

MISSISSIPPI

LANDMARKS

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MISSISSIPPI STATE
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DIVISION OF AGRICULTURE,
FORESTRY, & VETERINARY MEDICINE

RESEARCH, EDUCATION, AND EXTENSION

MISSISSIPPI LANDMARKS

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VICE PRESIDENT'S LETTER

With the end of the calendar year on the horizon, it's natural to reflect on the highlights of 2019, a year of unexpected developments, unprecedented challenges, and exemplary dedication by the administrators, faculty, staff, and students of the MSU Division of Agriculture,

Forestry, and Veterinary Medicine.

In the agricultural world, the news has been dominated by tariffs, weather problems, and changing markets. Our efforts to help Mississippi farmers work as efficiently as possible have never been more important. Our partnerships with commodity groups and other organizations passionate about producing the world's food, fuel, and fiber remain the foundation of our day-to-day efforts. We are stronger together!

This year's harvest reflects the numerous weather/flood issues we experienced. It appears the production of soybeans, rice, and peanuts will all be below 2018 levels. Cotton and corn production should be higher, mainly because of increased plantings. Because of the record-setting number of days that many of our locations experienced flooding, crops harvested this fall will be about 300,000 acres below those harvested in 2018.

This fall, I was privileged to attend the Swisher Sweets Sunbelt Ag Expo in Moultrie, Georgia, to congratulate and support Mississippi's Farmer of the Year, Ted Parker, a cattle producer in Covington County. The cattle industry is vital to Mississippi's agricultural economy, contributing an estimated \$305 million in farm-gate value to the state's economy in 2018.

On campus, we welcomed a fantastic freshman class to the Bulldog Nation. Preliminary enrollment figures indicate that all three of our colleges will set new record highs. Overall, we expect the final data will show about 100 more students enrolled in DAFVM colleges this fall.

One of the most rewarding aspects of my work with DAFVM is seeing the scope of work our people engage in every day. In this issue of *Mississippi LandMarks*, you can read about pine forest bird communities, agricultural literacy programs, mobile apps for hunters, and the impact of marine debris on commercial fishing. We strive to conduct research applicable to Mississippians in every walk of life and to deliver science-based educational outreach across the state. As the state's flagship research university, our work is reaching beyond the borders of our state to impact our region, nation, and world.

We hope you enjoy reading *Mississippi LandMarks* and want to make you aware of new subscriber options. Please see the options listed on the back cover.

REUBEN MOORE
Interim Vice President

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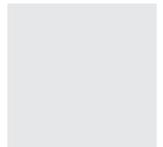
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ON THE COVER

MSU wildlife experts have developed three mobile apps that are benefiting thousands of deer hunters and landowners. See the article on pages 24 and 25 for more information. (Photo by Kevin Hudson)



FARMtastic™ and iFARM

Connect Students to Agriculture

Chocolate milk comes from brown cows. Pigs lay eggs. Cotton comes from sheep. This type of disconnect between agricultural literacy and everyday life led to the development of the Mississippi State programs FARMtastic and iFARM.

Julie White, Extension agricultural literacy specialist, started FARMtastic in 2012 as a partnership between the Extension office in Oktibbeha County and the Oktibbeha County Farm Bureau. The county event quickly grew into a successful statewide program.

“When I would conduct programs in the schools, kids would always have some unusual answers to where their food and clothes came from,” White said. “Ms. Nelda Starks, a retired Extension 4-H specialist, helped me create the first FARMtastic event, focusing on Oktibbeha County agriculture, and it grew from there.”

Since FARMtastic’s first event, more than 27,000 youngsters in 41 counties have visited the traveling exhibit. Shani Hay, Extension agent in Lauderdale County, helps host one of the largest FARMtastic events each year. In May, around 1,200 people attended the Meridian event.

Hay said the more people who are willing to be a part of the event, the bigger the impression it makes on the kids. Without the help of numerous partners, donors, and volunteers at each event, FARMtastic would not be as successful as it is.

“I’ve had children tell me they wish they could ‘live’ in FARMtastic,” Hay said. “So many children are removed from any rural or farm living that they don’t know what they’re missing. Getting to look into the eyes of a 1,200-pound cow is thrilling for kids who have never had that experience.”

Students enjoy the event from the time they enter the Barnyard Bonanza filled with animals until they exit the





“It’s rewarding getting to watch the students learn so much. The main purpose of this program is for students, along with their teachers and parents, to understand where their food and clothes come from.”

JULIE WHITE

FARMvillage, where they have the opportunity to connect the dots from farm to table. Other focus areas included in the exhibit are agronomy, horticulture, aquaculture, forestry, and wildlife.

“It’s rewarding getting to watch the students learn so much,” White said. “The main purpose of this program is for students, along with their teachers and parents, to understand where their food and clothes come from.”

After White saw the success of FARMtastic, she felt it was time to design a new program for older students. With colleagues in the College of Agriculture and Life Sciences School of Human Sciences, the iFARM summer camp was started in 2018 to allow students the opportunity to dig deeper into agriculture.

“Campers get to tour the College of Agriculture and Life Sciences departments, meet local farmers, explore agricultural

careers, and participate in STEM activities,” White said. “They get to see firsthand just how amazing Mississippi agriculture is and explore unique ways their future careers could have them involved in agriculture.”

Helping leave the impression that “agriculture is awesome,” FARMtastic and iFARM are bridging the gap between agricultural literacy and those who are not familiar with the value agriculture has in the daily lives of Mississippians.

“We are lucky enough to have farmers who produce all the necessary stuff for us, and all we have to do is go shopping for the final product,” Hay said. “Children need to understand that life as we know it would stop if farming stopped, and these two programs do a good job at putting that reality into perspective.”

BY MICHAELA PARKER • PHOTOS BY KEVIN HUDSON



Dr. Christine Coker

THE VEGGIE DOCTOR IS IN

Coker's Vegetable Programs Are Assets to Gulf Coast

“One of the reasons I love what I do is because every day is different. I may be at Beaumont working at the station, at a garden club discussing backyard gardening, working with Master Gardeners, training graduate students, or visiting growers. Depending on the day of the week, or the hour of the day, my role changes, but everything I do leads to educating people about growing food.”

DR. CHRISTINE COKER

For most of her childhood, Dr. Christine Coker wanted to grow plants in space.

“I wanted to be a specialist on a NASA mission,” the associate research and Extension professor of urban horticulture recalled. “Although I didn’t exactly go that route, I feel like I made a curve in the road, not a complete turn off the path. I continue to focus my work on feeding people. It’s my passion.”

Coker, an MSU Extension Service horticultural specialist, has been with the Coastal Research and Extension Center since 2001. She is also the research leader of the Mississippi Agricultural and Forestry Experiment Station Beaumont Horticulture Unit in Perry County. Her research interests include commercial vegetable production, home gardening, green roofs, school gardens, and community food systems.

Dr. James DelPrince, Extension floral design specialist, said many of the people Coker serves know her as “the Veggie Doctor.”

“She has taught and influenced thousands of people from Mississippi and beyond how to grow their own food,” DelPrince said. “She has an outgoing personality and the ability to connect people in the maze of horticulture.”

Coker moved to Cross Plains, Tennessee, from Nashville when she was 10 and was introduced to 4-H, a life event she described as the first that led her toward an interest in agriculture. It was during her time as an undergraduate at the University of Tennessee-Martin when her interest in plants was kindled.

“I wanted to study natural resources, but, as a transfer student, I had to do late registration, and the classes were already full,” Coker said. “I took my first plant biology class and was hooked. I majored in biology and did an undergrad research project on environmental stress effects on redbud trees.”

She continued her studies in biology at Austin Peay State University. As a graduate student there, she studied old-growth oak forests in the Land Between the Lakes National Recreation Area. She learned that she wanted to pursue a career that combined her plant research and enthusiasm for service. She would go on to earn her PhD in horticulture at Auburn University.

Coker splits her time between conducting field research with the Experiment Station, writing Extension publications, and coordinating workshops. From those who prefer patio containers to those who operate small farms, she works with many people interested in producing fresh, affordable food.

“One of the reasons I love what I do is because every day is different,” she said. “I may be at Beaumont working at the station, at a garden club discussing backyard gardening, working with Master Gardeners, training graduate students, or visiting growers. Depending on the day of the week, or the hour of the day, my role changes, but everything I do leads to educating people about growing food.”

Coker frequently collaborates with DelPrince on research projects ranging from her work with vegetable variety trials to his work with cut flowers.

“She is highly active within the Mississippi Gulf Coast community and knows the people and organizations that make things happen,” DelPrince said. “She maintains a balance between farm and city, research and outreach, to make impacts to improve lives.”

BY NATHAN GREGORY • PHOTO BY KEVIN HUDSON

ELITE STUDENTS

Have the Right Stuff

What kind of students would want to arrive at class before 6 a.m.?

No matter how much students wanted to learn to fly small unmanned aerial systems (UAS), the wake-up time was a deal breaker for some. That was not by design, but it did help eliminate students who were not serious about the class, said the course instructor, Dr. Amelia Fox, an assistant clinical professor in the MSU College of Agriculture and Life Sciences Department of Plant and Soil Sciences. Over the past two semesters, the number of enrolled students, including faculty members, has risen to 36.

“Students must have a 3.2 grade point average to take the class, as well as be willing to come in between 5 and 6 a.m. for portions of the classes,” Fox said. “These students already have an understanding of how UAS can be used in agriculture.”

The early mornings—when McCarthy Gym and Dorman Hall are clear of other faculty, staff, and students—are the best times for students to practice with their roto-copter and fixed-winged aircraft. Near the end of the semester, they take their small aircraft to the Mississippi Agricultural and Forestry Experiment

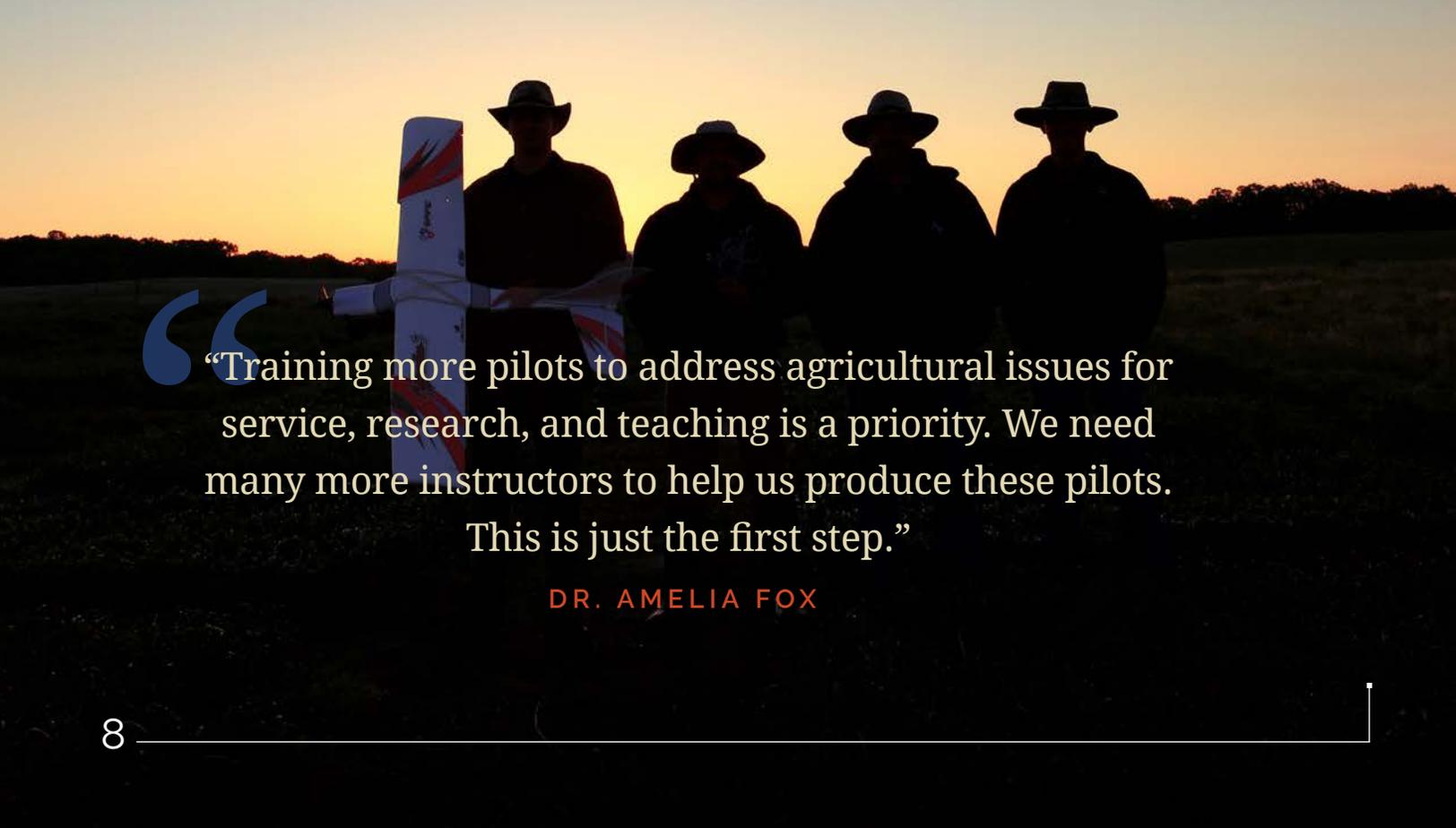
Station’s Henry H. Leveck Animal Research Center, also known as the South Farm, for serious air time.

The spring 2019 class also helped Fox find future instructors. Graham Oakley and Beau Varner, Plant and Soil Sciences staff members, will assume teaching responsibilities for the clinical portions of the class this fall, while Fox continues theory lessons in the classroom.

Oakley, an Extension associate, said the class is intense and not for hobbyists.

“The class prepares us to take the Federal Aviation Administration exam, which is definitely not easy,” he said. “It takes your commitment to the next level. This is not for someone who just plans to fly on weekends. We are looking forward to using drones for our research plots, taking imagery of plants, and studying things like drift issues.”

Varner, a research associate, said his first love is flying the drones over plots, but he also looks forward to seeing students gain flight skills.



“Training more pilots to address agricultural issues for service, research, and teaching is a priority. We need many more instructors to help us produce these pilots. This is just the first step.”

DR. AMELIA FOX

“Learning to fly was a challenge for me because I didn’t grow up playing video games,” he said. “Using toggle switches and levers did not come naturally. Generally, the students with more gaming experience picked up on flight skills faster.”

Fox said there are two facets of training: learning FAA rules (classroom theory) and learning Academy of Model Aeronautics rules (hands-on flight experience).

“Training more pilots to address agricultural issues for service, research, and teaching is a priority,” Fox said. “We need many more instructors to help us produce these pilots. This is just the first step.”

BY LINDA BREAZEALE • PHOTOS BY MICHAELA PARKER



Students prepare an unmanned aircraft during early-morning flight training.

MORNING BIRDS

Internship Develops Undergraduates' Field Skills



Steven Lewis (center photo, left), Corianne Schmidt, Keion Smith, and Dr. Kristine Evans document how birds respond to forest management in the Sam D. Hamilton National Wildlife Refuge.

The interns wake before dawn each day, travel to the wildlife refuge, hike to the target location, and begin their duties as the sun rises. The committed MSU College of Forest Resources undergraduates are documenting the outcomes of forest-management activities at Sam D. Hamilton Noxubee National Wildlife Refuge in Brooksville, Mississippi.

For 10 minutes, one intern listens to birds to determine which species are present. Corianne Schmidt, a senior majoring in wildlife, fisheries, and aquaculture with a concentration in wildlife agricultural conservation, is passionate about ornithology.

She identifies birds by sight and song and then records the number of species she's seen or heard. Schmidt credits an ornithology class taught by Dr. Chris Ayers, an instructor in the Department of Wildlife, Fisheries, and Aquaculture, with teaching her how to identify birds.

While Schmidt documents birds, a second intern helps listen, records data, and keeps time. Sophomore Keion Smith, who is also pursuing a degree in wildlife, fisheries, and aquaculture science, works alongside Schmidt regularly.

The students' project goal is to document how birds respond to forest-management practices, including pine removal and understory burning. They are especially interested in effects on the endangered red-cockaded woodpecker and other species of concern, including the Bachman's sparrow, northern bobwhite quail, prairie warbler, and brown-headed nuthatch.

The interns hike to the next point. They may scramble through dense vegetation or take an easy pace through a mostly open understory. On average, they visit about 10 sample points between 5:30 and 10 a.m.

"We're focused on restoring bird communities that are linked to pine savannahs," said Dr. Kristine Evans, an assistant professor

and avian ecologist in the Forest and Wildlife Research Center who coordinates Schmidt's data collection. "When we manage the land so it resembles historic Southeastern pine forests, we typically see those birds return. For me, it's about helping wildlife managers make conservation decisions based upon real data."

Steven Lewis, Noxubee's wildlife biologist, supervises the identification work, bird tagging, and other wildlife-support initiatives. He mentors both undergraduates.

The mission of the U.S. Fish and Wildlife Service National Wildlife Refuge System is to support wildlife, Lewis said. An agreement between the Fish and Wildlife Service and MSU supports this mission and provides students a prime opportunity to develop field experience that will set their résumés apart from other job seekers in the wildlife and forestry fields.

The internship program, coordinated by Evans and Dr. Leslie Burger, an MSU assistant Extension professor, is reinforcing both students' commitment to working in forestry and wildlife.

"I've always been in love with wildlife and being outside," Smith said. "It's a necessity for the world to have a good balance between wildlife and humans. The more stuff I get to do at the refuge—point counts, wood duck surveys, and tagging species—the more I'm falling in love with it."

Likewise, Schmidt focused on the advantages she is receiving from her internship.

"This research is, overall, giving us a better understanding of how to promote and protect wildlife, especially birds," she said. "We can figure out, how effective are our current methods? I have the drive to get up and do this every day."

BY LEAH BARBOUR • PHOTOS BY MICHAELA PARKER



“We’re focused on restoring bird communities that are linked to pine savannahs. When we manage the land so it resembles historic Southeastern pine forests, we typically see those birds return. For me, it’s about helping wildlife managers make conservation decisions based upon real data.”

DR. KRISTINE EVANS



PESTICIDE EDUCATION PROGRAM

Makes Physical, Digital Strides

MSU Extension finished building its new Termite Technician Training Facility in early 2019, but this building is just one example of the strides its Pesticide Safety Education Program has made in the last 4 years.

Gene Merkl, who has served as program manager since his arrival in 2015, touts a growing digital presence as an equally important development in pesticide safety training. Merkl, a member of the College of Agriculture and Life Sciences Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology, has overseen the establishment of an online training library and recertification process, along with an increased social-media presence and enhancements to research support.

State legislators passed the Mississippi Pesticide Law of 1975 in response to federal laws requiring individual and commercial applicators of restricted-use pesticides to be licensed. Recertification every 3 years for commercial applicators and every 5 years for private applicators is also mandatory. Extension developed certification programs for each class.

“Proper use and handling of all pesticides is necessary to protect the public safety, health, and welfare of Mississippians,” Merkl said. “It is also critical to environmental safety as it relates to crop and pollinator protection in agricultural production. Proper pesticide use in agriculture is not only the law, but crucial to prevent environmental damage, resistance management problems in crops, and damage to neighboring crops.”

Each Mississippi county has an Extension agent responsible for conducting the private applicator training. Before 2018, all commercial applicators and professional license holders were required to attend a face-to-face class every 3 years to recertify their status.

“This involved taking a day away from work for travel and class lasting about 6 hours,” Merkl said. “In an effort to improve efficiency, we developed an online library and training regimen utilizing an external learning management system.”

The system allows recertification candidates to recertify in nine of the 17 Commercial Pesticide Applicator Program categories at their own pace at any location with Internet access through a link from the Extension webpage.

“Proper use and handling of all pesticides is necessary to protect the public safety, health, and welfare of Mississippians. It is also critical to environmental safety as it relates to crop and pollinator protection in agricultural production.”

GENE MERKL

“We estimate that some of our commercial applicators may be saving as much as \$800 to \$1,100 between travel and lost productivity by training online instead of face-to-face,” Merkl said.

For structural pest control training and recertification, there is the 5,000-square-foot Termite Technician Training Facility, also known as T³F, located near the Mississippi Horse Park in Starkville. This \$204,000 project was conceived at the request of industry partners, who footed the majority of the construction bill. The building houses 11 stations that demonstrate real-life structural pest-control situations for training applicators.

Laura Vollar, deputy director of the Mississippi Department of Agriculture and Commerce (MDAC) Bureau of Plant Industry, said the new training center and online training are examples of how MDAC and Extension collaborate regularly.

“Mississippi currently has over 14,000 certified applicators, which include farmers, private business owners, research specialists, public-health employees, and the general public,” she said. “Having a robust Pesticide Safety Education Program serves as the first line of defense to ensuring pesticide compliance and competency. The general public’s increased demand for accountability and product availability all depend on knowledgeable pesticide applicators.”

In 2018, Extension educators conducted 218 private applicator training sessions and certified more than 1,974 private applicators. They also held 25 workshops that provided recertification to more than 359 commercial applicators.

BY NATHAN GREGORY

Gene Merkl, program manager for the MSU Extension Pesticide Safety Education Program, is pictured inside Mississippi State’s new Termite Technician Training Facility, which will provide demonstrations of real-life pest-control situations for training applicators. (Photo by Michaela Parker)

FEEDING THE FUTURE



In many developing countries, fish are vital to life. They provide a nutrient-rich protein source to more than 2.6 billion people, and they offer jobs to millions more.

MSU scientists are leading a global research effort to help fishers and small-scale aquacultural producers supply fish more sustainably.

The Feed the Future Innovation Lab for Fish brings together a network of researchers from multiple universities working to reduce world hunger, improve nutrition, and boost household incomes. Funded by a 5-year grant from the U.S. Agency for International Development (USAID), the lab is a project of the federal Feed the Future initiative. It addresses challenges in the areas of production, harvest, processing, and distribution.

“Fish is the most important animal source food in many developing nations, and it is a highly traded commodity internationally,” said Dr. Mark Lawrence, innovation lab director and professor in the MSU College of Veterinary Medicine Department of Basic Sciences. “It is highly nutritious, providing high-quality protein and micronutrients. By supporting development of aquaculture and fisheries globally, our goals are to reduce childhood stunting and support engagement of women and youth in these economic activities.”

Through targeted research, scientists gather data to help resolve productivity issues, manage risks, and improve nutrition and livelihoods. The first round of research, which began in early 2019, includes one project each in Bangladesh, Kenya, and Nigeria, along with two projects in Zambia. Results from these projects, known as “quick starts,” help scientists decide what research projects should follow.

The quick starts focus on improving fish brood stock through DNA sequencing, improving feed for commercial tilapia

Innovative Lab Fights Global Hunger

producers, examining the postharvest loss of fish, and improving the nutrition of vulnerable populations by analyzing inventories and markets for fish.

Dr. Julius Nukpezah, a lead researcher on the quick start project in Nigeria, said data collected in the study will help scientists locate loss in fish harvests throughout the value chain from production to consumption and develop strategies to reduce those losses. Nukpezah is an assistant professor in the MSU Department of Political Science and Public Administration.

“Our research will identify and create opportunities for technology adoption along the aquaculture value chain in Nigeria, sub-Saharan Africa, and elsewhere in the world,” Nukpezah said. “This will create entrepreneurial opportunities for marginalized groups, reducing poverty and creating a more stable Nigerian economy. It also provides job opportunities in Nigeria and other neighboring countries. An improved aquacultural sector also provides a reliable source of protein for vulnerable groups, including the poor and women and children.”

Research results will help scientists understand more about aquacultural production in these geographical areas and can apply to similar aquacultural businesses in other countries.

“This project has the potential to improve nutrition in some of the world’s most vulnerable households,” Lawrence said. “Much of the land suitable for aquaculture and many coastal regions contain some of the world’s most impoverished populations with high rates of malnutrition and childhood stunting. Mississippi State University aims to be a global leader in finding innovative solutions to reduce malnutrition and stunting.”

The project is led by MSU in partnership with the University of Rhode Island, Texas State University, Washington University St. Louis, and RTI International. The projects get vital expertise from the MSU College of Forest Resources, Social Science Research Center, Bagley College of Engineering, College of Agriculture and Life Sciences, Mississippi Agricultural and Forestry Experiment Station, Forest and Wildlife Research Center, and College of Arts and Sciences.

BY SUSAN COLLINS-SMITH •
PHOTOS BY TOM THOMPSON

A photograph of two scientists in a laboratory. On the left, a man in a white lab coat with a name tag that reads "Dr. M. Mark Lawrence, PhD Bacteriology" is looking down at a large white bucket filled with yellowish water. He is holding a black pen. On the right, a woman in a white lab coat is looking at a clipboard. The background shows a long row of similar buckets on a metal stand, each with a black hose and a red handle. The walls are white with some papers pinned to them.

Dr. Mark Lawrence and Eda Ozdemir, a graduate student in veterinary medical sciences, examine fish tanks in a Feed the Future lab.

“Fish is the most important animal source food in many developing nations, and it is a highly traded commodity internationally. It is highly nutritious, providing high-quality protein and micronutrients. By supporting development of aquaculture and fisheries globally, our goals are to reduce childhood stunting and support engagement of women and youth in these economic activities.”

DR. MARK LAWRENCE



ECONOMIC IMPACT OF MARINE DEBRIS

“Marine debris is a growing problem for our commercial fishers. They often encounter abandoned crab traps, along with various other types of trash that can affect their bottom line, including reduced amounts of shrimp in their nets, damages to their equipment, and lost fishing time .”

DR. ERIC SPARKS

As marine debris piles up in the Gulf of Mexico, so do the costs to Mississippi’s commercial fishers. In 2018, Mississippi State and other community partners teamed up with commercial shrimpers to find out just how much this debris impacts the industry that contributes millions of dollars to the state’s economy annually.

“Marine debris is a growing problem for our commercial fishers,” said Dr. Eric Sparks, MSU Extension coastal ecology specialist and lead researcher on the study. “They often encounter

abandoned crab traps, along with various other types of trash that can affect their bottom line, including reduced amounts of shrimp in their nets, damages to their equipment, and lost fishing time.”

The 2-year study, which ends in December 2020, focuses on shrimpers. One part of the program provides a monetary incentive for licensed and registered shrimpers to turn in the derelict crab traps they catch in their nets. A second phase enlists 20 of these shrimpers, who were trained through Extension,



Dr. Eric Sparks and Dr. Ben Posadas examine the impact of marine debris on Mississippi's commercial fishing industry.

on how to record data for the study. Participants use GPS-equipped cameras to photograph all debris types. They also record information in daily logbooks about debris location, equipment damage, time lost, catch reduction, foregone sales, and debris disposal costs. This information is used to help estimate economic impacts.

Dr. Ben Posadas, an Extension marine economist and coresearcher who developed the assessment methodology for the study, conducted a one-time, pre-fishing season survey along with the daily logbooks and summary reports from the 20 selected shrimpers from June through October 2019. In the preseason survey, boat captains provided information about their crews, boats, and equipment. At the end of the season, Posadas tallied the information from the logbooks and summaries.

"We can't inventory every piece of debris in the Gulf, so I take their information and use a computer program to estimate the impact to sales, jobs, labor income, value added, and tax revenues," explained Posadas, who is also a researcher with the Mississippi Agricultural and Forestry Experiment Station. "This gives us an estimate of how much money and time commercial fishers lose because of marine debris."

Results from this study will help researchers develop a public information campaign to raise awareness about marine debris and may lead to stricter rules regarding trash disposal.

Other states, regions, and countries can use the information as a template for the assessment of economic impacts of marine debris on commercial fishing in those areas.

"We will film a public service announcement about responsible debris disposal," said Sparks, who serves as the assistant director of outreach and coastal ecology specialist for the Mississippi-Alabama Sea Grant Consortium. "We want to help people see the connection between the trash they put out on their curbs and marine debris. Trash from all over the state that doesn't make it to the landfill ends up downstream somewhere. Sometimes that is in the Gulf of Mexico."

MSU collaborated with the Mississippi Coalition of Vietnamese-American Fisher Folks and Families, Mississippi Commercial Fisheries United, and the National Oceanic and Atmospheric Administration Marine Debris Program. The project is funded by the Environmental Protection Agency Gulf of Mexico Program.

The commercial shrimp industry is one of three sectors of Mississippi's commercial fishing industry. In 2015, the latest year for which data is available, the shrimping industry added \$215.4 million to the state's economy and employed 4,276 people.

BY SUSAN COLLINS-SMITH • PHOTOS BY KEVIN HUDSON

DIXIE NATIONAL

Sale of Junior Champions Reaches Milestone

A seed planted 50 years ago has produced a crop of more than \$7.3 million in awards and scholarships.

The Dixie National Sale of Junior Champions was started by Dr. Duane Tucker, MSU Extension livestock specialist, and Rupert O. Buckley, livestock specialist and executive vice president of the Mississippi Cattlemen's Association, as an effort to reward the state's young people for their work with livestock.

Betty Tucker, Duane Tucker's widow, joined the current Sale of Champions committee and MSU administrators to celebrate the milestone.

"He would be so excited he would jump up and click his heels because that's the kind of person he was," she mused. "He would be thrilled for the kids who have benefitted, proud of the Extension agents who mentored them through this process, and grateful to the people who have grown this program to what it is today."

Exactly what is the Dixie National Sale of Junior Champions? Here's the easy answer: an auction of champion market steers, hogs, lambs, and goats selected during the Dixie National Junior Round-Up livestock show.

However, this simple summary does not convey the time, hard work, and money invested by participants and their families as they hone their skills in selecting, caring for, and showing their livestock. It does not accentuate committee members' efforts to cultivate donor relationships to make the event possible. Nor does it acknowledge the charitable donations of meat to food pantries and soup kitchens once the auctioned livestock have been processed.

After 50 years, the size and scope of the livestock show and sale have far exceeded the founders' ambitions.



Betsy Padgett (left), MSU Extension Director Gary Jackson, Angela Love (mother of 4-H'er Tyler Branch), Branch, Betty Tucker, MSU President Mark Keenum, Mississippi Commissioner of Agriculture and Commerce Andy Gipson, and DAFVM Interim Vice President Reuben Moore gathered at an event commemorating the 50th anniversary of the Dixie National Sale of Junior Champions.

"They wanted to benefit youth, to give them a greater incentive to excel and do their best," Betty Tucker said.

The result is \$7,281,924.40 in total of sales from 1970 to 2019. In 1993, a scholarship program was added to benefit even more participants. Mississippi youths have received \$891,200 in scholarships over the past 27 years.

At the very first Sale of Champions, Betsy Padgett's lamb won the Grand Champion title. She's now an MSU Extension agent

in Holmes County, where Duane Tucker began his Extension career.

"That lamb brought me the happiest moment of my life to that point," Padgett shared. "Over the years, I'd had friends I showed with, and it was the first time I beat them!"

In 2019, one of Padgett's 4-H'ers, Tyler Branch, qualified two goats in the sale, making the 50th anniversary especially meaningful for her.

But it was MSU President Mark Keenum who truly brought the story full circle when he addressed the assembled Sale of Champions supporters.

"Dr. Duane Tucker hired me 35 years ago in the Extension Service," Keenum said. "He got me started in my life and career. I'm proud of what Extension does to help our citizens, 4-H youth, and families to have better lives, and our farmers to be more efficient and productive. I'm proud of the role our university plays in this event. This sale instills responsibility and leadership in our young people for the rest of their lives and prepares them for their futures."

BY KERI COLLINS LEWIS • PHOTOS BY KEVIN HUDSON

4-H'er Tyler Branch qualified two goats in the 50th Dixie National Sale of Junior Champions.

“I’m proud of the role our university plays in this event. This sale instills responsibility and leadership in our young people for the rest of their lives and prepares them for their futures.”

DR. MARK KEENUM





Dr. Caroline Kobia (right) and Fashion Design and Merchandising students examine fabric samples displayed by a Cotton Incorporated representative during a tour of the company's Raleigh, North Carolina, facility. A Cotton Incorporated grant took MSU students "From Cotton Fields to Fashion Fields."

COTTON WORKS

Shows Fiber's Path in Fashion



Before fashion designers can create a garment with the right finished look, they have to know the capabilities of the fabric they are working with.

Dr. Catherine Black, a professor of Fashion Design and Merchandising (FDM) in the MSU College of Agriculture and Life Sciences School of Human Sciences, said understanding the characteristics of various types of natural and synthetic fibers is key to working in the textile industry.

“The fiber is the foundation that allows students to make good decisions regarding the end products that they are either producing or selling,” Black said. “Therefore, knowledge about fiber is extremely important.”

FDM professors have won repeated grants from Cotton Incorporated to fund class projects, field trips, and other educational outings. This funding helps make education very hands-on at MSU as students track the path of this major fiber through the entire supply chain.

“If you know your textiles, you will have a job in the industry because you know what you’re dealing with,” said Dr. Caroline Kobia, an assistant professor of FDM. “But there exists a gap between awareness of cotton and understanding how innovative and impactful cotton can be.”

So, students in the program followed cotton, using resources from the Cotton Works curriculum, guest speakers, and travels. Last year’s study kicked off with a trivia night that pitted multidisciplinary teams of students against each other, testing their knowledge of cotton. Next came Denim Days in Nashville,

Tennessee, where students learned about cotton innovations in the denim world.

Other trips took them to visit Cotton Incorporated in Raleigh, North Carolina, and to a Mississippi cotton farm, cotton gin, and business cooperative. Students visited Joe Huerkamp at his Noxubee County farm, a gin in Bogue Chitto, and Staplecotn in Greenwood.

Students put what they learned into practice with a variety of fabrications and projects, showing the results of many of these efforts to farmers across the Southeast at the 2018 Row Crops Short Course. They also tried their hand at visual merchandising, creating displays, and talking with shoppers at the campus bookstore.

“Our students will end up in the fashion industry, and they will one day choose which fibers to use and to buy,” Kobia said. “All fiber manufacturers are competing, so we want them to know the properties of the fibers so they can make wise decisions. Mississippi farmers will benefit as cotton retains its place as the most-used natural fiber in this industry.”

While fashion is important, Kobia said the prevailing climate of the modern fashion industry is sustainability.

“How can we be more sustainable and take care of the planet and the people?” she asked. “Every industry is trying to do that, and cotton is no different. Our students saw how it is grown in an environmentally sustainable manner and how every part of the cotton is used in manufacturing.”

BY BONNIE COBLENTZ • PHOTOS SUBMITTED



LIL' BILL

Tiny Bull Made a Big Impact

Lil' Bill was a tiny bull that was born prematurely yet survived for 7 months because MSU College of Veterinary Medicine (CVM) professionals intensely invested in his health and learned from the experience.

Lil' Bill became a social-media sensation after the black-and-white calf was first revealed wearing twin, green casts that encased his entire front legs. He was born October 27, 2018, in Holmes County, Mississippi, and weighed just 7.9 pounds when his concerned owners brought him to CVM for the special care they knew he would need to survive. A normal calf weighs 50–80 pounds at birth.

"Lil' Bill faced a number of obstacles as a result of his prematurity and suspected dwarfism," said Dr. Gretchen Grissett, his primary caregiver and a CVM assistant clinical professor of pathobiology and population medicine. "He had a strong will to live, and with our help, he overcame numerous obstacles to his health."

Lil' Bill grew to a final weight of 40 pounds and was 16 inches tall. Grissett said he met several developmental milestones of a normal calf, such as weaning, transitioning to a cattle diet of roughage and grain, and playing and bucking like any other young bull. He also finally developed his carpal and tarsal bones—equivalent to the wrist and ankle bones of people—that were absent at presentation.

However, he succumbed May 27 to a massive infection that was unstoppable.

Nick Smith and Beatriz Valez-Irizarry, members of the CVM Class of 2021, supervise Lil' Bill's interaction with another calf.

"As with most preemies, Lil' Bill faced significant developmental issues, and in the end, his underdeveloped gastrointestinal system and immature lungs contributed significantly to his death," Grissett said.

CVM Dean Kent Hoblet said the time and effort invested in the tiny bull gave him a good quality of life and contributed to the educational experience of veterinary students.

"The staff at CVM worked around the clock at many times to provide the care and comfort that Lil' Bill needed to extend his life well beyond what he could have achieved on his own," Hoblet said. "Although we would have liked to see him live a long life, the experience of caring for his unique needs was a tremendous learning experience for our students."

As soon as Lil' Bill became her patient, Acacia Cooper, a fourth-year veterinary student from Jackson, Mississippi, knew the case would be an unusual challenge.

"This experience helped me to grow as a veterinary student, and I became aware of the importance of having compassion, dedication, patience, and perseverance as a veterinarian," Cooper said.

Claire Wilson coordinates social media for CVM and was responsible for the nation learning about this small bull. Wilson used Facebook, Instagram, and Twitter to tell his story, and that story went viral.

"Lil' Bill's social-media following was incredible. So many people were infatuated with this tiny bull's story and couldn't seem to get enough of him," she said. "I think Lil' Bill went viral because no one had ever seen anything like him—not to mention he was very cute."

Within 24 hours of CVM announcing Lil' Bill's arrival at their facility, more than 1.7 million people had seen the original social-media post.

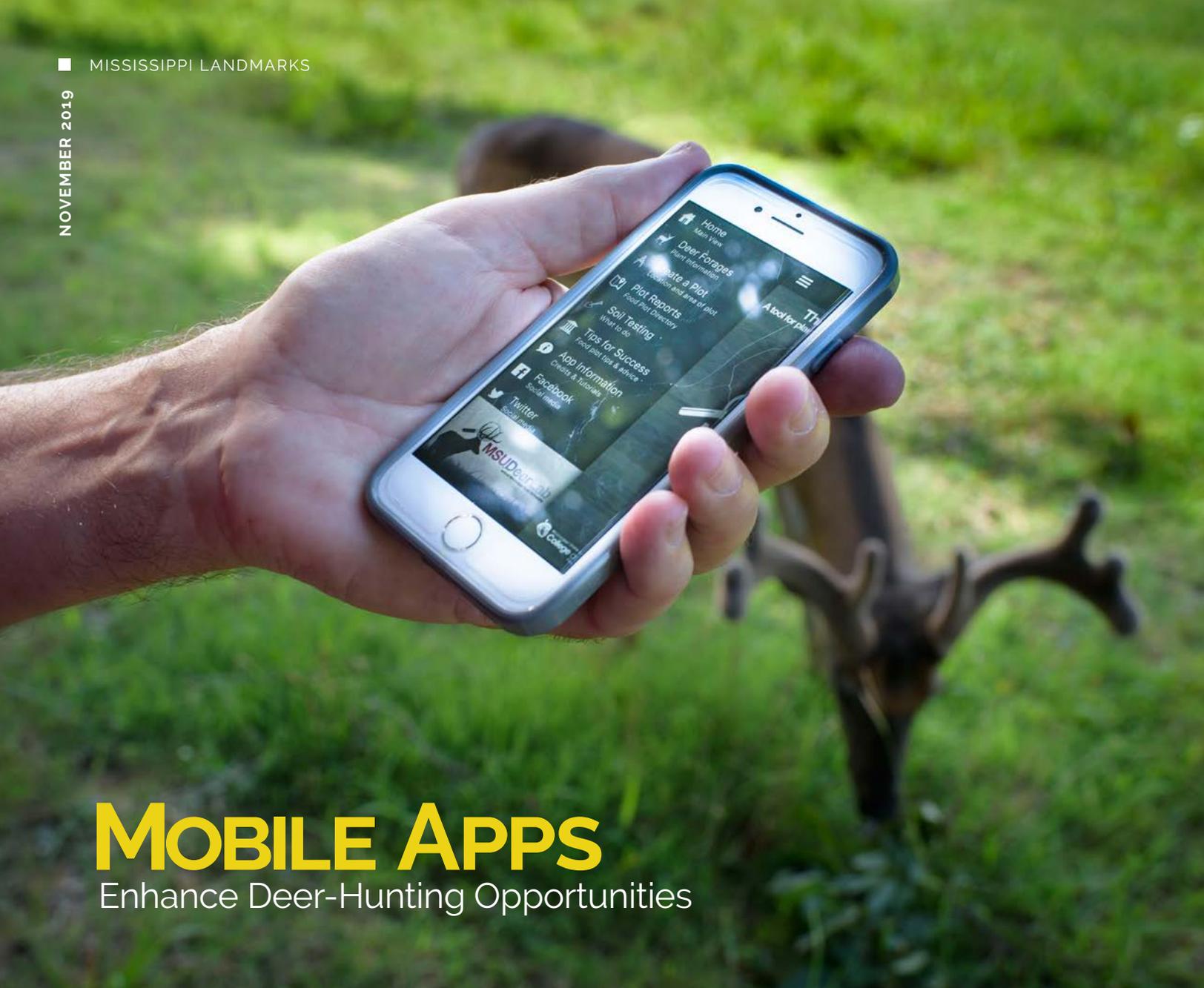
"Lil' Bill was an ambassador for the college in many ways," Wilson said. "Everyone loves a good underdog story, and the odds were really stacked against him. From the very first post, we tried to be transparent with the public that Lil' Bill had many obstacles to overcome. I think the world fell in love with him because he kept defying the odds."

BY BONNIE COBLENTZ •
PHOTOS BY TOM THOMPSON

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CLAIRE WILSON





MOBILE APPS

Enhance Deer-Hunting Opportunities

“

We are using the data to teach hunters and managers about what they can achieve with proper data collection. We hope to provide tools that will make their hunting and management experience more effective and enjoyable.”

DR. BRONSON STRICKLAND

Greater hunting success is no longer simply a matter of land management and learning deer habits; mobile technology is now a big part of becoming a better hunter.

The MSU Extension Service has long been involved in efforts that support a healthy deer population in the state, as well as hunters' opportunity to harvest these animals. Mobile apps are a logical move, so Extension took that next step in 2013.

Thousands of deer hunters and land managers in Mississippi and across the eastern half of the country are using three mobile apps developed by MSU Extension to help them in their efforts. Deer Hunt has 15,253 users, Deer Food Plot has 8,207 users, and Deer Aging has been downloaded 5,602 times.

Dr. Bronson Strickland, Extension wildlife specialist, and Dr. Steve Demarais, a wildlife biologist with the MSU Forest and Wildlife Research Center, developed the apps after a careful assessment of what hunters and land managers need.

"The Deer Food Plot app provides information on each common deer forage and gives planting and seeding rate recommendations," said Strickland, St. John Family Endowed Extension Professor of Wildlife Management in the College of Forest Resources.

The app also has a tool that allows users to measure the size of the field and gives seed amounts relative to the field size, resulting in very precise planting recommendations.

The Deer Aging app helps hunters estimate the age of live and harvested deer. Estimating age before harvest is critical for buck management.

"We wanted to provide a mobile educational tool to help hunters in the field," said Demarais, Dale H. Arner

Distinguished Professor and Taylor Chair in Applied Big Game Research and Instruction.

"It's important to verify the age estimate by looking at its teeth once the animal is harvested," he said. "Biologists typically age harvested deer, but we wanted to empower hunters with that knowledge with simple instructions and photos within the app."

The crown jewel of the suite of mobile tools is the Deer Hunt App.

"Many hunters neglect to record how many deer and other wildlife they see when they are in the field hunting," Strickland said. "Others jot sightings on a note card and then enter those numbers in a spreadsheet when they get back home. We decided to make this process easy and painless by providing a mobile platform where those numbers could be entered in the field and provide real-time answers."

Strickland said a diligent record of observation data is a powerful tool for both hunting and management. Data can indicate such things as where deer are most likely to be seen, ratio of bucks to does, what time of day and year they are most visible, and the age structure of the population.

The developers said feedback from users has been overwhelmingly positive. App updates are planned to add more options to these tools in



Dr. Steve Demarais (left) and Nick Mosby, an undergraduate student in the Department of Wildlife, Fisheries, and Aquaculture, interact with a buck at the MSU Deer Ecology and Management Lab.

response to user requests.

"We are using the data to teach hunters and managers about what they can achieve with proper data collection," Strickland said. "We hope to provide tools that will make their hunting and management experience more effective and enjoyable."

These apps are available at no cost at MSUDeerLab.com.

BY BONNIE COBLENTZ • PHOTOS BY KEVIN HUDSON

EXTENSION STAYS BUSY WITH 2019 DISASTERS

As natural disasters hit the state this year, MSU Extension Service personnel offered a variety of services to those impacted or tasked with responding.

“Some areas were hit with very little warning, and other locations spent weeks in preparation and then weeks waiting to begin the recovery efforts,” said Tom Ball, a governmental training officer with the Extension Center for Government and Community Development. “Either way, the mental, physical, and financial tolls weigh heavily on everyone in those areas.”

Ball, who oversees MSU Extension’s response to disasters, said university personnel worked with county emergency management agency (EMA) directors, relief agencies, farmers, and other residents impacted by recent disasters. Extension addresses issues such as mass care, human services, donation management, public health, agriculture, and natural resources.

“Without the local connections and support of our Extension agents working with local emergency managers, the state would be at a disadvantage when it comes to ag damage assessment, animal rescue, donations and volunteer management, and animal and human sheltering operations,” Ball said.

Warren County EMA Director John Elfer said he relies on Extension whenever disasters hit. For example, Warren County Extension agent Sandy Havard was able to help identify flood victims who needed assistance, and she was key



Emily Carter (right), MSU Extension Service agent in Sharkey and Issaquena Counties, meets with a local resident affected by 2019’s major flooding.

to communication with farmers impacted by this year’s flood.

“Sandy helped us contact farmers to determine how much cropland was under water,” Elfer said. “The answer was 25,000 to 30,000 acres in Warren County but also 225,000 acres across the Delta. Obtaining accurate numbers will impact how well the Federal Emergency Management Agency is able to respond with recovery resources.”

Frank Eason heads up the Sharkey County EMA. He said Extension agent Emily Carter

was “the middleman” when it came to identifying farmers and acreage impacted by the flood.

“In addition to our EMA office being open only part time, Emily Carter already had the rapport with the farming base,” Eason said. “She was extremely important in gathering information.”

Catastrophic flooding also occurred beyond the Delta counties. Extension agents responded to human and animal needs in Stone and Calhoun Counties during spring floods.

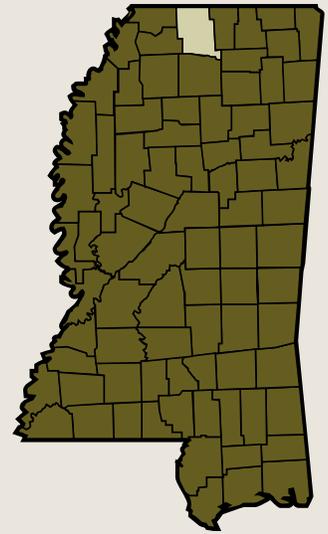
Tornadoes impacted Monroe County, Lowndes County, and other counties. MSU Extension teams assisted with agricultural damage assessments and with volunteer and donation management.

BY LINDA BREAZEALE • PHOTOS BY KEVIN HUDSON





Montrose, a historic mansion in Holly Springs, was completed in 1858 and is listed on the National Register of Historic Places. (Photo by Michaela Parker)



1/82: Marshall County

MSU in Marshall County:

120 South Spring Street
Holly Springs, MS 38635
P. O. Box 489
marshall@ext.msstate.edu

“Marshall County offers the quiet country life with all of the amenities afforded by being located close to a metropolitan area. Marshall County residents have multiple opportunities to enjoy recreation, museums, and festivals.”

JANET JOLLEY, MSU Extension County Coordinator

- County seat:** Holly Springs, the “City of Flowers”
- Population:** 35,619
- Municipalities:** Holly Springs, Potts Camp, Byhalia
- Communities:** Barton, Bethlehem, Cayce, Chulahoma, Galena, Hudsonville, Lake Center, Laws Hill, Marianna, Mount Pleasant, Red Banks, Slayden, Victoria, Warsaw, Waterford, Watson
- Commodities:** timber, soybeans, cotton, cattle, corn
- Industries:** Thomas and Betts Corporation, Parker Hannifin/Racor, Hunter Fan Company, Carrier Corporation, KP Building Products, Contract Fabricators Inc., Griffin Inc., Abby Manufacturing Co. II Inc., Maurey Manufacturing, Smith Transportation Equipment Inc., Acme Brick Company, Pallet Source Inc., Excel, Asics, McCormick, Niagara Water, Post, Volvo Group, Roxul, Cargill Feed Mill
- Natural resources:** timber, wildlife, fishing, pine plantations
- History notes:** Marshall County was established in 1836 and named after Chief Justice John Marshall. At one time, Marshall County was the largest producer of cotton in the country. Ida B. Wells, cofounder of the National Association for the Advancement of Colored People, was born in Marshall County. The county is home to Rust College, a historically black liberal-arts college founded in 1866 that is the second oldest private college in Mississippi.
- Attractions:** Strawberry Plains Audubon Society, Wall Doxey State Park, Chewalla Lake, Sardis Lake, Ida B. Wells-Barnett Museum, Marshall County Historical Museum, Kate Freeman Clark Art Gallery, Annual Holly Springs Pilgrimage, Hummingbird Festival, Kirkwood National Golf Club, Rust College
- Did you know?:** The hottest day in Mississippi was recorded in Marshall County on July 29, 1930. It was 115 degrees and was recorded at the North Mississippi Branch Experiment Station. The Marshall Rye Grass variety was developed at the North Mississippi Branch Experiment Station.

Editor’s note: 1/82 is a regular feature highlighting one of Mississippi’s 82 counties.

NewsNotes



Zhao

Dr. Yang Zhao, an assistant professor in the College of Agriculture and Life Sciences Department of Agricultural and Biological Engineering, received the Sunkist Young Designer Award from the American Society of Agricultural and Biological Engineers. Sponsored by Sunkist Growers Inc., this award recognizes society members under 40. Zhao, a scientist in the Mississippi Agricultural and Forestry Experiment Station, received the honor for his work designing engineering systems and tools for poultry welfare assessment, flock management, and environmental control. His work is improving animal-production environments and enhancing production efficiency and animal health by optimizing animal housing systems. Most recently, Zhao worked on a robotic floor-egg collection system for cage-free layer systems. This project included understanding poultry behavior and interaction with the robot. About 20 percent of eggs are now produced cage-free. Zhao earned his bachelor's and master's degrees from China Agricultural University. He earned his doctoral degree in animal sciences and farm technology from Wageningen University in the Netherlands.



Sones

Tobi Ku Sones, a doctoral student in the College of Veterinary Medicine, received a prestigious award for exceptional research in the field of animal behavior. She visited Washington, D.C., to formally accept the Whitney Joy Engler Memorial Veterinary Student Research Award from the American College of Veterinary Behaviorists (ACVB) at the 12th International Veterinary Behavior Meeting. Sones was invited to present research from her study titled "Positive Reinforcement of a Foundation Behavior to Reduce Perceived Anxiety of Kenneled Dogs." She completed this work last year as part of the CVM Summer Research Experience Program. Her participation in the ACVB meeting was made possible with a Graduate Student Travel Assistance Grant from the MSU Graduate School and support from the CVM Office of Research and Graduate Studies. Sones has served as vice president of two CVM student chapters: the American Association of Feline Practitioners and Christian Veterinary Fellowship. She also served as treasurer of the university's Veterinary Business Management Association student chapter.



Wells

Dr. Jessica Wells, an assistant clinical/ Extension professor in the College of Agriculture and Life Sciences Department of Poultry Science, won a national recruitment award from the Poultry Science Association. Awarded every other year, this honor is presented to an individual who significantly improves the recruiting program of a department, college, or university through innovative means. Wells, undergraduate coordinator and recruiter for her department, completed her doctoral degree in agricultural science/poultry science at MSU in spring 2019. As part of her doctoral dissertation, Wells completed research analyzing the effectiveness of recruitment strategies in poultry departments. She earlier earned her bachelor's and master's degrees in poultry science from MSU in 2007 and 2009, respectively. Wells has greatly enhanced departmental recruitment and retention efforts since she joined the faculty 10 years ago. In the last year, undergraduate enrollment in the department increased 11 percent, with a 125 percent total increase over the entire 10-year period. Wells participates in various regional and national recruitment activities, leading a poultry hatch-out project that has reached more than 2,400 school children in nearly 120 classrooms across the state.



Peebles

Dr. David Peebles, a professor in the College of Agriculture and Life Sciences Department of Poultry Science, was named a fellow of the Poultry Science Association. Peebles collaborates with the USDA and other organizations to solve pressing issues for the poultry industry, such as his study of *Mycoplasma gallisepticum*, a bacterial pathogen that costs the industry more than \$780 million a year. As a scientist with the Mississippi Agricultural and Forestry Experiment Station, Peebles has several other research focuses: nutrient and vaccine in ovo injection, hatching egg incubation, eggshell quality, and embryogenesis. Additionally, he teaches genetics to approximately 500 students each year. He has trained 26 master's and nine doctoral students and has served on 53 graduate committees. Peebles has had 513 career publications and was the most published author in *Poultry Science* and the *Journal of Applied Poultry Research* combined from 2014 to 2016. Peebles earned his bachelor's degree from the University of South Carolina, master's from College of William and Mary, and doctorate from North Carolina State University. He has been involved in the Poultry Science Association since 1984, serving on its elected board of directors from 2015 to 2018.

**Allen**

Dr. Peter Allen, an associate professor of aquaculture in the College of Forest Resources Department of Wildlife, Fisheries, and Aquaculture, received a prestigious Fulbright grant to conduct research abroad as part of the U.S. Department of State's flagship exchange program. A scientist in the Forest and Wildlife Research Center, Allen is spending 6 months conducting research

at the Center for Advanced Studies in Arid Zones in north-central Chile. He is studying the effects of hypoxia on corvina—a marine fish similar to redfish and speckled trout—and what can be done to improve aquacultural production under hypoxic conditions. Chileans are seeking ways to culture fish more efficiently, which is a goal of interest to Mississippi's aquacultural industry. Allen's work in Chile will be applicable to his research in Mississippi. Allen, who has been with MSU for 10 years, is also teaching at Universidad Católica del Norte, one of two universities housing the Center for Advanced Studies in Arid Zones facilities.

**Grebner**

Dr. Donald Grebner, a 21-year veteran of the College of Forest Resources Department of Forestry, is the new forestry department head. The George L. Switzer Professor of Forestry is a forest economist with a research focus in natural resources and forest management. Grebner is a certified forester in the Society of American Foresters and a registered forester in the Mississippi Board of Registered Foresters. During his

MSU tenure, Grebner has coauthored five textbooks and 60 refereed journal articles. He has garnered more than \$3 million in research support and mentored 20 graduate students. He teaches several different courses at the undergraduate and graduate levels. Grebner received his bachelor's degree in forestry from the University of Maine, a master's in forestry from Yale University, and a master's in economics and doctoral degree in forestry and forest products from Virginia Polytechnic Institute and State University. A fellow in the Society of American Foresters, Grebner has been honored numerous times for teaching, research, and service at MSU. He received the Phi Kappa Phi National Love of Learning Award in 2014 and 2018.

**Russell**

Christien Russell, an agricultural science doctoral student concentrating in agricultural and Extension education in the College of Agriculture and Life Sciences School of Human Sciences, was honored by the American Association for Agricultural Education for excellence in research. The Louisville, Kentucky, native received a Distinguished Research Poster award for her study "Culturally Responsive

Teaching: Experiences of Underrepresented Students." Dr. Carla Jagger, an assistant professor in Human Sciences, is the principal investigator who has guided Russell's research. The purpose of her MSU study is to identify and describe the experiences of minority postsecondary students related to culturally responsive teaching, as well as to examine the aspects that make students feel included and excluded when culturally responsive teaching is and is not present. Russell and her fellow researchers used focus group methodology to collect qualitative data from postsecondary underrepresented minority students at MSU, and they plan to conduct classroom observations of instructors—identified by participants—who display culturally responsive teaching.

**Tagert**

Dr. Mary Love Tagert, an assistant Extension professor in the College of Agriculture and Life Sciences Department of Agricultural and Biological Engineering, is one of four individuals selected nationally as a fellow in the Sustainable Agriculture Research and Education (SARE) program. Delivered through the National Association of County Agricultural Agents, SARE provides hands-on training to help Extension

agents and other agricultural professionals become leaders in promoting the adoption of sustainable and alternative farming practices. Tagert will begin the 2-year Reading the Farm training program in spring 2020. Each year, fellows visit different regions of the country to attend a series of seminars to learn about sustainable and alternative farming practices in other areas. They also visit selected farms to see how each implements sustainable practices. Knowledge she gains through this experience will enhance and strengthen her MSU Extension programs for innovative and conservation-minded producers in Mississippi.

DevelopmentCorner



Col. K. D. Johnson accepts his honorary Doctor of Public Service hood from MSU President Mark Keenum.

MSU SALUTES JOHNSON for His Career and Longtime Philanthropy

Col. Kenneth D. “K. D.” Johnson of Ridgeland, Mississippi, has manifested an almost lifelong allegiance to Mississippi State University and its College of Forest Resources (CFR). He staunchly supports the university with his time and financial resources. Because of this steadfast commitment, he is affectionately known as “The Colonel” by faculty, staff, and students who have built strong connections with him over time.

A Leake County native, Johnson is among Mississippi State’s most distinguished graduates and most loyal contributors. In May, he received an honorary Doctor of Public Service degree in recognition of his lifetime achievements and longtime major support of MSU programs. He joins some 30 individuals who

have received this honor over the course of the land-grant institution’s celebrated 141-year history.

Johnson began his association with then Mississippi State College as a 19-year-old engineering student when he joined the U.S. Army Enlisted Reserve Corps. In 1944, he completed his pilot training and was commissioned as a second lieutenant, launching his long military career. As a command pilot, Johnson logged more than 15,000 accident-free hours (nearly 2 years) in the air—a rare feat accomplished by only 1 percent of all U.S. Air Force aircrew members. Johnson, who achieved the rank of colonel in 1967, is a decorated veteran who earned many commendations, including the Legion of Merit and the

Distinguished Flying Cross for heroism and extraordinary achievement in aerial flight.

After service in three wars over three decades, Johnson returned to Mississippi State in 1978 to complete a grueling 9-week summer session in the field he grew to appreciate: forestry. Since then, he has maintained a strong relationship with the university.

In particular, Johnson continues his longstanding association with Mississippi State as one of CFR's most generous benefactors. He primarily supports student scholarships that have benefited numerous recipients; earnings from his valuable endowments ensure the success of future generations.

A perpetual link to Mississippi State began for Johnson with the creation of the Col. K. D. Johnson Forest near his hometown of Lena. This forest encompasses 123 acres in Scott and Leake Counties in Mississippi. Johnson donated this land for estate planning as one of the inaugural contributors to the MSU Bulldog Forest, a field-based learning resource for forestry students that also generates income for the college from timber harvests. Johnson has directed the proceeds from timber sales to support scholarships, including one named for him and his wife, Catherine.

Also bearing his name are two endowments for excellence—one for CFR and one specifically to be utilized by the college dean. Additionally, an endowment Johnson created benefits the summer field session in forestry, a program he personally gained valuable experience from many years earlier. Beyond these endowments, his support makes possible the Col. K. D. Johnson Courtyard outside Thompson Hall, the administrative home of CFR. The courtyard serves as an outdoor classroom for students and professors in several campus departments. Earnings from an endowment provide for the courtyard's perpetual care.

At age 96, Johnson remains a seasoned veteran loyally engaged with the university as he gives his time to mentor many active-duty service members and student veterans majoring in forestry.

With the honorary doctorate, Mississippi State and CFR proudly salute Johnson for his lifelong accomplishments and his Bulldog spirit of giving.

BY AMY CAGLE •
PHOTO BY LOGAN KIRKLAND

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Guide to Giving are available at
<http://www.msufoundation.com>.



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