The efforts by faculty, staff, and students have made 2010 another great year for Mississippi State University’s Division of Agriculture, Forestry, and Veterinary Medicine. We have seen growth in enrollment, research activity, student and faculty achievement, and private support.

We continue to make strides in our research, which is ranked seventh in the nation for agricultural research by the National Science Foundation.

Ninety-nine percent of the members of the College of Veterinary Medicine’s class of 2010 passed the North American Veterinary Licensing Examination on their first attempt.

Enrollment in the College of Agriculture and Life Sciences has increased by 14 percent for undergraduate students, by 10 percent for master’s students, and by 5 percent for doctoral students.

We have been mandated by the IHL to plan for an overall budget reduction of about $18 million through FY 12. I have been working closely with the deans of our colleges and directors of our major research and outreach units to prepare plans that accomplish this goal. We remain hopeful that the cuts will not be nearly this significant.

More than 130 employees in the Division took advantage of the retirement incentive offered by MSU. We are setting priorities for refilling these positions, and many employees have taken on additional responsibilities to enable us to continue to meet the needs of our stakeholders.

MSU’s Extension Service and the Mississippi Agricultural and Forestry Experiment Station held listening sessions around the state in an effort to make sure we are addressing the needs of Mississippians from a wide variety of backgrounds.

During 2010, the administrations of the College of Agriculture and Life Sciences and the College of Forest Resources were combined, but the colleges remain separate units. The new administrative structure is more efficient while maintaining the outstanding programs for students in both colleges.

We were pleased to complete the 2-year renovation of the Lloyd-Ricks-Watson Building in the heart of our beautiful campus. The 81-year-old building now bears the names of the three men who served as director of both the Experiment Station and Extension Service: Edward R. Lloyd Jr., James R. Ricks, and Vance H. Watson.

The Division was involved in one of 2010’s biggest news stories for the state and nation—the Deepwater Horizon oil spill in the Gulf of Mexico. MSU economists collected and assessed data on the potential economic impact of the oil spill. Personnel at the MSU Coastal Research and Extension Center in Biloxi fielded calls and worked with seafood industry clientele and others dealing with the crisis. The long-term impacts on the environment, on families, and on businesses will be studied by MSU for many years to come.

A year ago, we never dreamed of a disaster like the 2010 Gulf oil spill, but I am pleased with the way our Division responded. Mississippians can rest assured that regardless of the future events and needs they may face, MSU will be ready to lend a hand.

Gregory A. Bohach
Vice President
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Mississippi's families, farmers, communities, and educational institutions continue to push through the economic challenges of recent years. Agriculture experienced a much better year than in 2009, when excessive rainfall reduced the value and yields of many crops. Instead, Mississippi's farm value is predicted to increase 19 percent, one of the largest year-to-year increases ever experienced.

Under the leadership of Dr. Mark Keenum, MSU's role as "The People's University" is supported by the efforts of one of the strongest divisions within the university—the Division of Agriculture, Forestry, and Veterinary Medicine. Dr. Greg Bohach, the Division's vice president, has begun his second year of guiding researchers, Extension workers, and faculty members.

MSU is uniquely positioned to serve Mississippi's agriculture industry, communities, and families through its broad range of instruction, research, and outreach functions at strategic locations throughout the state. Functions of each of these units are performed at the Division's headquarters, 17 branch experiment stations and other units, four diagnostic laboratories, four research and Extension centers, two research forests, and 82 county Extension offices.

Rapid advancements in technology and research require changes for Mississippi agriculture so producers will remain competitive in the global economy. Division employees help Mississippians and communities overcome challenges by enabling them to understand and apply the latest and most advanced trends to solve their problems. College students; agriculture, forestry, and natural resource producers; agribusiness firms; industrial firms; families and youth; local government entities; and numerous other organizations and associations all benefit from the teaching, research, and service offerings of the Division.
2010 was a year of achievement for the College of Agriculture and Life Sciences with an increase in enrollment, more students successfully entering the workforce, and new programs to prepare students for the future.

Student enrollment in CALS was up 13 percent from 2008 to 2009. For example, undergraduate enrollment in agricultural economics increased 30 percent from last year, and graduate enrollment increased 27 percent. Even in today’s job market, 90 percent of the department’s 2009-2010 graduates found employment with many top companies.

Poultry science boasts 100 percent job placement, with most jobs available in the state.

The college’s students are finding internships and are being recognized in national competitions.

- Apparel, textiles, and merchandising students interned for Country Music Television and for fashion designer Vera Wang.
- A former biochemistry student interned for and is now employed with the FBI.
- Animal and dairy science majors won a gold award at the North American Intercollegiate Dairy Challenge.
- Agricultural and biological engineering teams excel each year in the International Genetically Engineered Machine, or iGEM, competition.

Unique degree offerings continue to make CALS programs stand out.

- Food science, nutrition, and health promotion has joined Mississippi University for Women’s Culinary Arts Institute to provide a new bachelor’s degree program. Culinology will be administered jointly by the universities and is one of only 12 in the country.
- Landscape architecture and landscape contracting is the only department of its kind to integrate the two curricula for a dual-degree program. The newly accredited master of landscape architecture program has seen dramatic growth, strengthening the department’s capacity to train research leaders.
- The master’s distance program with an emphasis in health promotion offers opportunities for those who must work while continuing their education.

In an effort to offer affordable tuition, plant and soil sciences has teamed with three other universities to provide specialized agronomy courses, decreasing the need for each university to hire specialized faculty.

USDA designated the Mississippi Entomological Museum in the Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology as an Eastern Region Identification Center. The museum is an integral part of identifying and controlling insects that pose a major threat to American agriculture.
Mississippi Entomological Museum director Richard Brown and MSU entomology researcher Sang Mi Lee compare moth samples to the images posted on the Moth Photographers Group website. MSU entomologists work to identify destructive invaders that could cause significant damage to U.S. agriculture.

Senior nutrition major Madison Jones of Germantown, Tenn., and MSU agriculture vice president Gregory Bohach work side-by-side at the annual sweet potato drop on campus in November to help bag 15,000 pounds of the roots. The Mississippi Food Network distributes the farmer-donated potatoes to food pantries and soup kitchens across the state.

POINTS OF PRIDE

- Three students from CALS spent 3 weeks in China studying that country’s extensive use of season-extension technology, which allows a crop to be grown beyond the normal production window. One method gaining popularity in Mississippi is growing crops in high tunnels, which are unheated greenhouses that capture the sun’s heat. MSU in collaboration with the universities of Arkansas and Florida received a $149,826 grant from the U.S. Department of Agriculture’s International Science and Education program to take students and producers from the three states on season-extension agricultural tours in China.

- Enrollment in CALS has increased 14 percent for undergraduate students, 10 percent for master’s students, and 5 percent for doctoral students.
Undergraduate enrollment in MSU’s College of Forest Resources increased by 24 percent in the fall of 2010, and there are many reasons why it is the fastest-growing college on campus.

The College of Forest Resources is the only one in the state offering 4-year degree programs in natural resources. With the current trend toward more eco-friendly living, many students are seeking to impact the planet with careers in forestry, forest products, wildlife, fisheries, and aquaculture. Since 1954, more than 4,000 students have received degrees from the College of Forest Resources and are engaged in successful careers dedicated to conserving, protecting, and using natural resources.

While this training has evolved over the years with new technologies, the goal remains the same—to sustain natural resources for future generations. The college is one step closer to providing this training not only in Mississippi, but globally. This fall, the college was approved to offer a master of science degree program with an emphasis in forest management economics. This program will be delivered via the distance learning capabilities of MSU’s Division of Academic Outreach and Continuing Education.

The student chapter of the Forest Products Society has been recognized as one of the top three outstanding student chapters in North America. These students perform service activities and host informative meetings. Students in the college consistently receive outstanding presentation and poster awards at professional meetings throughout the nation.

These students have learned how to be the best from their faculty members who are recognized throughout the nation as experts in their respective professions. The college boasts the highest percentage of faculty with the title of fellow—more than any other college in the university. CFR faculty members also hold more patents than those in other colleges.

Finally, faculty members and students in the College of Forest Resources perform ground-breaking research with the potential of making significant impacts on our world. The CFR has one of the largest graduate programs in the nation, with 108 master’s students and 64 doctoral students enrolled in the fall of 2010.

Before undergraduate students accept their diplomas, each one has completed a hands-on, professional job within their field of study.

For all of these reasons and more, there is no doubt that the College of Forest Resources is growing and is still the greenest option for students wishing to pursue a career in forestry, forest products, wildlife, or fisheries.
New software developed by a CFR student will provide insight into deer populations by analyzing rack sizes on bucks from trail camera photographs. After seeing a demonstration of the software at a national meeting, a Texas-based company obtained a license agreement from MSU to market the software as BuckScore. The software will be available to educators, scientists, and hunters to age and score antlers of white-tailed deer.

Scientists and graduate students in CFR are studying a fish that can grow more than 7 feet long and 200 pounds and survive outside the water for up to 2 hours. Alligator gar may not sound like they need protecting, but experts have observed declining populations due to loss of spawning habitat and overfishing by anglers.

A National Science Foundation grant is allowing CFR to develop educational activities for elementary and high school students and teachers in genomic and post-genomic biology. Workshops for students from historically underrepresented groups and secondary teachers are being developed, as well as science fairs for elementary school students and teachers.

Conservation camps in 2010 offered outdoor education opportunities for all ages. Three of the inter-generational camps were useful to those who participate in the Envirothon or on Wildlife Habitat Evaluation Program teams. A Natural Resources Summer Camp was geared toward high school students, introducing them to the diverse world of natural resources and exploring career opportunities in environmental science and conservation.

MSU now offers an online graduate degree program in forestry to help working professionals and others further their education. In 2010, CFR began providing a master of science program through distance learning. The 30-hour graduate curriculum covers forest management, natural resource policy and law, and forest economics.
MSU’s Forest and Wildlife Research Center provides scientific research focused on sustaining, conserving, and utilizing the state’s forest products, forest, wildlife, fisheries, and water resources.

Natural resource management and research are important to the state’s economy and to Mississippians. The industry—which includes forestry, forest products and furniture, and wildlife and fisheries recreation—provides an economic impact of more than $20 billion to the state’s economy. These resources also provide non-monetary benefits such as clean air and clean water, and they contribute to the livelihood of Mississippians.

The FWRC is committed to developing new technologies to further improve the economy, protect resources, and improve quality of life in the state. One discovery that could have an immediate impact on Mississippians is the use of bio-oil from woody materials.

FWRC scientists have developed a method to convert bio-oil, a crude-like substance made from woody biomass, into a hydrocarbon fuel. This upgraded bio-fuel can be blended with gasoline and diesel fuels or transported to a petroleum refinery to be turned into gasoline or diesel fuel. The production of bio-oil will help generate new companies in rural areas in the Southeast and create new markets for pulpwood and wood waste products.

The abundance of natural resources has positioned Mississippi to be a leader in bio-fuel technologies, and companies are beginning to realize the abundance of raw materials within the state. FWRC research has found that more than 3.5 million dry tons of logging residues and unharvested first thinning-sized materials are available each year for bio-fuel raw material. FWRC scientists have also developed a software program to determine where the resources are available in the state. Through the use of satellite imagery and ground analysis, the software allows forest products and potential bio-fuel companies to determine the economically feasible location to place a plant or mill with the closest access to the raw materials and workers.

Natural resources add income through wildlife recreation, hunting, and fishing. The rural nature of Mississippi has provided opportunities for landowners to develop natural resource enterprises. These enterprises not only provide extra income for landowners but also enhance wildlife habitat through active management. This management is good for deer, turkeys, birds, and small mammals, and it also increases property values by an average of $333 per acre, or 36 percent.

Despite challenging economic times, FWRC scientists are dedicated to developing technologies to advance the economic wealth, environmental sustainability, and improved quality of life associated with natural resources of the state. While the FWRC is supported through state funding, our scientists generate an additional $2.57 in extramural grants for every state dollar received. Clearly, Mississippi is poised to offer solutions to the environmental issues facing the state and nation through research in the FWRC.
MSU’s Forest and Wildlife Research Center and federal experts are helping landowners and farmers eradicate wild pigs that are digging up trouble across the state and causing major crop damage. USDA Mississippi Wildlife Services Director Kris Godwin and Paul Sellars, a tree farmer in Oktibbeha County, assess damage on Sellars’ property caused by wild pigs. The pigs’ deep rooting has made it difficult for Sellars to maintain parts of his land.

Researchers with MSU’s Forest and Wildlife Research Center and the Mississippi Agricultural and Forestry Experiment Station are optimistic that portable concrete dams, called weirs, can protect downstream water from agricultural runoff. Mississippi is a leader among Gulf Coast states in developing and implementing nutrient-reduction strategies to protect the Gulf of Mexico.

POINTS OF PRIDE

- Forest and Wildlife Research Center researchers found that the economic benefit to the state from wildlife recreation is about $2.8 billion annually, including more than 66,000 full- and part-time jobs that pay more than $1.15 billion in wages and salaries. Hunting generates the largest output at $1.18 billion, while fishing and wildlife-watching generate $773 million and $829 million, respectively.

- FWRC scientists are helping Mississippi’s forest industry take advantage of an old technology that turns residues from sawmills and furniture production into environmentally friendly energy sources of heat and electricity. The production of wood pellets is also a good use of the small trees that are thinned from Mississippi pine stands.
The College of Veterinary Medicine experienced many accomplishments in 2009-2010. Students excelled on the national and international stages, and faculty and staff continued to have a great impact on animal and public health through teaching, research, and outreach. In addition, CVM expanded services to provide better patient care and learning opportunities for students.

CVM crafted a partnership with Premier Radiology in Starkville to offer new hope to animals diagnosed with cancer. The center accepts human patients in the mornings for diagnostic imaging and cancer treatments, and animal patients get these same services in the afternoons. Cutting-edge treatments are available through this facility, which is one of the few radiation oncology centers that offer intensity modulated radiation therapy, a dramatic breakthrough in cancer therapy.

CVM’s large animal ambulatory service helps prepare students for practice in rural communities. In 2010, the service made 853 calls to farms. Faculty spent 1,363 hours on farms teaching students and delivering veterinary care to large animals.

A $100,000 donation from Walter and Jean Rotchild of Memphis honored two of their beloved pets and allowed the college to expand its physical rehabilitation program by purchasing a small-animal underwater treadmill. The treadmill helps patients quickly return to full, pain-free function after serious injuries, and veterinary students, interns, and residents learn advanced rehabilitation techniques.

While these services aid patients coming to Starkville, CVM partnered with private practice veterinarians in the Jackson area to provide around-the-clock emergency care and referral services for critical cases there. CVM staff at the Animal Emergency Referral Center in Flowood handle critical surgery and orthopedic and neurological referrals from practicing veterinarians. No elective surgeries, primary care, or routine treatments are provided. Local veterinarians staff the center in the evenings, on weekends, and on holidays when most private practices are not open. A significant number of MSU’s referral cases come from the Jackson area, and this clinic provides more convenience for those clients.

CVM also invested in a mentoring program designed to encourage minority students to pursue educational opportunities in science. MSU received a National Science Foundation grant to collaborate with Alcorn State University, Jackson State University, and Tougaloo College to recruit future graduates from underserved communities. These institutions’ outstanding, highly motivated undergraduates make good veterinary students.

Claire Fellman, a fourth-year student from Ocean Springs, received a Morris Animal Foundation Veterinary Student Scholars grant to study immunosuppression in dogs. This research has implications for both animals and humans. She placed first in the national competition among students from some of the nation’s most prominent colleges of veterinary medicine and students from Argentina, Australia, and the Netherlands. Her success points to her superior scholarship and high potential as a clinician-scientist, as well as the quality of her faculty mentors.
Claire Fellman, a fourth-year CVM student from Ocean Springs, prepares canine blood cells for culture as part of her research on the immune system of dogs. Her presentation on this grant-funded project received the highest award in an international competition.

Before the 2010 pandemic flu outbreak, Henry Wan, assistant professor in systems biology, developed a computer program that provides a better understanding of why flu viruses mutate and how they spread. His long-term goal is to use the research to aid in the development and production of flu vaccines.

Dr. Mark Lawrence, Michelle Banes, and Simon Menanteau examine a circular representation of the genome sequence of the bacterial chromosome. Lawrence led the CVM investigation that revealed the genome sequence of a bacteria that affects the state’s channel catfish industry. To map the genome sequence, the research team determined the exact order of more than 3.8 million DNA bases that make up its chromosome.

Tuskegee University veterinary student Alexandria Murphy, left, performs a procedure for Dr. Andrea Varela-Stokes, assistant professor at MSU’s College of Veterinary Medicine. Murphy took part in the college’s summer research program to explore careers in biomedical research. MSU’s new mentoring program may increase the number of minority students enrolled in veterinary schools or advanced degree programs in science.

Dr. Stuart Shoemaker maneuvers equipment inside the mobile MRI unit for horses at CVM. Shoemaker and Dr. Bob Schneider, background, are co-owners of MREquine. MSU equine surgeon Dr. Sarah Sampson, left, and equine surgery resident Dr. Cathleen Mochal, along with other staff members, also took part in this 2010 procedure at MSU. Veterinarians will turn to MRI when other diagnostic tools fall short.
MAFES DIRECTOR’S REPORT

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MISSISSIPPI AGRICULTURAL AND FORESTRY EXPERIMENT STATION

The Mississippi Agricultural and Forestry Experiment Station conducts research focused on economic development and improved nutrition, food safety, and human health benefiting all citizens. MAFES develops new products and processes, improves plant and animal production systems, and conducts fundamental research with the potential to enhance commodity production.

MAFES operates a statewide laboratory in 16 locations. These branch units represent all soil types, topographies, climates, and concentrations of plant and animal production systems found in Mississippi. They allow scientists to conduct site-specific studies under conditions that match those on the farm to ensure that research meets the needs of Mississippians.

About 112 scientists work at these branch locations and in 16 departments on the university’s main campus. MAFES scientists have led MSU to rank in the top 7 in the nation for agricultural funding. MAFES scientists are in the forefront in crop variety trials that offer growers insight into a seed’s potential. This decades-old research service removes some of the unknowns as growers select varieties for the next year’s crop. MAFES conducts trials for the state’s major agronomic crops including corn, cotton, rice, soybeans, oats, wheat, and ryegrass.

Mississippi’s sweet potato crop has benefited significantly from MAFES research. Ranked second in the nation in planted sweet potato acreage, Mississippi’s sweet potato production was valued at $56 million in 2010. MAFES scientists have developed a computer model that will allow sweet potato growers to input their current growing conditions—such as weather, soil moisture, number of nematodes, and timing of fungicide and herbicide applications—to help predict how their crops will turn out.

MAFES scientists are studying bioenergy crops that offer a viable alternative for Mississippi producers by producing biomass. A recent breakthrough was the feedstock development of giant miscanthus, which can grow as tall as 12 feet.

Another form of energy is ethanol, which is developed by fermenting starches from corn and other grains. Livestock and poultry industries have begun to use a nutrient-rich byproduct of this fermenting process. MAFES scientists have evaluated the product and found that by removing fiber, a diet containing the byproduct may reduce feed costs for producers.

Perhaps one of the most profitable research endeavors is the development of turf grass. More than a decade of research by MAFES scientists has led to four new and improved Bermudagrass cultivars that are for sale in Mississippi. These grasses are on the fields at MSU’s Scott Field, the Rose Bowl, Chase Field, Petco Park, Kauffman Stadium, and the Home Depot Center. The grasses are commercially licensed and generate about $3 million in revenue for the university each year.

Finally, MAFES is working to keep families safer while saving producers money. MAFES scientists have developed a process to use X-ray machines to decontaminate food products. Research has shown that X-ray doses can kill dangerous bacteria and extend the product’s shelf life without altering the taste. This technology has been tested on seafood and fresh produce.

Clearly, MAFES scientists are making a difference in the state and region. Through improved nutrition, food safety, and human health, as well as improved processes for plant and animal production, MAFES research impacts each Mississippi citizen.
MSU assistant professor of food safety and microbiology Barakat Mahmoud uses the RS 2400 X-ray machine to rid seafood and produce of harmful bacteria. He conducts his research at MSU’s Experimental Seafood Processing Laboratory in Pascagoula. MAFES researchers have found that not only does the X-ray technique kill pathogenic bacteria, but it also extends the shelf life of irradiated food.

Nick Simmons of Saltillo is one of two evaluators using a new method of scoring hair shedding on this herd of Angus cattle on MSU’s South Farm. MSU researchers are working to establish an evaluation system for cattle hair shedding. Additionally, they are looking for performance differences among cattle that shed their winter coats earlier than others.

MSU research horticulturist Guihong Bi and Natchez Trace Greenhouses manager Mark Terkanian of Kosciusko discuss hydrangea production techniques that may help commercial growers.

Nick Simmons of Saltillo is one of two evaluators using a new method of scoring hair shedding on this herd of Angus cattle on MSU’s South Farm. MSU researchers are working to establish an evaluation system for cattle hair shedding. Additionally, they are looking for performance differences among cattle that shed their winter coats earlier than others.

Karen Templeton

Kat Lawrence

Scott Carey

POINTS OF PRIDE

- Coastal Plain Branch Experiment Station personnel completed about 3 miles of nature trails for the general public and school groups to take advantage of the area’s vast natural resources and educational opportunities. More than 30 kiosks are strategically located throughout the trail and describe all aspects of forest and wildlife ecology. Two outdoor classrooms capable of accommodating 30-40 people have been constructed to enhance educational opportunities. Most of the trails are wheelchair-accessible and all are accessible by golf cart or ATV.

- MSU cotton breeders in Stoneville are developing lines of cotton that show great potential against the reniform nematode, a pest that caused a loss of about $130 million to the national crop last year.

- Successful aquaculture production relies on acceptable water quality, and researchers at MSU’s Thad Cochran National Warmwater Aquaculture Center in Stoneville are helping fish producers achieve optimum water quality in their ponds. Scientists run requested tests and give farmers results so they can correct problems from imbalances of oxygen, pH, hardness, and nitrogen.
Extension’s overall purpose is to educate people and help them make informed decisions related to their vocations, their families, and their environment.

We believe that agriculture and its related enterprises are of major economic importance in the state, and we direct programs and resources to reflect this importance. We also believe that quality of life is affected by the relationship between people and their environment, therefore we continue to emphasize environmental issues. We recognize the critical need for human resource development in our communities and are helping families and youth meet those needs in an ever-changing society.

In 2010, Mississippi State University’s Extension Service offered a variety of short courses to provide guidance based on the most recent research information. Some of those events addressed landscapes, greenhouse tomatoes, high tunnels, lead-paint safety, urban forestry, food as a business, rural tourism, healthy families and homes, and risk management.

Events such as garden, forage, and row-crop field days continue to draw large crowds. Many farmers took advantage of other learning opportunities for beef, poultry, and catfish producers.

Mississippi’s 4-H youth development program continues to be one of the best in the nation and addresses topics such as health, technology, the environment, and shooting sports. While many youth programs are decreasing in membership, Mississippi’s 4-H grew 4 percent in 2010, to a total involvement of 109,135 youth. Our enrollment mirrors the state’s diverse population in race, gender, and age. Youth maintain involvement because of the leadership opportunities afforded by 4-H.

Extension personnel can be proud of their responses to 2010 disasters, including tornadoes, floods, and the oil spill—which came along with the ongoing economic challenges. From MSU Extension’s Center for Governmental Training, which serves as the lead training agency for Incident Command Support for first-responders in the state, to volunteers in our Master Gardener programs, the organization stayed busy all year.

The 2010 retirement incentive enticed away 73 quality workers with many years of service to this organization. Those retirements included Dr. Melissa Mixon, who had served as the interim Extension director for 2 years. While the workforce reduction will help the Extension Service accommodate ongoing budget reductions, the better news is that we have many dedicated workers remaining to shoulder the load and serve Mississippians.

In 2011, Dr. Gary Jackson, a Mississippi native with more than 25 years experience in agricultural education, will become MSU’s Extension Service director. He has been a member of MSU’s College of Agriculture and Life Sciences faculty since 1990 and has served as assistant and associate dean of the college, as well as director of the School of Human Sciences and interim state program leader for Extension’s Family and Consumer Sciences program. Before this appointment, he was interim associate vice president of academic affairs in the Office of the Provost and executive vice president at MSU.

Dr. Jackson will inherit many challenges, but he will find a solid foundation and dedicated staff ready to serve the state in 2011.
A new program conducted by MSU’s Extension Service is looking at ways to stop a pest that kills an estimated 12 million cubic feet of the state’s pine forests annually. MSU experts believe preventative measures will better control the southern pine beetle, and they have been working with the U.S. Forest Service to provide landowner education and financial incentives for foresters and loggers.

The National Extension Association for Family and Consumer Sciences recognized MSU’s lead safety training programs conducted by family resource management agents. Area Extension agents entered into partnerships with national organizations to provide lead-safety training using video-conferencing delivery methods to reach more than 500 homeowners and contractors.
The FY 2010 budget was reduced several times during the year because of the continued decline in state revenues. The final budget was more than 8 percent below the previous year’s budget.

More than 130 Division employees took advantage of a special retirement incentive on June 30. Numerous positions will remain vacant, and travel is restricted.

The 2010 figure included stimulus funds, which made up about $1.7 million of the College of Veterinary Medicine’s budget.
The research, service, and teaching missions of the Division of Agriculture, Forestry, and Veterinary Medicine are carried out through numerous departments, schools, and other units.

**COLLEGE OF AGRICULTURE & LIFE SCIENCES**
- Agricultural and Biological Engineering
- Agricultural Economics
- Animal and Dairy Sciences
- Biochemistry, Molecular Biology, Entomology, and Plant Pathology
- Food Science, Nutrition, and Health Promotion
- Landscape Architecture
- Plant and Soil Sciences
- Poultry Science
- Human Sciences

**COLLEGE OF FOREST RESOURCES**
- Forestry
- Forest Products
- Wildlife, Fisheries, and Aquaculture

**COLLEGE OF VETERINARY MEDICINE**
- Basic Sciences
- Clinical Sciences
- Pathobiology and Population Medicine

**FOREST & WILDLIFE RESEARCH CENTER**

**MISSISSIPPI AGRICULTURAL & FORESTRY EXPERIMENT STATION**

**MISSISSIPPI STATE UNIVERSITY EXTENSION SERVICE**
- Center for Governmental Training and Technology
- Computer Applications and Services
- 4-H Youth Development
- Office of Agricultural Communications
- Southern Rural Development Center

*The faculty and staff of these units are affiliated with the departments and schools in the College of Agriculture and Life Sciences, College of Forest Resources, and College of Veterinary Medicine.*
Programs are further organized into specialized, often interdisciplinary, units. Several regional, national, and international organizations’ programs are located in the Division.

Agricultural Pest Management Program
Association of Southern Region Extension Directors
Bulldog Forest
County Extension Offices
Crosby Arboretum
Delta Health Alliance
Electron Microscope Center
Food Science Institute
Formosan Termite Research Facility
GeoResources Institute
Human Dimensions and Conservation Law Enforcement Laboratory
Franklin Furniture Institute
Jack H. Berryman Institute East
Life Sciences and Biotechnology Institute
MAFES Sales Store
Mississippi-Alabama Sea Grant Consortium
Mississippi Horse Park, Agricenter, and Fairgrounds
Mississippi Water Resources Research Institute
Natural Resource Enterprises
Pace Seed Technology Laboratory
Postharvest Collaborative Agribusiness Support Program
Professional Golf Management Program
Research and Extension Centers
Social Science Research Center
Southern Climatic Housing
Thad Cochran National Warmwater Aquaculture Center
Wood Utilization Research Center

In addition to the special and allied units, the Division has formed many partnerships with producer organizations, federal agencies, county boards of supervisors, the Mississippi Legislature, private industries, and individuals. These partnerships allow the Division to focus on serving the people of Mississippi.
Mississippians relied on the expertise and guidance from the People’s University during the 2010 tornadoes, floods, and Gulf of Mexico oil spill.

MSU Extension’s Center for Governmental Training serves as the lead training agency for Incident Command Support for first-responders across the state. More than 400 MSU Extension Service and Mississippi Agricultural and Forestry Experiment Station personnel have been ICS trained.

After training, the Extension and MAFES personnel join teams to perform a variety of services following a disaster, including damage assessment of row crops or livestock operations and assistance at shelters.

County Extension personnel responded to requests from local emergency management directors and other officials in counties hit by tornadoes and flooding. Using knowledge of their counties and the resources available, they helped organize efforts to secure temporary housing, child care, food, and other necessities.

Tornadoes left thousands of acres of timber on the ground, and Extension forestry professionals immediately began getting information to forest landowners on casualty loss, salvage procedures, and other recovery steps.

MSU Extension horticulturists provided similar information to homeowners with storm-damaged shrubs and trees.

MSU was the lead institution in the Northern Gulf Institute’s regional recovery efforts. Extension economists with expertise in natural disasters, seafood processing, and marine aquaculture production collected and assessed data on the potential economic impact of the oil spill.

Extension marine resources personnel at the MSU Coastal Research and Extension Center in Biloxi fielded calls and worked with seafood industry clientele. Along with other agencies, MSU Extension hosted workshops that provided quality assurance education for the Gulf seafood industry.

MSU Extension is active in the Extension Disaster Education Network. EDEN participation helps link MSU educators in various disciplines with colleagues across the nation, enabling them to use and share resources to reduce the impact of disasters.

Extension personnel in a variety of disciplines participate in Mississippi Emergency Management Agency drills and other training activities every year. In the case of an emergency, these individuals will be part of MEMA response teams.
MISSISSIPPI’S TOP COMMODITIES

2010 VALUE OF PRODUCTION

Poultry & Eggs $2.47 billion
Forestry $1.08 billion
Soybeans $821 million
Corn $555 million
Cotton $363 million
Rice $224 million
Catfish $199 million
Cattle $169 million
Hay $116 million
Hogs $96 million
Other Horticulture $93 million
Milk $74 million
Sweet Potatoes $56 million
Wheat $23 million
Peanuts $12 million
Grain Sorghum $2 million
Government Payments $520 million

TOTAL $6.88 billion

Sweet Potatoes - Mississippi sweet potato growers are predicted to have a 116 percent increase in their crop’s farm value, a significant improvement from 2009, when rains destroyed 75 percent of the crop at harvest. The state has 19,200 acres of sweet potatoes, and 90 percent of these acres are within 40 miles of Vardaman. Mississippi sweet potatoes are prized nationally for their sweetness and color.

Cotton - Cotton is no longer king in Mississippi, but it rebounded well in 2010 with a 160 percent increase in the value of lint and a 24 percent increase in the value of cottonseed. Farmers planted 425,000 acres of cotton, which was 120,000 acres more than in 2009.

Poultry - Mississippi’s poultry industry remains the state’s top agricultural commodity by responding to export market changes and meeting the needs of consumers. Poultry ended 2010 with an estimated $2.5 billion production value, an 8 percent increase from 2009. That figure includes a broiler value of $2.3 billion, eggs at $178 million, and chickens at $5 million.
Mississippi Landmarks is a quarterly magazine that provides insight into the teaching, research, and outreach of the Division of Agriculture, Forestry, & Veterinary Medicine.

The MAFES Sales Store is a one-stop shop for MSU’s famous Edam cheese, ice cream, muscadine juice, peanuts, and ribbon cane syrup.

Farmweek is a weekly television news show devoted to presenting a variety of agriculture-related educational topics to the citizens of Mississippi.