New technology connects Mississippians to university resources... Page 16

Research, Education and Outreach in the Division of Agriculture, Forestry and Veterinary Medicine

Mississippi State University
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## On the Cover
Making publications and other information compatible with smart phones is just one way Division of Agriculture, Forestry, and Veterinary Medicine personnel are using social media to reach a wider than ever audience. (Photo by Scott Corey)

## Back Cover
MSU student housing personnel extinguish a simulated fire during Campus Community Emergency Response Team training. The training was administered by Ryan Akers, MSU Extension Service assistant professor for crisis preparation and disaster management. (Photo by Scott Corey)

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The Internet is the largest repository of information ever created, and as such it is perhaps mankind’s most valuable technological resource. As with any source of information, however, information from the Internet often needs verification.

That is the case with a recent Yahoo Education article entitled “College majors that are useless.” Of the five majors highlighted in the online article, three were programs in the agricultural sciences: agriculture, animal sciences and horticulture.

The Yahoo Education article cites a recent Bureau of Labor Statistics report and equates “agriculture” with “farm management.” Farm management is an important field of study, but the agricultural job market is much broader. Other important areas under the umbrella of agriculture include food science, plant science, agricultural economics, agricultural engineering, animal sciences, agricultural education, and natural resource and environmental sciences, to name just a few. The Bureau of Labor Statistics report predicts job growth should be particularly good in the areas of agronomy and food science and technology.

Other sources suggest that not only is the need for graduates in these programs growing, but there is a shortage of graduates in the agricultural, food and natural resource sciences:

• **Very low unemployment rates.** A post to National Public Radio’s StateImpact Ohio cites a recent report by the Georgetown University Center on Education and the Workforce that found agriculture and natural resources to be among the fields with the lowest unemployment rates. See a summary of the findings at http://stateimpact.npr.org/ohio/2012/01/05/best-college-majors-if-you-want-to-find-a-job/.

• **Shortage of college graduates to fill needs.** In the “Employment Opportunities for College Graduates in Food, Renewable Energy, and the Environment, 2010–2015” report, the U.S. Department of Agriculture projects that 53,500 qualified graduates will be available for about 54,400 jobs annually in agricultural and food systems, renewable energy and the environment. About 55 percent of those graduates (29,300) are expected to earn degrees from colleges of agriculture and life sciences, forestry and natural resources, and veterinary medicine. The other 45 percent, an estimated 24,200 graduates, will come from allied disciplines, including biological sciences, engineering, health sciences, business and communication.

• **Vital economic growth engine.** A recent study conducted by the Battelle Institute, an independent research organization, found that agriculture and agbiosciences are generating vital economic growth and job creation.

• **New areas of opportunity.** Anyone writing about the employment outlook in agriculture also needs to consider the important trend toward interest in small-scale, local food production and those who want to become part of agriculture by launching these types of businesses. The Bureau of Labor Statistics report cited in the Yahoo article even points out that “…an increasing number of small-scale farmers have developed successful market niches that involve personalized, direct contact with their customers. Many are finding opportunities in horticulture and organic food production, which are among the fastest growing segments of agriculture.”

The number of students enrolled in the three colleges in the Division of Agriculture, Forestry, and Veterinary Medicine here at Mississippi State University increased 30 percent from fall 2007 to fall 2011 and currently totals about 2,700. The majority of these young men and women are learning how to produce, process, market and protect the food, fiber and other products we all need to not only survive, but to lead productive and fulfilling lives.

With the world’s population currently approaching 7 billion people and expected to continue increasing by about 1.1 percent each year for the foreseeable future, it is unlikely demand for “agriculture” graduates will decline.

Gregory A. Bohach

**Vice President’s Letter**
Mississippi’s talented cooks who want to turn their passion into a business can improve their chances of success with tips from the experts.

Anna Hood, an Extension professor in the MSU Department of Food Science, Nutrition and Health Promotion, has coordinated the Food as a Business conference since 1996.

“We want to give people the information and support they need to develop thriving businesses and successfully market their unique food products, such as turning a family recipe or a delicious restaurant item into a famous retail product,” Hood said.

Each year, Hood gathers experts from several organizations to guide prospective business owners through the complex process of building a successful enterprise.

“Starting a business can be a rewarding experience, but it takes careful planning,” said Hamp Beatty of the MSU Small Business Development Center. “About eight out of 10 new businesses fail. A strong business plan helps entrepreneurs manage the steps necessary to establish a viable new business.”

Ken Hood, an Extension professor in the Department of Agricultural Economics, said keeping good records and following the legal steps to establish a business will help it succeed.

“Select a business structure that meets your needs in terms of legal requirements, restrictions governing liability, government regulations, taxes and ease of securing capital,” he said. “Depending on the type of business structure — sole proprietorship, partnership, corporation or limited liability corporation — owners will have different federal, state and local regulations, licenses and permits they must abide by and secure.”

Hood said the first step is to get a tax identification number from the tax commissioner and then a business license. He also suggested that owners hire an attorney to walk them through the complex process of establishing their business structure.

Brenda Clark, a food program specialist with the Mississippi State Department of Health, explained the necessity of getting a permit.

“With very few exceptions, you must have a permit if you sell food to the public,” Clark said. “Whether you’re making a product to be sold elsewhere, selling a product to a vendor who will sell to the final customer, operating a mobile food operation, catering, opening a restaurant or selling at a farmers’ market, you need to contact your local health department’s food inspector.”

By Keri Collins Lewis

Plan Well for Success in Food-Related Business

Keri Lawrence

Scott Carey

Scott Carey

Scott Carey
Clark said home kitchens cannot be used to create food products for retail sale.

“Many people do not realize that they can’t bake or cook items at home and then sell them to the public,” she said. “Food business owners can build a separate kitchen in their garage or outer building that complies with all codes, or they can rent a commercial kitchen. They still need to go through the process of submitting a plan for review, a list of products being made, an application and the appropriate fees to secure an inspection.”

Inspections and permits are required to protect both consumers and business owners, Clark said.

“We don’t want you to invest your life savings in creating a product, getting the packaging just right, marketing it successfully, and then discover it makes someone sick because you haven’t followed proper food handling procedures in an approved kitchen,” she said. “For people who think they won’t get caught, I can assure them, their competition will turn them in.”

Funding is an essential part of starting a new business, and John Brandon of the Mississippi Development Authority’s Entrepreneur Center reviewed information available in their Entrepreneur’s Tool Kit that is available online at http://www.mississippi.org or through his office at (601) 359-2399.

“No matter what you see on late-night infomercials, there is no such thing as free grant money to start a business,” Brandon said. “But money is out there, and the key is knowing where to look. Entrepreneurs need to be creative in their searches for capital and choose the right source and type of capital for their business.”

The steps required to take an idea from the dream stage to a saleable product can feel overwhelming, but with the help and tools available online and from the MSU Extension Service, budding entrepreneurs have the resources they need to begin cooking up new food-related businesses. For more information on starting a food-processing company, call Anna Hood at (662) 325-3200.
4-H robotics projects spark interest in science and technology among youths in some of the state’s most rural communities.

Mariah Smith, an assistant professor with the Mississippi State University Extension Service, is coordinating the program for Mississippi 4-H. In addition to attending local meetings, the club members can take part in online chats to learn new skills and take on new challenges.

“If requested, counties may use statewide videoconferencing for additional technical assistance in science, technology and engineering that may be hard to come by in smaller communities,” Smith said.

In recent years, hundreds of Mississippi 4-H youths have taken part in robotics projects. The statewide 4-H project kicked off its new year Jan. 14 with a capacity crowd at MSU. Participants will continue monthly activities until the robotics contest at 4-H Club Congress and Project Achievement Days in June.

“Each month, the participants build on their robotics knowledge. Topics include ultrasonic sensor and analog input, light sensor and digital input and output, touch sensor and conditional programming and Bluetooth technology,” Smith said.

Dawn Westbrook, a 4-H volunteer in Yazoo County, said robotics projects lay the foundation for math skills.

“Robots are just puzzles, and puzzles promote math skills,” she said. “Kids are figuring out how to build them, and they might have to adjust their plans because of issues like weight or gears. The projects help kids see that they will use algebra every day.”

Westbrook, who has been leading robotics projects for two years, said most of the participants are from rural areas and many are homeschooled. However, the most common thread among “robotineers” is their interest in math and science, she said.

“What attracts kids to the project varies from child to child,” Westbrook said. “Some love building things; others like the programming aspect. Some like the competition, or it could be combinations of those.”

Extension 4-H agent Terence Norwood began working in Jefferson Davis County in October 2011. Building a robotics program is high on his list of goals. At the recent statewide kickoff, he taught the intermediate track.

“Robotics projects are a great way to bridge the technology gap in rural areas and encourage youth in science and technology,” he said.

Boys and girls aged 8 to 18 are members of the 4-H robotics clubs. Cloverbud robotics clubs are available for children as young as 5. Contact the local county Extension office for more information on the 4-H robotics program.
A Mississippi State University assistant professor is looking to “panda poop” — more specifically, microbes in panda excrement that break down woody material — as a possible means to biofuel production.

Ashli Brown, a biochemist in the MSU Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology, recently discovered that microbes in panda feces are strong enough to break down the toughest plant materials. According to Brown, panda poop might help overcome one of the major challenges to producing biofuels: breaking down the raw plant materials used to make the fuels.

Brown’s findings have garnered national attention as the reproduction of these microbes could contribute to developing alternative fuels that do not interfere with food crops and could also save a great deal of money.

“One of the most expensive processes in making biofuels is the pretreatment, where sugar polymers are chemically treated so that they can be used to make ethanol or oil,” Brown said. “If you can insert a microbe that does that naturally and efficiently, production costs for alternative fuels would be cut tremendously.”

Brown and her colleagues, including MSU graduate student Candace Williams, conducted a 14-month study of the giant pandas at the Memphis Zoo. While the initial focus of the study was to observe the overall health and nutrition of the pandas, Williams and Brown found several species of microbes capable of breaking down woody plant material that is generally difficult to digest.

“The microbes we found are similar to digestive bacteria found in termite guts, which help termites break down and digest wood,” Brown said. “However, our studies suggest that the bacteria species in panda intestines may be more efficient at breaking down plant materials than the bacteria species in termites, and may do so in a way that is better for biofuel manufacturing purposes.”

Under certain conditions, panda fecal bacteria can convert 95 percent of plant biomass into simple sugars, Brown said.

“The enzymes in the bacteria speed up chemical reactions, eliminating the current system of high heat, harsh acids and high pressures used to produce biofuels,” Brown said. “Bacteria would also be a more energy-efficient way to turn materials such as switchgrass, corn stalks and wood chips into fuel.”

Brown’s colleague, assistant professor Darrell Sparks, said the finding has the potential to make a huge impact in Mississippi, a state with abundant forest resources.

“We have plentiful forest resources in the state,” Sparks said. “Developing an economical process to convert that woody biomass to simple sugars would give Mississippi a competitive advantage in the development of biofuels.”

Brown and Sparks, both scientists in the Mississippi Agricultural and Forestry Experiment Station, are now working on identifying as many bacteria from the pandas’ intestines as possible and figuring out which ones are best at converting bamboo into sugars.

“We are looking for the most powerful digestive enzymes,” Brown said. “We could then program yeast cells to make these enzymes.”

Williams, a doctoral student in molecular biology, said the research illustrates the importance of conserving and protecting plants and animals.

The giant panda, whose home range is south-central China, is considered an endangered species. On its website, the International Union for the Conservation of Nature reports fewer than 2,500 mature giant pandas in the wild. The study was funded by the U.S. Department of Energy, The Memphis Zoological Society, the Mississippi Corn Promotion Board and the Sustainable Energy Research Center at Mississippi State.
Many organizations and individuals are dedicated to protecting and restoring the environment, but some would be surprised to find that farmers are one group on the forefront of these efforts.

Erick Larson, grain crops agronomist with the MSU Extension Service, said farmers are among the biggest conservationists around.

“Farmers are continually working to improve the quality of their land and resources so it will be sustainable and more productive, even during the inevitable times of poor farming conditions,” Larson said. “Farmers depend on the land and water to earn a living this year and next year and in the future, and they want their sons and daughters and grandchildren to be able to earn a living off that land as well.”

In Mississippi, at least 98 percent of the state’s 42,400 farms are owned and operated by families, not corporations. These family farms produce 86 percent of the state’s agricultural products.

Larson said there are many misconceptions and much misinformation in the debate over whether farming, especially large-scale farming, is good or bad for the land.

“Farmers consider long-term consequences because they know the resources they are working with are not necessarily renewable,” Larson said.

Hot topics in the farming debate are bioengineering and weed and insect resistance to chemical controls. While the science is complex, the bottom line for most consumers is simple.

“The general public is more interested in whether the food they eat is safe and whether new products and technologies, such as biotechnology and herbicides, are good for the food and fiber that we produce,” Larson said.

The U.S. Department of Agriculture, the Environmental Protection Agency and the Food and Drug Administration all help regulate and enforce various aspects of food safety, chemical use and environmental monitoring.

Years of scientific testing and research back any new product or technology that becomes part of agriculture, Larson said. Tough regulations and food safety standards help ensure safe products for human consumers.

One of the worst raps given farms is for their use of chemicals. Improper use of chemicals can lead to the development of weeds and insects that are resistant to the herbicides and insecticides that once seemed like magic cures for these costly challenges. Chemicals are labeled with safe protocol and application information, which are based on all available data.

Angus Catchot, MSU Extension entomologist, said scientific advances in insect control now allow farmers to control harmful insects without hurting beneficial insects. Current insecticides often target individual pests and are applied with precision and careful timing.

“Insecticide treatments are expensive, and farmers do not want to spray insecticides unless they have to,” Catchot said.

Scientific advances over the last few decades have introduced crops genetically engineered to resist specific, harmful pests. These crops require sig-
significant fewer insecticide applications, which ultimately is much more environmentally friendly.

Tobacco budworms provide an example of how crops with this resistance, known as Bt or transgenic crops, reduced the need for chemicals to be sprayed on farmland.

“In 1995, cotton producers experienced an outbreak of tobacco budworms and in Mississippi averaged six insecticide applications to control this pest. Some places had to have more than 10 applications,” Catchot said. “Bt cotton controls 100 percent of tobacco budworm populations, and producers no longer treat for this pest.”

Savvy producers today control insects using sophisticated Integrated Pest Management (IPM) techniques. Many of these techniques are the result of Mississippi Agricultural and Forestry Experiment Station research and MSU Extension Service programs that have netted better results, lower costs and fewer chemicals in the battle against bugs.

“IPM uses every tool available, which includes cultural practices, beneficial insects, scouting and insecticides when necessary, with the goal of having the least impact on the environment,” Catchot said. “It’s a multitactic approach that is least disruptive to anything in the environment other than the insects being controlled.”

IPM incorporates all aspects of managing pests, including how the crop is grown.

“Farmers today spend more than $100 an acre in the Delta controlling tarnished plant bugs in cotton,” Catchot said. “MSU researchers are looking at managing plant bugs by manipulating planting dates. We’re trying to show that by planting early, we can avoid up to 50 percent of the insecticides typically used to control these pests.”

Another pest under scrutiny is the soybean looper, the crop’s No. 2 pest in 2011. Soybean loopers are migratory insects that fly up from southern latitudes. Researchers have found that planting early can almost completely eliminate the need to treat for this pest.

“Farmers do have to rely on insecticides, but they’re doing so in a very calculated way to minimize the impact on the environment,” Catchot said.

Both insecticides and herbicides are applied with discretion on an as-needed basis when a pest is threatening to reduce the quality or yield of a crop.

**Recreational uses...**

While cost is part of producers’ desire to use as few chemicals as possible, it is by no means the only consideration.

Many farms today make money on more than the sale of crops. Tracts of farmland, waterways and forests adjoining farmland are leased for hunting, fishing and other recreational opportunities. These ventures bring in important revenue and give farmers who are also avid hunters or fishermen an opportunity to enjoy this use of their land.

“They’re not going to use practices on their farm that jeopardize a source of income and a recreational opportunity they enjoy for themselves and their family,” Catchot said.

Farmers follow careful environmental practices for financial reasons, their own ethics and personal commitment to preserving the land. Numerous regulations are in place to ensure protection of people, animals, the land and the food supply.

Tommy McDaniel, a division director in the Mississippi Department of Agriculture and Commerce Bureau of Plant Industry, said all producers applying restricted-use pesticides must be certified to do so.

“In the registration process, pesticides are evaluated to ensure that they will not have unreasonable adverse effects on humans or the environment,” McDaniel said. “Pesticides may pose some risk to humans, animals or the environment, but they can be used safely and effectively as long as they are used according to the label directions.”

Pesticide applicator certification is a legal requirement for those applying restricted-use pesticides and general-use products in a commercial situation. Licensing is required by both state and federal regulations, and the responsibility for providing this training has been given to the MSU Extension Service.

“The pesticide label contains pertinent information that should be understood and followed when using a pesticide,” McDaniel said.

Mississippi farmers do all they can to make a living and sustain the environment, and the result is good for consumers and the economy.

Ken Hood, an MSU Extension agricultural economist, said large commercial farms are key to the United States’ ability to feed the world.

“The first step to becoming an industrialized nation with a vibrant economy is to be able to provide the basic needs for your own population,” Hood said. “Agriculture provides food and clothing. Once you meet these needs, you can release labor to other sectors of the economy and increase economic development.”

Third World countries do not have the ability to supply their population’s basic needs, and they rely on these being supplied by farmers in the U.S. and other industrialized nations.

“We provide what we need plus a lot more,” Hood said. “Big producers are providing for the needs of ourselves and other countries, and that allows us to release productive units to do other things.”
A love for the land has been his driving force since he began his tree farm at the age of 13. Some 61 years later, Charles Dismukes is the Mississippi Forestry Association’s 2011 Outstanding Tree Farmer of the Year.

Not only has the Mississippi State University alumnus been a tree farmer, he has been fully engaged in forestry, first working in the forest industry and then building a timber company. Along the way, Dismukes has promoted sustainable natural resources throughout the state.

What began as a 4-H project in 1951 has turned into a career for Dismukes and his wife, Carolyn, who live on their 1,158-acre registered tree farm in Montgomery County. Dismukes recalls the experience well.

By Karen Brasher

The Dismukes tree farm is an educational resource for many groups, including local home-school students.

Carolyn and Charles Dismukes

Submitted

Submitted
“The 4-H club was in every school, and the Montgomery County agent, Mr. Bob Wilson, was very enthusiastic,” Dismukes recalled. “He thought a forestry project would be suited for our area since we didn’t farm that much.”

The concept of working in forestry was not a new one for Dismukes. His father and grandfather were both loggers, and his paternal grandfather managed a sawmill. With the help of Mississippi State Extension forester Ralph Robertson, young Dismukes developed a tree farm on 65 acres of his family’s land.

His interest and knowledge of forestry grew. Dismukes won the Mississippi and national 4-H forestry project awards in 1957. A four-year scholarship from Homelite Chainsaws allowed Dismukes to turn his hobby into a rewarding career.

Upon completion of his degree in forestry, he went to work for the forestry industry. When the need for a raw material supplier near his hometown arose, Dismukes pursued his entrepreneurial spirit and started Vaiden Timber Company. His father partnered with Dismukes to begin the company, and his sons Barry and Brian operate the business today.

A registered forester in Mississippi and Alabama, Dismukes had a unique opportunity through his timber company to advise landowners in the region on the need to replant after harvest.

“I have always offered to get the site work done and the trees replanted after harvest for my customers,” Dismukes said. “I have even sown seed for landowners when they couldn’t afford seedlings.”

Regeneration is an important component of forest management. Dismukes demonstrates regeneration, thinning, and other important forest management principles on his tree farm.

Dismukes’ property is a frequent site for field days, short courses and other demonstrations. Home schoolers, Boy Scouts and landowners often tour the tree farm.

“I have always wanted my property to be a demonstration of forest management,” Dismukes said. “I want people to understand how great a forest can be when it is properly managed.”

Retired Extension professor Tim Traugott recalls the many times he used the Dismukes tree farm to demonstrate forest management.

“When we planned Extension Forestry programs, all we had to do was call Charles and he was always supportive,” Traugott said. “Numerous forestry field days were held on his property.”

Dismukes is not one to stand on the sidelines, Traugott added. The tree farmer is active in forestry organizations and actively works with other tree farm owners.

“Charles is an outstanding alumni and ambassador for forestry,” said George Hopper, dean of the College of Forest Resources. “His leadership in the profession extends throughout the state.”

And now, two grandsons, Garrett and Wilson, will continue the legacy begun so long ago for the Dismukes’ family. Garrett is a sophomore pursuing a degree in forestry. Wilson is a sophomore pursuing a degree in agricultural engineering.

“I am so proud of my grandsons and their love for the land,” Dismukes said. “They have been learning and working in the tree farm since they first began to walk.”

Dismukes said he believes his grandsons will follow in his footsteps, spreading the message of sustaining our natural resources and planting trees.

“If they told me I wasn’t going to live but two more weeks, I’d plant some trees before I left,” Dismukes said. “If we don’t do it, future generations won’t have it.”

The American Tree Farm System® (ATFS) is a network of more than 83,000 woodland owners sustainably managing 26 million acres of forestland. It is the largest and oldest sustainable family woodland system in America, internationally recognized, meeting strict third-party certification standards. Mississippi ranks number one in the nation in the number of Certified Tree Farms with more than 3,200. The Mississippi Forestry Association sponsors the state’s Tree Farm Program. A team of more than 200 trained Tree Farm Inspectors conducts on-site inspections to determine if a forest property qualifies to become a certified Tree Farm.
MSU Offers Therapy for Injured Animals
A whirlpool bath, oatmeal hair rinse, blow-dry and massage may sound like a day at the spa, but it is a physical rehabilitation session for Curly, a patient at the MSU College of Veterinary Medicine (CVM).

The CVM Animal Health Center is one of a handful of veterinary programs across the United States with the qualified staff and financial support to operate a rehabilitation clinic.

“We’re fortunate to have a certified veterinary rehabilitationist and the help of generous clients who have a passion for these special animals,” said Dr. Jennifer Wardlaw, assistant professor and small-animal surgeon. “For patients suffering from chronic conditions, such as arthritis or dysplasia, or animals with acute injuries that have left them partially immobile, physical rehabilitation can be helpful.”

Curly, a labradoodle with a disc herniation that left him unable to move his hind legs, is a regular patient at the clinic. His custom-fitted, two-wheeled cart elevates his hind legs so he can pull himself with his front legs.

“His owner drives him over from Alabama on Monday, and he stays through Wednesday,” said third-year veterinary student Mel Whitfield. “He spends from 17 to 34 minutes on the underwater treadmill. I take him outside with his cart, and we play Frisbee. He jumps up and down and loves to run. He has so much energy.”

Whitfield said the goal of these various therapies is to keep Curly’s muscles from atrophying and to maintain his cardiovascular health.

“He has five or six sessions a day and gets more interaction whenever I have free time,” she said. “I like to come down here and spend time with him whenever I can.”

After one such rehabilitation session with Whitfield, Curly rested on a plush dog bed and looked like any other dog. But when rehabilitationist Ruby Lynn Carter walked into the center, Curly scrambled — dragging his hind limbs — to greet her. She and Whitfield put him in his harness and cart, and in moments he was running from person to person in the clinic.

Wardlaw, whose commitment to the physical rehabilitation unit resulted in restructuring office spaces to better accommodate the necessary equipment, said the animals are very motivated to participate in the program.

“If they weren’t motivated, the rehabilitation wouldn’t happen,” she said. “They love Ruby Lynn, they love treats, and we try to make it fun for them. Their owners see that they enjoy it, and that is why we have several clients who come to us regularly.”

Framed portraits of these patients hang on the wall. They include Lucky, who is nearly 17 years old, and Jack, a black Lab who uses a wheelchair for mobility after a fibrocartilaginous embolism. Third-year CVM student Kelley Comer explained the condition as a stroke to the spine that left Jack with partial use of his legs.

“Jack’s owners, Dr. Bill Moore and his wife, Caren, have donated an endless pool with a hoist so our bigger dogs, like Jack, can more easily use water therapies and swim,” Wardlaw said. “When we have larger dogs such as Great Danes or Rhodesian Ridgebacks that need rehabilitation, having the hoist will be better for them and for the therapists and students. The deeper pool will help immensely.”

In addition to on-site therapy, the staff at the Animal Health Center’s rehabilitation clinic provides cart fittings, orthotic brace fittings, nutritional counseling and customized plans for home rehabilitation.

“While many of our patients come from the MSU clinic, we take patient referrals from veterinarians across the Southeast,” Wardlaw said. “We can design programs for owners to manage at home in case they can’t come here for rehabilitation.”

For special-needs dogs like Curly, Lucky and Jack, physical rehabilitation offers an improved quality of life.

“Seven years ago, people didn’t know that physical rehabilitation for animals existed. Now that we’re aware of how much it can benefit humans, it’s easier to see the parallels in what it offers animals,” Wardlaw said.

To watch a video about the physical rehabilitation program at CVM, go to http://www.cvm.msstate.edu/.
A Mississippi State University program is connecting families to education and community resources that help children thrive.

Project Navigator, administered by the Mississippi Child Care Research & Referral Network, teaches families positive parenting skills and connects them with resources. During the first year, the program targeted families with children from birth to 5 years old in Choctaw, Clay, Kemper, Noxubee and Winston counties.

Kemper County residents Sherris and Curtis Grace are mapping a strong educational foundation for their 2-year-old son, Christian. Sherris Grace enrolled in the program after discovering it at http://www.childcaremississippi.org. The MSCCR&R Network is housed in the MSU School of Human Sciences.

“I want to make sure that Christian is a well-rounded child and provide him with the best opportunities,” Sherris said. “The more I learned about Project Navigator, the more interested I became in participating.”

The program, funded by a grant from the Appalachian Regional Commission, offers an opportunity for parents to have free one-on-one parenting training. Staff members called “navigators” provide lessons on appropriate behavior, developmental expectations, effective discipline techniques and other topics.

MSU Extension professor Louise Davis said she believes that parent education and life-skills development help prepare children for school.

“Early childhood intervention has been proven to be effective at increasing school readiness and long-term success,” Davis said. “Our goals include connecting families to local resources and transitioning children to school.”

Navigator Margie Moore of DeKalb is sharing her knowledge as a mother and grandmother with the Graces. She relies on her personal experience as a parent and teacher, as well as hours of MSU training.

“Following an assessment, we review the potential weaknesses in parenting skills and concentrate on improving those areas,” said Moore, whom the Graces consider a mentor and a friend.

The visits provide parental training from the Nurturing Parenting curriculum. Lessons include building parent-child bonding and self-worth, teaching children to care and handle their feelings, and understanding positive discipline.

In the family sessions, navigators teach parents how to establish routines. Parents also learn how to nurture each other and handle stress. They discuss problem solving, decision making, negotiation and compromise with their navigators.

Navigator Angel Long uses her experience as a mother of triplet sons to relate to first-time parents and their infants.

“I know how they feel and what they are going through once they bring a baby home from the hospital,” Long said.

She has been working with families in Choctaw County. Through Project Navigator, Long was able to help provide much-needed resources to a 21-year-old mother and her three children. Tragedy struck when their home and all of its contents were destroyed by fire.

“Head Start referred the mother, and I was able to connect her to resource agencies, including Prairie Opportunity and Broken Wings, for clothing and other needs,” Long said. “My role is to help women and men become better mothers and fathers and control their stress. I share with them resources that enable their children to be better prepared and have a successful start on their education.”

Long said the one-on-one visits provide opportunities for parents to raise well-adjusted children who are well prepared for the academic system.

“Through Project Navigator, I spend time with a mother and help her recognize her fears and dreams for raising her children. I know we are making a difference through the program,” Long said.

For more information about Project Navigator, visit http://www.childcare-mississippi.org or phone 1-(866) 706-8827.
Crawfish are a staple of springtime fellowship across the South. Millions of pounds of crawfish tails are pinched and consumed at boils each year.

While most crawfish are grown and harvested in neighboring Louisiana, MSU scientists have found that crawfish are available to harvest in wetlands throughout Mississippi and beyond.

Commercial crawfish production in rice fields of Louisiana has been studied extensively, but the quantity of naturally occurring crawfish is not known. Scientists in the MSU Forest and Wildlife Research Center embarked on a study to determine how many crawfish are available for harvest in Mississippi’s wetlands.

“Seeds, tubers and invertebrates found in moist-soil wetlands provide an important food source for wintering waterfowl throughout the Mississippi Delta,” said Rick Kaminski, professor of wildlife ecology and management. “Through our research, we have found that crawfish are also abundant in these grass-sedge-dominated wetlands which are flooded in the winter.”

When the wetlands flood, crawfish emerge from their earthen homes and begin scavenging plant and animal foods from the bottoms of duck holes. When the wetlands dry, the crustaceans burrow deep into the soil to survive the dry season, Kaminski added.

To determine the quantity of naturally occurring crawfish in these habitats, MSU graduate student Amy Alford deployed baited traps similar to those used in commercial crawfish production. From April through June, Alford harvested crawfish throughout the Mississippi Delta.

“Crawfish are most active in the wetland when water temperatures reach about 65 degrees,” Alford said. “They are actively feeding and are attracted to the traps that we bait with a feed formulated from fish meal, corn and soybeans.”

Alford found crawfish harvested from moist-soil wetlands averaged two pounds per acre. Commercial crawfish production usually requires a harvest of 10 pounds per acre for a farmer to break even or make a profit.

While the differences in yield may seem large, the research is currently investigating the economic benefits a landowner may gain by harvesting their own crawfish from duck holes. Comparatively, the expense is much less in harvesting native crawfish.

“The traps cost around $8, and commercial bait costs $12 per pound; however, landowners that rely only on natural vegetation rather than rice may see decreases in operational costs associated with planting and harvesting,” Alford added.

While moist-soil wetlands produce a plentiful supply of crawfish, the obvious concern is taste.

“There is a misconception that the wetland habitat found in duck holes is dirty or swampy, so the crawfish in these habitats will taste muddy,” Kaminski added.

The only way to determine if there was a difference in the taste of commercial crawfish and naturally occurring crawfish was to conduct a taste test analysis. With the assistance of Wes Schilling, a food scientist with the Mississippi Agricultural and Forestry Experiment Station, Alford conducted a taste test of 150 crawfish consumers. “We had volunteers from the community come to our lab and rate the taste of natural crawfish and commercially harvested crawfish from Louisiana,” Schilling said. “The participants liked the wild-caught crawfish and the rice-field crawfish equally.”

While the research was designed to estimate the number and taste of naturally occurring crawfish in duck holes, the motivation of the project was to find yet another benefit for establishing wetlands. Moist-soil wetlands and swamps in Mississippi and other states in the Lower Mississippi Valley not only produce crawfish, they also provide a myriad of environmental services, such as water storage, flood control, aquifer recharge and nutrient cycling.

Landowners and managers in the Delta and beyond are actively participating in wetland conservation through the management of duck holes. More than 50,000 acres of wetland area are enrolled in federally funded easement programs such as the Wetlands Reserve Program in the Mississippi Flyway.

“These wetlands provide habitat for ducks and other wildlife,” Kaminski said. “They also serve as filters for nutrients washed off of farmlands and populated areas.”

Creating moist-soil wetlands can provide additional sources of food and recreation and demonstrate incentives that are key to conservation by landowners on their properties, Kaminski added.

“Landowners can harvest ducks, watch a wide diversity of wetland wildlife, harvest crawfish and improve water and other natural resource qualities by managing wetlands,” Kaminski said.

So grab a few traps and some bait, find a good duck hole, and contribute to the conservation of wetland habitat by catching and consuming your own crawfish, Kaminski added.
Research Benefits Mississippians

As technology has progressed, people are no longer relying on just traditional methods and sources for getting the information they need. Mississippi State University’s Division of Agriculture, Forestry and Veterinary Medicine (DAFVM) understands that and is helping people connect by increasing the use of technology-based and networking programs. Whether it is helping people find locally grown produce or providing a fun way to experience nature, DAFVM is working to connect Mississippians with the resources they need.

Social Media Makes Friends for Agriculture

Farmers and Facebook may not seem like natural allies, but savvy agribusiness owners are using social networks to generate business and educate consumers.

Amanda Clay Powers, Extension reference librarian and assistant professor at MSU’s Mitchell Memorial Library, is a nationally recognized expert in social media. Her Twitter guide for the library’s collection, located at http://guides.library.msstate.edu/twitter, helps people get started in social media.

“People have moved their lives online,” she said. “They have different expectations about how they receive information, how they interact with information and how they engage with online communities. Individuals expect their voices to be considered an important part of the dialogue.”
As someone highly involved in social media on a professional and personal level, Powers has seen the evolution and adoption of emerging technologies in rural communities from Mississippi to India.

“People use their smartphones to get information delivered straight to them,” Powers said. “Areas without broadband are still connected to social networks, and like their urban peers, rural residents increasingly expect information and the people generating content to be available to them.”

Social media gives agribusiness owners ways to connect with audiences eager for information about food and how it is grown.

“Producers can interact one-on-one with their clients,” she said. “Eating is a personal experience, and people want to understand the process of getting food from the farm to the table.”

Powers described how Starkville-based Old Well Organics created a social media strategy to promote their unusual products.

“They developed a Facebook page and shared recipes using their more unique vegetables,” she said. “Customers took pictures of the meals they created using Old Well Organics produce and tagged them in photos they posted to Facebook. Soon there was an online community of people who wanted their products and wanted to engage with like-minded people.”

Many assume farming is an independent activity, but in the age of social media, many farmers realize that they can tell their story better by connecting with consumers.

Michael May of Lazy Acres Plantation in Chunky, Miss., uses a website, Facebook and Twitter to promote his business, which includes a pumpkin patch, corn maze and Christmas tree farm.

“My wife and I attended several agritourism conventions, and we kept hearing about social media,” he said. “I started on Twitter and then moved to Facebook because I like the format better. My Facebook messages automatically feed to Twitter, so I reach clients though both social networks. The best thing about this form of advertising is that it only costs me a little of my time.”

In addition to informing fans about additions to the petting farm and building renovations, the Mays run contests, including a promotion designed to increase the number of fans on their Facebook page.

“When we first started on Facebook, we had 200 to 300 fans,” May said. “About a month before the season started, I ran a post that said if we hit 1,000 fans, I’d send a password to everyone to get free admission our first open weekend, which is typically our slowest time. We immediately hit 1,000 fans because people recommended that others join our page. That word-of-mouth advertising is priceless.”

With consumer interest in food production so high, May advised agricultural producers to get involved in social media to connect with other growers and share their story, or “agvocate” for agriculture.

“We’ve talked to growers from all over the South, and they’re hesitant to get into social media, but I tell them to jump in,” May said. “Now is the time to get started. You have to get in there and learn through the process. Technology moves on — you have to change and keep up with it.”

In conjunction with county Extension offices, the MSU Extension Service offers workshops in e-commerce and social media designed for agribusiness owners. To schedule a workshop, contact assistant Extension professor Mariah Smith at (662) 325-3226.

Arboretum Goes High-Tech With App

MSU’s Crosby Arboretum has a new, high-tech way for visitors to experience the nature preserve.

Bob Brzuszek, associate professor of landscape architecture at MSU, created an interactive application through GPTrex, a company focused on providing fun, family adventures while boosting interest in a local community’s cultural, historical and educational venues.

“My students always had their mobile phones in their hands,” he said. “This new generation is very tuned in to instant communication. I thought maybe this new technology could be used as a learning tool. Building the application was an exercise for me too. I didn’t have an iPhone or any experience with this kind of thing.”

The application is to be used along the pond and south Savanna journeys. Each journey is a walking trail designed to teach visitors about different Mississippi habitats.

There are nine stops along the adventure where visitors can get information and answer questions about the plants, animals and landmarks in each habitat. The stops include the drinking fountain, the pavilion, the oaks and wildlife sign, the briars and rabbits sign, the emergent cove, Tupelo Honey Landing, the pitcher bog, the long-leaf pine walk and the Acolapissa sign.
Brzuszek created the application to increase interest in the arboretum.

“I think having this available will draw visitors to the arboretum who would not normally go,” he said. “It’s also a way for families to do something fun together. I know when my family and I go places together, we like to have things to do. This application gives families a way to participate in an activity together while also learning something.”

The application, which is a cross between a game and geocaching, has only been available since October 2011 and is still being evaluated for its popularity among visitors.

“We look forward to determining how successful this application will be,” said Pat Drackett, Crosby Arboretum director.

Right now, Brzuszek is hopeful that visitors to the arboretum will enjoy the application and learn a thing or two.

“It’s a nice visual tool and creates a lot of opportunities for learning. In the old days when we wanted to know something, we went to a book. Books are still important, but we are much more multimedia oriented now. It’s easier and quicker to access information.”

Drackett hopes to bring more visitors to the arboretum by adding this technology.

“What we wanted to do when we implemented this technology was to provide another way for visitors to explore the arboretum, and attract people who enjoy interfacing with the iPhone,” Drackett said.

The application can be used only with the iPhone, iPad, or iPod Touch at this time. Instructions for downloading and using the free application are available at the Crosby Arboretum gift shop. For more information on the Crosby Arboretum, see http://www.crosbyarboretum.msstate.edu or call (601) 799-2311. The arboretum is open Wednesday through Sunday from 9 a.m. to 5 p.m. in Picayune.
Online Tool Links Consumers, Businesses

Mississippi’s specialty businesses are finding a quick and easy virtual connection to consumers through a newly expanded computer-mapping tool.

MarketMaker is a free online service that exists to connect “willing markets and quality sources of food from farm and fisheries to fork in Mississippi.”

Amanda Seymour, a MarketMaker marketing outreach coordinator with the MSU Extension Service, said MarketMaker puts consumers in contact with local retailers, producers and processors of food items in the region.

“This is a unique tool that allows users to find Mississippi-made products and helps out businesses in local communities,” Seymour said. “Some of our small, locally owned businesses don’t have the resources to advertise widely, but almost everyone is on the Internet. MarketMaker helps put willing buyers in touch with sellers.”

Shoppers looking for produce, pick-your-own farms, sweet potatoes, pecans, organic farms, baked goods or other food or farm products can find local sources online at marketmaker.msstate.edu. Consumers start by entering their information in the middle box of the site’s main page under Farmers, Fisheries and Businesses. MarketMaker also links growers and producers with grocery stores, food processors, specialty outlets and food industry groups.

The University of Illinois Extension developed the software to help beef producers reach potential buyers in large cities, such as Chicago. The program was a success, and other food commodity groups quickly began using it. Now in its seventh year, MarketMaker serves 16 states and the District of Columbia.
“The program generated so much interest because it is easy to use and can map food commodity buyers and sellers by location, size, specialty and even clientele,” said Ken Hood, MSU Extension agricultural economist. “It isn’t just for large farms and producers. It can help customers find organic and locally produced products, too.”

Led by Hood, Mississippi was the sixth state to join MarketMaker, and Mississippi is represented on the program’s governing board. Hood said the program helps businesses attract in-state clientele.

“In bad or good economic times, it benefits the local community to keep as many dollars in the local economy as possible,” Hood said. “If the dollar is spent somewhere outside the community, then part of the economic impact goes to other economies outside the local community and may never return, a principle we call leakage.

“Dollars spent within a local community will have less leakage and create more economic activity within the local community, as the dollar is turned over and over for more goods and services in the local community,” Hood explained.

Seymour said the fact that using MarketMaker is free makes it an even better resource for buyers and sellers.

“This is a great way for a niche product to find a larger audience, and a way for those who like to shop locally to find new sources of favorite products,” Seymour said.

Ben Posadas, associate Extension and research professor of economics at the Coastal Research and Extension Center in Biloxi, said MarketMaker expands a business’s market beyond its traditional limits and helps those people looking for a specialty product find what they want.

“A tool like MarketMaker helps local businesses by expanding the reach of their marketplace,” Posadas said. “As long as the local business is listed in MarketMaker with sufficient market information about what they offer buyers, MarketMaker can bring in additional transactions that will enhance their sales of products and services.”

Posadas said more than 10,000 Mississippi businesses are listed on the state’s site. Each month, about 3,000 visitors come to the site for market assistance.

Seymour said MarketMaker’s usefulness to a business depends largely on how carefully the owner describes the business when listing it on MarketMaker. Depending on the item being listed, the service allows users to search within set geographic limits and by keywords, such as organic, naturally processed, vegan and more.

Mississippi MarketMaker is online at http://ms.marketmaker.uiuc.edu.

Contributors to Focus Section: Bonnie Coblentz, Susan Collins-Smith, Keri Lewis and Karen Templeton.
Jennifer Schaumburg uses MarketMaker to promote Indianola-based Taste of Gourmet's diverse line of Mississippi products.
Untrained eyes may see Mississippi State University’s extensive fields adjacent to the Starkville campus as typical farmland, but to researchers, these acres are laboratories.

MSU has more than 2,200 acres of crop and pasture land adjacent to the Starkville campus. While commonly referred to as North and South Farms, these parcels of land are actually the R.R. Foil Plant Science Research Center and the Leveck Animal Research Center, respectively.

The Foil Center cropland is divided into a variety of plot sizes so researchers can manipulate variables such as irrigation, seed variety, disease and insect pressure, and fertilizer or herbicide application rates. Plots are meticulously labeled and tracked, and some plants are individually labeled, making it possible for researchers to gather specific details.

Careful records are kept on livestock and horses on the Leveck Center. Special conditions can be created to allow animals to be managed and bred for highest performance and health.

“It is advantageous for a land-grant institution to have research land this close to campus,” said Reuben Moore, associate director of the Mississippi Agricultural and Forestry Experiment Station. “Some forward-thinking previous administrators purchased this property. Many of our researchers also have teaching and Extension responsibilities, and these locations give them ready access from campus, making it easier to keep up with all their responsibilities.”

Work done at test plots on both farms supports MSU research in the departments of Plant and Soil Sciences, Animal and Dairy Sciences, and Biochemistry, Molecular Biology, Entomology and Plant Pathology. Keith Daniels, superintendent of the two farms, said the land is used only for research and Extension Service programs.
“We have one of the largest land reserve adjacent to campus of any land-grant university in the country,” Daniels said. “We work with our researchers to provide the exact conditions they need to carry out projects. They state the land resource they need and what they’ll be doing, and we follow their protocols to accommodate their needs.”

The Foil Center is about 725 acres of land located north of Highway 182 on the northeast side Starkville. It is a triangle-shaped piece of land bordered on the north by Highway 82 and on the west by the Thad Cochran Research Park.

This highly visible stretch of farmland has about 400 acres devoted to row-crop research; 180 acres, turf and ornamental research; and 75 acres, forestry research. About 190 acres are dedicated to greenhouses, field labs and some outbuildings.

“About 25 percent of our operating budget each year is derived from row-crop proceeds from the Foil Center,” Daniels said.

The center grows energy feed stocks, such as switch grasses, giant miscanthus and energy canes, to support bioenergy research.

The Leveck Center is larger, encompassing about 1,500 acres on the southwest side of Starkville. Spring Street forms the eastern boundary of the land by the College of Veterinary Medicine, and the farm extends south to Poorhouse Road near the Starkville Country Club and west to residential areas along South Montgomery Street.

This land includes 840 acres of animal-grazing and pasture projects and 165 acres of hay. There are about 18 acres of aquaculture ponds and 500 acres of land in miscellaneous uses, including U.S. Department of Agriculture research and poultry science facilities.

Researchers set the conditions and stipulate each year what crops will be planted, how they will be managed, where animals will be grazed and what test conditions will be created. Daniels and his crew of eight make it happen.

“We have a few more workers than normal farms of this size have, but the work we do is labor-intensive,” Daniels said. “The researchers tend to be very hands-on and do a lot of their own work with the help of graduate students and student labor, but there is a lot of work to be done on these acres.”

When demand for land exceeds the capacity of the two centers, research work spills over to the Black Belt Experiment Station, about 25 miles away in Brooksville.

Moore said the research plots support projects funded by MSU, private industry contracts, USDA grants and other sources.

“For every dollar we get from state funds, we get about $1.30 from other sources,” Moore said.

These funding sources include royalties from the ownership of intellectual property. Much of MSU’s research is in basic science, making discoveries about the composition of plants and animals, proteomics, genomics and genetics.

“We can look at positive characteristics, such as marbling in beef or handling heat stress in livestock, and discover what genes are responsible for these desirable characteristics,” Moore said. “Or we can look for negative characteristics, such as disease susceptibility, and try to determine what genes are responsible.”

Basic research forms the foundation on which other, often commercially valuable, research is based. When a significant discovery is made or an important process developed, that knowledge can be legally protected as intellectual property. Rights to use this intellectual property are licensed to commercial interests, providing income for MSU that is put back into more research.

“One of our biggest recent research accomplishments at the Foil Center is the development of some highly successful, commercially available varieties of turfgrass,” Moore said. “We also were the first place in the world where there was field-size testing of transgenic, or genetically engineered, cotton.”
On the first day of the Apparel Design I class at Mississippi State University, most of the students had never threaded a sewing machine, much less made clothes. By the end of the semester, they had each created a dress destined for an orphan somewhere in the world.

Charles Freeman, an instructor in the School of Human Sciences, said he searched for a project that would incorporate service learning into the clothing design course.

“Toward about this project when the founder of the nonprofit organization Little Dresses for Africa was on the ‘Today’ show,” Freeman said. “The final project for this class is usually a dress or a skirt and blouse, but I wanted to integrate social responsibility into the curriculum.”

Little Dresses for Africa is an organization that collects homemade dresses for girls and sends them to children in need around the world, primarily those living in orphanages. Frequently, to cut down on shipping costs, the clothes are taken by missionary groups traveling internationally.

Freeman contacted the Michigan-based charity, which sent a DVD and brochures to promote the project to his students.

“The students were very receptive to the idea of doing a project for a goal greater than the grade they’d receive for it,” he said. “They’ve had their ups and downs and frustrations with sewing, but overall, it has been a good learning experience.”

Freeman’s students had no sewing experience when they began the class. They learned to sew on paper first, and then progressed to cutting out a pattern and creating a dress from scratch.

“The relaxed environment helps, and the students have been very supportive of each other,” he said.

For the project, students selected patterns and picked out the fabric and notions needed to complete the dresses. Some patterns used zippers, while others required buttons. Students were free to embellish the final products with their choice of trims.

Carrie Anne Biffle, a senior from Tupelo, said she underestimated the complexity of the pattern she chose.

“I loved the fringe and thought I’d just cut the fabric to make it, but I had to create the fringe by removing one thread at a time with a stitch ripper,” she said. “I spent hours on the fringe alone, but I like the meaning of the project, so it was worth it. I know this dress is going to go to someone who needs it.”

Hattiesburg native Constance Crockett, a sophomore, said sewing was harder than she thought it would be.

“We got pictures and patterns, but it’s not as easy as it seems, especially the tucks, zippers and button holes,” she said. “It’s for a good cause and purpose, though, so we all stuck with it.”

Thoughtful touches, such as pockets cut from coordinating fabrics, made each dress unique, though pink dresses far outnumbered other colors.

“I took my time because it’s a dress for a child somewhere,” said freshman Lindsey Traylor. “I wanted to do my best.”
Students in the School of Human Sciences’ Apparel, Textiles and Merchandising course perform all the tasks associated with making items for the Little Dresses for Africa program. Students in the class include, opposite from top, Constance Crockett, Rachel Camp, Maegan Bedells, and above, Ashley Mulloy and Carrie Anne Biffle.
Nearly every community in the United States has an emergency response plan for humans in distress, but very few have such a plan for animals. Members of the MSU College of Veterinary Medicine’s Student Chapter of Disaster Animal Response Team (SC-DART) are determined to help change that disparity.

CVM faculty members have always been responsive to animal needs after disaster strikes. The college serves under the Mississippi Animal Response Team whenever a state disaster is declared, and members have responded to several foreign animal disease outbreaks over the years. But it wasn’t until Hurricane Katrina hit in 2005 that students organized a formal group to prepare for and respond to emergencies involving animals.

Since that time, SC-DART members have responded to Hurricane Gustav, cared for search and rescue and chemical detector dogs for various state and federal agencies, and looked after coastal animals during the oil spill in the Gulf of Mexico.

Today, about 40 CVM students are members of the team, and about 20 participate in any given activity. Current team members have been trained in the Incident Command System, the communication system used by all emergency responders. They’ve also been trained in personal protective equipment (PPE) and decontamination.

And members of the team are spreading the knowledge. Some of them chose to assist at the American Pre-Veterinary Medical Association Symposium this March, devoting part of their spring breaks to teach others about PPE and decontamination.

Dr. Carla Huston, who along with Dr. Diana Eubanks serves as an adviser to the team, says the group has extraordinary drive and initiative. They frequently contact trainers and organize events with little to no help from faculty.

“This group is exceptional. They’ve done really great stuff. They are definitely pushing us sponsors!” Huston said. “We are one of the few veterinary medicine colleges that have such a defined group, and people from outside MSU-CVM often tell me our students are particularly well organized and active.”

One of the students responsible for that level of organization is team president Chris Magee. Magee has been an EMT and firefighter for about 6 years and so found the SC-DART group to be a natural fit for him.

“Disaster response has been a big part of my life, even outside of veterinary medicine,” he said. “When I combine my firefighting experience with disasters involving animals or infectious diseases, then I’m able to apply all the leadership and communication techniques used in the fire service to help organize the response — whatever the subject of the disaster.”

And the effects of this group are potentially far-reaching. Now, while the students are in school, they can respond to disasters as a team. However, after they graduate and begin practicing veterinary medicine, they will take with them the knowledge, training and skills they received as members of SC-DART.

“The more formally trained individuals you have locally, the quicker and better the overall response will be,” Magee said. “They can hit the ground running without waiting for someone else to come figure out what to do.”

And that’s good news for animals everywhere.
1/82: Jefferson County

Jefferson County Extension Office
1257 Main Street
Fayette, MS 39069
Phone: 601-786-3131
Email: jefferso@ext.msstate.edu

County Seat: Fayette
Population: 7,726
Municipalities: Fayette, other major communities includes Bluehill, Canonsburg, Churchill, Harriston, Lorman, McNair, Poplar Hill, Redlick, Rodney, Stampley, Stonington, Union Church
Commodities: Cotton, soybeans, corn, beef cattle, vegetables
Higher Education: Alcorn State University, established in 1871, is located in Lorman.
Natural Resources: Timber, wildlife, Cole’s Creek, Homochitto Forest
History Notes: Jefferson County, located in Southwest Mississippi, was originally known as Pickering, and was established April 2, 1799 by proclamation of Winthrop Sargent, the first territorial governor of Mississippi. The county was later named for Thomas Jefferson and later reestablished on January 11, 1802. Much of the early immigration to the county came in over the public road known as the Natchez Trace, which ran north from Natchez through Jefferson County, to the Cumberland River Valley in Tennessee.
Attractions: Old County Store, Poplar Hill Grade School, Rodney Center Historic District, Rosswood Plantation, Springfield Plantation, Windsor Ruins, Natchez Trace Parkway
Did you know? Rodney, about 32 miles northeast of Natchez, was almost the state capital of Mississippi. Charles Evers, brother of slain Civil Rights leader Medgar Evers, was elected as the mayor of Fayette in 1969. Richard H. Truly, famous astronaut, was born in Fayette. Hugh Green and Louis Green, Jr., former NFL players are both residents of Jefferson County.

“Jefferson County is a great place to work and raise a family. The county is rich in history and natural resources and is an ideal place for rural tourism.”

Thelma C. Barnes, Extension County Director

Editors note: 1/82 is a regular feature highlighting one of Mississippi’s 82 counties.
New Leader at Central R & E Center

Sherry Bell Surrette has been named the new head of Mississippi State University’s Central Research and Extension Center in Raymond.

As director, she oversees the daily operations of this regional facility, one of four located across the state to meet the information, research and programming needs of Mississippians. The center serves as a hub for research and outreach activities of the Mississippi Agricultural and Forestry Experiment Station and the MSU Extension Service. She also serves as an associate Extension professor of environmental education in the School of Human Sciences.

“Dr. George Hopper and I are pleased with the selection of Dr. Sherry Surrette for this very important administrative position with the MSU Extension Service and MAFES,” said Gary Jackson, director of MSU’s Extension Service. “She brings a wealth of ideas and energy to the southwest region to support our research and Extension efforts.

“She has a strong agricultural background and environmental education track record. Her past experiences include developing strong partnerships and working with the public, government officials, rural and urban communities and stakeholder groups.”

Surrette earned her bachelor’s in agronomy from the University of Tennessee at Martin and a master’s at MSU with a major in agronomy and a minor in plant pathology. She holds a doctorate in biology from the University of Mississippi.

“We are pleased to have Dr. Surrette in this leadership position,” said George Hopper, director of MAFES. “She is an accomplished leader in natural resources and agriculture, and I am confident in her abilities to build partnerships in central and southwest Mississippi.”

Surrette comes to MSU from the Mississippi Department of Wildlife, Fisheries and Parks, where she was the conservation biology program coordinator at the Mississippi Museum of Natural Science in Jackson. Surrette also served as the state plant materials specialist for the U.S. Department of Agriculture Natural Resources Conservation Service.

MSU Extension Agent Named Outstanding Alumna

Laura J. Giaccaglia

MSU Extension Service County Director and Bolivar County 4-H agent Laura J. Giaccaglia was named the Delta State University College of Education’s Outstanding Alumna for 2011.

Giaccaglia joined the MSU Extension Service in 1999 as the 4-H agent for Coahoma County. In 2002, she became the 4-H agent for Bolivar County. Last year, she became director of Bolivar County Extension.

Giaccaglia graduated from Delta State in 1996 with a degree in family and consumer sciences. She also holds a graduate degree from Mississippi State in health education and promotion.

MSU’s Poultry Science Names Beck as New Head

Mary Beck has been selected as the new head of the Department of Poultry Science at Mississippi State University.

Beck has served as a professor at the Clemson University College of Agriculture, Forestry and Life Sciences since 2007. While there, she held various leadership positions, including chair of the Department of Animal and Veterinary Sciences. Before her term at Clemson, Beck worked as a professor at the University of Nebraska-Lincoln.

“Dr. Beck’s leadership skills in MSU’s College of Agriculture and Life Sciences (CALS) will be significant as we support the state’s largest agricultural industry through teaching, research and service,” said George Hopper, dean of CALS and director of
Mary Beck

“Throughout her career, Dr. Beck has shown the ability to lead a department in service, including her work with commodity boards and associations,” Jackson said. “She will be instrumental in leading the poultry science department into the future.”

Beck serves as the executive secretary of the Southern Poultry Science Association and is a section editor of the journal Poultry Science. She is a past president of the Poultry Science Association.

Special Recognition Given to Emergency Response Agencies

As part of National Preparedness Month, the Mississippi Citizen Corps (CC), a volunteer-led community preparedness unit within the Mississippi Office of Homeland Security, distributed disaster readiness information and give-aways to campus visitors in the Junction before the MSU vs. Louisiana Tech University football game. The group helped raise awareness about emergency preparedness efforts in the state.

Ryan Akers, MSU assistant Extension professor for crisis preparation and disaster management, partnered with the MSU Athletic Department to provide a discounted group rate for tickets for emergency management officials across the state. He also helped put together an on-field recognition program to show appreciation for the work of the Mississippi Office of Homeland Security, the Mississippi Emergency Management Agency and the Mississippi Civil Defense Emergency Management Association.

“On behalf of MSU, the Extension Service and the people of Mississippi, we want to show our sincere appreciation of the three agencies and all emergency management officials across the state,” Akers said. “We continue to be thankful for the efforts of officials from emergency management, public safety and public health, and volunteer agencies across Mississippi who safeguard us on a daily basis, through prevention of, preparation for, response to and recovery from the varieties of disasters that we face.”

MSU President Mark Keenum, right, and Extension Service Director Gary Jackson, center, participated in the on-field recognition of emergency response agencies at the MSU vs. Louisiana Tech University game during the 2011 football season.
Mississippi State University and the College of Veterinary Medicine (CVM) are pleased to announce a collection of new endowments established by Dr. P. Mikell and Mary Cheek Davis through The Hall Foundation Inc. as a part of the university’s StatePride: An Initiative for Student and Faculty Support.

Dr. Davis was a member of the CVM faculty for nearly 30 years. For many years, he led the college’s admissions program and implemented some of the most creative admissions policies among the 28 U.S. colleges of veterinary medicine. The Starkville couple, who are also breeders of registered beef cattle, have partnered with the CVM on several fronts in order to ensure that the college is successful in carrying out its mission to educate the next generation of veterinarians.

The Davises’ generous gift will provide for a professorship and four scholarships:

- The Dr. P. Mikell and Mary Cheek Hall Davis Endowed Professorship in Beef Cattle Health and Reproductive Management. The holder of this professorship will lead a program aimed at enhancing beef health and reproduction in Mississippi, a state that is especially suited to raising cattle because of its abundant rainfall and expansive pastureland. CVM faculty members have long been leaders in cattle health due to the importance of cattle to Mississippi and the entire U.S. This professorship will provide for practical monitoring of disease, the improvement of cattle health and the development of sound business models for beef production.
• The Dr. P. Mikell and Mary Cheek Hall Davis Veterinary Technology Endowed Scholarship Fund. Candidates for this scholarship will be graduating seniors with demonstrated interests and career aspirations in veterinary medical technology.

• The Dr. P. Mikell and Mary Cheek Hall Davis Feline Medicine Endowed Scholarship Fund. This scholarship will be awarded to a rising senior with demonstrated interest and definite career aspirations in pursuing a feline practice.

• The Dr. P. Mikell and Mary Cheek Hall Davis Early-Entry Student Beef Cattle Endowed Scholarship Fund. This scholarship goes to an entering freshman with a demonstrated interest in beef cattle practice.

• The Dr. P. Mikell and Mary Cheek Hall Davis Beef Cattle Endowed Scholarship Fund. This scholarship will be awarded to a rising senior with demonstrated interest and definite career aspirations in beef cattle practice, along with a track record of outstanding performance during clinical rotations related to beef cattle.

For Dr. Davis, this endowment is a manifestation of his deep connection with the College of Veterinary Medicine and its mission.

“Seeing the students come, seeing them mature and graduate, and seeing them go into practice and become viable parts of the profession is a very significant aspect of the pride I feel for the college,” he said.

In particular, the endowment’s focus on beef cattle is of paramount importance to the state of Mississippi. The Hall-Davis Professorship will provide lasting impact not only in beef health and food production, but also the economic growth of Mississippi and rural America. This professorship will provide practical solutions for Mississippi cattle producers and will enhance the competitive advantage of cattle originating in the Southeast. With excellent, focused leadership and programs based in clinical service, applied research and education, this professorship will enable CVM to be a national leader in cattle health.

The Davis professorship and scholarships in the College of Veterinary Medicine are open funds in the MSU Foundation, which may benefit from additional contributions.

The College of Veterinary Medicine is proud of the commitment made by the couple.

“The gift provided by Dr. Mikell Davis and Mary Cheek Hall Davis will not only help educate veterinarians, but it will also help to foster economic growth in rural America. This couple serves as a role model for others,” said Dean Kent Hoblet.

Established in 1974, the College of Veterinary Medicine is one of only 28 veterinary schools in the United States. Of veterinary practitioners now working in Mississippi, more than 50 percent are graduates of MSU-CVM.

The Hall-Davis endowments are established as a part of the StatePride initiative at Mississippi State University. StatePride is a four-year fundraising initiative with a goal of raising $100 million. The initiative is approaching $75 million in funds raised.
It’s all in the name. Check it out for news and information from the Division of Agriculture, Forestry and Veterinary Medicine.