

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



The long days of summer are here, but the eventful beginning of 2019 has not been forgotten. From historic flooding in many parts of the state to the powerful tornadoes that hit many communities, recovery is ongoing. Division of Agriculture, Forestry, and Veterinary Medicine units,

particularly the MSU Extension Service, worked diligently to aid those in need. From putting tarps on damaged roofs to facilitating food and shelter for displaced people and animals, we are proud of the contributions our people have provided to their communities.

At our spring graduation ceremonies, the College of Agriculture and Life Sciences awarded 312 undergraduate and 32 graduate degrees; the College of Forest Resources awarded 64 undergraduate and 25 graduate degrees; and the College of Veterinary Medicine awarded 26 undergraduate and 100 graduate and professional degrees. We are grateful to these new alumni, their families, and their communities for partnering with us in the important work of education, research, and service. We know our graduates are making a positive difference wherever they go!

Included in this issue of *Mississippi LandMarks* are our college alumni of the year, and we appreciate their advocacy for MSU (see page 26). We are also proud to highlight one of our College of Agriculture and Life Sciences graduates; read about John Mark Looney's expanding popcorn business, Crop to Pop, on page 16. This issue also highlights a recent international honor bestowed on the Mississippi Agricultural and Forestry Experiment Station's South Mississippi Branch Experiment Station (see page 18).

July 1 marked several transitions within MSU and DAFVM. Dr. David Shaw, who started his MSU career as a weed science faculty member and researcher, began his work as provost and executive vice president. Most recently, Shaw served as vice president for research and economic development.

Dr. Greg Bohach, former DAFVM vice president, began a faculty position in the MSU Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology. We appreciate his tireless dedication to the people and programs in the division and congratulate him as he celebrates a decade of service at MSU this fall.

Finally, we pause to remember the life and career of U.S. Senator Thad Cochran, whose advocacy for agriculture left an indelible mark on Mississippi, MSU, and DAFVM. In planning a tribute for a future issue of *Mississippi LandMarks*, we have been reminded of his legacy of service in support of the state's producers, researchers, and systems. His efforts transformed more than one industry in the state, and generations of Mississippians have benefitted from his work. We offer our sincere condolences to his family.

Thank you for your continued support of DAFVM and our work in teaching, research, and outreach.

REUBEN MOORE
Interim Vice President

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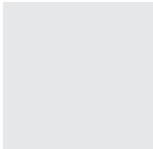
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ON THE COVER

The H. H. Leveck Animal Research Center is an important resource for teaching and research in the MSU Department of Animal and Dairy Sciences. These activities are further enhanced by completion of the College of Agriculture and Life Sciences' nearby animal agriculture complex (see page 22). (Photo by Elizabeth Gregory North)





VARIETY IS ON THE MENU:

Dietetic Internship Promotes Diverse Experiences

A diverse student group convenes each summer at Mississippi State to complete 1,200 practice hours over the following 11 months, submit a research project for publication, and prepare to take the Registered Dietitian exam. Some also complete master's degrees in nutrition or health promotion.

Enrollment in each Dietetic Internship (DI) class is capped at 16 interns. If successful, these students will join an elite group of well-rounded professionals who educate people about healthy dietary choices. Their success is MSU's success, as the program's accreditation hinges on 80 percent of interns passing the RD exam.

Armed with shelves of color-coded, three-ring binders and an intricate spreadsheet is Dr. Terezie Mosby, associate professor in the College of Agriculture and Life Sciences Department of Food Science, Nutrition, and Health Promotion. Mosby has served as the internship director for 3 years, building on a program started in 1990.

Mosby explained the fierce national competition for internship programs; only 50 percent of students who apply get placed. In addition to being a top choice for Bulldogs, MSU's program is steadily growing in popularity among talented, out-of-state students as graduates tell their friends back home about the broad range of experiences they enjoyed while in Mississippi.

"Some internship programs provide all of the experiences in one location, such as a big hospital, but we want our students to see the wide variety of jobs RDs can do," Mosby said. "We are a well-balanced program, and our students love that they can see what is possible for their futures. We also heavily emphasize research."

Rotations include North Mississippi Medical Center in Tupelo, Mississippi; Baptist Hospital in Columbus, Mississippi; Starkville Oktibbeha School District food service; the Mississippi Department of Health's Women, Infants, and Children program; the Mississippi Band of Choctaw Indians food distribution center; and a Fresenius dialysis center. Four additional rotations are offered at MSU: research, the Extension

Service, Aramark (food service), and the MSU Student Health Center. Students also have optional experiences in sports nutrition, farm-to-school programs, or specialty clinical service.

Interns conduct cooking demonstrations, provide nutrition assessment, design medical nutrition therapy, make diet recommendations, perform food-safety inspections, plan menus for a variety of audiences, and teach nutritional concepts while learning from experienced mentors, called preceptors.

2018 DI graduate Maria Navarro transferred to MSU's program after Hurricane Maria devastated Puerto Rico in 2017. She is now a clinical dietitian at Dignity Health St. Joseph's Medical Center, a 350-bed regional hospital with five intensive-care units in Stockton, California.

"This program really cares about the individuality of the interns and their fields of interest," she said. "For example, I had always been interested in oncology, and Dr. Mosby arranged a rotation at St. Jude's Children's Research Hospital. Being from California, this is a huge deal; my coworkers still can't believe that."


Like Navarro, Dana Carman credits the DI program with building her skillset so that she was able to compete for her dream career. She passed the RD exam 2 weeks after graduation in 2018 and is a registered dietitian for Yale Pediatric Specialty Clinics in her home state of Connecticut.

"The DI taught me a lot about the community and resources available," Carman shared. "Having the experience working with populations of all ages and different backgrounds has taught me how to connect with people. I'm a better dietitian because I can offer a variety of services to patients who need them."

The MSU Dietetic Internship is currently granted accreditation by the Accreditation Council for Education in Nutrition and Dietetics, the accrediting agency for the Academy of Nutrition and Dietetics (www.eatright.org/ACEND).

For more information about the DI program, see https://www.fsnhp.msstate.edu/students/dietetic_grad.php.

BY KERI COLLINS LEWIS • PHOTOS BY JONAH HOLLAND

A photograph showing two young women, Emily Faquin and Linsey Radford, in a kitchen setting. Emily, on the left, is wearing a maroon t-shirt with a white 'STATE M' logo and 'SPORTS NUTRITION' text. She is wearing glasses and has her hair styled in waves. Linsey, on the right, is wearing a grey t-shirt with a white 'STATE M' logo and 'SPORTS NUTRITION' text. She has long, straight brown hair. They are both wearing white gloves and are focused on preparing a smoothie. Emily is holding a small clear plastic cup filled with dark berries, and Linsey is holding a larger clear plastic pitcher filled with various fruits, including strawberries and blueberries. In the background, there is a stainless steel sink with a faucet, a blue bottle of Dawn dish soap, and two green water bottles. To the left, there are shelves with baskets of oranges and other fruits. The lighting is bright and focused on the women and their work area.

Emily Faquin (left) and Linsey Radford participate in the Dietetic Internship Program offered in the MSU Department of Food Science, Nutrition, and Health Promotion.

“The DI taught me a lot about the community and resources available. Having the experience working with populations of all ages and different backgrounds has taught me how to connect with people. I’m a better dietitian because I can offer a variety of services to patients who need them.”

DANA CARMAN

“When a cotton gin is owned by growers, they are going to look for every possible way to be efficient and produce quality cotton. They want the gin working at peak performance, not wasting fuel or labor. This gin is able to get more lint from the seeds for slightly better yields. The little things make a difference.”

DR. DENNIS REGINELLI



NOXUBEE COTTON GIN

Exceeds Expectations

The Bogue Chitto Gin in Noxubee County, Mississippi, has met and exceeded lofty goals that area cotton growers established when they built the facility in 2012.

With an initial investment of \$6.5 million and a goal of 30,000 to 40,000 cotton bales annually, growers invested almost \$2 million more to expand production for the 2017 crop. Bogue Chitto, which is Choctaw for “big water,” exceeded 138,000 bales from the 2018 harvest.

As east Mississippi cotton acreage expanded, growers became frustrated at the ginning challenges they experienced, said Dr. Dennis Reginelli, northeast regional specialist for the MSU Extension Service.

“Growers were hauling their cotton to gins in Lowndes County and in Alabama, and they often faced delays waiting for their crop to be processed,” Reginelli said. “The Noxubee gin was the vision of some of our most progressive and aggressive growers.”

Having a gin nearby was not only convenient but also reduced hauling costs and time involved. About 75 percent of the cotton ginned in Noxubee County comes from a 25-mile radius of the facility, located in the Deerbrook Community, said gin manager Aaron Litwiller. However, some growers travel up to 200 miles to use the facility.



Joe Huerkamp, gin board member and cotton producer, stands beside one of Bogue Chitto's trucks.

“We have a seven-member board of directors that guides us monthly, plus an annual stockholders meeting,” Litwiller said. “They have had great vision and insight. We’ve tripled or quadrupled the original volume goals, but I think we’ve handled the growing pains fairly well.”

The ultimate question for Litwiller and the gin’s board will be, “Is the amount of cotton acreage in east Mississippi sustainable?”

“Growers need a crystal ball to know what other commodity markets will look like moving forward,” Litwiller said. “Until then, we keep riding the market with caution. Our goals are to keep our workers employed and safe, to avoid ginning delays, and to maintain our quality. We have been extremely blessed to be part of this community and work for such exceptional producers.”

Litwiller said the extended wet conditions created some challenges for the 2018 crop.

“Crop yields were above average, and, due to some improvements in the gin, we got off to a slow start,” he said. “Add

in the wet winter and it made for an interesting ginning season—finishing up on February 18, 2019.”

Reginelli said good communication is a key to the success of the new gin, including a knowledge of when to expect harvest. Additionally, the most current technology helps the process. The gin is always evolving to help growers, he added.

“When a cotton gin is owned by growers, they are going to look for every possible way to be efficient and produce quality cotton,” Reginelli said. “They want the gin working at peak performance, not wasting fuel or labor. This gin is able to get more lint from the seeds for slightly better yields. The little things make a difference.

“The gin does not recognize a difference between stockholders and nonstockholders,” he said. “It takes the same care of every grower who brings cotton to the gin.”

BY LINDA BREAZEALE • PHOTOS BY KEVIN HUDSON



BATS

Provide Natural Pest Control

“I think we underappreciate the sheer mass of the insects that they eat and their ability to control pests for agricultural systems as well as things that might directly affect us.”

DR. SCOTT RUSH



Bat photos submitted by Dr. Scott Rush

Dr. Scott Rush raises a net to temporarily capture bats for blood and tissue samples. (Photo by Kevin Hudson)

Bats may be best known for hanging upside down in caves, but some people may be surprised by their important services to the ecological community.

“I think we underappreciate the sheer mass of the insects that they eat and their ability to control pests for agricultural systems as well as things that might directly affect us,” said Dr. Scott Rush, an associate professor of wildlife ecology and management in the MSU Forest and Wildlife Research Center.

“The number of insects they eat in a night is incredible,” he explained. “If you were to take out all these older trees in the area, there wouldn’t be any more places for the bats to roost, which would lead to issues with our crops.”

Rush is one of many researchers at MSU involved in bat research collaborations, ranging from studies as far away as Brazil to others as near as the Sam D. Hamilton Noxubee Wildlife Refuge.

The Refuge is a giant research laboratory for Rush and his colleagues as they study parasites that affect bats, the different habitats bats use, and the influence forest management can have on those habitats. Researchers employ acoustic monitors to identify sounds and then use nets to capture bats for about 5 minutes to take blood and tissue samples. Most research takes place in the spring and summer.

Of the six to eight species MSU professors and graduate students have found at the Refuge, the most typical are red and big brown bats.

“Part of the interest is in looking at bats that are considered threatened or endangered, like the northern gray bat, the

long-eared bat, and the Indiana bat,” Rush said. “Several species of bats in North America have been affected by relatively novel pathogens, some of which have likely reduced populations. In many cases, we do not have sufficient data to understand what we’ve lost.”

Mississippi is not known for an abundance of caves, and the Refuge is no exception. Tree holes, underpasses, and drain pipes are common substitutes.

“Bats are going for a thermal equilibrium, so during the day when they are not flying around, they hide out in old hickory-tree cavities with the softened bark on the sides to save energy and moisture,” Rush said. “When it is really cold, some bats will go into the leaf layer on the forest floor, inside trees, and occasionally inside attics or other man-made structures. They then emerge when it warms up. During warm periods in winter in Mississippi, it is not uncommon to see bats flying.”

Dr. Graham Rosser, an assistant research professor in the MSU College of Veterinary Medicine and one of several research collaborators, studies the parasites of bats.

“With these projects, we are interested in the diversity of blood-borne parasites of bats and their effects on their health,” Rosser said.

Rush said helping people appreciate the utility of bats is one of the most important things this research can accomplish.

“One observation I’ve made from fielding calls is the general fear that people have about bats,” he said. “They are much more of a benefit than a hindrance.”

BY NATHAN GREGORY



SWEETPOTATO CULLS

May Be a Viable Feed Source for Cattle

Feeding cattle nonmarketable sweetpotatoes may be a way to add value to one industry while cutting costs in another once Mississippi State researchers determine best practices.

2019 marks the third year MSU researchers at the Mississippi Agricultural and Forestry Experiment Station Prairie Research Unit have fed culled sweetpotatoes to beef cattle. These sweetpotatoes are either too large or misshapen to receive the USDA No. 1 rating that brings premium market prices.

“Cull or processing-grade sweetpotatoes have very little value relative to a fresh-market sweetpotato,” said Dr. Stephen Meyers, Extension sweetpotato specialist and assistant professor with the Mississippi Agricultural and Forestry Experiment Station. “As much as half the crop can fall into this category, and they sell for a lot less if a producer can even find a fresh market for them.”

At the 2013 Producer Advisory Council meeting in Verona, Mississippi, growers charged MSU with the task of finding more uses for culled sweetpotatoes. Researchers knew that some producers fed them to their cattle, but there were some concerns, a lot of partially correct beliefs, and no guidance on how best to use culls as feed.

Researchers are exploring several issues related to feeding sweetpotatoes to cattle, said Dr. Jane Parish, head of the North Mississippi Research and Extension Center in Verona. Questions include whether sweetpotatoes pose a choking hazard to cows, how much of this high-starch product cattle should consume, and how producers can best incorporate culls into cattle diets.

“There’s no way we can prove that they’re not going to choke, but we did a feeding trial with heifers to measure intake,” Parish said. “These are smaller, growing cattle, and we did not observe any choke with them.”

Researchers explored breaking the sweetpotatoes into smaller pieces before offering them as feed, but they found that damaged potatoes molded very quickly. Cattle that eat moldy sweetpotatoes might actually get sick and die as a result.

In their 3-year feeding trial, researchers used Grow-Safe equipment to measure how much feed each animal consumed.

“This system uses a radio-frequency tag in the animal’s ear and scales installed underneath the feed trough,” Parish said. “When an animal sticks its head into the trough to eat, we can tell who it

“If we’re going to make a difference for the cattle producers and the sweetpotato producers, we need to be able to use a lot of sweetpotatoes and decrease the feed cost or give cattle producers a viable feed option that is not going to take a lot of labor.”

DR. JANE PARISH

was, how much it ate, and what time of day it was.”

Research showed that almost all of the heifers either ate a lot of sweetpotatoes or very little. This is important because too much starch is harmful to cattle. The amount of labor required to feed the cattle also became a problem.

“Sweetpotatoes are a high-starch food like corn, but, where corn has a moisture content below 15 percent, sweetpotatoes are about 80 percent water,” Meyers said.

In one test, researchers put out 15 pounds of sweetpotatoes per cow three times a week. With 120 cows in the test, farm workers were carrying a lot of water while hauling the culls.

A graduate research project is now examining ways to dry down sweetpotatoes and use them as a feed supplement. In the winter, cattle producers feeding hay frequently supplement their herd with protein and energy in the form of lick-tubs filled with cooked molasses, minerals, and other feeds. Researchers are looking for ways to incorporate sweetpotatoes into this feed system in an efficient and effective way.

“If we’re going to make a difference for the cattle producers and the sweetpotato producers, we need to be able to use a lot of sweetpotatoes and decrease the feed cost or give cattle producers a viable feed option that is not going to take a lot of labor,” Parish said.

BY BONNIE COBLENTZ • PHOTOS BY MICHAELA PARKER



Research technicians Sarah Montgomery and Monty McIlwain feed sweetpotatoes to cows at the MAFS Prairie Research Unit.



Dr. Alejandro Banda (left) and Dr. Lanny Pace, executive director of the Veterinary Research and Diagnostic Laboratory in Pearl, Mississippi, test for chronic wasting disease in the state.

CHRONIC WASTING DISEASE

MSU Sets Sights on Deer Health



Mississippi State University is working in the woods and in the laboratory to protect the state's deer population from chronic wasting disease (CWD).

Mississippi's wildlife community was shaken to its core when the state's first deer tested positively for CWD in early 2018. The MSU Extension Service immediately launched educational efforts to help detect infected deer and prevent the spread of this game-changing disease. State wildlife officials implemented an action plan including a quarantine area and extensive sampling to estimate the infection rate and determine how far infected deer are found from the hot zone.

"The first positive deer was a 4-year-old buck found in Issaquena County," said Dr. Bronson Strickland, St. John Family Endowed Extension Professor of Wildlife Management in the MSU College of Forest Resources.

"One year and more than 7,000 samples later, 19 positive deer have been found in the state, primarily in Marshall and Benton Counties," he added. "The testing of hunter-harvested deer and road-killed deer has been a monumental undertaking to help wildlife biologists and hunters respond effectively to protect future deer populations.

"Our goal was to help everyone understand how this disease spreads and the importance of detecting infected deer," Strickland said, explaining that Extension partnered with the Mississippi Department of Wildlife, Fisheries, and Parks to conduct educational meetings with state legislators and with landowners and hunters around the state.

CWD is a 100 percent fatal disease that affects members of the deer family, causing them to lose weight and waste away. It is in a class of diseases called "transmissible spongiform encephalopathies," which ultimately cause many sponge-like holes to form in the brain.

Because this disease is caused by a protein—not a bacterium or virus—the method of testing is somewhat different, said Dr. Alejandro Banda, a clinical professor in the MSU College of Veterinary Medicine.

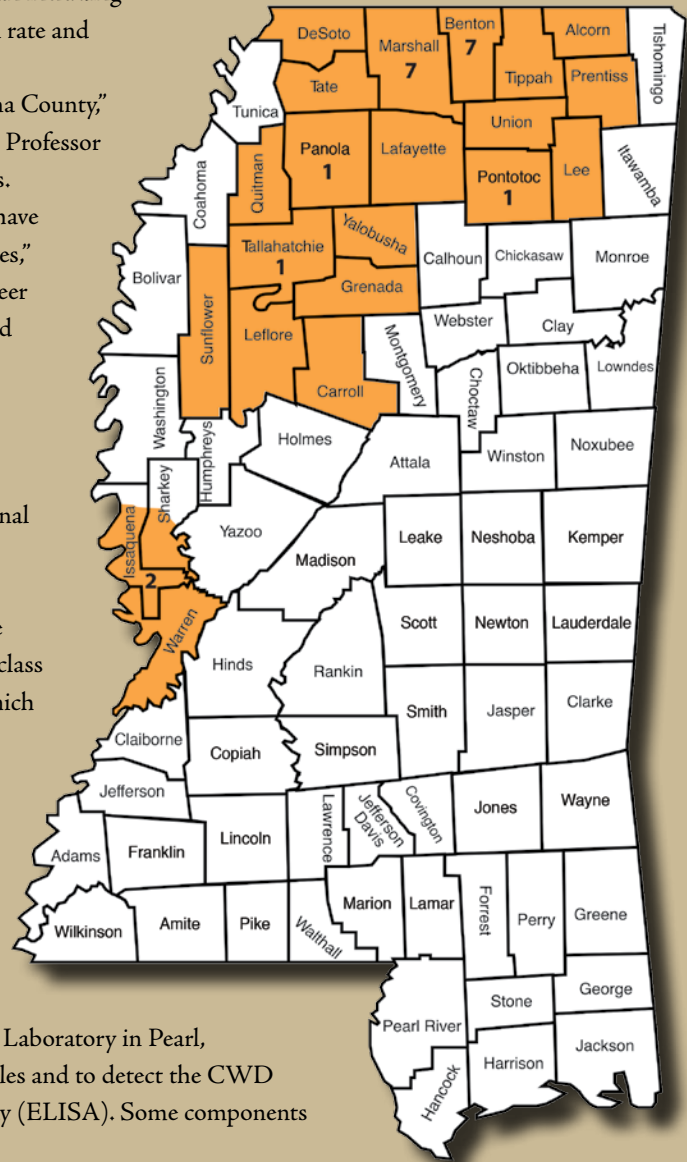
"The testing requires us to use a multistep process to break down tissues and preserve the integrity of the protein of the CWD prion and then to detect it accurately," Banda said.

With support from the State Legislature, the MSU Diagnostic Laboratory in Pearl, Mississippi, obtained specialized equipment to process deer samples and to detect the CWD prion by a method known as enzyme-linked immunosorbent assay (ELISA). Some components came directly from France.

"We must follow the protocols established by the U.S. Department of Agriculture, including procedures and equipment," Banda said. "No substitutions or deviations from the protocol are allowed. MSU makes the initial detections. Samples that react with ELISA are considered suspect positives, and they are submitted to the USDA's National Veterinary Services Laboratory in Ames, Iowa, for final confirmation as per USDA protocol."

Up to this point, CWD testing had been done manually for the most part, Banda said.

"We are in the process of getting an automated system to conduct the ELISA process," he said. "We have dedicated three to five of our technicians to work in CWD testing, but with automated equipment we will be able to reduce personnel for this task and make it more efficient and expeditious."



Shaded areas denote the CWD management zone in Mississippi. The numbers are cases reported in six counties, a total of 19.

BY LINDA BREAZEALE • PHOTO BY TOM THOMPSON

Making Her Mark

BRITTANY BROWN

Uses 4-H Skills Daily

Beverly Brown was looking for activities to enrich her grandchildren's lives when she discovered 4-H.

"When Brittany and Blaine came to live with me, I wanted to get them involved in activities that would help them be active and productive citizens," she said. "I had heard wonderful things about 4-H, so I checked it out."

Although Brittany Brown, now a senior journalism major at the University of Mississippi, didn't think she'd be interested, she actually grew to love the MSU Extension Service youth development program.

"I knew that people showed animals in 4-H, and that's all I really knew," she said. "So, I really didn't think it was something I wanted to do."

After joining Clarke County 4-H at the age of 13, she found out 4-H is much more than livestock and participated in almost everything the program offers. She was a three-time attendee at State 4-H Congress, a 4-year member of the state leadership team, and a public-speaking and shooting-sports participant. She completed record books chronicling her achievements and leadership accomplishments in 4-H and earned second-place awards for both.

Brittany Brown said the Safe Archery and Firearms Education and Training for Youth (S.A.F.E.T.Y.) program was her favorite activity because of the challenge. She competed in air pistol, .22 pistol, and archery divisions of shooting sports, qualifying for the National Invitational.

"You don't just pick up a firearm and start competing," she said. "You have to work at it, and you appreciate your achievements when you have to work for them."

Brittany Brown is a talented marksman, something her grandmother said surprises many people. But 4-H taught her more than how to hit a target.



Brittany Brown (right) says 4-H laid the foundation for her successful university career.

"My time in 4-H taught me determination, persistence, how to carry myself, how to talk to others, how to speak in public, and how to properly interact with adults that aren't my family," she said. "I gained networking skills that have helped me in college and will help me in my career. 4-H laid down the foundation for a lot of the skills I use. I also met a lot of people from my community and across the state."

Brittany Brown has been an active member of her university community, serving in many leadership roles. She is a reporter for *The Daily Mississippian* and a contributing writer for *Eat, Drink, Mississippi* magazine. She is serving her third year at the Center for Inclusion and Cross-Cultural Engagement and is a member of the yearbook staff, the honors college, Alpha Kappa Alpha Sorority Inc., and Phi Kappa Phi academic honor society.


Beverly Brown said 4-H was a family activity. She volunteered as a 4-H leader while her granddaughters participated.

"It is such a wonderful experience," she said. "My kids loved it. They were able to travel and attend different events. They were learning and didn't even realize it. I loved watching them learn and grow."

Clarke County Extension agent Christy King said Brittany Brown is a great example of what 4-H can do for young people.

"Brittany is well-spoken, and her resume is impressive at such a young age," King said. "She is motivated and goal-oriented. She is going places and will make a name for herself. I'm so glad to claim her as one of our 4-H alumna."

BY SUSAN COLLINS-SMITH •
PHOTOS BY KEVIN HUDSON



“My time in 4-H taught me determination, persistence, how to carry myself, how to talk to others, how to speak in public, and how to properly interact with adults that aren’t my family. I gained networking skills that have helped me in college and will help me in my career.”

BRITTANY BROWN

TRIBBETT
MISSISSIPPI
FARM RAISED
CROP
to POP

Alum Markets Specialty Popcorn

John Mark Looney started growing popcorn on a small part of his family's 2,200-acre Delta farm in 2016, but he hopes Crop to Pop will become the farm's main source of income.

"I'd like to move away from relying heavily on commodity markets we have no control over to something we do have control over," Looney said. "I feel like there's a lot of room to grow and a lot of research to see what the next step is."

Looney is owner of Six Mile Farms in Tribbett, Mississippi, which grows, processes, bags, and markets

yellow-butterfly popcorn. The Washington County farm began with 1 acre in 2016, doubled to 2 acres the following year, and grew 35 acres of popcorn in 2018. Looney is growing a similar amount this year.

"A lot of people have the misconception that you take regular corn and turn it into popcorn," Looney said. "That's not the case. It's a completely different kind of corn."

Popcorn is not genetically modified to resist disease or certain herbicides, unlike the majority of field corn. Growers must keep a closer eye on insect pressure, but



John Mark Looney, who earned bachelor's and master's degrees from Mississippi State, went into the popcorn business in 2016.

“I’d like to move away from relying heavily on commodity markets we have no control over to something we do have control over. I feel like there’s a lot of room to grow and a lot of research to see what the next step is.”

JOHN MARK LOONEY

crop management is otherwise just like growing field corn. Mississippi’s climate allows popcorn, like field corn, to be dried in the field to the optimum 14 percent moisture level for storage and popping.

Looney’s popcorn looks very similar to sweet corn, which means it is a little shorter and not quite as dark green as field corn. A good popcorn yield is 45–60 bushels an acre. By comparison, field corn has an average yield near 185 bushels per acre in Mississippi. But what popcorn lacks in volume, it makes up in value, and Mississippi consumers are increasing demand for this product.

“My popcorn is a high-quality product,” he said. “An initial shipment to a new retailer in Alabama sold out in 24 hours. It definitely has more appeal to people in Mississippi.”

Looney does his own product marketing. So far, his Crop to Pop is sold in 51 stores across the state. He also has sales outlets in Alabama, Arkansas, Louisiana, Missouri, Tennessee, and Texas.

The biggest challenge in this new business has been getting the product to customers. Looney bought the deserted Tribbett Grocery Store; after extensive demolition and renovation, it now houses Crop to Pop’s processing facility.

“The winter is definitely our off-season, so we do a lot of marketing then,” he said. “We store the popcorn in a grain bin, then clean and bag it at the processing facility. We do a batch at a time, and 3 or 4 days of bagging and boxing will last a few weeks.”

Looney is a 2005 graduate of the MSU College of Agriculture and Life Sciences with a bachelor’s degree in agronomy with a concentration in integrated crop management. He was a member of the student chapter of the National Agri-Marketing Association, where he gained practical experience he now uses with his own product. He earned a master’s degree in agribusiness management from MSU in 2008.

BY BONNIE COBLENTZ •
PHOTOS BY MICHAELA PARKER

MAFES STATION

Wins International Garden Contest

The South Mississippi Branch Experiment Station in Poplarville earned first place in the All-America Selections 2018 Landscape Design Challenge competition.

Themed “Get Social in the Garden,” the competition challenged participants at AAS Display Gardens across the U.S. and Canada to plan and carry out landscape designs that encouraged visitors and community members to share their experiences at the garden on social media.

“Everyone was thrilled to receive the award,” said Dr. Gene Blythe, a Mississippi Agricultural and Forestry Experiment Station research professor of horticulture based at the station. “The success of the 2018 AAS Display Garden was a result of the combined efforts of the Master Gardeners and our employees.”

The Pearl River County Master Gardeners planned, planted, and maintained the garden, as well as handled the social-media promotion required by contest rules. Dr. Gary Bachman, horticulture specialist and host of Southern Gardening, broadcast his Facebook Live feed from the garden twice. Station personnel grew the plants from seed and helped maintain the garden.

About 25 AAS-award-winning plants from 2014 to 2018 were planted around the trial garden’s central focal points: a gazebo and bridge. To promote the contest, the Pearl River County Master Gardeners held a social in the garden, participated in a live social-media feed at the garden, and arranged local newspaper coverage.

Contest judges were impressed with the group’s display and promotion of the competition and related events. In addition

to plant health and garden quality, they noted the orderly arrangement of plants and the use of permanent garden features, social-media promotion, and the added sense of community with the participation of local garden personalities and local businesses.

The MSU contest team members received the 2018 Coastal Research and Extension Center Outstanding Teamwork Award for their work on the project. The Pearl River County Master Gardeners were nominated for the Mississippi Master Gardeners Outstanding Project of the Year Award.

The South Mississippi Branch is one of seven Mississippi Agricultural and Forestry Experiment Station units in the coastal region. The MSU Extension Service trains Master Gardener volunteers to deliver horticultural education to the public.

All-America Selections is an independent, nonprofit organization that works with volunteer horticulture professionals, including university personnel and Extension agents, to find the best-performing varieties of new flowers and edibles across the U.S. and Canada. For more information about AAS, visit its website at <https://all-americaelections.org>.

For more information about the Get Social in the Garden competition and winners, visit the All-America Selections website at <https://all-americaelections.org/landscape-design-contest-winners-2018/>.

BY SUSAN COLLINS-SMITH

“Everyone was thrilled to receive the award. The success of the 2018 AAS Display Garden was a result of the combined efforts of the Master Gardeners and our employees.”

DR. GENE BLYTHE



The Pearl River County Master Gardeners planned, planted, and maintained the garden. (Garden photos submitted by Dr. Gene Blythe)



Dr. Gene Blythe prepares plants in a South Mississippi Branch Experiment Station greenhouse. (Photo by Kevin Hudson)



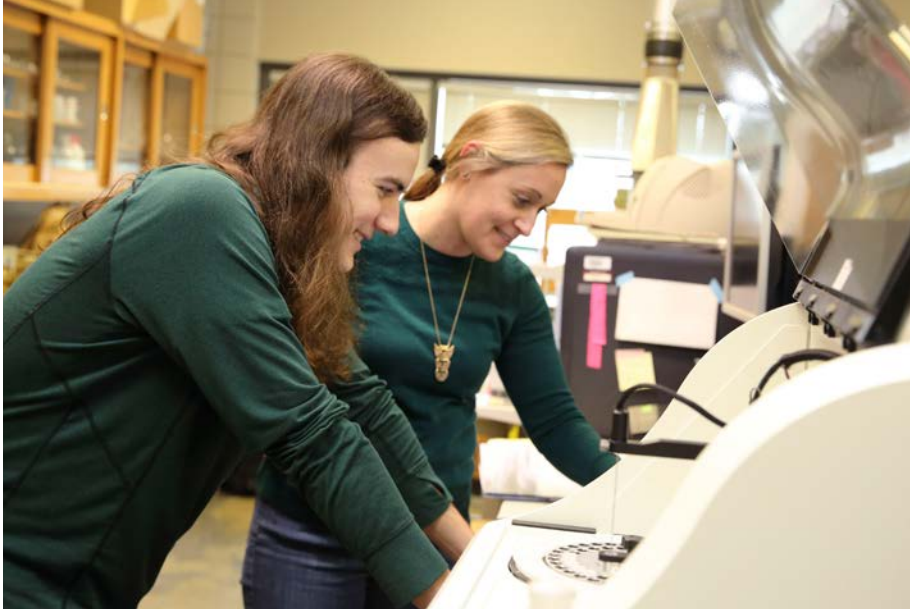
PRESCRIBED FIRES

Promote Forest Soil Carbon Cycles

“The land has been in the same family for over 100 years. They have living memory of the landscape looking dramatically different than it does now. They are very interested in our research because we are essentially trying to mimic the natural landscape that used to occur.”

DR. COURTNEY SIEGERT

Photo submitted by Dr. Courtney Siegert



Dr. Courtney Siegert (right) and MSU forestry major Andrew Lowery use an infrared gas analyzer to measure the amount of carbon dioxide in a soil sample. (Photo by Michaela Parker)

Before Europeans settled in territory that is now the southeastern United States, Native Americans there used fire as a forestland management tool.

Removing fire from these landscapes helped certain trees outcompete upland oak species. These mesophytes—trees adapted to grow in wet forest conditions—have an impact on wildlife and postharvest uses of oaks.

Dr. Courtney Siegert, an assistant forestry professor in the Forest and Wildlife Research Center, is studying prescribed fires in forest ecosystems. One focus of her research is the effects fires have on the carbon cycle on forest soils. This cycle is the process through which trees take in carbon through photosynthesis and release carbon dioxide back into the atmosphere.

“By removing fire from the ecosystem, our forests have closed in,” Siegert said. “Species like red maple, sweetgum, and American beech that prefer moister conditions have colonized the landscape and are becoming dominant.”

Spirit Hill Farm, a legacy property in the MSU Bulldog Forest near Holly Springs, Mississippi, has been the site of this research. Bob and Sheryl Bowen own Spirit Hill. Numerous upland hardwood stands now share more than 1,000 acres with red maples at the farm, but the wooded portion of the property was once more open and dominated by oaks.

In addition to Siegert, the project involves 11 MSU students and Forest and Wildlife Research Center assistant professors Dr. Heather Alexander and Dr. Marcus Lashley.

“The land has been in the same family for over 100 years,” Siegert said. “They have living memory of the landscape looking

dramatically different than it does now. They are very interested in our research because we are essentially trying to mimic the natural landscape that used to occur.”

Early spring is the ideal time of year to conduct prescribed burns in forests, but most naturally occurring fires induced by lightning occur in mid- to late summer. With that in mind, researchers conduct dormant-season and growing-season burns and collect monthly soil samples for analysis.

“What we have seen is that the carbon dioxide coming off of the oaks is higher than what is coming off sweetgums,” Siegert said. “Our oaks have more nitrogen cycling through the soils in their immediate vicinity. In order to have respiration and decomposition of organic matter, you need nitrogen as the fuel supply there. Whether this is a signal of just a single burn, or if we go back and do it again in a couple more years, is yet to be seen.”

Siegert said she hopes the ongoing research will help landowners better understand when landscapes are no longer able to be restored through prescribed burns.

Students in the College of Forest Resources Undergraduate Research Scholars program play a key role in the study.

“I get a lot of good experience in the lab using different types of soil-analysis equipment and documenting soil-collection data,” said Andrew Lowery, a junior majoring in forestry with a concentration in environmental conservation. “But I think I learn the most at a project site like Spirit Hill interacting with other researchers.”

BY NATHAN GREGORY

BUILDING FOR THE FUTURE

New Animal Agriculture Complex Nears Completion



Animal and Dairy Sciences Department Head John Blanton (left), DAFVM Interim Vice President Reuben Moore, College of Agriculture and Life Sciences Dean George Hopper, and Mississippi Agricultural and Forestry Experiment Station engineer David Howell stand in front of the new building. (Photo by David Ammon)

A 34,500-square-foot building now stands on the corner of Hailstate Boulevard and Blackjack Road on the Mississippi State campus. The new Animal and Dairy Sciences building, slated for completion in July 2019, is one of three in the College of Agriculture and Life Sciences' new animal agriculture complex.

The Department of Animal and Dairy Sciences is moving from its current location on the fourth floor of the Wise Center to the new three-story structure, located just 1,200 feet away from the iconic building.

In addition to the new Animal and Dairy Sciences building, the L-shaped complex includes the 15,000-square-foot Meat Science and Muscle Biology Laboratory opened last fall and a two-story, 26,500-square-foot Poultry Science building planned for completion in spring 2020.

“Our Animal and Dairy Sciences faculty provide science-based solutions for animal agriculture through innovative and effective education, research, and outreach programming,” said Dr. John Blanton, head of Animal and Dairy Sciences. “This move will enhance our capacity to serve the state’s farmers and ranchers.”

In addition to teaching, research, and outreach, the department manages the Mississippi Agricultural and Forestry Experiment Station’s foundation herds, which include beef cattle, dairy cattle, swine, goats, lambs, and horses.

Naming opportunities are available in the newly constructed facility. Prospective rooms for naming include three classrooms, three laboratories, 26 faculty offices, two conference rooms, and a graduate assistant suite. A food retail space on the first floor, adjacent to the main lobby, has been named by the Mississippi State Equine Association.

A multipurpose connector, also available for naming, will connect the Animal and Dairy Sciences building to the Poultry Science building.

Individuals interested in naming opportunities should contact Jud Skelton or Will Staggers (see contact information at the bottom of the page).

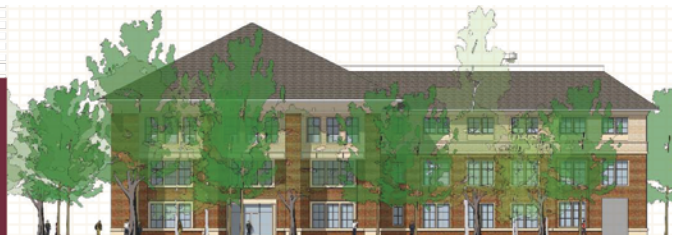
BY KAREN BRASHER

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AND LIFE SCIENCES



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COLLEGE OF AGRICULTURE
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“Our Animal and Dairy Sciences faculty provide science-based solutions for animal agriculture through innovative and effective education, research, and outreach programming. This move will enhance our capacity to serve the state’s farmers and ranchers.”

DR. JOHN BLANTON

Photo by Kevin Hudson

DIVING IN

Marine Mammal
Institute Offers
Opportunities for
Veterinary Faculty
and Students

Dr. Debra Moore (left) and IMMS marine mammal trainer Lisa Crawford work with a dolphin.

Atlantic bottle-nosed dolphins, Kemp's Ridley sea turtles, and California sea lions might be rare sights at the MSU College of Veterinary Medicine (CVM), but they are frequently seen at the Institute for Marine Mammal Studies (IMMS) in Gulfport, Mississippi. A partnership between the two institutions has grown over time and offers unique learning opportunities in marine mammal veterinary medicine.

The IMMS was founded in 1984 for the purposes of public education, conservation, and research of marine mammals both in the wild and under human care.

"We have one of the largest dolphin populations in the U.S. here on the Mississippi Gulf Coast," said Dr. Moby Solangi, IMMS president and executive director. "We want the state of Mississippi to be the world leader in marine mammal care and wildlife conservation."

A grant awarded through the Mississippi Department of Environmental Quality by the National Fish and Wildlife Federation Gulf Environmental Benefit Fund (GEBF) has provided opportunities to expand collaborative efforts between the CVM and IMMS. This fund was established in 2013 as a result of plea agreements from the 2010 Deepwater Horizon explosion and oil spill.

GEBF grants are awarded to state and local organizations with personnel, equipment, and expertise to implement projects with immediate and long-term benefits to Gulf Coast natural resources. Among other benefits, these grants provide important funding that allows organizations such as IMMS and CVM to collaborate in efforts to increase capacity to treat and care for sick and injured marine mammals and sea turtles.

"With IMMS, we are responsible for the rescue or recovery of stranded dolphins and turtles," said Dr. Tim Morgan, CVM veterinary pathologist. "If they are found alive, we figure out what's wrong with them, try to treat them, and then release them. If they are dead, we try to figure out the cause of death so that we can help monitor the population and reduce future deaths in the population."

Building upon opportunities to further bolster collaborative efforts between the two institutions, CVM hired Dr. Debra Moore in January 2018 as an assistant clinical professor. Located in Gulfport, Moore oversees the veterinary care provided to animals at IMMS and mentors MSU students who come to the institute for externships.

A two-time alumna of Tuskegee University in Alabama, Moore previously owned a mixed animal practice, and she

IMMS veterinary technician Erin Fitzpatrick-Wacker (left) and Moore examine a sea turtle.



“We have one of the largest dolphin populations in the U.S. here on the Mississippi Gulf Coast. We want the state of Mississippi to be the world leader in marine mammal care and wildlife conservation.”

DR. MOBY SOLANGI

cofounded the Caribbean Center for Marine Studies. Moore has previous experience training with the U.S. Navy Marine Mammal Program in San Diego, California; the National Oceanic and Atmospheric Administration Sea Turtle Necropsy Training Program in Pascagoula, Mississippi; and the Cetacean Stranding and Necropsy Workshop in Puerto Rico and Florida.

CVM Dean Kent Hoblet pointed out that his college's partnership with IMMS provides benefits not only to veterinary students and clinicians, but also to the state of Mississippi.

“We are grateful to expand our IMMS partnership with the addition of Dr. Debra Moore to our faculty and for the mentorship she is providing our students,” Hoblet said. “We are proud of the continued collaboration and veterinary care that our faculty members can bring to marine mammals and sea turtles on the Mississippi Gulf Coast, which will benefit the state of Mississippi now and for many years to come.”

BY KATIE TIMMERMAN •
PHOTOS BY TOM THOMPSON

Division Honors Three Alumni



CALS Dean George Hopper (left) recognizes Samuel D. Duda.



CFR Dean George Hopper (left) recognizes Edward J. Penny.



CVM Dean Kent Hoblet (left) recognizes Dr. Thomas K. Smith.

MSU's 2019 alumni of the year include three graduates from colleges in the Division of Agriculture, Forestry, and Veterinary Medicine. These distinguished graduates, selected from among the university's more than 145,000 living alumni for their professional and community achievements, were honored in March by the university alumni association.

"Our division proudly salutes these alumni and the contributions they have made to their professions and society," said Dr. Gregory Bohach, who was division vice president at that time. "They are excellent role models for demonstrating how an education from one of our colleges can help prepare one for an outstanding and productive career anywhere in the world."

The College of Agriculture and Life Sciences (CALs) honored Samuel D. "Sammy" Duda of Salinas, California, as alumnus of the year. A 1985 agricultural economics graduate from Oviedo, Florida, Duda is senior vice president of national operations for Duda Farm Fresh Foods Inc. A fourth-generation company leader, he oversees the business's harvest and vegetable production in the cities of Salinas and Oxnard in California and in Yuma, Arizona. He also oversees growing and harvesting operations in Florida and Michigan and for the company's international partnerships in Australia, Spain, and the United Kingdom. Duda serves on numerous boards, including the Western Growers Association, which he chaired in 2017. Earlier, he was board president for Yuma Vegetable Shippers and held a seat for the California Leafy Greens Research Advisory Board. While attending Mississippi State, Duda was an outfielder for Ron Polk's Diamond Dawgs, who finished a strong third in the 1985 College World Series.

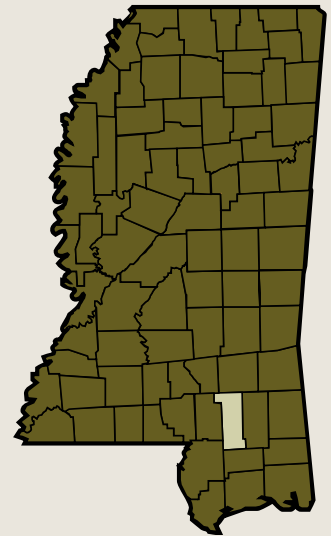
Edward J. Penny of Jackson, Mississippi, is alumnus of the year for the College of Forest Resources (CFR). A 2000 bachelor's graduate in wildlife, fisheries, and aquaculture and 2003 master's graduate in wildlife and fisheries science, Penny began his career as a biologist for Ducks Unlimited in California and for the state wildlife agencies in both California and Mississippi. For nearly 9 years, Penny served the Mississippi Department of Wildlife, Fisheries, and Parks, most recently as director of conservation programs. Penny's career has come full circle, bringing him back to Ducks Unlimited with the role of director of public policy in the Southern region. He handles state, regional, and national policy issues related to wetlands and waterfowl habitat conservation and funding, along with public policy efforts in Mississippi and 12 other states.

Thomas K. "Kevin" Smith of Picayune, Mississippi, is alumnus of the year for the MSU College of Veterinary Medicine (CVM), from which he earned a 1984 Doctor of Veterinary Medicine degree. For the past 33 years, Smith has served his community as an advocate for large and small animals. He has two Mississippi clinics—Animal Health Clinic in Picayune and Hancock Animal Clinic in Kiln—that are part of the South Mississippi Veterinary Clinics Corporation. Through these clinics, he witnesses CVM students as they follow his path and proudly offers externships to those who successfully job shadow for him. Smith holds membership in the American Veterinary Medical Association, the Louisiana Veterinary Medical Association, and the Mississippi Veterinary Medical Association, of which he is a past president. At MSU, his long and rewarding relationship with CVM continues as an inaugural member of the Dean's Advisory Council.

For more on the MSU Alumni Association and the 2019 awards banquet, visit alumni.msstate.edu.



The Mississippi Armed Forces Museum is located at Camp Shelby, approximately 12 miles south of Hattiesburg, Mississippi. (Photo by Kevin Hudson)



1/82: Forrest County

MSU in Forrest County:

MSU Extension Office
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Hattiesburg, MS 39401
forrest@msstate.edu

“Forrest County is a great place to live. We are a short drive from our state capital, Jackson. South of us is the Mississippi Gulf Coast and New Orleans, and east of us is Mobile. Forrest County is home to two universities: The University of Southern Mississippi and William Carey, which is the state’s second medical school. We are the hub of the Pine Belt, with top-notch medical facilities, great entertainment, shopping, and a rich history.”

TAWNIA HOLLIMAN, MSU Extension County Coordinator

| | |
|---------------------------|---|
| County seat: | Hattiesburg |
| Population: | 75,471 |
| Municipalities: | Hattiesburg and Petal |
| Communities: | Barrontown, Brooklyn, Carnes, Carterville, Dixie, Eatonville, Fruitland Park, Glendale, Indian Springs, Leeville, McLaurin, Macedonia, Maxie, Palmers Crossing, Rawls Spring, Sunrise, Sheeplo |
| Commodities: | beef, timber, vegetables, corn, peanuts, cotton, soybean |
| Industries: | Mar-Jac Poultry, Channel Control Merchants, Kohler Engines, Johnson Control, Cooperative Energy, Camp Shelby, Forrest General Hospital, Merit Health Wesley, The University of Southern Mississippi, William Carey University |
| Natural resources: | Leaf River, Bouie River, Okatoma Creek, DeSoto National Forest, Black Creek |
| History notes: | Forrest County was carved out of the western portion of Perry County in 1908 and named in honor of Confederate general Nathan Bedford Forrest. |
| Attractions: | Paul B. Johnson State Park, Hattiesburg Zoo, Camp Shelby, Longleaf Trace, African American Military Museum, Mississippi Armed Forces Museum, Pep’s Point Water Park |

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

NewsNotes



Dodds

Dr. Darrin Dodds, who is recognized as an exceptional research scientist and educator, was named as head of the College of Agriculture and Life Sciences Department of Plant and Soil Sciences. The 12-year veteran of the department took the helm on April 1. A native of Rushville, Illinois, Dodds is well respected throughout the Midsouth for his teaching, research, and outreach programs in cotton physiology. In 2016, he was awarded

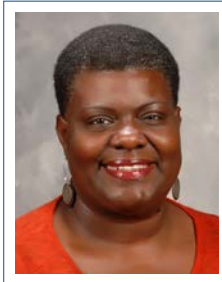
the Dr. J. Tom Cothren Outstanding Young Physiologist Award by the National Cotton Council and its partners. Dodds has garnered nearly \$6 million in research funding and mentored a dozen graduate students. He performs more than 100 Extension and Mississippi Agricultural and Forestry Experiment Station cotton trials each year. As a cotton specialist with the MSU Extension Service, Dodds was a featured presenter at more than 100 producer meetings. He co-organizes the Row-Crop Short Course, which brought nearly 800 agricultural professionals to campus in 2018. Dodds earned his bachelor's degree from Western Illinois University in agriculture, a master's degree from Purdue University in botany and plant pathology, and his doctoral degree in agricultural science from MSU.



Reddy

Dr. K. Raja Reddy was recognized as MSU's winner of the 2019 Southeastern Conference Faculty Achievement Award. Reddy, a research professor in the College of Agriculture and Life Sciences Department of Plant and Soil Sciences, is among 14 faculty members from SEC universities to receive the prestigious award this year. Each award candidate must have amassed records of extraordinary teaching and nationally

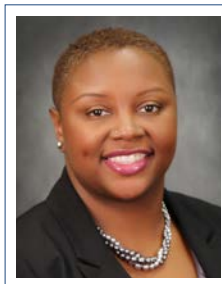
or internationally recognized scholarship. Reddy is a scientist in the Mississippi Agricultural and Forestry Experiment Station and directs the university's Soil-Plant-Atmosphere Research Facility, discovering how environmental stressors influence agronomic crop processes. He also is a research fellow with the MSU Geosystems Research Institute. With interests in remote-sensing applications in agriculture and crop modeling and applications, Reddy has pursued solutions to enhance food security for a growing global population. Reddy earned his doctoral degree in botany with applied plant physiology from Sri Venkateswara University in India, along with bachelor's and master's degrees. As author or coauthor of more than 150 peer-reviewed journal articles, 70 proceedings, 30 book chapters, and two books, his research informs his teaching. Reddy has overseen the graduate programs of 21 master's and doctoral students. His undergraduate researchers and graduate students have earned more than 50 paper, presentation, and professional awards. His scholarship has attracted visiting scientists from around the world, and he has trained more than 20 postdoctoral researchers.



McRunnels

Tabitha McRunnels received one of four national peer educator awards given to highlight contributions to the Expanded Food and Nutrition Education Program (EFNEP) legacy of improving the lives of limited-resource families through nutrition education. McRunnels, an EFNEP nutrition educator in Lee County since 2007, is part of the MSU Extension Service, which administers the program through the U.S. Department

of Agriculture and the National Institute of Food and Agriculture. EFNEP helps its clients acquire knowledge, skills, attitudes, and behavior changes necessary for the nutritional well-being of the total family. McRunnels uses a variety of resources to teach children and young people, such as Show Me Nutrition. For adults, she offers Cooking Matters for Adults and Eating Smart, Being Active. Over the past 11 years, she has consistently exceeded program benchmarks. For example, in 2018, she had a 98 percent graduation rate for adult classes, and 95 percent or more of her participants showed improvement in key areas of diet quality, physical activity, food safety, and food-resource management. While McRunnels teaches some classes at the Lee County Extension office in Tupelo, Mississippi, she also offers them when and where her clients can meet. She challenges her participants to commit to be fit, uses a cell phone app to remind students of upcoming classes, and includes physical activity and movement in all her classes.



Simpson

Dr. C. LaShan Simpson was one of five outstanding women recognized at Mississippi State's annual President's Commission on the Status of Women awards ceremony. MSU President Mark E. Keenum said many women perform with excellence at the university's highest levels and are integral to the institution's administration and operation. An assistant professor in the College of

Agriculture and Life Sciences Department of Agricultural and Biological Engineering who joined the MSU faculty in 2013, Simpson received the Outstanding Faculty Award. The South Carolina native, who received her bachelor's and doctoral degrees from Clemson University, has long been engaged in empowering women in science and engineering. She is passionate about K-12 outreach and participates in numerous Bagley College of Engineering camps. She also supports the Boys and Girls Clubs of America and offers research opportunities in her laboratory. Simpson established the Biomedical Engineering Association of MSU in her department. Simpson, a Mississippi Agricultural and Forestry Experiment Station scientist, was previously named College of Agriculture and Life Sciences Teacher of the Year.

**Bachman**

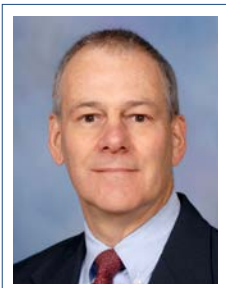
Dr. Gary Bachman, Southern Gardening host and columnist, earned a 2019 Great American Gardener Award from the American Horticultural Society. Bachman was also elected a Fellow of the American Society for Horticultural Science in recognition of outstanding contributions to horticulture. Bachman is an Extension Service horticulturist and a Mississippi Agricultural and Forestry Experiment

Station scientist based at the Coastal Research and Extension Center in Biloxi, Mississippi. He received the American Horticultural Society's B. Y. Morrison Communications Award, which recognizes effective and inspirational communication through print, radio, television, or online media. The society presents Great American Gardener awards to honor those who have contributed significantly to fields such as scientific research, garden communication, landscape design, youth gardening, and conservation. The award-winning *Southern Gardening* is available on television and radio, in newspaper columns, and on social media outlets. Through media and many personal appearances, he has shared gardening information with a weekly audience of as many as 2 million people since 2010. Bachman earned his bachelor's and master's degrees at Clemson University and his doctorate at The Ohio State University. Before coming to MSU, Bachman was on the faculty at Tennessee Technological University and Illinois State University.

**Byrd**

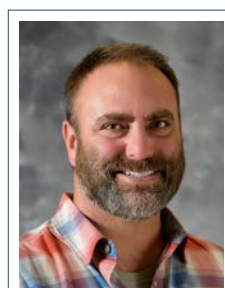
Dr. John Byrd, a research and Extension professor in the College of Agriculture and Life Sciences Department of Plant and Soil Sciences, has been designated a Fellow of the Southern Weed Science Society (SWSS). Fellows are recognized for their significant contributions to the society and advances they have made in weed science. Byrd has worked to understand and stop the spread

of invasive species that are detrimental to Mississippi's native plants and wildlife. He is a trusted resource to state agencies tasked with keeping roads and public rights-of-way safe. As a Mississippi Agricultural and Forestry Experiment Station weed scientist, Byrd has spent nearly 30 years focused on control of undesirable plants and invasive weeds that impact home lawns, crops, ornamentals, and public lands. As an Extension specialist, he has an in-depth understanding of the weed problems landowners and state and county roadside managers face. He earned a bachelor's degree in agronomy at Clemson University and master's and doctoral degrees in weed science at North Carolina State University. He has been involved in the SWSS since 1986 and is currently its representative to the Weed Science Society of America. Byrd has been active on several committees in the organization, including chairing the graduate student contest, the Outstanding Young Weed Scientist program, and the constitution and bylaws committees. He has also been on the SWSS board of directors.

**Demarais**

Dr. Steve Demarais won Mississippi State's highest research honor, the Ralph E. Powe Research Excellence Award. Demarais is a Dale Arner Distinguished Professor and the Taylor Chair in Applied Big Game Research and Instruction in the College of Forest Resources Department of Wildlife, Fisheries, and Aquaculture. A deer biologist in the MSU Forest and Wildlife Research

Center, Demarais has generated more than \$6 million in support of a research program that has produced 140 peer-reviewed publications by 38 graduate students since joining the faculty in 1997. As codirector of the MSU Deer Lab, he answers deer and wildlife habitat questions of interest to managers and landowners. A Fellow of The Wildlife Society, his professional involvements include chairing two technical reviews on deer-management issues, chairing the deer committee for the Southeast section of the society for 13 years, and serving multiple terms as associate editor for the *Wildlife Society Bulletin* and *Journal of Forest Research*. Demarais earned his bachelor's degree in wildlife biology at the University of Massachusetts. He earned a master's degree in wildlife ecology and doctoral degree in forest resources at Mississippi State. The Powe Award is a memorial to the MSU alumnus and longtime research vice president who died in 1996.

**Drymon**

Dr. Marcus Drymon, Extension Service marine fisheries specialist at the Coastal Research and Extension Center, was the primary author of an article published in the peer-reviewed journal *Ecology* on a new study that found that songbirds are a remarkably common part of young tiger sharks' diets. Scientists investigated the stomach contents of newborn tiger sharks collected during bottom longline surveys from 2010 to

2018. Thirty-nine percent contained remains of 11 different species of terrestrial birds, including barn swallow, kingbird, house wren, common yellowthroat, marsh wren, eastern meadowlark, swamp sparrow, brown thrasher, white-winged dove, yellow-bellied sapsucker, and American coot. In every instance, the timing of the tiger shark eating the bird coincided with the peak sightings for that species of bird off the coast, primarily during the fall, when the songbirds begin their journey across the Gulf of Mexico to the Yucatan Peninsula. In the article, scientists hypothesized that sudden storms caused the songbirds to fall out of the sky. Unable to resume flight, the birds became easy prey for young tiger sharks at the water's surface. Drymon worked with several coauthors, including three Coastal R&E staff members: postdoctoral associate Auriel Fournier, Extension program associate Emily Seubert, and Extension associate Amanda Jefferson.

DevelopmentCorner



NUTRAMAX GIFT Transforms CVM Pharmacy

The MSU College of Veterinary Medicine (CVM) and its Animal Health Center strive to provide top-notch, compassionate care for clients and their family member patients, along with a quality education for exceptional students and future veterinarians. Private gifts from alumni, such as Dr. Todd Henderson and the Nutramax Family of Companies, enhance the college and areas vital to its mission, including its pharmacy.

The CVM pharmacy will now carry the name of one of Henderson’s companies, Nutramax Laboratories Veterinary Sciences, in honor of the company’s \$250,000 gift. Of that amount, \$150,000 created an endowment for the pharmacy’s perpetual operation, and the remaining \$100,000 provided immediate assistance.

“Our pharmacy is critical to the treatment and care provided through our animal hospital, and we are grateful to Nutramax Laboratories and Dr. Todd Henderson for their generosity in ensuring our level of care and treatment are of the highest standard,” said CVM Dean Kent Hoblet. “We also are pleased the pharmacy will collaborate with Nutramax Laboratories to educate our students on quality manufacturing procedures.”

The Nutramax gift provided for the renovation of the pharmacy, which had not been updated since the Wise Center opened in 1981. As a result of the renovation, the pharmacy is well prepared for future growth.

“Nutramax and Dr. Henderson have been huge CVM supporters over the years,” said Dr. Joey Burt, director of the Animal Health Center. “The pharmacy endowment is just one example of their support, and we are glad to honor them with recognition for this phenomenal philanthropy.”

The Nutramax gift has elevated the pharmacy to the next level of customer service. A single window for prescriptions has become an open area where customers can receive education about their medications. On a daily basis, the pharmacy dispenses around 300 prescriptions for teaching-hospital patients and provides drug information consultations for faculty, staff, and students, as well as veterinary practitioners and community pharmacists.

New designated workspaces for counting, weighing, and compounding medication bring an improved mobility for employees. Additionally, the pharmacy can effectively use its “clean room” to safely handle drugs that can be spread through the air. The pharmacy offers clinical clerkships for Doctor of Pharmacy students and clinical pharmacy elective coursework for veterinary students. Additional space enables them to study and observe.

Henderson leads the Nutramax Family of Companies, including Nutramax Laboratories Veterinary Sciences Inc., Nutramax Laboratories Consumer Care Inc., and Nutramax Manufacturing Inc., as president and CEO. Nutramax has



become an industry leader in setting and adhering to high standards in manufacturing and quality control as it develops products for animal and human health. The company, founded by Henderson's father, conducts and supports laboratory research and clinical studies on its nutraceutical products and publishes many of these studies.

"A love of veterinary research inspires me to steer Nutramax into a new era, and I want to collaborate and share my knowledge with my alma mater, in particular through the pharmacy, because MSU has an exceptional veterinary college," Henderson said. "Together, our structured missions can lead to even better educational training and promotion of best practices for future graduates, and that preparedness will benefit society."

Henderson, a Maryland native drawn to the hospitality of CVM for graduate studies, received a Doctor of Veterinary Medicine in 1992. He serves on the CVM dean's advisory council. For his professional accomplishments, he was honored as the college's 2018 Alumnus of the Year and 2003 Alumni Fellow.

Through the Nutramax Family of Companies, Henderson continues his passion for improving the quality of life for people and animals. With his philanthropy, he helps ensure CVM has the right prescription for continued success.

BY WALT HARRINGTON •
PHOTOS BY TOM THOMPSON

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MSU President Mark E. Keenum (left) speaks with U.S. Department of Agriculture Deputy Under Secretary for Food Safety Mindy M. Brashears (far right) before a campus lecture on the future of women and minorities in agriculture. Joining the conversation are Dr. Caroline Kobia (next to Keenum), an assistant professor in the College of Agriculture and Life Sciences School of Human Sciences; and Dr. Leslie Burger, an assistant Extension professor in the College of Forest Resources. Brashears's lecture was supported by the MSU Office of Research and Economic Development and the university's Division of Agriculture, Forestry, and Veterinary Medicine as part of the USDA National Institute of Food and Agriculture's Women and Minorities in Science, Technology, Engineering, and Mathematics program. (Photo by Megan Bean)

