The land-grant university system celebrates 150 years. . . Page 16

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

Mississippi State University
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The latest farm equipment, circa 1919, was displayed in front of the YMCA building. Mississippi State University and more than 70 other land-grant institutions are celebrating their 150-year history this year. The history of the legislation that opened higher education to working class Americans begins on page 16. (Photo courtesy of University Libraries)

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This year, Mississippi State University and other schools across the nation are celebrating the 150th anniversary of the uniquely American land-grant system of higher education.

On July 2, 1862, President Abraham Lincoln signed the Morrill Act, setting into motion the creation of a system of higher education accessible to working-class Americans. The mission of the new institutions was to teach agriculture, military tactics and the mechanical arts, as well as classical studies.

The Focus section of this issue of Landmarks, starting on page 16, is devoted to the history of the Morrill Act and other federal legislation that established and expanded the role of the land-grant system.

Today, Mississippi State is one of more than 70 land-grant institutions in the nation. Also in the system is Alcorn State University in Lorman. Both Alcorn and MSU carry out the land-grant mission of accessibility and service to the people of Mississippi through academic programs, research and educational outreach.

Many land-grant universities, including Mississippi State, are counted among the nation’s most distinguished public research universities. The National Science Foundation recently ranked MSU 6th nationally in agricultural research expenditures.

Mississippi Agricultural and Mechanical College opened its doors to students in 1878. The name changed in 1932 to Mississippi State College and again in 1958 to Mississippi State University. One thing has remained constant through growth and name changes: a strong partnership between the university and agricultural organizations.

Farm Bureau, Delta Council and producer organizations representing almost every agricultural enterprise in the state provide input that helps guide our research, educational outreach and academic programs. These organizations represent the people that make agriculture Mississippi's biggest industry, employing 29 percent of the state's population. It is their support and guidance that help us provide the programs that best serve the needs of the state.

A real connection to Mississippi’s people can also be found in engineering, business, arts and sciences, and the other areas of the university. That connection helped bring MSU’s fall 2011 enrollment to a new record of 20,424 students. The College of Veterinary Medicine led all colleges with a 9.5 percent increase. Enrollment in the College of Agriculture and Life Sciences increased by 3.8 percent.

When Sen. Justin Morrill drafted the legislation that bears his name, his goal was for practical education to benefit both the individual and society as a whole. Today, Mississippi State and other land-grant institutions remain committed to that goal.

The commitment of the land-grant universities to research, service and education has enabled our nation’s farmers and agribusiness leaders to build the world’s most productive food and agricultural enterprise system. In that and many other ways, all of society has benefitted from our land-grant system.

If he were alive today, I believe Senator Morrill would be pleased with what he helped create.

Gregory A. Bohach
Mississippi State University’s gardening public image has taken several forms over its 27-year history, but what is now known as “Southern Gardening” with Gary Bachman has a long history of impacting landscapes in Mississippi.

“Southern Gardening” is a weekly newspaper column, radio segment and television feature produced by the MSU Extension Service. Bachman, the current host, is a horticulture specialist at the MSU Coastal Research and Extension Center in Biloxi.

“The ‘Southern Gardening’ radio and television programs and the newspaper column are well-known ways the MSU Extension Service reaches out to Mississippians,” said Joe Street, Associate MSU Extension Director. “Viewers and readers know to look to ‘Southern Gardening’ as a quality source of good gardening advice and ideas to try in their own landscapes.”

The newspaper column was first published in early 1985, shortly before the radio program began airing. The television program began in 1996. All have been produced 52 weeks a year since then.
The newspaper column “In Mississippi Gardens” was originally written by horticulture specialist Milo Burnham, horticulture leader Richard Mullenax and landscape specialist Jim Perry in rotation. Burnham, who worked in Starkville on MSU’s main campus, soon took over the duties exclusively. He wrote broadly about vegetable gardening and horticultural topics. He also hosted weekly radio programs by the same name.

In 1996, the column’s name changed to “Southern Gardening,” and it was written by horticulturist Norman Winter, who was based at the Central Mississippi Research and Extension Center in Raymond. Winter’s columns introduced numerous new plants to Mississippi gardeners and suggested landscape ideas and plant pairings.

In May 1996, Winter began hosting the radio program “Gardening — Mississippi Style,” which later changed to “Southern Gardening.”

The first “Southern Gardening” video segment aired July 25, 1996, on Mississippi Public Broadcasting as part of the MSU Extension Service’s 30-minute agricultural news program, “Farmweek.” The first topic was “Secrets to Successfully Growing Crape Myrtle” with Winter.

In March 2010, Bachman took over as the personality behind “Southern Gardening” television, radio and newspaper columns.

“I like to find horticulture subjects that are interesting to me, and I hope my audience finds them interesting as well,” Bachman said. “Some of my columns and programs seem to really strike a chord with the home gardener. For example, my recent work with the blue butterfly plant resulted in calls from all across Mississippi wanting to know where to find this plant.”

Today, 12 television stations and cable outlets air the two-minute “Southern Gardening” program weekly, and it continues to be a weekly feature of the “Farmweek” television program on MPB and RFD-TV. Eleven radio stations across Mississippi broadcast the two-minute “Southern Gardening” audio program. As many as two dozen newspapers statewide publish “Southern Gardening” as a regular feature for their readers.

Topics for the radio and television programs and the print columns often overlap, featuring the same plants in each media product. Video segments are shot throughout the state in interesting locations and beautiful gardens.

“I think ornamental horticulture should be fun,” Bachman said. “I like to introduce new plants, educate gardeners about plant uses and celebrate the fun of gardening. Seeing new plants or how other home gardeners use plants in the landscape is of interest to the home gardener.

“Sometimes the television show producers have to rein me in from being too much of a plant geek, but this geekiness has allowed us to show some beautiful close-up video of plant features that probably would go unnoticed,” he said. “I have the heart of a teacher in terms of sharing ornamental horticulture.”

This spring, the MSU Extension Service won a regional communication award for the television show “Southern Gardening.” The show won a Blue Ribbon Communication Award from the Southern Region of the American Society for Horticultural Science.

The Blue Ribbon award program began in 1987 to recognize outstanding contributions to horticultural education in written, video, audio or electronic form.

Today, producing the “Southern Gardening” products is a team effort by several members of the MSU Office of Agricultural Communications. The television show is edited and produced by Extension media producers Tim Allison and Brian Utley. The radio program is produced by Amy Taylor, and the newspaper column is edited by Bonnie Coblentz.

Each of these media products is available online at http://msucares.com.
PRODUCERS MEET

to Help MSU Set Ag Priorities

By Keri Collins Lewis

Advocates for agriculture met at the North Mississippi Research and Extension Center in Verona on Feb. 16 to identify priorities for research and Extension Service education programs at Mississippi State University.

Scientists from the Mississippi Agricultural and Forestry Experiment Station, specialists with the MSU Extension Service and almost 250 members of the North Mississippi Producer Advisory Council spent the day discussing current research and educational needs, as well as the challenges growers face on their farms.

Gary Jackson, Extension Service director, said Mississippians support their local Extension agents and rely on them to share the research findings generated by specialists and scientists. In turn, Extension specialists and agents want their work to meet the needs of their clients.

“Extension programs should be designed to meet the needs of the people. MSU’s Extension Service depends heavily on producer advisory groups to help us determine needs required to develop teaching plans and programs at the state, regional and local levels,” Jackson said. “We greatly appreciate your being here today to share your needs as producers, stakeholders and community members.”

MAFES Director George Hopper addressed the group of producers, growers and farmers.

“You are the leaders in agriculture, forestry and community resource development,” Hopper said. “You are developing the future of this region, caring for the land, water and natural resources. You are giving us advice that helps us stay true to our mission, and our research is designed to help you become more profitable and competitive.”

Fourteen agricultural commodity groups — including beef, cotton, dairy, equine, forestry, fruits and nuts, goats, grain crops, ornamentals, peanuts, sweet potatoes, swine, turf and vegetables — met separately. Aquaculture, the 15th group usually represented, did not attend because of a scheduling conflict.

Several common themes emerged in the group presentations.

Beef cattle representative Jacob Megehee of Noxubee County saw a need for recruitment.

“We need to draw in younger generations, and we can do that if we show a better profit,” he said. “We need training for producers on economics and management. And we really need a cool-season grass to extend the grazing season.”

Dairy producer Grandy Ladner of Tate County suggested establishing a mentoring program, similar to one in Kentucky, to help bring interested youth into the industry.

Educating stakeholders and the general public was another common theme.

Sadie Gardner said the equine group struggles to get local leaders to understand the need for equine events at local county agricultural centers.

Providing up-to-date information to producers and consumers was a priority of fruit and nut producers and the growers of ornamental crops.

“We need updates on recommended varieties, information on new varieties and trial plantings, and what other crops might work in Mississippi, such as dates, walnuts and olives. If we could find a variety that would grow here, we could diversify,” said Gerald Jetton of Itawamba County, who represented the newly formed fruit and nut group.

Sherra Owen said the ornamentals group needs research on insect- and disease-resistant plant varieties, organic disease control methods and pest control strategies.

Bobby Moody of the grain crops group had very specific research requests for MAFES scientists.

“How does poultry litter compare to commercial fertilizer? What types of irrigation and sources of water are most
efficient? What’s the best application timing for herbicides? These are all important, but our number-one request is research on what happens when you plant corn behind corn, on both irrigated and dryland acres.”

Swine group representative Byron Wilson of Chickasaw County stressed the need for support from MSU’s scientists as producers face increasing environmental regulations and restrictions.

Turf growers, represented by Harry Collins, requested research on the tensile strength of mature sod, as well as continued work on herbicide resistance and cost issues, and studies on products that conserve nitrogen.

Weed control research continued to be a request for both the cotton and sweet potato commodity groups.

Joe Camp spoke for the cotton growers, who want more Liberty Link® cotton varieties and continued variety trials.

The sweet potato growers, represented by Benny Graves, executive director of the Mississippi Sweet Potato Council, said continuing the seed stock program is important.

“We need nematode control strategies. We need further end rot research,” he said.

Like many other groups, peanut producers said they need variety trial research to continue.

“We’d like to see varieties for north Mississippi, not just south Mississippi or Georgia, as well as new seed types,” said peanut chair Reid Nevins.

Mississippi’s producers feel strongly about their role in feeding and clothing the world, and the goat producers said they have some advantages.

“Goats will eat just about anything, and they take less space to produce than larger livestock,” said Jimmy Howell. “Mississippi is a good place to raise goats, but it’s also heaven for parasites, and we need specific research from the university on parasites, forage varieties, nutritional supplements and herd health.”

Most attendees focused on the big picture: how to produce the best crops possible for the greatest profit, while maintaining healthy environments for future generations.

Lisa Hart spoke for the vegetable growers.

“We’re concerned about our pollinators,” she said. “We can’t lose our bee populations, so we’d like to see beekeeping become a research and education priority. We’d like to see an irrigation cost-share program in northeast Mississippi, similar to the program in the Delta.”

Logging wastes and how to deal with them effectively was the first priority of the forestry group, represented by George Byrd of the Mississippi Forestry Commission.

Bill Herndon, head of the North Mississippi Research and Extension Center, said this meeting has been held annually since the mid-1950s and he anticipates its continued success.

“The tremendous support producers, researchers, Extension specialists and agents, industry personnel and commodity leaders provide to our North Mississippi Producer Advisory Council meeting is evidence of the value of the information shared among these partners,” he said.
Time, experience and research findings show no-till farming can boost production, prevent soil erosion and transform hayfields and pastures into viable cropland.

Glover Triplett, research professor in the MSU Department of Plant and Soil Sciences and the Mississippi Agricultural and Forestry Experiment Station, is an advocate for no-tillage farming, a planting method he has pioneered since the 1960s. Producers who practice no-tillage grow crops without disturbing the soil except at planting, using any residue carried over from previous crops as mulch. Instead of tillage, earthworms and other soil organisms aerate the soil while preserving its structure.

Triplett said today’s surge in commodity prices has created an ideal time for producers to embrace no-till methods. No-till works particularly well on sloping land that is often passed over by buyers and renters looking for cropland acres.

“Land cost in the Hills is lower than in the Mississippi Delta, and one can easily farm with no-till practices on sloping land,” he said. “These fields drain well and will support equipment much better than land that has been tilled, so producers can work more days than in a tilled system.”

Ernie Flint, area agronomist in central Mississippi with the MSU Extension Service, said no-till may be the best method of farming much of the state’s land, especially in areas with sloping topography. However, fighting age-old traditions prevents many growers from adopting the practice.

“Most people who want to farm have been told that tillage is essential for growing crops,” Flint said. “This opinion has been passed down to them by older farmers, family members and even the lending institutions, where many of the bank presidents are from the old school. Although the acceptance of no-till has improved in recent years, there is still prejudice against those who farm ‘ugly.’”

Flint has helped several growers successfully use no-till and other conservation tillage methods.

“I worked with a grower in 2011 who planted a 350-acre former cattle ranch to soybeans. The soybeans were drilled directly into existing sod from which hay had been harvested prior to planting. The grower applied poultry litter, sprayed the sod with glyphosate and planted with no-till drills,” he said. “I worked with him through our SMART program to select varieties, set the drills, and control pests, diseases and weeds. These beans yielded around 60 bushels per acre, without irrigation on land that no one else wanted to farm until he came along.”

According to 2011 reports, that was nearly 20 bushels per acre more than the average in Mississippi.

Researchers and Extension professionals at MSU, such as Triplett and Flint, combine their experience with scientifically generated knowledge to help producers make the best crop they can while using sustainable practices such as no-tillage.

“We try to figure things out so the farmer doesn’t have to bear the potential loss from experimenting,” Flint said. “We plant different varieties and use different herbicides for weed control and share our findings with producers so they can see that no-tillage works.”

For more information on conservation agriculture and no-tillage, visit http://www.msucares.com.
Imagine an insect that can eat nearly anything, control microbes, live off of water alone in the adult stage, and be a good source of protein for animal feed. The black soldier fly is real, not science fiction, and it has researchers at Mississippi State University abuzz with excitement.

John Schneider, a professor of entomology in the MSU Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology, said the black soldier fly is a common insect native to the Southeast. Because it is not attracted to human living spaces or food, it is not considered a pest. As part of the Mississippi Agricultural and Forestry Experiment Station, MSU scientists are studying the black soldier fly as a potential solution to dealing with large amounts of waste while also generating a feed product.

“Black soldier flies are 40 to 45 percent protein by dry weight,” he said. “Theoretically, one metric ton can be produced per day in the space of a medium-sized house, and used as a feed product.”

Harvested larvae can be dried and milled to create a high-protein meal for livestock, poultry and aquaculture consumption, Schneider said. Due to their high oil content, black soldier fly larvae may even be useful for biofuel production.

“They’re not a known disease carrier, they don’t bite or sting, and they’re not a nuisance,” he said. “They’re a versatile species with huge potential.”

Alfredo Llecha from Santiago de Compostela, Spain, is a visiting scholar to the MSU Insect Rearing Center in the Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology. He said black soldier fly larvae will eat almost anything — manure, carcasses — without any remaining harmful fungi or microbial residue. These insects require no special diet, so they can be fed nearly any kind of agricultural byproducts or waste.

“If we can supply them with food and remove their waste products, they could potentially deal with significant amounts of pathogen-laden agricultural wastes,” Schneider said.

While conducting the annual MSU Insect Rearing Workshop in 2010, Schneider and professor emeritus Frank Davis learned that attendee Llecha had been rearing black soldier fly larvae in captivity.

“Several years ago, I was rearing different kinds of insects and beetles, and I found an American living in Vietnam who was researching this fly in the wild. He could not rear them in captivity, but only in the wild due to the tropical environment,” Llecha said. “In colder weather, they have to be reared in a lab or special facilities. I bought some larvae and finally was able to rear them in an insect cage.”

Llecha came to MSU in June 2011 to share his expertise and to develop improved rearing methods for the black soldier fly.

“MSU is rearing millions of larvae and refining our methods,” Llecha said. “Our first goal is to design an ideal system for rearing black soldier flies. There is a lot of research to be done to optimize the system.”

Llecha said he has worked with MSU scientists to design an environmentally friendly building specifically for rearing black soldier flies. Llecha and his family have offered to make a donation of $100,000 to start the project.

The new facility will expedite black soldier fly rearing and research and expand the internationally renowned MSU Insect Rearing Workshop.

“Registration for the annual workshop is filled a year in advance. We could have a second workshop on rearing, and a special workshop focused on the black soldier fly every year,” Llecha said.

For more information on the MSU Insect Rearing Center, visit http://www.irc.entomology.msstate.edu/.
Doug Carter has spent 21 years as a 4-H youth agent and has worked in Adams, Simpson, Leake, Scott and now Rankin County. He said the program’s goal is to improve the quality of life for young people through a variety of project areas, including livestock, horses, shooting sports, gardening, robotics, modeling, clothing construction, photography and many others.

“4-H offers kids between the ages of 8 and 18 a safe environment to make mistakes. That’s how they learn, and they need to know it is OK to make mistakes,” Carter said. “4-H teaches responsibility and sportsmanship and builds character and self-esteem. The youth learn by doing.”

Carter said club members develop lifelong friendships with quality youths. They also learn citizenship and leadership skills that benefit the entire community.

“Kids want to belong to something, and 4-H offers a healthy community for youth involvement,” he said. “They develop generous attitudes as they give back to their communities through a variety of volunteer efforts.”

Lisa Stewart’s career started in 4-H in 1988. She worked in Leake, Attala and Madison counties before becoming an agriculture agent in Webster County, where she now serves as the county director. She frequently fields questions related to home lawns and horticulture.

“Master Gardener is one of Extension’s best volunteer and outreach programs,” she said. “Extension oversees their training, and then the Master Gardeners contribute hundreds of hours of volunteer service to our community.”

County offices bring producers and growers together and help meet their educational programming and networking needs.

“We organize meetings for the forestry association, beef producers and growers of row crops, sweet potatoes and peanuts,” she said. “We work closely with area agents and state specialists to bring research-based recommendations from the university to farmers in the county. We host demonstration plots and field days to help in seed selection, equipment choices, and herbicide and insecticide considerations in production planning.”

“Community residents still call with some of the same questions they called about 50 years ago, but in many cases the answers or methods of answering have changed,” Bearden said. “When calls comes in, we direct them to the best source for that topic.”

Extension activities focus on four subject areas: youth development, agriculture and natural resources, family and consumer sciences, and community resource development.
Stewart said Extension also helps producers consider marketing options so they can get the best prices for their crops.

“We are able to take advantage of video conferencing to bring experts from many different locations to our community. One recent workshop taught city and county workers about issues related to electrical guide wires, pesticide use and weed identification,” she said.

Stewart said topics related to wildlife and fisheries are important in her community. Landowners also request forestry programs on pine beetles, thinning pine stands and carbon credits.

After her first year in Warren County, Charlestein Harris spent the next 24 years of her career in Quitman County and currently serves as the area family resource management agent for the north Delta. Although her location has not changed much, her focus has.

“Today, we spend a lot of time addressing financial concerns like how to repair bad credit or get out of debt. We work with people going through foreclosures or other issues related to the bad economy,” she said. “We are also involved in a statewide broadband initiative to bring high-speed Internet to rural areas.”

Harris is working with other communities through a new program called Stronger Economies Together (SET). The goal is to partner with rural development to bring decision-makers together to help communities build on their economic strengths.

Patty Swearingen has had two “tours of duty” with Extension, starting in Monroe County as a 4-H agent. After an eight-year departure, she returned to Extension in Lauderdale County, where she is now the county director.

“We work closely with several nonprofit organizations serving low-income residents of our community. We address money management concerns, health issues and family dynamics,” she said.

“Our presence is often seen in schools at health fairs and at foster parent trainings.”

A key community service organization managed through Extension is the Mississippi Homemaker Volunteers.

“Homemaker volunteers are dedicated to giving back to their communities in a variety of ways,” Swearingen said. “They put in hundreds of hours of service every year.”

Most county Extension offices are located in the phone book under county offices. They can be found online at http://msucares.com/counties/.
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Miss Dixie National and Miss Rodeo Mississippi are both current Mississippi State University students striving to raise awareness about the importance of livestock and agriculture.

Paige Nicholson, Miss Dixie National, is a junior agricultural information science major in the College of Agriculture and Life Science. Samantha Golden, Miss Rodeo Mississippi, is a sophomore pre-accounting major.

Nicholson said she hopes to use her education to lend a strong voice for agriculture.

“I chose to major in agricultural information science because I became aware of the need for agriculture advocates,” she said. “I think we need a strong voice for agriculture. Becoming the commissioner of agriculture in Mississippi one day is a long-term goal of mine.”

Nicholson, who is from Lawrence, said her active involvement in 4-H for 10 years encouraged her to contribute to the agricultural industry.

“My involvement in 4-H dramatically shaped who I am,” Nicholson said. “It taught me to work for the things I want to accomplish. It nourished the interest and passion I have for animal agriculture, and it taught me valuable leadership skills.”

During her time in 4-H, Nicholson participated in horse shows and judged in dairy cattle, dairy products and horse events.

“4-H contests taught me valuable career skills as well as confidence, how to be a winner and how to lose gracefully,” she said. “I learned to think on my feet, especially on topics of agriculture and animal science. 4-H created my will to be an advocate for agriculture and animal science through educating me on these topics and making me the kind of person who stands up for what I believe in.”

As Miss Dixie National, Nicholson promotes the Dixie National Livestock Show and Rodeo in television and radio advertisements and appearances in the Jackson area.

“As Miss Dixie National, I want to educate others about my heritage and the atmosphere that made me who I am,” she said. “Farmers and agricultural enthusiasts feed, clothe and shelter the world. The kinds of life we are accustomed to would not be possible without people who love and live agriculture. I don’t expect everyone to love agriculture like I do, but I would like to give others the opportunity to learn about the impact it has on all our lives.”

Miss Rodeo Mississippi Samantha Golden, whose family runs a boarding stable in Lauderdale, said she grew up around horses. Golden got involved with rodeos at age 12.

“Because my family runs the stable, I was involved with training horses and things like that,” she said. “I’ve always loved being around the animals, and when I started doing rodeos I fell in love with barrel racing and goat tying.”

Golden was a member of Future Farmers of America throughout high school, which helped prepare her to speak about the importance of the livestock industry.

“FFA helped shape my educational goals,” she said. “I learned fundamental building blocks that gave me a firm foundation in livestock and allow me to speak for livestock now.”

As part of her Miss Rodeo Mississippi duties, Golden will travel throughout the state as a representative for the Professional Rodeo Cowboy Association and the Livestock Association.

“I’ll be speaking on behalf of these organizations at various events, and so I will be representing not only the organizations, but also Mississippi State University because it has equipped me with the skills I need to make a positive impact,” she said.

MSU Extension Service Director Gary Jackson said these young women play an important role in representing agriculture to a larger audience.

“Miss Dixie National, Miss Junior Dixie National and Miss Rodeo Mississippi have always worked to promote agriculture and the livestock industry in our state and region,” he said. “I have always enjoyed being associated with their work as they partner with the MSU Extension Service to serve the public. Paige and Samantha are two exceptional young people who possess outstanding leadership qualities needed in agriculture today and in the future.”

By Kaitlyn Byrne

Students Use Crowns to Promote Agriculture

Miss Dixie National Paige Nicholson, left, and Miss Mississippi Rodeo Samantha Golden joined Mississippi State University Extension Service Director Gary Jackson at the 2012 Dixie National Sale of Junior Champions to support youth development and agriculture. (Photo by Kat Lawrence)
When the head of Mississippi State’s Institute of Golf needed the right trees to improve playability and course safety, he had only to travel a short distance to the MSU College of Forest Resources.

Tony Luczak, a Professional Golfers Association (PGA) member who has directed the golf institute for four years, said he knew additional trees would add aesthetic value, as well as various practical benefits, to the 18-hole, par-72 facility. After reaching out to Andrew Ezell, head of the MSU Department of Forestry, the two began creating a vision for the course’s tree-lined future.

The golf course, located three miles east of campus on Mississippi Highway 182, is now home to 2,200 newly planted trees. Weyerhaeuser and Plum Creek Timber companies each donated 1,000 loblolly pine seedlings, while Joshua Timberlands Nursery donated 200 green ash seedlings. Members of the student chapter of the Society of American Foresters planted them over a recent two-day period.

Luczak, a 1990 MSU graduate and PGA member since 1992, praised the collaborative project as an example of interdepartmental coordination that saved the university considerable money. Purchasing trees and planting services would have been very expensive, he explained.

He also is looking forward to using the pine straw of mature trees for landscaping, which also would be very costly if purchased commercially.

“As an auxiliary unit of the university, we function off the revenue we generate,” Luczak said. “This was a great opportunity to work with the forestry department to improve our property.”

Luczak said the trees will have long-term playability and safety effects by serving as natural fairway barriers. Also, from a purely cosmetic standpoint, “it’s going to look gorgeous,” he added, with a broad grin.

He expressed great appreciation for Ezell’s expertise on matters of topography and soil conditions to yield the best selection of trees that could both thrive and serve the needed functions.

For his part, Ezell pointed out two major secondary benefits: aesthetically, the pines will maintain greenery on the course year-round; and the planting process provided a meaningful hands-on learning and service experience for the forestry majors.

“Students want to give something back to the university and show their devotion by contributing some type of service,” Ezell said. “With organized crews and hardworking forestry students, they planted all 2,200 trees in a matter of two days, but they will be able to come back to this university long after their graduation and say, ‘I helped plant those trees.’”

“Anytime you plant a tree, you create a bit of a legacy,” Ezell observed. “They were able to contribute and leave something that people will enjoy literally for decades.”
Mississippi State University researchers and graduates received top awards this year from the Southern Weed Science Society.

Dan Reynolds, a researcher in the Mississippi Agricultural and Forestry Experiment Station and professor in the MSU Department of Plant and Soil Sciences, was named the 2012 weed scientist of the year by the society, the highest honor awarded.

Jason Bond, MAFES researcher at the Delta Research and Extension Center in Stoneville, was named the 2012 outstanding young weed scientist in academia. Cody Gray, who earned his doctorate at MSU, was named the 2012 outstanding young weed scientist in industry. David Shaw, MSU vice president for research and economic development, was given the 2012 distinguished service award in academia.

Mike Phillips, head of the Department of Plant and Soil Sciences, said these honors reflect the quality of work and the level of expertise at MSU.

"It is a distinct honor for such an outstanding group to be recognized by the Southern Weed Science Society. These awards speak highly of the leadership we provide in production agriculture to the state and region," Phillips said.

Reynolds’ responsibilities at MSU include teaching and research on cotton defoliation and weed control in corn and cotton. His research focuses on the use of spatial technologies to assess the needs and application of herbicides, plant growth regulators and harvest aids in a site-specific manner.

Bond has developed an extensive applied weed science research program in rice, cotton and corn while at MSU. His major research emphases include identification and management of herbicide-resistant weeds, developing economic weed management programs and investigating the interactions among crops and weeds.

Gray works for United Phosphorus Inc. as a field development representative overseeing all aquatic herbicide and algaecide market development and research trials conducted in the United States, Canada, Australia and New Zealand.

Shaw was MSU’s first director of the Remote Sensing Technologies Center until it merged with the Geosystems Research Institute. Since 2010, he has been MSU’s vice president for research and economic development.

The society presented these and other awards at their annual meeting Jan. 25 in Charleston, SC.
New plant hardiness maps released by the U.S. Department of Agriculture increased Mississippi’s average low temperatures by 5 degrees.

Eric Stafne, assistant Extension professor for fruit crops at MSU, said the maps provide good average information, but individuals still must make careful planting decisions.

“With fruit crops, I am more concerned with individual weather events than averages,” Stafne said. “It takes only one or two individual extreme cold events to put someone out of business, especially if they chose the wrong plant variety.”

Commercial producers and recreational gardeners use the USDA plant hardiness maps to determine the best plants to grow in different regions. Mississippi has four USDA plant hardiness zones: zone 9a, along the extreme Gulf Coast; zones 8b and 8a, through central Mississippi; and zone 7b, across the northeastern third of the state.

USDA last updated its map in 1990, drawing from data collected from 1974 to 1986. The 2012 map reflects weather station data collected from 1976 to 2005. The average low temperature for that period was warmer than before.

“The ramifications of this can be mild or profound, depending on where you live,” Stafne said. “It could mean fewer chilling hours, causing erratic and early budbreak and bloom times. It could lead to more frost injury in northern areas, and it could lead to poor fruit quality on plants growing in now hotter areas.”

Stafne said the plant hardiness map is a useful tool for home gardeners when they decide what plants to purchase and use. And although the map has changed, the temperature change has been gradual.

“I don’t believe the plant material that can be grown will change too much, so gardeners have no need to buy all new plant books or replace their landscape,” Stafne said.

Gary Bachman, Extension horticulturist at the Coastal Research and Extension Center in Biloxi, said savvy gardeners should check to see if their area has been reclassified.

“I don’t think we will see much difference in the ornamental landscape plants we grow during the summer months,” Bachman said. “Most of the flowering plants in the landscape are annuals, and there is little expectation beyond summer beauty.”

The biggest change, he said, will be that some plants previously classified as borderline for a hardiness zone can now overwinter just fine.

“This has occasionally occurred in most gardeners’ experiences, and I’m sure it will be a more frequent occurrence with the shift in hardiness zones,” Bachman said.

As the state’s zones have become slightly warmer, gardeners are more likely to try plants they previously thought were too sensitive to cold temperatures. While the maps indicate the lowest average temperatures, cold damage will still occur when temperatures drop to the low 20s along the coast and the teens and lower in north Mississippi.

“Gardeners should look at this as a situation where the glass is half full,” Bachman said. “It gives us the opportunity to plant something besides what we’ve normally planted.”

Find the national USDA plant hardiness maps and individual state maps online at http://www.planthardiness.ars.usda.gov.
Teaching, Research and Outreach in the Division of Agriculture, Forestry and Veterinary Medicine
In 1862, American newspapers were full of reports from Civil War battlefields, but there were other events that year that would forever change the nation. This year, universities in every state are celebrating the 150th anniversary of one of those events.

On July 2, 1862, President Abraham Lincoln signed the Morrill Act, and his signature began the process of making higher education possible for the sons and daughters of all Americans.

“The Morrill Act was the first in a series of steps that created the nation’s land-grant universities, the largest and most effective public higher education system in the world and one that is uniquely American,” said MSU President Mark Keenum. “As a land-grant institution, Mississippi State University is dedicated to academic excellence, research, and service. Our graduates are leaders in wide-ranging fields, including business, education, engineering and agricultural enterprises across our state and nation. All of this began with the Morrill Act and was expanded to include the Hatch Act in 1887 that created experiment stations to provide agricultural research and the Smith-Lever Act in 1914, which established the Extension Service to offer university-based educational resources to the public.”

The author of the first land-grant legislation was Congressman Justin Smith Morrill of Vermont. The son of a blacksmith, Morrill ended his formal education at 14, when he went to work as a store clerk. He went on to a successful career in business and farming.

In 1854, Morrill was elected to Congress, and in 1858, he introduced legislation to create public schools of higher education in each state to provide training in the agricultural and industrial arts, as well as the traditional liberal arts. Funding for the schools would be provided by income generated from federal grants of public land to each state. His first bill narrowly passed in Congress, only to be vetoed by President James Buchanan.

The idea of making higher education available to people of modest means was both unique and radical 150 years ago, said MSU Department of History Head Alan Marcus.

“The purpose of the Land Grant Act was to provide higher education to the sons and daughters of working people, farmers and mechanics, people who usually didn’t have an opportunity to go to college,” he said. “Early on in the congressional debate, there was the argument that if you really educated these young boys and girls, they would pursue more prestigious occupations rather than applying their new skills to farming and manufacturing. The idea that finally prevailed, however, was that extending education would prosper both individuals and the nation.”

Mississippi received its land grant after the state’s re-entry into the Union in 1870. Income from the sale of the state’s land grant, which was located in New Mexico Territory, was first used to create an agricultural and mechanical program for whites at the University of Mississippi in Oxford and for blacks at Alcorn University in Lorman.

In a 1979 journal article, “The Cow in the Front Yard”: How a Land-Grant University Grew in Mississippi, Mississippi historian John K. Bettersworth, described the effort to establish the program at the University of Mississippi.

“(Professor of geology and agricultural chemistry Eugene Hilgard) strove valiantly to get something going, but students would have no part of it,” Bettersworth wrote. “After five enrollments in ‘agriculture and mechanical arts’ in 1873, and only three in 1874, Hilgard left for California. In 1876 the whole program was abandoned.”

The program at Lorman was successful and continued as Alcorn A&M College. Efforts by the farm organization Patrons of Husbandry, or Grange, led the Mississippi Legislature to establish Mississippi Agricultural and Mechanical College in Starkville in 1878.
Mississippi A&M became firmly established under the leadership of its first president, Stephen D. Lee. President Lee, who served as a general in the Confederate Army, recruited experienced faculty from northern schools. The new college also received continuing support from farm organizations.

“The Grange and other agricultural organizations were very vocal about what they wanted their children to learn,” Marcus said. “These types of groups were the land-grant schools’ earliest constituent group and remain strong advocates for the land-grant system.”

Mississippi A&M and other land-grant schools soon became important forces for economic development, Marcus said.

“In 1926, the Borden Company was looking for a site for a big new manufacturing plant for condensed milk,” he said. “Starkville was one of the sites under consideration because of the willingness of farmers in the area to produce milk in the quantities needed for the plant and the availability of the college to teach modern dairy production methods. When Starkville was selected as the site for the plant, a parade with the theme of ‘Prosperity’ was held to celebrate.”

Partnerships between Mississippi State University, agricultural organizations and businesses have continued to strengthen and are today a key part of Mississippi’s largest industry, said Greg Bohach, MSU vice president for agriculture, forestry, and veterinary medicine.

“Agriculture, including forestry and natural resources, is a $7 billion industry in Mississippi and provides 29 percent of the state’s jobs,” he said. “Our two land-grant schools, MSU and Alcorn State University, provide essential support to Mississippi’s food and fiber enterprises and our rich natural resources. While the vision of Justin Morrill and the other early leaders of the land-grant movement has become a reality, it must be our vision to continue to apply the resources, including new technology, to ensure a food-secure future for our state, nation and world.”
The Rail Road Act of 1862 was the first of a series of acts of Congress that promoted the construction of the transcontinental railroad by authorizing the issuance of government bonds and grants of land to railroad companies.

The Homestead Act of 1862 helped increase settlement of undeveloped federal land west of the Mississippi River.

By promoting the settlement and development of the West, these two pieces of legislation helped increase the value of the Western land grants given to states for the support of agricultural and mechanical education. They also opened up millions of acres of land for farming and created the need for new methods of cultivation for the Western prairies.

Sen. Morrill introduced 12 bills to Congress between 1872 and 1890 in an attempt to obtain more money to support land-grant colleges.

Finally on Aug. 30, 1890, Congress passed the Second Morrill Act, which specified that states maintaining separate colleges for different races had to propose a just and equitable division of funds received under the act. Under the 1890 legislation, any states that used their 1862 funds entirely for the education of white students had to either open their facilities to black students or provide separate facilities for them.

The act led to the establishment of 16 black land-grant colleges throughout the South. These universities became known as “The 1890 Land-Grant Institutions.” Each Southern state that did not have an African-American college by 1890 established one under the Second Morrill Act.

The black land-grant institutions have had a prominent role in various areas of research.

These institutions have studied ways to boost the productivity of grain legumes — peanuts, soybeans, pigeon peas and dry beans — to help alleviate poverty in developing nations. Other research at the historically black universities included work to synthesize a series of oxygen-carrying protein complexes that have the potential to serve as blood substitutes in the treatment of sickle cell anemia, as well as efforts to develop new composite alloys for use in outer space and earth-based activities.
The Hatch Act

Passed in 1887, the Hatch Act created funding for experiment stations that were to be associated with land-grant universities.

The Hatch Act called for experiment stations to conduct research based on each state or territory’s need. The stations were to provide farmers with research-based information on a variety of matters directly related to agriculture. For crop and livestock producers, this service included information on diseases, fertilizers, crop rotation, and feed and forages. Experiment station research also covered other relevant areas, such as soil and water analysis and butter and cheese making.

In 1888, the Mississippi Legislature established the State Agricultural Experiment Station under the direction of Mississippi A&M. The first station director, S.M. Tracey, had a staff of 11 that consisted of a general agriculturalist, horticulturists, chemists, a veterinarian, a meteorologist and a treasurer. Early experiments included simple crop rotations and use of manure on fields sapped by decades of cotton production.

Today, the Mississippi Agricultural and Forestry Experiment Station (MAFES) operates a statewide laboratory based at Mississippi State University with research facilities at four Research and Extension Centers and encompassing a total of 16 off-campus locations. There are approximately 160 scientists employed in 13 MSU departments and the off-campus sites.

“MAFES is committed to the traditional land-grant mission of advancing the production of food and fiber, protecting the natural resources and improving the quality of life of all Mississippians,” said MAFES Director George Hopper. “When asked what we do, I like to say ‘research is our business,’ and using that approach our scientists are constantly working to benefit Mississippi and support the agricultural and natural-resource-related businesses that provide jobs for almost 30 percent of the state’s workforce.”

Another piece of federal legislation to support land-grant research is celebrating its 50th anniversary this year. In 1962, President John Kennedy signed a bill establishing the McIntire-Stennis Cooperative Forestry Research Act.

“McIntire-Stennis is a formula-based cooperative program providing base support for much of the forestry research at land-grant universities,” Hopper said. “MAFES provides relevant research to solve the most pressing needs facing our farmers and agricultural businesses, which provide jobs for 30 percent of Mississippi’s workforce. Our research has resulted in revolutionary new technologies and discoveries to advance plant and animal production in the state and region. Our best work, however, is yet to come.”

McIntire-Stennis Cooperative Forestry Research Act

Another piece of federal legislation to support land-grant research is celebrating its 50th anniversary this year. In 1962, the McIntire-Stennis Cooperative Forestry Research Act was passed.

“McIntire-Stennis is a forestry research cooperative program that provides base support for forestry research at land-grant universities,” Hopper said. “The act was coauthored by Senator John Stennis of Mississippi, who recognized the importance of forests and natural resources to economic prosperity and quality of life for all Americans. The McIntire-Stennis funds provide support for graduate education and help develop new knowledge and technologies for the nations’ forest, wildlife and forest products industries.”
**Smith-Lever Act**

The Smith-Lever Act of 1914 established the Cooperative Extension Service in all states and U.S. territories. This legislation charged Extension with the responsibility of educating the public in partnership with the U.S. Department of Agriculture and land-grant universities.

Federally supported Extension work in Mississippi actually began in 1907, with William H. “Corn Club” Smith at Mississippi A&M. He was paid $1 a year by USDA and given federal “franking” privileges to mail educational material to members of Boys Corn Clubs and other farm youth organizations in the state without charge. Smith is recognized as the first state-based federal Extension employee.

Today, more than 100,000 boys and girls participate in MSU’s 4-H Youth Development Program each year.

In addition to youth development, MSU Extension has programs focused on agriculture and natural resources, rural community development, and family and consumer sciences. Thousands of Mississippians benefit each year from these programs’ research-based information distribution, educational programs and technology-transfer activities.

“Federal support for Extension continues to unite the nation’s land-grant institutions and remains the cornerstone of our funding,” said MSU Extension Director Gary Jackson. “Other partnerships, however, are helping Extension in Mississippi provide services and programs that improve the quality of life for thousands of Mississippians and that support the agricultural and natural-resource enterprises that, taken together, make up Mississippi’s largest industry. Maintaining the quality and diversity of programs we provide would not be possible without the support of county boards of supervisors, grower associations and agricultural organizations, including Farm Bureau and Delta Council.”
Fourteen-year-old Caleb Hyatt barely spoke a word on the ride to his first hunting trip. This was his first time to embark on such an adventure. By the time he was done, he could not stop talking or wipe the huge smile from his face.

For kids like Caleb, Break-Away Outdoors — the foundation created by Mississippi State alumnus Jay Stokes — has provided these unique outdoor adventures. Stories like Caleb’s are frequent in Stokes’ memory. There is something special not only in each child’s experience, but in the founder’s story as well. A native of Louisville, Stokes began his foundation during a part-time job while in college.

“I was working for Dr. Eastman, an orthodontist in Starkville, helping him maintain his deer population through the Deer Management Assistance Program,” Stokes said. “This was an ideal part-time job for an avid hunter like me. I was able to help a landowner manage his deer population and hunt.”

However, Stokes quickly realized that this was also a perfect opportunity to instill a love for the outdoors and hunting in young people.

At just 23 years old, Stokes, along with his roommate and fellow forest products student Justin Wilkes, brought together a group of seven foster kids from the Columbus-based Palmer Home and decided to teach them to hunt.

“We had no idea what we were doing, but it felt like the right thing,” Stokes said. “We took them hunting, fed them lunch, and the rest is history.”

That first hunt took place in October 2003, and Stokes and Wilkes haven’t missed a year since. The duo graduated from the MSU College of Forest Resources in 2007. They have continued to organize deer hunts but have added fishing trips, dove hunts and duck hunts to their offerings.

“We wanted to create something for kids that didn’t necessarily qualify for other similar programs. We saw a gap between organizations like Make-a-Wish or Catch-a-Dream, which provide wonderful experiences for children that are terminally ill,” Wilkes said.

While the first group of participants resided at the Palmer Home, living at the facility is not a requirement. Since 2003, Break-Away Outdoors hasn’t turned away any young person between the ages of 9 and 15 who has little to no experience outdoors and a desire to learn, Wilkes added.
The Mississippi Department of Wildlife, Fisheries and Parks supports the nonprofit organization. The goal of Break-Away Outdoors is more than just providing outdoor hunting adventures for children who may not have these opportunities.

“We teach them community-based hunting and responsibility,” Stokes said. “They learn compassion for others and confidence in themselves.”

And once a child attends, they often want to come back. “Many of the children who attend one year come back the next as volunteers,” Wilkes added.

In March of this year, Stokes was honored as a Field and Stream Magazine Hero of Conservation. The honor recognizes individuals who are involved in a hunting- and/or fishing-related conservation project that is well under way with outstanding results.

For Stokes, the honor is “icing on the cake” compared to the sense of accomplishment he feels when a young person catches a fish for the first time or sees a deer in the woods.

“I am fortunate to have 12 classmates, with whom I graduated, to work with me in this venture,” Stokes said. “Teaching kids to conserve and protect America’s wildlife and wild places is truly an honor.”
A Mississippi State University researcher has uncovered the first molecular evidence linking live-poultry markets in China to human H5N1 avian influenza.

Henry Wan, an assistant professor of systems biology in the MSU College of Veterinary Medicine, collaborated with scientists in the World Health Organization Collaborative Centers for Influenza in China and St. Jude Children’s Research Hospital to investigate the connection.

“Although conceptually we knew live-bird markets posed a risk for human H5N1 infection, there had previously not been any direct evidence, especially molecular evidence, supporting this hypothesis,” Wan said.
Based on information provided by patients infected with the H5N1 virus during the 2008–2009 season, Wan and his colleagues collected and analyzed 69 environmental samples from the live-bird markets visited by six patients before the onset of the disease.

“From these 69 samples, we isolated a total of 12 highly pathogenic H5N1 avian influenza viruses from four of the six live-bird markets. The similarity of the genetic sequence of the environmental and corresponding human isolates demonstrates a solid link between human infection and live-poultry markets,” Wan said.

Wan said the goal of his research is to find the sources of human H5N1 infections and provide the foundations of policy-making for protecting public health. While the United States has regulations in place to protect consumers, this is not the case in all countries.

Wan began studying avian influenza while conducting graduate work in southern China in 1996. He was the first scientist to identify the highly pathogenic H5N1 avian influenza virus. One year later, this virus infected humans in Hong Kong, resulting in six deaths.

The subsequent massive depopulation of poultry stopped the human outbreak for a time, but two cases identified in Hong Kong in 2003 confirmed the virus was still circulating in the region and posed a health hazard. From 2003 to 2011, the World Health Organization recorded a total of 566 confirmed human cases for avian influenza worldwide that have resulted in 332 deaths. To date, there have not been any highly pathogenic H5N1 detections in the United States.

Wan, whose other area of expertise is developing computer programs to model the mutation of viruses and to identify vaccine strains, performed an evolutionary study on this virus to identify the links between the human and avian strains of the virus at the molecular level.

“H5N1 viruses have spread to both wild and domestic bird populations in many countries, predominately in Asia, Africa and Europe,” Wan said.

Although no sustained human-to-human transmissions of the H5N1 virus have been confirmed, the mortality rate among human cases to date is about 60 percent.

Wan said he hopes the results of this study can be used to develop policies to prevent and control H5N1 infections in humans.

“For instance, control and regulations of live-bird markets could be used to help prevent the H5N1 human infections in areas that have active live-bird markets,” he said.

In the United States, most live-bird markets are in major metropolitan areas.

“We have live-bird markets in many major cities with large concentrations of ethnic groups who prefer to buy live poultry rather than processed poultry,” said Dr. Danny Magee, director of the CVM Poultry Research and Diagnostic Laboratory in Pearl. “The U.S. Department of Agriculture’s Animal and Plant Health Inspection Service has monitoring procedures in place to prevent and control the disease in live-bird markets and in the production premises and poultry distributors that supply those markets.”

Magee said Mississippi’s commercial poultry industry follows biosecurity protocols to protect the chickens on the farms from avian influenza.

“Raising chickens in confinement minimizes their exposure to wild migratory waterfowl, which have been identified as possible reservoirs of the avian influenza virus,” he said. “Biosecurity practices also limit exposure of the chickens to unauthorized visitors on the farm. The flocks are raised as securely as possible, and then they are tested for exposure to the avian influenza virus before they are sent to market. Every flock in the state undergoes this serological test so the consumer can be assured that the product is safe.”

Poultry is Mississippi’s top agricultural commodity, with a 2011 production value of $2.21 billion.

“Approximately 15 million broilers are processed in Mississippi each week,” Magee said. “We test the breeders that lay the eggs to produce the broilers, and we test the commercial egg-laying birds. The facility in Pearl is one of the labs in the Southeast that performs the regulatory test to monitor for the presence of the avian influenza virus in the commercial poultry industry.”
Take a look at 4-H livestock show rings anywhere in the state. There are nearly as many goats as hogs, sheep or steers.

“We’ve increased the numbers of goats shown by about 25 percent each year since the first year,” said Kipp Brown, area 4-H livestock agent and meat goat specialist with the MSU Extension Service. “It’s helping the kids, the producers and the 4-H program.”

The first statewide market meat goat show was held at the Mississippi State Fair in 1996. Market goats were added to the district-level shows in 1999. By 2001, interest in show goats had increased enough to merit adding goats to the statewide Dixie National Livestock Show.

The popularity of the small ruminants stems largely from their disposition.

“It’s hard for an 8-year-old to handle a 125- to 150-pound lamb because lambs can be very stubborn and very strong,” Brown said. “A 250-pound hog and an even larger calf also can be intimidating. But the personality of a goat makes it a logical animal to start a young person with. Goats are inquisitive and docile by nature. When you add the element of human interaction, they become even easier to handle.”

Debbie Huff of Brandon said that is the reason her oldest son David, now 18, started showing livestock with a dairy goat.

“David was small for his age,” Huff said. “At 8 years old, he was timid and shy and a little bit afraid of the horses and cattle we had. So we let him show a dairy goat in 2001, and that was it. He told us he wanted to show dairy goats, and that’s what he’s done for 11 years.”

Goats are also a good beginner project for children because of their relatively low cost. Goats can range in price from $150 to $250 or more. A set of clippers costs about $100, and feed for a year is $50 to $100. Getting to the shows is easy with an inexpensive cage in the bed of a pickup.

“Starting with an inexpensive and gentle animal allows the child to learn to feed it properly and learn showmanship,” Brown said. “If children can first learn to feed the goat to the proper weight, exercise him, measure his fat content, and all the other things they have to do to show the goat, it is easier for them to move on to larger, less cooperative livestock.”

But it is rare for a child to give up showing goats, even if they move on to larger livestock.

“A lot of times, once kids are 10 or 12 or 13, they move into lambs and cattle, but most of them keep the goats because they like them,” Brown said. “The kids love the goats, and the goats love them.”

That is not a bad deal for kids or parents.

“It’s the same concept as taking piano lessons,” Brown said. “You probably won’t make money showing goats, but you are teaching life skills. It doesn’t matter what is used to train young people. To me, a goat is just a simple way to do it.”

David’s parents, who homeschool all four of their boys, agree.

“When David decided he wanted to show goats, we saw the opportunity there to use the milk and the animals to teach the boys even more,” Huff said. “Just because we raise livestock doesn’t mean our kids have to do that for the rest of their lives. It’s a pathway to develop abilities to do so many other things. Everything we do in life requires that we be responsible, dedicated participants, and raising goats teaches my kids those skills.”

David Huff, who plans to study engineering, begins college in August.

“We knew that having our boys involved in 4-H would teach them responsibility and accountability and instill in them a work ethic,” Debbie Huff said. “People involved in the admissions process are piecing all of that together. We were not just raising goats. There was a plan in all that work. We were preparing our sons for life.”
County Seat: Vicksburg
Population: 48,840
Municipalities: Vicksburg is the only incorporated municipality in Warren County.
Commodities: Timber, Corn, Cotton, Soybeans, Wheat, Peanuts, Cattle
Natural Resources: Timber, Wildlife, Mississippi River, Yazoo River, Big Black River, Numerous Lakes
History Notes: The Mississippi River forms Warren County’s western border, and the county is basically situated between two other rivers, the Yazoo and Big Black. Warren County was organized in 1809 and had been part of Claiborne and Jefferson counties in the Old Natchez District. It was named for Dr. Joseph Warren, a Boston dentist who became the first casualty of the American Revolution when he was killed at the Battle of Bunker Hill. The county is best known as the site of one of the turning points of the War Between the States, the Siege of Vicksburg, in 1863.
Did you know? Vicksburg holds the highest per capita ratio of engineers and Ph.D.’s in the country and is considered the most progressive town in Mississippi. Vicksburg is home to the country’s top inland port, the Port of Vicksburg, where more than 20 businesses and 4,000 employees oversee importing and exporting of approximately 850,000 tons of freight each year.

“Warren County has a diverse population along with its diverse landscapes. These characteristics, when coupled together, make working in Warren County challenging, yet rewarding.”

Wesley Purvis, Extension County Director

Editors note: 1/82 is a regular feature highlighting one of Mississippi’s 82 counties.
Karisch Named Extension Beef Specialist

A Louisiana native has joined the Mississippi State University Extension Service as a beef specialist.

Brandi Bourg Karisch grew up in south Louisiana and was involved in the Junior Simmental Association and state livestock program. She earned her bachelor’s degree from Louisiana State University, where she was a member of the Livestock Judging Team, was active in the Block and Bridle Club and served as a student worker at the beef unit. She earned her master’s and doctorate degrees from Texas A&M University and has experience in research and teaching.

Mark Crenshaw, interim head of MSU Department of Animal and Dairy Sciences, said Karisch will focus on farm-to-feedlot programs, stocker cattle, feeder calf board sales, heifer development programs and the Deep South Stocker Conference.

“Dr. Karisch will give beef producers the latest information in applied beef cattle management and help them improve efficiency,” he said. “She also serves as Research Professor with MAFES.”

Karisch can be reached by e-mail at bbourg@ext.msstate.edu or at (662) 325-7465.

MSU Poultry Expert Recognized

Dr. Kelli Jones of the MSU College of Veterinary Medicine has won the World Veterinary Poultry Association (WVPA) Young Veterinarian of the Year award.

Jones, who is a Diplomate of the American College of Poultry Veterinarians and an assistant clinical professor in the CVM Department of Pathobiology and Population Medicine, is an expert in avian medicine and poultry disease diagnostics. She serves Mississippi’s $2.21 billion poultry industry through her work at the CVM Poultry Research and Diagnostic Laboratory in Pearl.

“The award given to Dr. Jones is recognition of the fact that we have world-class poultry veterinarians here in Mississippi,” said Dr. Bill Epperson, professor and head of the Department of Pathobiology and Population Medicine.

The award was created by WVPA and Pfizer Animal Health Global Poultry to recognize important contributions to the success of the industry by veterinarians under the age of 35.

Extension Adds New Fruit Crops Specialist

Mississippi fruit producers have a new specialist to consult about crop problems and advise them on best practices.

The MSU Extension Service has hired Eric Stafne as the assistant Extension professor of fruit crops. He is located at the South Mississippi Branch Experiment Station in Poplarville.

After earning a bachelor’s degree from Michigan State University in forestry, Stafne received his master’s in horticulture and doctorate in plant science, both from the University of Arkansas. From 2005 until November 2011, he worked for the Oklahoma State University Department of Horticulture as the state specialist for fruit crops. He has worked with a variety of different fruit crops, as well as pecans.

Patricia Knight, head of the Coastal Research and Extension Center, said Stafne has significant experience communicating with horticultural audiences and will work closely with fruit growers across the state.

“Eric has a strong background in both Extension and fruit crop production. He has already launched a fruit blog and has been busy making contacts with the Mississippi fruit industry,” Knight said.

Stafne can be reached by e-mail at estafne@ext.msstate.edu or at (601) 403-8939.

CVM Associate Dean Wins Diversity Award

Dr. Mark Lawrence, associate dean and professor at the MSU College of Veterinary Medicine has been honored for his efforts to increase diversity within the veterinary profession.

The Mississippi Board of Trustees of the State Institutions of Higher Learning recently presented Lawrence with the Black History Month Educator of the Year award for the MSU Division of Agriculture, Forestry and Veterinary Medicine.

“Dr. Lawrence’s efforts to recruit
minority students into our Summer Research Experience Program as a part of our partnership with Tuskegee University’s School of Veterinary Medicine allows students to be exposed to facets of the veterinary practice outside of private practice,” said Dr. Kent Hoblet, CVM dean. “His efforts help to ensure the continued growth and diversity of our profession.”

MSU-CVM has conducted the Summer Research Experience program for the last 11 years. It gives many students their first exposure to research and provides a series of educational experiences, including workshops, career development opportunities, meetings with research leaders, visits to veterinary research facilities, field work and laboratory time.

4-H Club Receives Monsanto Donation

The Calhoun County 4-H club has received a $2,500 donation through the America’s Farmers Grow Communities (AFGC) program sponsored by the Monsanto Fund.

William “Rocky” Fleming registered for the program, which offered farmers a chance in a drawing to benefit their favorite community nonprofit organization. Fleming and his wife, Dot, selected the Calhoun County 4-H Club based on their son’s active participation in 4-H, the youth development program of the Mississippi State University Extension Service.

“Will Fleming showed dairy cattle and participated in all kinds of activities in 4-H,” said Trent Barnett, Calhoun County 4-H agent and interim county director. “The Flemings chose our 4-H general fund because 4-H had done so much for their family, and now that Will is grown and has a daughter of his own, they hope she’ll grow up to be a 4-H’er.”

The AFGC program, which is in its second year, offers farmers a chance to benefit their favorite community nonprofit organization.

MSU Delegates Named to National Advisory Board

Mississippi State University supporters Gary Blair and Sells Newman are helping provide oversight of some of the nation’s universities as delegates of the Association of Public and Land-Grant Universities.

The men will serve one-year terms on the association’s Council for Agricultural Research, Extension and Teaching, or CARET board.

Greg Bohach, vice president of the MSU Division of Agriculture, Forestry and Veterinary Medicine, reappointed Blair to the association and appointed Newman to replace outgoing delegate Harry Dendy. Dendy, president of Capitol Agriculture Services Inc., an agricultural consulting firm in Jackson, served six years on the CARET board.

“Both Mr. Blair and Mr. Newman have over 25 years’ experience working directly with Mississippi farmers and farm families,” Bohach said. “They are keenly aware of many of the problems facing Mississippi farmers, families and youth. They are also aware of the resources available at MSU that can be used to determine the best solutions to these problems.”

Funding from federal sources has been reduced in recent years, and the two board members will support MSU efforts to restore those funds, Bohach said.

“These individuals will represent MSU and the state very well,” he said. “I am also grateful for the significant contributions Harry Dendy made while he served on this board.”

Blair is vice president and relationship manager for Southern Ag Credit. He is serving his fourth year on the CARET board and will chair the Southern Region in 2013.

“I have worked in agriculture for 32 years in Mississippi, and I definitely understand the importance of the Extension, teaching and research that is done at Mississippi State University and all our land-grant institutions,” Blair said. “The council is charged to make sure MSU’s Ag Division is funded on a federal and state level, especially through federal research dollars matched on the state level.”

Newman is senior vice president for legislative/marketing and public affairs for First South Farm Credit.

“My background in banking and finance and legislative work in Washington, D.C., gives me an understanding of research appropriations,” Newman said. “I will use the expertise I have to the benefit of Mississippi State University.”

CARET’s mission is to enhance national support and understanding of the land-grant university system’s food and agricultural research, Extension and teaching programs to achieve a better standard of living for all people.

Mississippi State University students in the College of Agriculture and Life Sciences’ Apparel, Textiles and Merchandising program swept the awards in the student merchandising exhibit competition at the 2012 Mississippi Association for Family and Consumer Sciences state conference. From left are Storey Wilson, third place; Hana Ali and Holly Farlow, first place; and Lashaunda Bobbett, second place. (Photo by Kat Lawrence).
Longleaf pine forest once covered the southern landscape. Beginning in Virginia, the majestic trees spanned nine states along the coast, eventually stopping in east Texas. The tall, stately pines covered an estimated 90 million acres with a forest floor of grasses and flowering shrubs in a manicured, park-like appearance.

Frequent natural fire created and maintained the landscape in which longleaf pines flourish along with a diverse array of plants and animals. More than 300 plant and animal species occur in the unique fire-dependent ecosystem created in a longleaf pine forest.

This particular pine species is resistant to high-wind events and often grows on dry sandy ridges where other trees will not survive. However, about 150 years ago, the landscape began to change. Commercial forestry and urban development have reduced the size of the once expansive longleaf pine forest.

Recognizing the value of longleaf pine forests, the U.S. Department of Agriculture recently announced 20 restoration projects set to begin in 2012, including a large effort in the DeSoto National Forest and Camp Shelby.

A recent gift by Davis Mortensen will allow Mississippi State University to join in the restoration efforts. Mortensen is an alumnus, longtime contributor and Mississippi native.

For Mortensen, the gift is a natural outpouring of his love for natural resources, students and Camp Shelby, the largest state-owned military training center in the U.S. Mortensen spent a 35-year career managing 5.6 million acres of timberland for Georgia-Pacific Corporation. He understands the importance of responsible timber management and conservation efforts. He also knows the necessity of educating students to be good stewards of the land.
However, the expense associated with obtaining a college education can be overwhelming.

“I attended MSU on the G.I. Bill and had it not been for that, I would have been unable to attend college due to the cost. Giving back so that students have a means to pursue a college education is very important to me,” said Mortensen, who resides in Greensboro, Ga.

When the property adjoining Camp Shelby military base became available, Mortensen realized that he could provide an asset to the university while helping restore the pristine forests of long ago at a familiar and special location.

Mortensen has fond memories of the time he spent on the Camp Shelby base. He went through basic training there as a member of the Mississippi National Guard 631st Field Artillery Battalion headquartered in Hattiesburg. A native of nearby Moss Point, he served two years in the Army prior to attending community college and later enrolled at Mississippi State.

Mortensen’s gift enabled the college to acquire a 352-acre property which is classified as an ACUB or Army Compatible Use Buffer. In the ACUB program, the U.S. Department of Defense partners with non-federal programs or private organizations to establish buffers around military installations.

These buffers proactively limit encroachment while allowing Camp Shelby to maximize the land inside the installation to support its mission.

“This is one of a few privately funded ACUB sites in the state of Mississippi,” said George Hopper, dean of the College of Forest Resources. “Our college is pleased to be in a position to restore this land to longleaf pine, manage the timber resources and protect the wildlife species dependent on this habitat.”

Threatened or endangered wildlife species including the gopher tortoise, red-cockaded woodpecker and black pine snake are dependent on the longleaf pine ecosystem, Hopper added.

Other species, including bobwhite quail, ground-nesting birds, turkey and white-tailed deer also inhabit the longleaf pine ecosystem.

“This site will dramatically impact the students, faculty and programs of the university, particularly in our college,” Hopper said.

Students will be able to use the property as a living laboratory, gaining a better understanding of longleaf pine management and the wildlife that it supports. Timber harvested from the property will fund scholarships, Hopper added.

The ACUB property will be named the Davis and Ann Mortensen Forest and will become one of the properties in the Bulldog Forest. The Nature Conservancy will hold a working conservation easement on the Mortensen Forest, which allows for compatible uses such as timber production and harvest.

“This gift is a partnership between Davis Mortensen, the Nature Conservancy, the National Guard Bureau, Camp Shelby and Mississippi State University,” Hopper said. “It is a unique property to have in the Bulldog Forest, and we are delighted to have this opportunity to work with these organizations in restoring longleaf pine.”

Mississippi State currently has more than 18,000 acres in the Bulldog Forest program. Proceeds generated from Bulldog Forest properties may be used to assist any college or area on campus.

Individuals interested in MSU’s Bulldog Forest program should contact Jeff Little, director of development for the College of Forest Resources, at jlittle@foundation.msstate.edu or (662) 325-8151.
Shrimp boats prepared for the 2012 season in Gulf Coast harbors this spring. These vessels were at the Lighthouse Fishing Docks on the Back Bay in Biloxi. The Gulf Coast shrimping season typically runs from June to December. (Photo by Scott Corey)