on traditional 4-H values to make these tools effective.

Chelsi, an 18-year-old graduating senior at Saltillo High School, has built an astounding track record of community service.

During her year as council president, she used the videoconferencing capabilities of the MSU Extension Service to bring leaders of the four 4-H districts together for virtual meetings. She also has worked with youth at county livestock shows and was involved with many nonprofit organizations in Lee County that champion society’s underprivileged.

“4-H has changed with the times, and the new projects with robotics, engineering, technology and science are quite exciting,” Chelsi said. “I hope we don’t lose focus of the traditions that started 4-H, particularly the livestock projects that I dearly love, because they instill responsibility, respect and a sense of wonder for life.”
Tommy and Brenda Howard of Columbus could see how much the spring and fall sessions of Mississippi State University’s 4-H therapeutic riding program helped their daughter, so they made a donation to help make the program a year-round option.

For several years, the Howards’ daughter, Elizabeth, took part in MSU’s 4-H TEAM program (Therapeutic Equine Activity Member), which was offered seven weeks each spring and fall at the Mississippi Horse Park. The Howards believe their daughter, who was born with cerebral palsy in 2000, benefited from the program.

“We definitely could see how the riding strengthened her core. It also improved her confidence level,” her father said.

The Howards contributed $300,000 to the TEAM program. Their funding helped establish the Elizabeth A. Howard Therapeutic Activity Center, a covered arena behind the Mossy Oak Mall in West Point. Bryan Farms and Jimmy Bryan donated the land to the Mississippi 4-H Foundation in 2000.

“Therapeutic riding is a specialized equine activity that provides physical, emotional and psychological benefits to people with cognitive and physical disabilities,” said Mary Riley, coordinator for Mississippi States 4-H therapeutic riding program. “Trained instructors provide carefully planned activities developed by a health professional and a certified riding instructor. The horse is used as a treatment tool to help riders achieve their goals.”

Riley said the dedicated facility enables greater access to the program.

“We have more riders from north Mississippi,” she said. “Instead of two seven-week sessions, we will be able to offer as many as four 12-week sessions.”
Sales will begin next year for Delta Jazz, a new crape myrtle variety developed by Mississippi State University that has maroon foliage and handles the heat of Southern summers.

MSU researchers developed and licensed this variety to Plant Development Service Inc. (PDSI) of Loxley, Ala., for commercial sale through the Southern Living Plant Collection. PDSI has established itself as a global leader in new plant introductions. Delta Jazz will be available for purchase in garden centers across the Southeast in the spring of 2010.

Patricia Knight, director of MSU’s Coastal Research and Extension Center in Biloxi, developed the plant with Wayne McLaurin, who is a visiting MSU professor.

“This crape myrtle has foliage that appears to be maroon, although it is actually a dark-brown color,” Knight said. “Many plants with dark leaves scorch in the heat of Mississippi, but this plant maintains its color, and the foliage is accented by medium pink flowers.”

Knight said the tree can stand alone in the landscape because of the color of its foliage, or several can be grouped together to showcase the blooms in the summer.

Knight said the tree was identified in Poplarville at the South Mississippi Branch Experiment Station, a unit of the Mississippi Agricultural and Forestry Experiment Station. Once identified as unique, the researchers began to evaluate the potential of the specimen.

“This crape myrtle has probably exceeded expectations, and we were contacted by industry to release it,” Knight said.

“Our initial attraction to the Delta Jazz crape myrtle was the unique leaf color, this really rich raspberry-maroon, especially on the new growth,” said Robert “Buddy” E. Lee, PDSI director of plant innovations. “It’s also really easy to grow. We think that consumers will appreciate and be drawn to this plant.”

The Southern Living Plant Collection includes shrubs, annuals, perennials, bulbs and groundcovers. The collection will include the Delta Jazz crape myrtle next year.

Chase Kasper, licensing associate for MSU’s Office of Technology Commercialization, helped guide Delta Jazz through the licensing process. MSU began conversations about licensing with PDSI in the fall of 2008, and the license was signed in July. As a licensee, PDSI has the right to propagate and sell Delta Jazz through its licensed wholesale grower group.

“We’re excited about formalizing the relationship with PDSI and are confident that they will be successful in commercializing Delta Jazz,” Kasper said. “The company is ramping up production now to release it in the spring in anticipation of the planting season.”

Kasper said MSU’s Office of Technology Commercialization looks for ways to transfer technologies that emerge from MSU research for the public benefit, usually through a commercial partner.

“A company that licenses the technology that we discover is given the right to take the technology to market,” Kasper said. “MSU holds more than 250 technologies in its portfolio, including nearly 100 issued patents. The portfolio primarily consists of forestry, agricultural and engineering-related inventions, reflecting the university’s land-grant heritage.”

MSU receives a revenue stream when its licensed products are sold.
Corn-to-ethanol manufacturing has created huge amounts of a byproduct suitable as an ingredient in cattle feed, and Mississippi State University researchers want to know if a more refined version packs the same nutritional punch.

The byproduct is known in the ethanol industry as “distillers dried grains with solubles,” or DDGS. Ethanol manufacturers extract starch from corn to produce fuel. They discard the protein, fat and fiber of the corn. Some feed manufacturers have used this byproduct, in its unrefined state, in products for cattle.

Animal nutritionist Brian Rude of the MSU Department of Animal and Dairy Sciences and his graduate student, Jonathan Greene of Trussville, Ala., conducted a digestibility study of refined distillers grains on steers at MSU’s South Farm. The refined version has a higher concentration of fiber.

The Mississippi Agricultural and Forestry Experiment Station funded their research, which holds promise for cattle producers and feed manufacturers.

“The byproduct does not differ much from the energy value of corn used as feedstuff,” Rude said. “People don’t know what to do with the increasing amounts of distillers grains, and many researchers are separating the components of the byproduct to look for new uses. We wanted to see if a refined version, which contains more fiber, could still be used as feedstuff for cattle.”

MAFES bioenergy scientist Radhakrishnan Srinivasan developed a technique he calls the “elusieve” process to use sifters and air to separate the fiber in distillers grains from the protein and fat. Some of these nutrients still cling to the fiber particles afterwards. Srinivasan supplied the researchers with unrefined and refined versions of distillers grains for the study.

“If we can use a byproduct that humans can’t eat to produce food that they can, we’re doing a successful job of recycling,” Rude said.
Cattle are ruminant animals and need fiber in their diet to effectively digest their food. Rude and Greene designed a feed trial to see if the higher fiber content in refined distillers grains would affect digestibility.

Twelve steers were divided into three groups of four and placed in holding pens. One group was fed a ration containing refined distillers grains, which the researchers designated as the “L-fraction,” or lighter density fraction.

A second group of steers was fed a ration containing unprocessed distillers grains, and a third was given a control ration equivalent to commercial feed. The researchers allowed the animals to adjust to the new feed before conducting a 10-day trial on the experimental rations.

“We allowed the steers to adjust to the new feeding routine before we ran the trial,” Greene said. “We monitored food intake by feeding them a special diet first and then putting them exclusively on the experimental rations before gathering samples.”

Greene sampled the rations before feeding and then sampled the portions the steers did not eat, as well as the steers’ urine and feces. He analyzed the samples for nutrients.

“We wanted to see how well the steers digested and utilized the different feeds,” Greene said. “If the higher-fiber L-fraction ration adversely affected the cattle’s digestive systems, then that would indicate it was not a suitable feedstuff.”

Interestingly, the results indicated the steers fed the L-fraction ration were able to digest a greater percentage of protein than those on the other two diets. Fat digestibility was similar between the unprocessed distillers grains and the L-fraction, but it was generally better than the control diet.

Perhaps even more significant, the steers that ate the L-fraction ration consumed less feed than those fed the unprocessed distillers grains ration or the control diet. The L-fraction diet resulted in steers eating less but digesting more protein.

“The nutrient digestibilities for all three groups were comparable, and there were no significant differences among the different rations,” Rude said.

Future studies of refined and unrefined distillers grains may lead to the identification of potential ingredients for cattle feeds that are cost-effective and may even enhance weight gain.

“Feed costs make up from 50 percent to 75 percent of the cattle producer’s total cost,” said Rude. “If cattle can eat less of a feed that contains an ingredient, such as refined distillers grains, and digest a greater amount of protein, producers could potentially minimize feed costs.”
Mississippi State University research has found that protecting young bucks improves herd health and creates a better hunting experience.

The university’s Department of Wildlife, Fisheries and Aquaculture has been conducting deer research for more than 40 years with the goal of improving deer populations throughout the Southeast. A recent study found that protecting young bucks is important because they father nearly a third of all fawns.

“We found through DNA analysis of 1,219 deer that physically immature bucks 1.5 to 2.5 years old fathered 30 percent to 33 percent of the fawns in the three populations we examined,” said Steve Demarais, MSU professor and deer biologist. “This was with larger, more mature males available.”

The myth of the biggest bucks dominating the breeding season and producing next year’s fawns was busted.

“Our research found that every buck has a chance to contribute to the next generation,” Demarais said. “Social dominance alone does not guarantee reproductive success.”

The research is groundbreaking and furthers the belief that protecting younger bucks improves the health of the deer population. Protecting younger bucks also improves the buck-to-doe ratio, which shortens the breeding season.

New regulations require hunters to examine the inside antler spread and main beam length rather than count antler points. The regulations are based on soil regions throughout the state and broken into three zones.

“Regional variation in antler size can be explained by soil fertility,” Demarais said. “Different soil types, even in the same state, can impact antler growth.”

Demarais said because of the regional differences in soil types and their effects on antler production, one antler criterion alone cannot be used to protect the 1.5-year-old bucks statewide.

“While the four-point rule — deer must have four antlers to be harvested — protected some young bucks, the rule did not provide 100 percent protection of the 1.5-year-old age class,” said Chad Dacus, statewide deer program coordinator for the Mississippi Department of Wildlife, Fisheries and Parks.

“In the last few years, we have seen that the four-point rule allowed the harvest of quality yearling bucks, while protecting older-aged spikes and three-point bucks,” Dacus said. “The result has been a decrease in antler size within age classes of older bucks.”

The combination of the four-point law, high hunting pressure and lower reproduction caused by the overharvest of bucks has contributed to a decrease in antler size, Dacus said.

“The overall goal is to increase the size of antlers on bucks and produce a quality deer-hunting experience,” Demarais said. “By allowing young bucks to reach older ages, it creates a healthier deer herd.”
In the furniture industry, first-line supervisors are responsible for managing workers and coordinating all of the activities to make, ship, sell and deliver thousands of pieces of furniture, but there is little formal education and training available to them.

Numerous furniture manufacturers have indicated their desire for formal manager education and training within their organizations.

“When visiting furniture manufacturing facilities throughout the state, we found that the first-line supervisor is the person who must implement company strategic plans and modern manufacturing strategies. Sometimes they perform in this capacity without the knowledge required to communicate, guide, and direct the workforce,” said Bill Martin, director of Mississippi State University’s Franklin Furniture Institute.

These individuals have moved into their positions, usually from a line position, because of their inherent skills, work ethics and abilities. However, they need training to become effective leaders and supervisors, Martin said.

Recognizing the need for this type of training, the Franklin Furniture Institute designed a program specifically for this group.

“The program was designed to help employees gain a better understanding of leadership, communication, management teams and the business of manufacturing,” Martin said.

Developed and taught by Chip Bailey, an engineer and institute project coordinator, the program offers participants instruction in leadership, motivation, communication, management skills, team building, job analysis, time management, industrial safety, the principles of motion economy, manufacturing assessment and techniques, and changeover and set-up techniques.

Fulton-based Max Home is one of three companies that have completed segments of the training. They have noticed a more skilled workforce, improved production and enhanced morale.

Alonzo Gibson, a furniture-manufacturing employee for nine years, benefited firsthand from the training. Gibson began working at Max Home in 2005 in the packing department. In 2007, he was promoted to packing lead, the second in command in the department. Perhaps the most important aspect of the training for Gibson was learning how to listen and communicate.

“I learned how to deal with people and understand their viewpoint,” Gibson said. “I found that by listening to the employees and not jumping to conclusions, we could work together to solve problems and get the job done.”

Mutual respect, communication and leadership skills are exactly what the company wanted to enhance among mid-to lower-tier managers, Martin said.

Gibson’s supervisor, Steve Irvin, agrees. Irvin, a 30-year veteran, found that the training actually improved morale among the management and increased production for the plant.

“The problem-solving skills of Alonzo and others who completed the training have increased exponentially,” said Irvin, a packing supervisor at Max Home. “This has always been a great place to work. Now it is just better because we all seem to be pulling in the same direction.”

“Perhaps the best feature of the program is the ability to customize it to fit an individual company’s needs,” Martin said.

The curriculum is divided into four topic areas that are further divided into four three-hour modules. The modules are delivered on-site at the company’s facilities and can be delivered in one three-hour session or three one-hour sessions, all at the request of the participating company, Martin said.

“Our goal is to make furniture manufacturers globally competitive,” Martin said. “A content, knowledgeable workforce is one piece of the puzzle to ensure one of the state’s leading manufacturing industry will continue to thrive and grow.”
**1/82: Pontotoc County**

*Editors note: 1/82 is a regular feature highlighting one of Mississippi's 82 counties.*

**MSU in Pontotoc County:**
Pontotoc County Extension Office
402 C.J. Hardin Jr. Drive
Pontotoc, MS 38863
Email: pontotoc@ext.msstate.edu

Pontotoc Ridge-Flatlands Branch
Experiment Station
8320 Hwy 15 S
Pontotoc, MS 38863

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**County Seat:** Pontotoc

**Population:** 26,726

**Municipalities:** Algoma, Ecru, Pontotoc, Sherman, Thaxton, Toccopola

**Commodities:** Cotton, Cattle, Corn, Cotton, Timber, Soybeans

**Industries:** Automotive, Furniture, Metal Fabrication

**Natural Resources:**
Howard Stafford Park, Natchez Trace Parkway, Trace State Park

**History Notes:** Pontotoc County, “The Land of Hanging Grapes,” was originally Chickasaw Indian territory. By four successive treaties, the Chickasaws had ceded their hunting grounds, before the Treaty of Pontotoc Creek in 1832. Pontotoc was proclaimed a county by the state Legislature on Feb. 9, 1836. In 1840, the population was 4,491.

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**Attractions:**
Historical Driving Tour, Lochinvar, Town Square Post Office and Museum, Westmoreland’s Log Cabin

**Did you know?**
Mississippi’s champion Bodock tree is located in Pontotoc. The tree is 82 feet tall with a crown spread of 79 feet and 5 inches.

“Pontotoc County’s sense of family and support of community make it a great place to live. Mr. Gary Carroll always says, ‘Everybody can’t be born in Pontotoc, but they get here as soon as they can.’”

*Ricky Ferguson, Extension County Director*
In 1958 while an MSU undergraduate, I made a decision to change majors from animal husbandry to entomology. At the time, I didn’t know much about the field that I was entering except what I had experienced living on a Delta farm where boll weevils, mosquitoes and house flies were regular topics of conversation. I also had a little experience from working for the Leflore County Coop and spending several summers as a cotton insect scout.

It did not take me long to realize that I had entered a fascinating world where insects have evolved into the most dominant and diverse animal species on earth. For example, there are more insect species than all other animal and plant species put together, and they have exploited almost every ecological niche available to living organisms.

My MSU professors ignited in me a burning desire to learn more about insects and encouraged me to continue my studies. I took their advice and received my Ph.D. degree in 1965 from MSU at the age of 25.

My professional career began as a research entomologist with the U.S. Department of Agriculture – Agricultural Research Service’s Corn Host Plant Resistance Research Unit at MSU. Shortly after, the MSU Department of Entomology invited me to become an adjunct professor. This appointment afforded me the opportunity to do everything from teaching to sitting on graduate committees. Needless to say, I jumped on their offer like a flea on a dog. I realized that I now had the benefits of both USDA and my beloved university department and that I would be able to mentor graduate students from all over the world.

In 1999, I retired from USDA. However, my entomological journey continued in 2000 when I helped to create an Insect Rearing Center, offering the world its first formal education in insect rearing. This year, we are sponsoring our 12th insect-rearing workshop. The program attracts people from all over the world with various backgrounds in insect rearing.

So now I’m an “old bug man,” but I have the corporate memory and perspective to make some comments about entomological activities here at MSU. There are many activities that make me proud of my fellow entomologists. Richard Brown, our insect taxonomist, and his staff have developed one the best insect museums in the country. In 1994, entomologists of the department started the first residential 4-H bug camp in the country. Today, our department and John Guyton of the MSU Department of Wildlife and Fisheries have joined forces to continue this camp, which is wildly popular among both youth and adults.

Another thing I’m excited about is Jerome Goddard returning to the MSU campus as our Extension medical and veterinary entomologist after 20 years as a public health entomologist. He is a world-class medical entomologist who brings great ideas for helping solve major insect-related health problems facing today’s urban and rural communities and livestock farmers. We can hardly wait to see the impact that he is going to have on our department.

For an overview of our entire department, please take a look-see at these and other exciting happenings in the bug and plant pathology world at http://www.entomology.msstate.edu.

I’ll never forget the impact of my mentors and fellow colleagues in the Entomology Department at MSU in both my personal and professional life. I guess you can say that I have been and still am in “bug heaven” thanks to my education and to the professional opportunities provided to me by MSU.
National Science Foundation Grant Supports MSU-Led Research Training

A recent National Science Foundation grant of nearly $452,000 to Mississippi State is supporting a collaborative student research and mentoring program with three other Mississippi institutions.

Led by Erdogan Memili, an assistant professor of animal functional genomics in the university’s Department of Animal and Dairy Science, the project also will involve faculty and students at Alcorn State University, Jackson State University and Tougaloo College.

Ten undergraduate students will serve as research fellows in a year-round comprehensive training program in genomics and computational biology. They will work with faculty mentors to learn how to develop, conduct, write, publish and present scientific research. Participants will receive $12,000 a year, along with a research allowance.

“Four undergraduate research fellows will be selected at MSU and two at each of the partner institutions,” Memili explained.

Other MSU faculty members working on the program include Susan Bridges of the Department of Computer Science and Engineering, Cetin Yuceer of the Department of Forestry, and Attila Karsi and Mark Lawrence of the College of Veterinary Medicine Department of Basic Sciences.

“Students trained in this program are expected to become leaders who will extend the frontiers of multidisciplinary knowledge and discovery in genomics and computational biology,” Karsi said.

Additional information on the grant may be viewed at www.urm.msstate.edu.

MSU Department Name Change Reflects Impact of Aquaculture

Mississippi State’s Department of Wildlife and Fisheries is changing its name to reflect the state aquaculture industry’s importance and the university’s role in the continuing development of fish farming.

During its September meeting, the state College Board approved the new name: the Department of Wildlife, Fisheries and Aquaculture. The department is one of three academic units in the College of Forest Resources and its Forest and Wildlife Research Center.

Department Head Bruce Leopold said aquaculture makes a significant contribution to Mississippi’s economy. Presently, the industry — which primarily involves catfish farming — ranks fifth among all agricultural production.

“There are more than 70,000 acres of aquaculture ponds in the state with a production value of $258 million,” the veteran MSU professor and researcher said.

“The department has been conducting fisheries and aquaculture research since 1968,” said College of Forest Resources Dean George Hopper. “Expansion of the department to include aquaculture is natural; our fisheries and aquaculture research are interconnected and inseparable.”

Ten faculty members specializing in aquaculture are located both on and off campus. Campus facilities include 80 ponds occupying 15 acres. Research facilities at the Delta Research and Extension Center in Stoneville involve 290 ponds spread over more than 350 acres.

“Our program currently has two graduate and 14 undergraduate majors,” Hopper said. “This administrative change will enable Dr. Leopold and others in the department to more effectively recruit new majors throughout the state and nation.”

Entomologist Recognized for Award-Winning Article

Mississippi State entomologist Richard Brown and two coauthors will be given the Editor’s Choice Award for writing one of the best entomological articles of 2008.

Brown and his colleagues will receive the award from the Entomological Society of America. The article, “Tracing an Invasion: Phylogeography of Cactoblastis cactorum in the United States Based on Mitochondrial DNA,” was published in the Annals of the Entomological Society of America.

“Among papers published in Annals during 2008 … this paper had the best combination of sound science, breadth of
interest and good writing,” said Larry E. Hurd, the journal’s editor-in-chief. “The study was a nice combination of experimentation and molecular genetics brought to bear on a question of both theoretical and applied interest: How did an economically important, exotic insect get established in the United States?”

Brown’s research on the cactus moth was supported by a grant to the MSU Geosystems Research Institute from the U.S. Geological Survey. Brown cooperated on the article with Thomas J. Simonsen and Felix A.H. Sperling of the University of Alberta.

Mississippi State formally dedicated the W.B. Andrews Agricultural Systems Research Farm located east of campus near Clayton Village with an Oct. 2 ribbon-cutting ceremony. Baker Andrews, who died in 1995, was the university alumnus and agronomy professor credited with developing the use of anhydrous ammonia as a fertilizer. His son Lester, center, joined College of Agriculture and Life Sciences officials Jac Varco and Melissa Mixon for the ceremonies.
Webster’s dictionary defines tradition as the handing down of information, beliefs and customs by word of mouth or by example from one generation to another.

For the Dunn family, the tradition of supporting Mississippi State University has spanned three generations.

It began when Durward Dunn Jr. and his wife, Georgene, of New Orleans entrusted the university with Durward III, their first-born son, who began his pursuit of higher education in the early 1970s. His sister Susan and brother Paul soon followed him.

This was the beginning of a tradition and the family’s love for MSU. When the couple’s middle child, George Crow, died in 1972 during his senior year of high school, a new tradition was born, one of charitable giving to Mississippi State.

George Crow had planned to attend MSU after graduation. To honor his memory, the family established the George Crow Dunn Memorial Endowed Scholarship Fund in the College of Engineering, in what became the first of a number of financial contributions to the university.

“I was a sophomore when my brother passed away,” Durward III says. “My parents were prepared to pay his college tuition, so they decided to help someone else. We inherited the desire to give from them.”

The Dunn family continued contributing to the university, supporting scholarships for students in engineering and forestry, as well as for handicapped students. The younger Dunns continued the tradition, providing building enhancements for business and supporting scholarships in business, education and engineering.

After their parents died, the children continued their legacy by giving a land lease to the foundation’s Bulldog Forest. Durward Jr. and Georgene loved nature and being outdoors. This lease was a natural fit for the family who had grown to love Mississippi State.

A farm lease on a 240-acre tract in Pearl River County, Mississippi, will fund the Durward and Georgene Dunn Loyalty Scholarship in memory of the late couple. MSU’s College of Forest Resources will manage the land for timber. The forested tract includes a lake and house. A gravel lease on a separate 94-acre tract in the county will also support the scholarship.

“The lease gifts are one of the avenues available for individuals to make significant charitable gifts,” said John P. Rush,
MSU’s vice president for development and alumni. “Assets of real property, including leases of property, may be given for charitable purposes through either Bulldog Properties or Bulldog Forest programs.”

Both programs offer benefits to donors, including the designation of support to a specific academic college or other areas on campus. Bulldog Properties and Bulldog Forest assist alumni and friends who are interested in making a significant charitable gift through methods other than outright gifts, Rush said.

“I know Durward Jr. and Georgene would certainly be proud of their children, who routinely give back to MSU, as well as their grandchildren, who are just beginning their careers and already keeping the tradition of giving to the university,” Rush said.

The Loyalty Scholarship, like the one funded by the Dunn family, provides financial awards on the basis of merit and need. These scholarships benefit entering freshmen and community college transfer students. Recipients must have academic achievement, as well as community leadership skills.

**DID YOU KNOW?**

A will is one of the most important documents you can own, yet surveys show only four out of 10 Americans have current wills.

Many people mistakenly believe that wills are only for the wealthy, yet nothing is further from the truth. A current will provides you with an opportunity to distribute your estate according to your wishes. In the event you do not have a legal will, the state where you live has one for you.

If you are considering a charitable gift, think of the advantages of designating it by will. During your lifetime, a bequest is private, changeable at any time and does not deprive you of the use of assets or income. Bequests can include specific cash amounts, property or a share of the residue of an estate.

The MSU Foundation Office of Planned Giving is available to help you and your attorney design a bequest to Mississippi State University. Contact Vance Bristow, director of planned giving, at (662) 325-3707, or via e-mail at vbristow@foundation.msstate.edu, for more information.

**For More Information**

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It’s all in the name. Check it out for news and information from the Division of Agriculture, Forestry and Veterinary Medicine.