The woods were abuzz with the sound of equipment in October. . . Page 8

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

Mississippi State University
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As a land-grant institution and Mississippi’s leading research university, Mississippi State University plays a central role in the development and transfer of technology that contributes to the well-being of the state’s agricultural producers, forest landowners and communities.

The units of the Division of Agriculture, Forestry and Veterinary Medicine play critical roles in the university’s commitment to learning, research and service. Our goal is to build stronger communities, to enhance economic prosperity and environmental stewardship, and to improve the health and well-being of families. The result is service to the people of the state, the region and the world.

At the top of our priorities list is support for agricultural production. The Mississippi Agricultural and Forestry Experiment Station conducts research in support of all of the state’s major plant and animal enterprises. In a global market projected to reach 9 billion consumers in less than 35 years, there is no more pressing need than development of sustainable agricultural production systems that deliver abundant, safe, nutritious and affordable food and fiber. Mississippi has the land, water, labor and other resources to make significant contributions to meeting growing national and worldwide demand for agricultural products.

Among Mississippi’s natural resources are almost 20 million acres of forestland. MSU scientists in the Forest and Wildlife Research Center are developing wood products and manufacturing systems for wood-based industry in the state. Important research is also focused on sustaining and protecting the state’s ecosystems. Our fish and wildlife populations are essential for maintaining our quality of life, as well as the state’s natural resource enterprises and agritourism.

Division scientists have made significant progress toward development of sustainable energy resources and are continuing to explore ways to convert underutilized forest byproducts and Mississippi’s native and exotic grasses into renewable sources of energy. One of our successes is the licensing of a variety of the exotic grass giant miscanthus for commercial biomass production.

Human health and well-being are also research priorities in the division. Healthy lifestyles and obesity and diet-related disease prevention are focus areas of work in the College of Agriculture and Life Sciences.

Research in the College of Veterinary Medicine includes work with health management practices for Mississippi’s poultry, livestock and aquaculture enterprises. Scientists in CVM’s Center for Environmental Health Sciences also conduct research directed at maintaining and improving the quality of environmental health. Their work includes environmental monitoring of pesticides.

Development of educational programs based on university research is the critical role of the MSU Extension Service. The outreach provided to the public through those programs connects our agricultural enterprises, families, landowners, stakeholders, policy makers, and others to university research, bridging the gap between science and application.

Gregory A. Bohach
In an industry with small profit margins, a perishable product and fierce, largely unregulated competition, one Mississippi company has confidently filled its market for more than 30 years.

Pride of the Pond is the catfish processing operation of Battle Farms of Tunica. Owned by Bill Battle, the farm has about 10,000 acres of row crops and 2,700 acres of ponds in Panola, Tunica and Quitman counties. The state-of-the-art catfish processing plant is located just a few miles outside Tunica and employs 121 people.

“We pay attention to detail. We strive to be 100 percent on flavor 100 percent of the time,” Battle said. “We guarantee our product to have good flavor, and we take extra steps to be ‘Certified On Flavor.’”

Catfish are prized for their pleasant texture and mild, sweet flavor. Restaurants nationwide serve them fried or prepared in ways that take advantage of the fish’s versatility. The product’s biggest challenge is off-flavor, a problem that happens when the meat picks up an unpleasant flavor from algae while the fish is growing. Producers manage ponds extensively to prevent off-flavor.

Battle Farms began raising catfish in 1969 when Bill Battle’s father learned about the business from a friend in Belzoni.

“The friend was farming and told him he was only making money selling catfish. Dad came home and started pushing up pond banks,” Battle said.

In 1982, the Battle family joined forces with two other investors to build a processing plant. The plant underwent an extensive renovation in 2008.

“We’re probably the smallest modern plant in the industry, and we have to maintain quality to stay in business,” Battle said. “We’ve been in the processing business for 30 years, and we still sell to many of our original customers.”
Jimmy Avery, aquaculture specialist with the MSU Extension Service, said the company has worked hard to earn this loyalty.

“Battle Farms is an excellent example of the quality-oriented businesses that have helped U.S. farm-raised catfish maintain a reputation of high quality with American consumers,” Avery said. “The relationship between Battle Farms and Mississippi State University has been mutually beneficial for many years.”

Pride of the Pond processes about 55,000 pounds of catfish a day. James Gaiters manages Pride of the Pond’s acreage.

“We seine ponds with a 1 and 5/8-inch net, looking for the 1.5- to 2-pound catfish that produce the 3- to 5-ounce fillet, which is what the market wants,” Gaiters said.

Crews seine in the morning, using two tractors to pull a net across the length of the rectangular, 8- to 12-acre ponds. Once rounded up at the pond bank, a mechanical arm, or boom, scoops between 500 and 600 pounds of live catfish at a time into a tanker truck. A pond can yield 20,000 to 40,000 pounds at a harvest.

Catfish are hauled to the processing plant and emptied into a chilled holding tank. As they enter the plant, fish are sorted for size and then gutted, filleted and trimmed. Fillets are individually frozen in 20 minutes, and the fillets are sorted a final time for size and boxed for sale and distribution.

Bob Bies, Pride of the Pond plant manager, said the plant is kept at 43 degrees year-round.

“That’s almost refrigeration, so the fish are being chilled from the moment they exit the trucks,” Bies said.

A refrigerated environment helps ensure that the finished product — frozen catfish fillets — meets all quality and safety standards. With input from the MSU Extension Service, the plant implemented the Food and Drug Administration’s required Hazard Analysis and Critical Control Point (HACCP) standards in 1998.

“There are a lot of different ways you can mess up a good catfish,” Battle said. “We want to be remembered for high quality and producing the best-tasting fish in the world.”

Today, employee turnover is low, production remains steady, and Pride of the Pond is a bright spot in the northwest Mississippi agricultural landscape. But the industry and this company are struggling through some hard times.

Bill Gidden, Pride of the Pond’s general manager and one of the original investors, said the U.S. catfish industry, in which Mississippi is the major player, is now producing about 300 million pounds of processed catfish, down from a high of 600 million pounds a few years ago.

“This industry has hit the perfect storm,” the general manager said.

High demand encouraged the still-young industry to overproduce, which always drops prices. However, at the same time prices began to fall, input costs rose.

“Feed prices went crazy because of the high cost of soybeans and the other grain commodities used in catfish feed,” Gidden said.

Significant amounts of excess product had to be sold really cheaply, and many farmers lost so much money they went out of business. The industry has lost 50,000 acres of ponds in the last five years. Supply has tightened up and prices have risen by about 50 percent.

“At the same time, Vietnamese fish and other imports came in at a considerably lower price,” Gidden said. “Today, even more acres are going out of production.”

Gidden and Battle both said imports are unfairly pressuring U.S. farm-raised catfish. U.S. catfish are grown under stringent standards that ensure the quality and safety of the product, and it costs money to meet these requirements. Imports do not have to meet U.S. quality standards in production, and the lower-cost product is flooding U.S. markets.

“Where the market will level with demand and price, I’m not really sure yet,” Gidden said. Despite the challenges, Battle said Pride of the Pond’s goal is to pay attention to detail and continue to deliver the best product to cooks nationwide.

“On-flavor is everything to us,” Battle said. “Our quality and service will determine whether or not we stay in business. We want to compete with the alternatives market on quality, delivery and sales, not just price.”
Most citizens in the developed world only think about human-wildlife conflicts when they make the news — for instance, when an unfortunate deer collides with an equally unfortunate motorist. But the staff at MSU’s Center for Resolving Human-Wildlife Conflicts (CRHWC) thinks about the coexistence of humans and wildlife every day.

This center was established in the MSU Department of Wildlife, Fisheries and Aquaculture in July, but it grew out of the long-standing Berryman Institute. Since 2003, the Berryman Institute Eastern Unit had been based in the MSU Forest and Wildlife Research Center. It became a separate organization after federal funding to Berryman was cut in 2008 and 2011 because of the recession and reduced congressionally directed funding.

Jerry Belant, who has studied human-wildlife conflicts for 20 years, leads the activities for the newly-created center.

“If you think of increasing human populations and wildlife populations, not only in the U.S. but also globally, this leads to deleterious effects,” Belant said.

The center’s multifaceted goals follow the university’s land-grant mission: to conduct research, provide educational outreach and promote undergraduate and graduate education concerning the resolution of human-wildlife conflicts.

“We want to be holistic and complete,” Belant said. CRHWC research addresses conflicts locally, nationally and internationally. For example, researchers in Mississippi are looking into ways to mitigate crop and forest damage and prevent disease spread by feral pigs. Other projects include analyzing black bear-human conflicts in Michigan and Missouri, as well as livestock predation by jaguars and cougars in Columbia.

Bronson Strickland, CRHWC coordinator for Extension and outreach at the center, stresses the importance of making the research available to the public.

“We’re communicating research-driven topics regarding human-wildlife conflicts and disseminating that information in a manner that people can use, understand and apply,” Strickland said.

According to Strickland, the center’s future plans include more hands-on education.

“We want to develop a training center where we can provide hands-on educational opportunities for Extension personnel and natural resource professionals,” Strickland said.

The center’s recently launched Web site is another vehicle for disseminating information to the public. Visitors to the site — www.humanwildlifeconflicts.msstate.edu — will find current research, publications, advertisements for workshops and symposia, and much more.

CRHWC is active on campus as well, engaging MSU students in human-wildlife conflict resolution. The College of Forest Resources offers undergraduates a concentration in human-wildlife conflicts, which includes an internship with agency professionals.

“We want to make a huge push through graduate and undergraduate education,” Belant said.

Belant credits the supporters who made this new center’s foundation a success.

“I appreciate the support we’ve received from the Forest and Wildlife Research Center, the Mississippi Agricultural and Forestry Experiment Station, the MSU Extension Service and the Division of Agriculture, Forestry and Veterinary Medicine,” Belant said. “We’ve had great internal support from the division, and it’s been very much appreciated.”
A growing number of Mississippians are interested in how their food gets from the farm to the table and are looking for local fruits, vegetables and meat. Ali Fratesi, a graduate student in the MSU Department of Food Science, Nutrition and Health Promotion, said more people are choosing locally grown food. When they do, they can ask farmers how it was grown or raised.

“If we want a more secure food system that increases the health of the environment and our community, we will eat local food from local farmers who use environmentally friendly practices,” Fratesi said.

Fratesi is a partner in Beaverdam Farms in Indianola, where she helps raise pasture-grazed livestock and a variety of vegetables using environment-enhancing farming practices, such as rotational grazing, cover crops and crop rotations. She believes these growing methods can reduce food-borne illnesses, health-care costs and the environmental impacts of farming.

“We also use our farm as a place to educate our community through workshops, internships and tours,” she said. “It’s so important to provide the information people need to make environmentally beneficial decisions.”

One way Mississippians can access locally grown products is through the Gaining Ground Sustainability Institute of Mississippi, commonly called Gaining Ground.

Alison Buehler, cofounder of Gaining Ground, said the institute strives to create a healthier future for Mississippians by providing examples of sustainable living and sharing resources, experiences and educational opportunities.

“Returning to local food, energy, transportation and shared natural resources is our goal,” she said. “We believe Mississippians have the ability to meet the coming challenges through personal choice and change.”

Locally grown food is sustainable because it decreases the need for fossil fuels used to transport the food. Some local produce is grown using organic methods.

“We have seen an increase in demand for local and sustainably produced products in the last three years in Mississippi,” Buehler said. “There are now 85 farmers’ markets in the state, whereas five years ago, there were fewer than 10.”

Buehler said there is a greater demand for healthy, local food than current production can supply. Several farmers have waiting lists of more than 20 families who want to purchase their produce. This increased demand has captured the attention of grocery store chains. Some stores now include a section for local farmers’ produce, Buehler said.

Buehler said that buying locally benefits Mississippi’s economy. For every $100 spent at a national chain, $10 stays in the community. By contrast, for every $100 spent at a local business, $75 stays in the community.

“Not only does buying direct from farmers promote environmental sustainability by decreasing our dependence on nonrenewable resources, it promotes economic sustainability for our state,” she said.

Some Starkville members of Gaining Ground buy grass-fed cattle by the share from a cattleman in West Point, pasture-raised chickens from the Delta, and fruits and vegetables from the Starkville Community Market and local growers.

Johnny Wray, president of Gaining Ground, said sustainability is an issue that impacts everyone.

“I’m discovering more and more people are interested in a sustainable lifestyle, whether it’s through growing their own food, purchasing local produce, conserving energy or eliminating products containing harsh chemicals,” he said. “Living sustainably matters.”
EQUIPMENT SHOW
Provides Education and More
By Meg Henderson • Photos by Scott Corey
On the weekend of October 5-6, the John W. Starr Memorial Forest was abuzz with the sounds of wood chippers, skidders and other forestry equipment. More than 6,000 loggers, landowners, foresters and exhibitors gathered at the Mississippi State University forest for the Mid-South Forestry Equipment Show.

The biennial event is sponsored jointly by MSU, the Mississippi Forestry Association, the Mississippi Loggers Association and Hatton-Brown Publishers. Established in 1983, it is the longest-running show of its kind and one of few that offers live demonstrations of forestry equipment, thanks to Starr Forest’s 8,244 acres.

Misty Booth, forest supervisor at Mississippi State, has worked with the show for seven years. As manager of the equipment show, Booth said she is excited that MSU can provide a venue to serve those in forestry, logging and related industries.

“The purpose of the show is to be an outreach for the technology transfer between the manufacturers and the end users, the loggers. At MSU, our mission is to serve the people of our state. So this is also a great chance for education,” Booth said.

John Auel, MSU Extension associate, coordinates Mississippi’s Professional Logging Manager Program and has worked at the show since 1996. He explained that one reason loggers attend is for continuing education.

“Loggers have to earn 12 hours of continuing education every two years to maintain their qualification,” Auel said.

“I’ve been here the last three times to get my continuing education credits,” said Jeremy Hilton of Tylertown-based Hilton Logging.

Educational opportunities are not exclusively for loggers. Teachers brought their students to observe programs such as the skidder contest, 4-County Electric’s power line safety demonstration and an appearance by Smokey Bear.

Many attendees brought their families to the show. “It’s a family-friendly venue, and it’s for everybody, from the 55-year-old logger getting continuing education credits to his 5-year-old grandchild learning about trees,” Booth said.

The equipment show draws large and small companies from around the U.S. and Canada. It allows exhibitors opportunities for equipment demonstrations and face-to-face interaction with customers.

Justin Webb is vice president of B&G Equipment, a Mississippi-based distributor of brands such as Tigercat. His family and company have a long-running history with the show.

“Our owner, W.J. Bates — my grandfather — helped found the show. He was one of the original board members, so we’ve been coming here since the beginning. This show is the only one we participate in, and we look forward to keeping it going,” Webb said.

This year marked a special celebration for the equipment show site and pavilion. The Mississippi Institutions of Higher Learning approved the dedication of the facility as the Charles E. Burkhardt Pavilion and Site. Burkhardt served as forest supervisor and equipment show manager for 31 years until his death in 2011.

“Charles served the university with a can-do attitude during his tenure, and he is greatly missed,” said George Hopper, dean of the College of Forest Resources. “It is a fitting tribute to name this site, where he contributed so much of his time and energy.”

Above all, Burkhardt worked to educate students and the public about the importance of forestry and forest products, Hopper added.

“Education is at the very core of the equipment show. Companies educate customers. MSU faculty and staff educate loggers, foresters, families and students. It is this common goal that will sustain the event for years to come,” Hopper said.
About 32,000 grasshopper specimens from the Smithsonian Institution are now housed in the Mississippi Entomological Museum to support ongoing research at Mississippi State University.

JoVonn Hill, a Mississippi Agricultural and Forestry Experiment Station research associate in the MSU Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology, has been working since last summer to secure the collection’s loan from the Smithsonian National Museum of Natural History.

The collection is in 150 drawers of dried, pinned and identified insects, many of which have hand-written tags dating back more than 100 years. Smithsonian staff pulled the portion of the collection MSU is borrowing and packed them for transport. Hill and fellow research associate Jennifer Seltzer hauled the insects from Washington, D.C., in a trailer.

The collection arrived July 27, and MSU has it on loan for five years. Hill said they likely can extend the loan.

“This is a research collection,” Hill said. “I’ve been studying the grasshopper species of the Southeast, and this collection will give me more information on how widely a species is distributed and other biological information, as well as provide more specimens to work with.”

Hill said few grasshopper specimens have been added to the Smithsonian collection since the 1970s. While the collection is in MSU’s possession, Hill will be required to curate and add to it.

“To curate it is to keep it up to date, such as when a name is changed or when two previously identified species are determined to be the same,” Hill said. “I’ll add to it when I go out in the field, and I’ll collect for MSU and for the U.S. National Museum collection.”

The grasshopper collection is being housed in the Mississippi Entomological Museum in the Clay Lyle Entomology Complex at MSU.
A long-standing and well-attended festival in Ocean Springs gave Mississippi State University researchers an opportunity to calculate the value of such events to the state’s economy.

The John C. Stennis Institute of Government and Community Development and the MSU Extension Service completed two economic impact studies of the Peter Anderson Arts and Crafts Festival. This annual festival draws more than 100,000 people to the community of 18,000 residents and has a $13 million impact on the local economy.

Al Myles, Extension community and economic development specialist in the Department of Agricultural Economics, and Rachael Carter, project manager with the Stennis Institute, evaluated the economic impact of this festival over two years to calculate its positive influences on the local economy.

“In many communities, festivals and special events are vital to the bottom line of many businesses and the local economy,” Myles said. “The economies of these towns depend on the revenue, employment and income that these events might bring.”

Festival organizers asked Carter and Myles to measure the economic impact and help evaluate consumer support of the Peter Anderson Arts and Crafts Festival, an established, juried art festival held in Ocean Springs for 32 years. Organizers were specifically interested in finding out who attended the festival, how much money nonlocal attendees spent at the event and what was the festival’s overall economic impact.

“Festivals and special events are growing forms of tourism, especially in rural areas struggling to revitalize local economies,” Myles said. “Festivals and events are attractions that have drawing power and staying power. This means they not only bring in new visitors, but they help keep visitors in the area longer.”

Festivals allow even the smallest communities to capitalize on what makes them unique, Carter said.

The first study was conducted by the MSU Extension Service and the second by the Stennis Institute.

“The first study looked at what dollars were being brought in,” Carter said. “We did the follow-up study because the first study generated excitement, got local buy-in and helped land influential sponsors. The goal of the second study was to improve advertising as well as increase local support for the event so that more people would participate.”

While the study was specifically useful to Ocean Springs, it is generally useful to other Mississippi communities seeking to host new festivals or expand existing ones.

“Once the economic impact of an event has been calculated, the potential use of this information is almost endless,” Myles said. “Figures can be used with policymakers to justify continued support for tourism in the area. The information on expenditures by sectors could be used to show the direct impact on the local economy resulting from a specific event.

“These results also could be used to illustrate the benefits of the event to local industry and as a tool for gaining local sponsorship,” he said.

According to the Tourism Division of the Mississippi Development Authority (MDA), travel and tourism rank No. 5 in overall private statewide employment. For the fiscal year ending June 2011, travel and tourism visitors spent $5.97 billion in the state.

Every $1.3 million that visitors spent travelling through Mississippi in 2011 sustained 18 direct jobs and seven indirect and induced jobs, according to MDA information.

While visitors are important sources of income and tax revenue, some festivals are organized simply to add quality of life and enjoyment to a community.

“Not all festivals are trying to bring in people. Not all are tourism events,” Carter said.

Those who coordinate events intended to generate economic impact should conduct an evaluation to determine if their goals are being met.

“An evaluation can help communities determine if the event is accomplishing its goals, and if not, the evaluation can indicate changes that could be made to improve the outcomes of the events,” Carter said.

The Peter Anderson Arts and Crafts Festival in Ocean Springs drew a near-record crowd in 2012.
Long before scientists created commercial fertilizers, farmers used cover crops to increase soil health and productivity, and many of today’s producers are returning to those roots.

Mississippi State University professor Jac Varco, a researcher with the Mississippi Agricultural and Forestry Experiment Station, said a cover crop is one planted during the off-season to benefit the soil. Common cover crops include clover and vetch.

“Deep in our history in the South, cover crops were a fairly widespread management practice,” Varco said. “Our mild winters are an advantage.”

Cover crops help protect soil from erosion and other problems.

“They prevent surface soil crustning and help maintain and improve soil porosity. They are used to prevent erosion, add organic matter, suppress weeds and feed microbes and microfauna, such as earthworms,” Varco said. “Once the cover crop is cut or killed, it remains on the surface as mulch, which helps the soil retain moisture.

“Over time, water quality improves. There are not a lot of disadvantages,” he said.

Certain cover crops can obtain nitrogen from the atmosphere, which reduces growers’ needs for off-farm purchases of nitrogen fertilizer, Varco said.

“Legumes, such as common clovers and vetches, grow readily in Mississippi and accumulate nitrogen through a symbiotic association with certain bacteria that infect the roots,” he said.

After the legume cover crop has grown sufficiently, the producer desiccates it or cuts it. It releases plant-available nitrogen as it decomposes.

Varco said the primary cost of a cover crop is in the seed and planting. Some growers struggle to see the financial benefit of a cover crop that is not harvested and sold.

“Although there are many benefits, they are difficult to quantify economically — except nitrogen. Nitrogen released in plant-available form has a direct, measurable effect on a subsequent crop’s yield,” he said.

More exotic types of cover crops exist, but their seed is more expensive.

“One cover crop that growers have asked about lately is called oilseed radish, forage radish or tillage radish,” he said. “It produces biomass quickly and puts down a root, which helps open up the soil space.”

Generally, this crop is planted in the fall and will not survive a killing frost.

“Many growers like that idea because they don’t want something green when planting in the spring. Some cover crops have to be chopped or desiccated with an herbicide, but if a frost kills it, the grower doesn’t have to,” he said.

Cover crops appeal to organic growers because they can supply nitrogen naturally and provide mulch and other benefits for water conservation and weed control.

Dustin Pinion of Beaverdam Fresh Farms in Indianola said he uses cover crops for many reasons.

“We grow them before and after cash crops to suppress weeds, improve soil fertility and structure, prevent erosion and attract beneficial insects,” he said. “We like to experiment with different cover crops, but our favorites are buckwheat and cowpeas.”

Pinion and his business partner, Ali Fratesi, sell pasture-raised eggs, poultry and hogs in addition to pesticide-free fruits and vegetables.

“Sometimes we plant cover crops after we move our pigs to a new pasture paddock,” Pinion said. “This speeds up the recovery of the disturbed paddock and adds more biomass for the pigs to eat on their next rotation. It also breaks up any compaction that the pigs may have caused during their short stay in each paddock.”

Varco said cover crops can be beneficial for home gardeners too.

Home gardeners can use a winter legume cover crop in their gardens, till it under in the spring, and get a good dose of available nitrogen while also building the soil’s organic matter,” he said. “As people think more about where their food comes from and grow their own, they can see how easy cover crops are to manage. They can take their lawn mower, mow the cover crop, pile up the clippings, till the garden, and then use the cover crop cuttings as mulch.”
Scientists at Mississippi State University have been working to find an inexpensive, attractive way to keep the sand on the 26 miles of man-made beach between Biloxi and Pass Christian, and Hurricane Isaac tested their experimental site.

As the researchers expected, all of the vegetation at the site is still intact and will regenerate. The sea oats that created the foredunes, or the line of sand dunes closest to the water, were flattened by the storm surge but not destroyed.

“The foredunes took the brunt of the hurricane’s storm surge, but root and stem parts of the sea oats were still embedded in the beach from when they were originally planted in July 2009. They will grow back and recreate the dunes,” said Pete Melby, a professor in the MSU Department of Landscape Architecture. “One of the purposes of sand dunes is to serve as a sacrificial formation to protect the mainland from tropical storm wave erosion.”

The dunes on the upper beach were largely intact, with some erosion at their southernmost edge, Melby said. Most encouraging was that the 1-year-old salt marsh was unaffected by the storm.

“We were elated to see that the salt marsh had survived the storm,” Melby said. “That is a big deal because once the marsh is established, it is very beneficial to the rest of the beach.

“The root structure of salt marsh grasses is 90 percent of the plant’s biomass, and one of its main purposes is to protect the beach edge from erosion. The marsh creates much more stability for the beach and contributes to the overall health of the water’s ecosystem,” he said.

Mississippi’s Gulf Coast has faced the challenge of keeping sand on the beach for decades.

“The erosion of the beach since its creation in the 1950s has been relentless. Stopping it is beyond the capacity of individual cities,” said Thomas Cathcart, agricultural and biological engineering professor and Mississippi Agricultural and Forestry Experiment Station researcher. “All cities can do is replenish the beach using dredged sand, and that costs about $9 million each time.”

Since 1995, Cathcart and Melby have researched a sustainable landscape system designed to hold beach sand in place, reducing the frequency with which it has to be replaced. The sand protects Highway 90, which runs parallel to the beach, and the residential and commercial areas on the north side of it.

At the experimental site — a 3-mile stretch of land donated by Harrison County to the Biloxi Bay Chamber of Commerce — Cathcart and Melby planted native grasses, shrubs and trees on the upper and middle portions of the beach that are adapted to the environment.

“Compared to the conventionally managed site, the experimental site has experienced much less wind and rain erosion,” Cathcart said. “The plants effectively create a natural sand dune by catching the windblown sand before it reaches the road. Before Hurricane Isaac, the dunes had grown to become the highest point between Biloxi and Pass Christian. Before planting, it was the topographical low point. Over time the dunes naturally will rebuild.”

Cathcart and Melby estimate the dunes will reestablish themselves within two to three years. Melby said the experimental site will now be referred to as the sustainable beach because of the landscaping’s success at withstanding Isaac’s storm surge.

“This is a system that will work,” Melby said. “It will save money on highway sand clean-ups and on replenishment. It will also be better for the Mississippi Sound and its sea life.”
Right now, you may be reading this at home in your favorite chair or at work behind your desk. You know that wood makes these activities possible. But to a child, the relationship between a tree and finished wood products such as chairs and desks might seem like magic.

For one week in October, the Mississippi State University Department of Forest Products hosts its annual Wood Magic Science Fair to help teach fourth-grade students about the science behind the magic. Groups of students, teachers and parents arrive early each morning and spend the day rotating through 12 interactive, kid-friendly demonstrations with catchy names such as Bubbling Bazookas and Chem-Is-Tree.

The idea for the fair came almost 20 years ago when forest products professor Dan Seale gave his daughter’s third-grade class a tour of the forest products complex. According to Seale, one of the students said to him, “All you’re doing is cutting down the trees and destroying the ozone.” This innocent accusation was the impetus for creating Wood Magic.

The curriculum targets 9- to 10-year-olds because this is when children begin to study math and science at school.

“They’re very formative years,” Seale said.

Creating a curriculum that engages this age group in forest products was an initial challenge for the department, but faculty members strive to meet the students’ and teachers’ needs.

“Our events have changed based on teacher feedback and students’ reactions, so the fair has evolved over time,” Seale said.

For instance, fair coordinator and assistant Extension professor David Jones said that his papermaking station might not sound exciting but is nevertheless effective at demonstrating the science of making wood products.

“When we have a tub of pulp, and we bring different kids up to do the different steps to make the paper, that’s exciting for them because they feel the pulp, and they’re making an actual product,” Jones said.

Haley Lee, a fourth-grade student from Hamilton Elementary School, said she enjoyed the demonstrations. Lee said her favorite station was Wood Sandwich, which shows how plywood is produced by comparing the process to making a grilled cheese sandwich.
“They showed us how to make (the plywood) thicker or thinner and how to make the ‘cheese’ (glue),” she said.

Lee’s teacher, Jennifer Dickerson, appreciated the educational opportunities the fair provided for her students.

“It’s a wonderful way for my students to see what they’ve learned in the classroom applied in real life so they can take better ownership of (the information). I like the way it’s structured, and the kids are able to ask questions and receive immediate feedback from experts in the field,” Dickerson said.

The program as it exists today began as a tour of the forest products complex for elementary students from Starkville, West Point and Columbus. Over the last two decades, it has reached students across Mississippi and continues to grow in popularity with students, teachers and parents.

To date, more than 100,000 students have attended Wood Magic, including the Mobile Fair, which travels to Mississippi schools that are unable to send their students to MSU.

“My daughter’s class started it. I have her daughter here today. So we’ve started the second generation,” Seale said.

“A lot of the students in the forest products program actually went through the (Wood Magic) program when they were in fourth grade,” Jones added.

This event is truly a team effort, he said. Faculty, staff and students from all three departments in the College of Forest Resources facilitate the events.

Rubin Shmulsky, forest products department head, acknowledged the generous financial support the department receives from the community as well.

“The College of Forest Resources and the Forest and Wildlife Research Center put resources into the fair, and we have external sponsors. The Mississippi Forestry Association sponsored the t-shirts this year,” Shmulsky said.

The Wood Magic Science Fair is an excellent opportunity for MSU to carry out its mission of education, both at home and nationwide, Jones said. Its popularity has spread, and institutions such as Virginia Tech University, University of Kentucky and Oregon State University have adopted this program.

“It serves the public by bringing information we have known for a while, as well as new and innovative research, and putting it in the hands of children and their teachers, too, so they’re better educated and can live a more fulfilling life,” Jones added.

“Since forestry and manufacturing of wood is so important, especially in all our communities in Mississippi, we want to educate children about how trees and wood products improve our daily lives.” Shmulsky said. “Indeed, forestry is the greenest industry in the state.”
Sometimes it’s good to drop what we’re doing and get out and visit the neighbors, even if there is other work at hand.

Checking in with the neighbors is a good way to share information, ideas and perspectives that can often help with the work back home. That was the goal for about a dozen MSU Extension agents who attended an in-service agents training and farm tour in northeast Mississippi on Sept. 27.

“The Mississippi Association of County Agricultural Agents was the host/sponsor of our tour,” said Reid Nevins, Extension agent in Lowndes County. “These tours give us agents a chance to see new or different operations up close as a group.”

“Each year we plant oak, maple, river birch, crape myrtle and magnolia seedlings. We grow them up and market them in many sizes to a variety of customers.”

Kent Townsend

By Tim McAlavy
“Aside from the fellowship, we often go home with information or ideas to help our clients in our own county,” Nevins added. “We owe a thanks to Charlie Stokes in Monroe County for helping get funding for our tour vehicle and to Ricky Ferguson, Pontotoc County Extension director, for helping line up some interesting operations for the tour.”

The agents first visited Goldleaf Farms near Pontotoc, a specialty farm that produces distinct trees, according to the farm’s Web site. Goldleaf Farms in Mississippi is a satellite operation of the home farm in Ball Ground, Ga. The 70-acre Georgia farm is the production ground for more than 150 varieties of ornamental trees sold in ball-and-burlap form to the nursery and landscape trades.

Kent Townsend, an MSU graduate, runs the 210-acre Mississippi farm.

“We started the operation here in 2001,” he said. “Right now, we have 200 acres in production. Most of our farm is crop ground that was once enrolled in the Conservation Reserve Program. It was a challenge identifying the best ground for tree production on this farm, but Ricky Ferguson consulted with us and helped us figure that out.

“Tending the trees is a lot of work, but we also have to tend to our customers, too,” Townsend said. “We spend a lot of time networking with our customers and other growers, so we will be able to help a buyer find exactly the size and species they want.”

Kent Townsend
“Each year we plant oak, maple, river birch, crape myrtle and magnolia seedlings,” Townsend added. “We grow them up and market them in many sizes to a variety of customers. We don’t market any trees with a trunk diameter larger than 8 inches, that’s about the limit of what we can dig and ball-and-burlap.”

This fall, Townsend will plant about 2,000 seedlings from 3-gallon containers to supplement the 50,000 ornamental trees already growing on the farm. The plantings are staggered to ensure the farm will have a variety of different sized trees available for customers, he said.

The trees are laid out in neat, well-kept rows so potential customers can visit the farm and see what they will get while it is still growing in the field.

“Tending the trees is a lot of work, but we also have to tend to our customers, too,” Townsend said. “We spend a lot of time networking with our customers and other growers, so we will be able to help a buyer find exactly the size and species they want.

“The down economy has hurt our sales a little bit because we do a lot of business with the landscaping trade, but it will rebound when the economy recovers and the construction industry starts rolling again,” Townsend said.

He said the most popular sellers for Goldleaf Farms are magnolias and colorful maples and oaks.

The second tour stop provided Extension agents a look at an operation that is vastly different in size and scale from Goldleaf Farms. They visited St. Bethany Fresh, a fledgling hydroponic greenhouse-tomato operation near Tupelo.

Steve Hale, an MSU graduate and former crop consultant, owns and operates St. Bethany Fresh with his family. Production takes place in a four-bay greenhouse that
measures 88 feet wide by 128 feet long. The greenhouse is double skinned; fans circulate air between the outer and inner plastic skins to provide the insulation necessary for strict climate control in the greenhouse.

The growing environment inside is monitored and controlled by a computer system that regulates temperature, humidity, drip irrigation and fertilizer application. An insect excluder at one end of the greenhouse allows in fresh air but catches any insects before they enter.

“Our plants are grown in perlite blocks,” Hale said. “The vines grow upward but also loop around each row in the greenhouse. Our irrigation water comes from a well and goes through a reverse osmosis system that allows us to control the acidity/alkalinity of the water…we want the pH between 5.5 and 5.7.

“We grow Geronimo tomatoes — a disease-resistant, indeterminate variety — and so far we are having real success with it,” he added. “The greenhouse allows us to produce and market fresh tomatoes year-round through a variety of outlets.”

Ricky Ferguson, Pontotoc County Extension director, said the initial investment to get this type of greenhouse established and running ranges from $250,000 to $350,000. Hale purchased his greenhouse through CropKing, an Ohio-based company that specializes in controlled-environment agriculture and hydroponics. CropKing manufactures and distributes greenhouses, hydroponic systems, supplies and equipment to growers in the U.S., Canada, Europe, Mexico and the Caribbean, according to the CropKing.com Web site.

“With this system we can produce fresh, chemical-free tomatoes year-round,” Hale said. “We’re still establishing our customer base — it takes two to three years to do that — but we are producing a consistent product that our customers really like, especially our restaurant customers.”

Extension agents learned more about catering to customers at Pine Meadows Farm near Caledonia, the final stop on their in-service field tour.

Dwight and Jean Colson grew up in the area and started Pine Meadows Farm in 1975, producing cotton, corn, soybeans, wheat, oats and pine trees. In 2000, Dwight’s brother Paul gave him some pumpkin seeds from his Kentucky farm and told him to try a few acres.

The Colsons planted 3 acres that year. Twelve years later, they are producing pumpkins, winter squash and ornamental vegetables in a 25-acre pumpkin patch that fuels their agritourism enterprise known as Country Pumpkins. Customers can purchase locally grown farm products during a fun family trip to the farm from late
September through early November.

“We marketed our you-pick pumpkins on the honor system for about 10 years,” Colson said. “You came out and selected what you wanted and left payment in a box we placed in the field. Nowadays we have a check-out system in place and a lot of fun attractions and things to do while you are here. It has really paid off.”

Seasonal attractions include a playground, hay rides, walk-through corn maze, hay-bale maze for younger visitors and a grill that provides food and drink. The farm also hosts birthday parties and school groups in-season on an appointment basis.

“We weren’t sure how to exactly lay out our corn maze, but our MSU Extension agents used GPS technology and tools to help us with that,” Colson said. “It’s one of our more popular attractions.

“Right now, we are producing 72 varieties of pumpkins, gourds, winter squash and ornamental vegetables, and we have 600 acres in traditional crop production,” he added. “Country Pumpkins is a lot of work, but we really enjoy it... and our customers.”
“We marketed our you-pick pumpkins on the honor system for about 10 years. You came out and selected what you wanted and left payment in a box we placed in the field. Nowadays we have a check-out system in place and a lot of fun attractions and things to do while you are here. It has really paid off.”

Dwight Colson
Mississippi 4-H’ers from 42 counties put their talents on display at 4-H Day at the Mississippi State Fair on Oct. 13.

Exhibits by 4-H members totaled 1,225 this year, said Larry Alexander, 4-H youth development specialist with the Mississippi State University Extension Service.

“This is a way for our youth to display the work they have done throughout the year in their counties,” Alexander said. “They put a lot of effort into their project areas during the year, and those who place in their local contests have their projects and exhibits judged at the state fair.”

Displays and exhibit categories include agribusiness, horticulture, creative arts, natural resources, clover kids, fashion design, kids in the kitchen, and health and safety. 4-H Leadership Team members manned booths for hands-on science experiments, and robotics team members showed off their self-engineered robots.

Members who either made or selected clothing as a project participated in the fashion show. A public speaking competition was held off-site at the Cattlemen’s Association. Livestock shows of sheep, swine, meat goats, dairy goats, beef cows and dairy cows went on throughout the day.

Alexander said state fair events are exciting for 4-H members and their parents, but the hands-on learning and companionship is what keeps members interested.

“I really enjoy being in 4-H because I like to get out and meet new people and do new things. If I were not in 4-H, I would not get to do these things,” said 11-year-old Galin Burton, who has been a member of DeSoto County 4-H for five years. “This year, I’ve got exhibits in the 4-H Village, and I’m participating in the fashion revue.”

Her mother, Carol Burton, said 4-H has proven to be a great venue for learning and socialization.

“Being involved in 4-H gives Galin the ability to explore things other than what she gets to experience at school and at home, and to meet new people,” Carol Burton said. “I serve as an adult volunteer, so I’m able to participate in activities alongside her. We have friends all over the state now. 4-H broadens both our outlooks and is an enjoyable activity for both of us.”
Perhaps best known for its livestock program, 4-H has added other programs as lifestyles have changed and technology has advanced.

“All of our programs are tried and tested with research-based methods, and they do work,” Alexander said. “We’ve recently added the science, engineering and technology program, or SET, because many of our young people in the state are performing below the national average in science and math. We want to try and implement programs that will foster an interest in and help strengthen those skills.”

In addition to SET, 4-H focuses on healthy living and citizenship. More than 110 years since its inception, 4-H has served more than 6.5 million people in the United States.

“4-H has something for everyone, and it is constantly evolving and advancing. That is a large part of its appeal,” Alexander said. “The program also is very accessible because it is in every county in the state.”

Paula Threadgill, interim state 4-H program leader, said the 4-H Leadership Team gives youths an invaluable opportunity to develop their skills.

“The youth who are members of the leadership team get more of an opportunity to develop their communication skills because they assist with all of our state programs, including Club Congress and Project Achievement Day,” Threadgill said. “They also have the opportunity to attend our national conference in Washington, D.C., where they serve on teams to solve political, health or civic issues that parallel real issues.

“We have great youth, and 4-H provides a way for them to grow into productive citizens,” she added.
When Mississippi sod farmer David Rainey says, “Business is better than last year,” he is not suggesting it is good.

The Alcorn County farmer said he sees greater challenges in turning a profit in 2012 than when he started Rainey Sod Farm about 36 years ago. Rainey said he started downsizing his sod business when the housing market bubble burst in 2007.

“The cost of production is still making it tough. It may be easy to make a dollar, but it’s getting hard to hold anything out of it for the profit margin,” he said. “I’ve cut my sod acreage in half and my labor costs by more than half.”

Rainey converted some of his older, nonirrigated sod fields to soybeans when turf sales declined.

Wayne Wells, MSU Extension turf specialist, said the sod market is tied closely to home sales and new construction. The economic downturn in recent years prompted many of the state’s sod growers to reduce their sod acreage, diversify with other crops or leave the business completely.

“Building construction depends mostly on two things: economic conditions and the weather,” Wells said. “When people are able to landscape and build, more sod is sold. Even though sod seems like a nonperishable product, growers need to move it. Otherwise, their input costs will continue to grow from mowing, pesticides, fertilizer and irrigation to keep it healthy.”

James Henderson, MSU Extension forestry specialist, said reports on national and regional construction show the industry is strengthening.

“Over the past year, housing starts are up almost 24 percent nationally and 27 percent in the South,” Henderson said. “This is the third year of improvement for new home construction since 2009. Given the current level of both new and existing homes on the market, we should see continued increases in new home construction.”

Rainey said producers who want to get into the sod business need to choose their locations carefully.

“It is better to locate near good markets to reduce freight costs,” he said. “Buying out an existing farm can be more profitable in the long run than starting a new one because you won’t be competing with another business for sales.”

Rainey is also finding success with some of the less common sods.

“Bermuda is what most farms grow because builders like the less expensive grasses,” he said. “But we are seeing an increased interest in zoysia grass. The people who chose zoysia love it.”

Wells said after Hurricane Isaac, growers will be keeping an eye out for increased disease pressure.

“Wet leaves, cloudy skies and high humidity increase fungal organism activity. Most sod producers hope for good weather to prevent the need for any treatment,” he said. “Regardless, they want the sod to be clean when it transports because when it gets to its destination, water will be added. If any disease is present, it will explode.”

Wells said fall armyworms can cause a similar challenge.

“Producers do their best not to ship sod that could cause an insect outbreak,” Wells said. “However, under hot summer conditions, it takes only three to five days from the time an adult fall armyworm moth lays her eggs till hatch, so oftentimes it unjustly reflects poorly on the producer when the sod becomes infested with armyworms shortly after installation.”
A Mississippi State University biologist’s fascination with crocodiles has brought together researchers from the United States and Australia to study the genetic building blocks of a reptile order.

In the process, they hope to discover ways to conserve endangered animals, harness the antibiotic properties of alligator blood and isolate the genes that determine gender.

“Humans have had a complex relationship with crocodilians for most of their history,” said David Ray, a researcher with the Mississippi Agricultural and Forestry Experiment Station and assistant professor in the MSU Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology. “We respect and admire them, as evidenced by the numerous references to them in historical literature and art, as well as the plethora of current television documentaries, but we’re also a bit terrified by them.

“They’re one of the few groups of animals out there that make a habit of considering people as potential food,” he said.

Ray said crocodilians include true crocodiles, alligators, and gharials. Caimans live in Central and South America, while gharials are an endangered species native to India.

“Caimilians represent big business,” Ray said. “In the U.S., Australia and several other countries, alligator and crocodile skins and meat are valuable commodities.”

Ray recently received funding from the National Science Foundation for a collaborative project with other scientists involved in crocodilian research. Each researcher hopes the genetic information stored in the crocodilian genome will answer different questions.

Ray is most interested in the role DNA plays in the body shape of all crocodilians.

Ray said a genome is the complete set of genes in an organism. A gene is a segment of DNA. He compared the information contained in a cell to the information found inside.

“Imagine a cell is like a book. When you look inside the book, you see text made up of letters. Now, imagine the letters are all mixed up and only form a sentence every once in a while,” Ray said.

“When scientists look at the text and see a sentence that makes sense, that is a gene. That particular segment of DNA has letters in a unique order the scientists can identify. When we put all of those sentences together, we have text that makes sense; we have mapped out all of the genes of a genome,” he said.

Because genes determine physical and inheritable characteristics in an organism, scientists can figure out which genes determine which physical traits. For example, in the crocodilians, researchers hope to learn which genes determine how rough or smooth the saltwater crocodile’s skin is.

Out of the 2.5 billion “letters” in the crocodilian’s “text,” Ray and his colleagues hope to find 20,000 “sentences,” or genes, in the genomes of three crocodilians: the American alligator, the Australian saltwater crocodile and the Indian gharial.

Such significant genetic information could have an impact on wildlife conservation, including ways to preserve one of the research subjects, the gharial. This crocodilian is visibly different from its relatives, with completely webbed rear feet and a long, tapered snout that ends in a soft bulbous nose in males of the species.

Ray said there are only about 200 gharials left in the wild.

“Part of the reason for that is the difficulty these animals have surviving in environments other than the very specific one they are adapted to,” he said. “By gaining information from their genome, we increase our chances of improving captive and wild breeding programs.”

While genomic research is challenging and complex, Ray said this type of basic science is fundamental to understanding a wide range of topics that impact human health.

“Getting genome sequences of organisms gets us to the basics of what that organism is and where it came from,” he said. “The genome is the source of the variation we see in any population; it is where all of our differences and similarities come from. Understanding the genomes can lead to improvements in medicine and to identifying the genetic causes and potential cures for diseases.”

Daniel Peterson, director of the MSU Institute for Genomics, Biocomputing and Biotechnology (IGBB), said the original scope of Ray’s NSF funding was limited to sequencing only a portion of the crocodile, alligator and gharial genomes.

“Recent breakthroughs in DNA sequencing technology, coupled with financial and technical support from the IGBB, permitted expansion of Dr. Ray’s research to include the complete genome sequencing of all three species,” Peterson said. “Crocodilians are the closest living relatives of birds. Information about crocodilian genomes will not only help protect crocodilians, but may provide insights into how to better protect birds in the wild and on the farm.”

Peterson said MSU formed the IGBB in 2010 to increase the university’s role in the world of biomolecular research. Ray’s project is one of the IGBB’s largest research initiatives.

“MSU has the technology and expertise to make significant contributions to basic and applied science while advancing opportunities for students interested in biology and related careers,” he said.
The South Mississippi Branch Experiment Station in Poplarville recently won first place in the first annual All-America Selections’ Landscape Design Contest.

“We were thrilled and honored to have been selected from among several AAS display gardens in the United States and Canada,” said Gene Blythe, MSU assistant research professor of horticulture. “We used the planting beds in the station’s rose garden to more closely resemble a home garden so visitors could easily envision ways to use AAS flower and vegetable winners in their gardens.”

Blythe said the station’s design theme, “Bridging the Seasons with All-America Selections,” demonstrated an ever-changing display of color and form throughout the year.

All-America Selections opened the contest to the more than 180 AAS display gardens across the United States and Canada in honor of the organization’s 80th anniversary. Scoring criteria were based on photo quality, design description, overall attractiveness of the design, promotion of the display, and quality and creative use of AAS plant winners.

The South Mississippi Branch Experiment Station used 57 different AAS winners spanning the organization’s 80-year history, from the 1934 winner, ‘Chrysanth’ calendula, to the 2013 winners, ‘South Pacific Scarlet’ canna and ‘Cheyenne Spirit’ coneflower.

“The South Mississippi Branch Experiment Station did a fantastic job of changing their plantings of AAS winners according to the season,” AAS said in a press release announcing the winners. “The judges noted how precise Mississippi State University was in their labeling of AAS winners, the pleasing plantings, the orderly submission of contest materials, the high-quality photos and the Southern Gardening video produced by the MSU Extension Service.”

The South Mississippi Branch Experiment Station is part of the Coastal Research and Extension Center and the Mississippi Agricultural and Forestry Experiment Station. The station’s trial and display gardens are open to the public free of charge year-round.
1/82: Tate County

MSU in Tate County:
Tate County Extension Service
P.O. Box 177
#1 French’s Alley
Senatobia, MS 38668
Phone (662) 562-4274
Fax: (662) 562-6874
E-mail: tate@ext.msstate.edu

County Seat: Senatobia
Population: 28,886
Municipalities: Senatobia, Coldwater
Commodities: Cattle, Cotton, Corn, Peanuts, Rice, Sweet Potatoes, Sorghum, Soybeans, Wheat
Industries: AES Outdoors, Advanced Urethane Technologies, Aluminum Extrusions, BMW, Baddour Center, Carlisle Syntec, Cardinal Conveyor, Chromcraft Furniture, RR Donnelley & Sons, Magnolia State Die, PK USA, Southern Timber Products, Twin Creeks Technologies, Williams Plantation
Natural Resources: Arkabutla Lake

History Notes: Senatobia received its charter in 1860, one year before the start of the Civil War. During the course of the Civil War, the town was burned twice by federal troops. It is also said that Confederate General Nathan Bedford Forrest spent the night in Senatobia just before his famous raid on Memphis. Rumor has it that he bunked at the old Greely Hotel located on Front Street.

Attractions: Farmers’ Market, Mayfair, Optimist Five Star Races, Tate County Fair, Memorial Gardens, Sycamore Park, Tate County Heritage Museum, Sycamore Arboretum, Northwest Mississippi Community College

Did you know? Charles Meriwether gave the town the name Senatobia, which means “White Sycamore,” the symbol for “rest for the weary.” Senatobia served as a rest stop for Choctaw Indians who regularly traveled to Hot Springs, Ark., seeking out the legendary healing powers of the springs there.

“Tate County — home of Senatobia, nicknamed the “Five Star City” and named “Mississippi’s Best Place to Raise Kids” by Bloomberg BusinessWeek — is a wonderful place to live. We have beautiful landscape with half of the county in the delta and half in the hills. The citizens here are always extending their hospitality to welcome new residents.”

Shelli Benton, County Director

Editors note: 1/82 is a regular feature highlighting one of Mississippi’s 82 counties.
MSU Names Delta Building for Former Administrator

Mississippi State University recently named a building in honor of a retired agricultural researcher and administrator.

More than 200 attended the Aug. 30 dedication of the new Verner G. Hurt Research and Extension Building at the MSU Delta Research and Extension Center, despite inclement weather brought by Hurricane Isaac.

During more than four decades of service to MSU, Hurt was director of the Mississippi Agricultural and Forestry Experiment Station and professor and head of the Department of Agricultural Economics. He received numerous awards from agricultural organizations and associations.

Hurt’s career epitomized the land-grant ideals of teaching, research and service. Many of his students have been recognized at the state, national and international levels for their contributions to agriculture.

“Dr. Hurt was a great teacher and administrator, and is a great Mississippian. No one is more deserving of having a building dedicated to him. This structure will extend his legacy in agriculture for many, many years to come,” said MSU President Mark Keenum.

The dedication ceremony took place in the new facility’s 2,000-square-foot library. The Hurt Building contains more than 19,000 square feet of office and research space. Designed to be energy-efficient, the building allows for natural lighting.

“Dr. Hurt has dedicated his life to the Delta and the people of Mississippi. Located in the row crop center of the state, the Hurt Building is a fitting tribute to Dr. Hurt’s legacy as MAFES leader,” said MAFES Director George Hopper.

Covering more than 4,800 acres, the Delta station is one of the largest single agricultural research sites in the world. The center focuses its work on catfish, corn, cotton, rice and soybeans — the five leading commodities of the Delta.

MSU Veterinary Student Wins National Scholarship

A Mississippi State University veterinary student interested in bovine health recently won a national scholarship.

Matt Mundy, a third-year student at the MSU College of Veterinary Medicine, received an American Association of Bovine Practitioners’ Amstutz Scholarship. This is the first time an MSU student has received this prestigious award.

Mundy received his bachelor’s degree in animal science from MSU in 1996. After graduation, he worked for Aesland Farms in north Mississippi before embarking on a career farming cattle and row crops. His experiences owning, operating and managing a large cattle operation led him to shadow veterinarians and ultimately return to MSU to pursue his doctor of veterinary medicine degree.

A native Canadian, Mundy grew up in Carrollton, Ga. He said he plans to return to Canada after graduation to begin a job with Metzger Veterinary Services in Ontario. Mundy said he intends to be a food animal practitioner and focus on the health of feedlot cattle.

“My family has a history of working in the medical field,” Mundy said. “My dad, granddad and uncle built great reputations by caring for their clients’ individual needs, and I hope to do the same.”

The $7,500 scholarship is named for a leading authority on bovine diseases, Dr. Harold E. Amstutz. He is also known for developing national and international organizations devoted to bovine veterinary practice, including the American Association of Bovine Practitioners, which is an international professional organization of more than 6,000 veterinarians.

MSU Names Animal, Dairy Sciences Head

Mississippi State University named John Blanton Jr., a researcher with 20 years of experience in animal and food science, head of the Department of Animal and Dairy Sciences.

Blanton has been a research program manager at the Samuel Roberts Noble Foundation in Ardmore, Okla., since 2008. He gained faculty and administrative experience at Texas Tech University and the University of Groningen in the Netherlands, along with industry experience from KVS Service in Georgetown, Del., and Intervet Inc., now Schering-Plough, in Millsboro, Del.

“Dr. Blanton is coming to MSU with an outstanding record of teaching, research and service, and we are confident that under his leadership, the outstanding programs in Animal and Dairy Sciences will excel,” said George Hopper, director of the Mississippi Agricultural and Forestry Experiment Station and dean of the MSU College
of Agriculture and Life Sciences, which includes the Department of Animal and Dairy Sciences.

Blanton earned bachelor’s and master’s degrees from New Mexico State University in animal science and population genetics, respectively. He earned a doctoral degree in muscle biology from Purdue University.

“Mississippi’s livestock and dairy industries are important contributors to the state’s economy, and our ability to support these industries is vital to their stability,” said Gary Jackson, director of the MSU Extension Service. “We are pleased with the experience and expertise Dr. Blanton will bring to this department.”

Blanton assumed his duties Dec. 1, replacing Mark Crenshaw, who served as interim department head since 2011.

**Peanut Equipment Donation**

A two-row digger shaker donated to the Mississippi Peanut Growers Association by Kelley Manufacturing Company was demonstrated recently at Parrish Farms in Holmes County. The association has given the Kelley equipment to the Mississippi Agricultural and Forestry Experiment Station for use with peanut variety trials on the farms of cooperating producers and in MSU test plots. On hand for the demonstration were, from left, Brad Burgess, MSU variety testing director; Malcolm Broome, Mississippi Peanut Growers Association executive director; Keith Weeks, Kelley Manufacturing territory manager; Daniel Parrish, Mississippi Peanut Growers Association board member; and Reuben Moore, MAFES associate director. (Photo by Kat Lawrence, MSU Office of Ag Communications)

**MSU Partners With Marine Institute to Study Gulf of Mexico**

Dr. Kent Hoblet, dean of the MSU College of Veterinary Medicine, addressed a press conference Oct. 24 at the Institute for Marine Mammal Studies in Gulfport to announce a formal partnership between MSU and the institute. Scientists from the university and institute will work together to study and protect the marine resources of the Gulf of Mexico. During his remarks, Hoblet said the partnership will also provide research opportunities for MSU students and help expand the veterinary medicine curriculum. (Photo by Bob Ratliff)
As a boy growing up in central Mississippi, Joe Gordy never imagined that his love of flowers would grow into an accomplished career.

Gordy, a Mississippi State University alumnus, has a passion for floral design that began in childhood.

“As a child, I was fascinated with plants and flowers. I grew up on a farm, and I loved working in the flower garden,” Gordy said. “Horticulture was a subject I wanted to study because I have always been interested in plants. But design is what I love.”

Gordy graduated in 1963 from the MSU College of Agriculture and Life Sciences (CALS) with a horticulture degree and several design awards to his credit. He immediately went to work and spent 14 years in the retail floral industry and in residential and commercial interior planning and design. He then spent more than 10 years as the director of product development with Knud Nielsen Company, a prominent manufacturer and importer of dried flowers.

“Knud Nielsen processed and sold naturally dried plants and flowers and came along before the industry had what are referred to as silk and fabric flowers,” Gordy said. “When I worked for them, I took their product to trade shows and into the marketplace. That experience really prepared me to take on the next phase of my career.”

Gordy and his wife, Carol, who is also a floral designer, purchased Natural Decorations Inc. (NDI) from Knud Nielsen in the early 1990s. The couple led the company to its current standing as the world’s foremost provider of floral and botanical reproductions.

“All of our flowers and designs are made from high-quality fabric and mimic the colors and textures found in nature as closely as possible,” Gordy said. “We strive to make our products as botanically correct as possible.”
NDI’s products are used by interior designers and have appeared in several popular interior design magazines, such as Elle Decor, Traditional Home and Veranda. NDI designers have created arrangements for celebrity homes, the Academy Awards, the Rose Parade, the White House, and television and movie sets. In January, NDI accepted its seventh ARTS Award, which is a peer-nominated prize for professionals in the home accents industry.

NDI’s only showroom is an 8,000-square-foot facility in High Point, N.C. All floral designs are created at the NDI headquarters in Brewton, Ala.

Gordy has been a member of the American Institute of Floral Designers (AIFD) for many years and has served as national president and vice president. Through the AIFD, he was invited three times to decorate the Reagan White House for Christmas. He also served as a Rose Parade judge as part of the Pasadena Tournament of Roses, decorated at Ellis Island for a birthday celebration of the Statue of Liberty, and served as one of six expert floral design judges for the 1993 World Cup of Floral Design in Sweden.

But Gordy has not forgotten his alma mater. He serves on the MSU Foundation Board of Directors as a representative of CALS. He was named Alumnus of the Year in 2004 by MSU and Alumni Fellow in 2008 by CALS. In 2010, he and his wife endowed two faculty positions: the Joe and Carol Gordy Endowed Chair in Horticulture and the Joe and Carol Gordy Endowed Professorship in Horticulture.

“Mississippi State did a lot for me through the years. I walked away with an education that has served me well,” Gordy said. “And now I want to give some of that back to future horticulture and floral design students. I think that is important.”

Gordy is admired for his work ethic, personality and generosity.

“Joe is revered as one of MSU horticulture’s best products,” said Lynette McDougald, an instructor of floral management in the MSU Department of Plant and Soil Sciences. “He has a wonderful eye for design, and that is reflected in every arrangement his state-of-the-art facility makes. Once you talk to him, you understand how he became one of the greats in permanent botanical production. He is a wonderful industry model for our students.”

His hands-on approach has played a major role in his success.

“He connects with people on a personal level,” McDougald said. “When I visited with one of my classes from the university, Joe greeted each of his staff by name as we toured. We could tell Joe knows his employees, and they know Joe.”

The endowments will help give other students the opportunity to follow their dreams, said CALS Dean George Hopper.

“The benefits provided by Joe and Carol will positively impact our students for years to come,” Hopper said. “Joe Gordy is a man of high character and determination. He serves as a role model for our students, exemplifying how hard work, cultivating God-given gifts and following your passion lead to success.”
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)

Smokey Bear was a hit with young and old at the Mid-South Forestry Equipment Show. (Photo by Scott Corey)