MISSISSIPPI LANDMARKS

2025 • VOLUME 21

MISSISSIPPI STATE UNIVERSITY™

DIVISION OF AGRICULTURE, FORESTRY, AND VETERINARY MEDICINE

RESEARCH, EDUCATION, AND EXTENSION

MISSISSIPPI
LANDMARKS

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VICE PRESIDENT'S LETTER

When I look at the work happening across our Division of Agriculture, Forestry, and Veterinary Medicine, I can't help but feel excited about what lies ahead.

Our division is where tradition meets innovation. The values that define Mississippi—our farms, forests, and families—remain at the core of everything we do. But we are also focusing on innovation, preparing the next generation of leaders, and discovering new ways to serve our state and strengthen our future.

One of the most meaningful parts of my role is seeing how our work at Mississippi State University connects to the bigger picture. Agriculture isn't just about food—it's about security, stewardship, and competitiveness. This year, we launched the Food and Agriculture as Competitive Statecraft Collaboratory, an initiative that recognizes food and farm security as a matter of national security. We're also collaborating with partners across our state on Vision 2030 to keep agriculture and forestry strong for future generations. A leakage study conducted by MSU economists revealed that more than $10 billion in agricultural and forestry commodities leave our state every year for processing elsewhere. Through Vision 2030, we're working to bring attention to this leakage and capture more of these value-added opportunities to support jobs and economic growth in Mississippi.

Of course, none of this happens alone. Every step forward is possible because of the people who believe in this mission—our alumni, donors, friends, and partners. This past year, your generosity and support made a record-breaking impact. For that, I want to sincerely say, "Thank you."

As you read through this issue of *LandMarks*, I hope you see what I see: a community of people dedicated to making Mississippi stronger and preparing the next generation of leaders. I'm proud of the work we're doing, and I'm grateful for your partnership in this journey.

KEITH H. COBLE
Vice President

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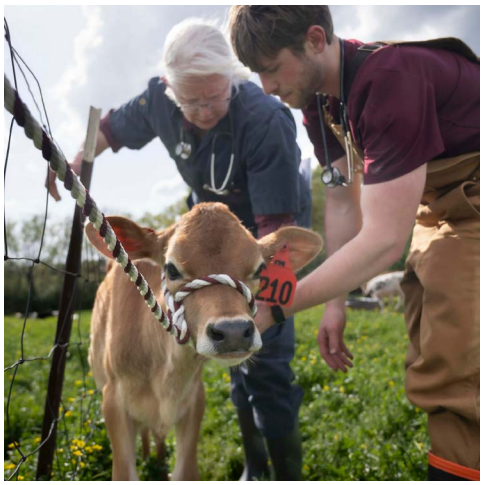

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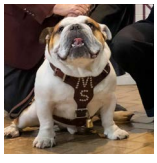


MSU President Mark Keenum, U.S. Secretary of Agriculture Brooke Rollins, and U.S. Senator Cindy Hyde-Smith visit with Dak during a tour of the MSU College of Veterinary Medicine. Read more on page 16. (Photo by Tom Thompson)

Embracing the Future

MSU Researchers Use AI to Help Develop Smarter Solutions

Mississippi State University faculty are tapping into the potential of artificial intelligence (AI) by using it to augment research and training practices in unexpected ways.

This is especially true throughout the MSU Division of Agriculture, Forestry, and Veterinary Medicine (DAFVM). Researchers are using the constantly evolving technology to assist in various tasks, which include enhancing imaging in animal scans, developing catfish vaccines, combatting illegal logging, and advancing precision agriculture.

SMARTER IMAGING FOR BETTER ANIMAL CARE

The MSU College of Veterinary Medicine (CVM) is using AI to enhance its diagnostic capabilities through its 3 Tesla MRI scanner technology. Dr. Marc Seitz, CVM associate clinical professor of diagnostic imaging, explained that AI enhances MRI scans by producing higher-quality images in less time.

"If you have ever used a phone with low light to take a picture, AI made that image better. Our MRI is now doing that, too, and not just with images post-processing," Seitz said. "If AI were used to enhance an image after it was already made, there's only so much you can do. The AI used in this scanner actually helps the MRI create the image."

Faster scan times are also beneficial—especially to equine patients.

"With horses, we have a huge concern with scan time because if horses are under anesthesia for too long, they can have adverse effects from it," he said, "and it can be hard for them to recover."

Veterinary students work with Dr. Marc Seitz to learn proper ultrasound technique on a golden retriever in the Small Animal Hospital. (Photo by Tom Thompson)

FIGHTING WOOD FRAUD

In the MSU Forest and Wildlife Research Center, Dr. Frank Owens and his team are training AI systems to identify wood species. This innovation allows customs officials and procurement professionals to combat illegal logging and species fraud and ease the issue of limited wood anatomists in the U.S.

"In both import and export markets, species fraud means unfair competition for American wood product manufacturers and traders," he said. "Misidentified imported wood products, including furniture, lumber materials, musical instruments, and household goods—a portion of which are likely to be illegally harvested and traded—compete against products made from domestic material by American manufacturers and against products properly declared by U.S. importers."

Owens said misidentified imported wood products can have a price advantage because they were made from less expensive alternative species or stolen materials, or because they were brought into the country without incurring full import taxes.

"Misidentified wood products in foreign markets compete against U.S. exports in similar ways, making it more difficult for American wood products to gain a foothold internationally due to unfair price competition," he said.

BREAKTHROUGH SCIENCE IN AQUACULTURE

At the MSU Global Center for Aquatic Health and Food Security in Gautier, Assistant Research Professor Dr. Arun Venugopalan is using AI to develop vaccines for one of aquaculture's most devastating diseases.

The channel catfish virus disease, or CCVD, can result in up to 90 percent mortality in a pond of channel catfish and occurs mostly in catfish less than one year old.

One tool used by Venugopalan and his team is AlphaFold2, an AI system that can predict three-dimensional protein structures from amino acid sequences. This capability is a critical milestone that greatly benefits the development of trial catfish vaccines, he said.

"This is part of a larger effort to understand the characteristics of this virus in depth, which would ultimately help us develop better scientific management strategies, including therapeutics like vaccines," Venugopalan said. "The virulence factors that enable this virus to kill 90 percent of catfish in ponds remain unknown.

"Cutting-edge AI tools like AlphaFold2 can evaluate the structures of the proteins that interact with the host to unravel how this virus can overcome fish immunity to cause devastating losses for catfish farmers," he said.

This cutting-edge research contributes to MSU's No. 1 global ranking in aquaculture by ScholarGPS for the second consecutive year.

AUTONOMOUS AGRICULTURE TAKES ROOT

Aimed to establish Mississippi as the "Silicon Valley of agricultural autonomy," the MSU Agricultural Autonomy Institute launched in 2023 as the first academic institute

Drs. Frank Owens (left) and Adriana Costa (right) work with Asi Ebeheakey, sustainable bioproducts doctoral student, to identify wood using the XyloTron. (Photo by David Ammon)

exclusively dedicated to advancing the automation of traditional agricultural practices and developing the workforce to support this emerging industry.

At the AAI's Autonomous Acres Proving Ground, a 5-acre tract located at the MAFES R. R. Foil Plant Science Research Center, researchers evaluate autonomous vehicle systems that use AI analytics for precision tasks like herbicide application. Unmanned aerial systems with spray capabilities, or "spray drones," are among the latest autonomous technologies tested.

"I can't stress enough how well-suited Mississippi State is to do this work, and not only to do the research but to ensure the research ultimately leads to actionable, real-world benefits for our growers," said Madison Dixon, AAI associate director of research. "We're able to do that through the Mississippi Agricultural and Forestry Experiment Station. We're also able to do that through MSU Extension."

The benefits of AI and autonomous technology are already paying off for row crop grower Jeremy Jack, who owns Silent Shade Planting Company in Belzoni. He noted the ways he has made AI work for him during a panel discussion at the AI in Agriculture Conference hosted by AAI last spring.

"In two minutes with my iPad, I can send a variable rate seeding prescription to a planter in the field. He can accept it, load it, and take off planting. That was a week's worth of hard work when I was in college," Jack said. "The programs are so much more intuitive than they used to be. I look at automation and AI working together with a person, giving them a better career path, giving them better job satisfaction, and making us more productive."

BY NATHAN GREGORY

(From left) Drs. Sathish Samiappan, Wes Lowe, and Gray Turnage review hyperspectral images of catfish ponds to determine the presence of cyanobacteria. (Photo by David Ammon)

Family, Leadership, and Legacy

CALS Alumni Grow Family Roots, Chart Different Agricultural Paths

Land writes our stories. Often, place binds us to our loved ones and communities. Sixty miles north of the Mississippi Gulf Coast, two centuries ago, Dan Batson's and John Rabby's forefathers carved timberland out of the Stone County wilderness. Forty years ago, Batson carved his own legacy from those same woods while Rabby took his agricultural roots across the world. Though their paths differ, their family history, commitment to land and community, and Bulldog pride remain the same.

Batson and Rabby are cousins—their grandfathers were brothers who lived two miles apart. Childhood memories include visits to grandparents, where there was always plenty to eat and much to explore. That connection to place carried them to MSU and ultimately defined their lives.

Dan Batson and John Rabby

CARVING A LIFE FROM THE WOODS

Batson earned bachelor's and master's degrees in horticulture from MSU's College of Agriculture and Life Sciences in 1980 and 1982. He and his wife, Kathy, settled in Starkville, where she worked at MSU.

"We worked hard and enjoyed our time in Starkville," he said.

Batson's family ties to MSU run deep—his father earned a horticulture degree, his grandfather attended, and his great uncle was a horticulture professor. After graduation, the couple returned to Perkinston, where Batson's parents deeded them 80 acres to launch GreenForest Nursery.

"I wanted to come home to the land that had been in our family for 200 years," he said.

He started with yaupon holly, foraging the woods to fill containers and eventually cultivating a variety named after his wife: Kathy Ann. Batson was among the first to adopt container-grown trees, helping shift the industry.

"Before the 1980s, landscaping trees grew in the field. We grew them in 15-gallon buckets with pine bark, which was lighter and ready for market faster," he said.

GreenForest Nursery has nearly 300 acres and half a million containers in production, supplying clients across the U.S. and in Canada.

Batson's deepest investment is in people. Kathy has managed accounting since the beginning. Their son, Brad, is now chief financial officer. Longtime employee Joseph Davenport is president.

"Our greatest reward has been seeing the company and our people grow, and all we've been able to give to our rural community," he said.

Batson also invests in Mississippi State—he established the Dan Batson Loyalty Scholarship during the university's Infinite Impact campaign.

A GLOBAL CAREER WITH LOCAL ROOTS

Rabby's path took him around the world and was inspired by his uncle Bill Batson, an entomologist and crop consultant.

"My uncle was a guiding force," he said.

Rabby earned a bachelor's in entomology in 1977 and a master's in agriculture in 1979, also in MSU's College of Agriculture and Life Sciences.

"Coming to MSU was eye-opening. I had mentors give me real wisdom. I tell every young person: talk to people, learn about people."

Dr. James Spencer left a lasting impression.

"Dr. Spencer said, 'Try to learn something new and meet someone new every day. Get out of your comfort zone at least 20 minutes a day.' I try and live by that," said Rabby.

After MSU, Rabby joined American Cyanamid, helping develop herbicides and plant growth regulators that revolutionized soybean and rice production. From his base in Athens, Greece, he eventually led operations in Europe, Africa, the Middle East, and India.

"The role gave me a valuable global perspective—especially on soil fertility and water," he said.

He later led ADAMA US and AgBiome before launching his own consulting firm. The longtime board member and former chairman of the North Carolina Biotechnology Center continues to shape the future of agriculture.

Rabby's friends like to joke: "If you want to kill it, call John. If you want to grow it, call Dan," he said with a laugh.

But that doesn't quite capture it. Both men have built their lives around nurturing—plants, people, and communities.

With roots planted at MSU, they've helped agriculture thrive at home and around the globe.

BY VANESSA BEESON

Advancing U.S. Military Infrastructure

FWRC Research Supports National Defense Needs

Mississippi State University's nationally recognized expertise in wood durability and testing has made it a trusted partner of the U.S. Department of Defense (DOD). Researchers in the MSU Forest and Wildlife Research Center (FWRC) are leading efforts to enhance the durability, performance, and rapid testing of wood products vital to military construction, transportation, and infrastructure resilience through a $3.3 million DOD partnership.

Focused on cross-laminated timber (CLT) and glulam—two mass timber products increasingly used in commercial construction—researchers are conducting durability testing and evaluating strength, stiffness, and dimensional stability. They are also developing a rapid test to assess railway ties for replacement.

Bryan C. Casillas, PE, a structural research civil engineer with the U.S. Army Engineer Research and Development Center (ERDC), said the use of wood in the military sector is vitally important.

"Europe has used mass timber for decades, and its use is becoming more prevalent in the U.S. I see this as an opportunity for Mississippi and timber-producing states throughout the Southeast, especially those with an abundance of forest resources," said Casillas, who is with ERDC's Geotechnical and Structures Laboratory. "Mass timber potentially adds a whole new material to our arsenal of building materials for the Department of Defense."

Casillas said MSU's long history of forest products research—specifically in strength, durability testing, and wood preservation—make the collaboration a natural fit.

"I see benefits on the military side and in transferring technology to other sectors," he said. "For me, it's impactful to work on something as wide-ranging as helping our soldiers and communities in the United States."

Dr. Rubin Shmulsky, professor and head of the MSU Department of Sustainable Bioproducts, noted MSU was

"I am excited that Mississippi State gets to do work that will be impactful on the national and international scale."

DR. RUBIN SHMULSKY

Drs. Rubin Shmulsky (left) and Dan Seale walk past the commercial cross-laminated timber press. The 1,250-ton hydraulic hot press was delivered on three semi-truck trailers and is used for the fabrication of composite wood products.

selected for this initiative based on the university's nationally recognized expertise in wood durability and product testing.

"I am excited that Mississippi State gets to do work that will be impactful on the national and international scale and that the DOD has chosen us for this work," said Shmulsky, who is also an FWRC scientist.

In the first phase, researchers will develop durability testing protocols for glulam and CLT based on wood species and product type.

"The durability and protection of wood from decay, termites, fire, and other detractors are crucial," Shmulsky said.

The second phase will improve railway infrastructure by developing a faster test for determining when rail ties need replacement. The current method takes 30 minutes per tie—MSU scientists aim to develop a test capable of analyzing up to 15,000 ties per hour.

"The United States has approximately 140,000 miles of railway. The DOD owns and operates several thousand miles of track. Most of the track rests on wood ties—approximately 3,200 ties per mile. These railways are used to move equipment and supplies safely and quickly from 'fort to port,' particularly in times of geopolitical uncertainty," Shmulsky explained. "The ability to quickly and accurately detect ties that need replacement is a critical issue as it fosters railway safety not just for the DOD but for all rail lines."

The third phase of the project will explore how mass timber, including glulam beams and CLT panels, can support DOD facility needs.

Two additional phases with an additional $1.8 million of support were recently added. These further promote and enhance engineered mass timber, thermally modified wood, and durability in DOD applications.

"The Department of Defense is the federal government's biggest owner and operator of buildings, and they have ongoing needs for new construction and rapid response rebuilding," Shmulsky said.

He pointed out that mass timber enables rapid reconstruction and resilience in the wake of natural disasters.

"The ability to rebuild quickly is critical, and wood construction—specifically glulam and CLT—offers that advantage. These materials also provide energy absorption properties, including blast resistance, which is essential for DOD facilities," he said.

Shmulsky said the work also has major implications for the U.S. lumber industry.

"The military has many applications where CLT could be a game changer, especially in base housing and other infrastructure needs. This project allows us to explore how different grades of lumber perform in CLT panels while advancing solutions that could ultimately expand the demand for southern yellow pine," he said.

With more than 50 years of leadership in forest products innovation, MSU is advancing military infrastructure and expanding the Southeast's timber industry—bolstering Mississippi's forest sector and powering economic growth in rural communities.

BY VANESSA BEESON
PHOTO BY DAVID AMMON

MSU's Agricultural Research Drives

$1.7 Billion Economic Impact

"People don't understand how valuable Extension and MAFES are to agriculture in the state."

BILL RYAN TABB

Photo by Laura Hough Smith

For more than two decades, Mississippi State University has ranked among the top 5 percent of universities in the nation in agricultural research, but that's more than just a statistic—it means real solutions for producers and an economic boost for the state.

"The advancements made through MSU's agricultural research are fueling growth in the sector by attracting investments, creating jobs in our communities, and helping ensure the long-term sustainability and productivity of Mississippi's farmers," said Bill Cork, executive director of the Mississippi Development Authority.

MSU's Division of Agriculture, Forestry, and Veterinary Medicine (DAFVM) plays a critical role in that growth, providing $1.7 billion in economic impact to the state's agricultural and business sectors, according to a recent study by MSU's National Strategic Planning and Analysis Research Center (NSPARC). DAFVM units include the MSU Extension Service, Mississippi Agricultural and Forestry Experiment Station (MAFES), Forest and Wildlife Research Center, College of Agriculture and Life Sciences, College of Forest Resources, and College of Veterinary Medicine.

"Mississippi State University has long been a trailblazer in research and development across a range of sectors, including the state's top industry—agriculture," Cork said.

MSU is the state's leading research institution. In fiscal year 2024, scientists in the Division of Agriculture, Forestry, and Veterinary Medicine secured $123 million in grants and contracts, resulting in research and Extension efforts that ensure producers like Bill Ryan Tabb have access to cutting-edge solutions to remain competitive and productive in the face of challenges.

Photo by Michaela Parker

FROM BREAK-EVEN TO BILLION-DOLLAR COMMODITY

When Tabb began farming with his father in the early 1980s, soybeans were not a crop they expected to profit from.

"Soybeans, back then and really into the 1990s, were used as a rotational crop to prepare your fields for cotton and rice. Hopefully, you would break even and move on," said Tabb, who now farms with his son on the Bolivar County farmland his father bought in the late 1970s.

Roundup Ready varieties introduced in the mid-1990s and later the Soybean Management by Application of Research and Technology (SMART) program were game changers, said Tabb.

"Roundup Ready changed the way people farmed, and SMART was revolutionary," he said. "It opened our eyes to the potential of soybeans."

Herbicide-resistant Roundup Ready varieties helped farmers control a wide range of weeds with fewer herbicide applications and reduce soil tilling, which improves soil health and decreases erosion.

The SMART program, a research and demonstration effort coordinated by Extension soybean specialists and funded by the Mississippi Soybean Promotion Board, began in the 1990s and has helped soybean producers make important management decisions about their crops.

Through the years, the program has evolved from demonstrating practices such as early planting, irrigation, and pest management to variety selection, soil fertility, irrigation termination timing, and harvest management.

"Before SMART, we would only irrigate in an emergency, and then we would flood the field, which was a lot of water wasted," Tabb said. "When we started using the SMART program, we learned to use irrigation in a targeted way and use as little water as necessary.

"I can remember when we first started using the principles of the system, we watered five times one year. In the same situation before SMART, we may have only irrigated twice. My dad said, 'I just watered those beans, we're going to drown them.' But we didn't. That field outyielded everything else that year because it wasn't stressed."

A COLLABORATIVE APPROACH MAXIMIZES ECONOMIC RETURNS

Tabb said the work and research done by MSU Extension and MAFES has contributed a great deal to the success of his farm.

"We've participated in the variety trials Extension and MAFES does. I've worked with everyone from Extension specialists to administrators. They listen to our needs and are always willing to come out to the farm to look at something," Tabb said. "People don't understand how valuable Extension and MAFES are to agriculture in the state."

Since 1999, Mississippi's average soybean yields have increased by 32.5 bushels per acre, far outpacing other states across the country and consistently posting yields above the national average, said Dr. Justin Calhoun, assistant professor in the Department of Plant and Soil Sciences and MSU Extension soybean specialist.

In 2024, Mississippi's soybean crop yielded 56 bushels per acre, tying 2023's record-setting yield. The crop ranked third among all agricultural segments of the state's economy with a production value of $1.3 billion.

Of course, improved technology and management practices have contributed to the increase in yield, Calhoun said, but he also points to the applied research model of Extension and MAFES and the units' broad network of partners that uniquely position MSU to advance agriculture.

"I have worked in multiple systems in multiple states during my training and career, and I have never been a part of another system that rivals MSU in its ability to network with farmers, consultants, and industry representatives," Calhoun said.

This network enables MSU to identify market opportunities and deploy research resources where they are needed most to make the biggest impact.

"Our strong relationship with our commodity groups—in this particular case, the Mississippi Soybean Promotion Board—has been instrumental in improving soybean production in the state," Calhoun said. "To conduct the research and outreach at the level we do at MSU, we need resources, and the MSPB has always done fantastic work to support multiple research and Extension programs to ensure those resources are provided."

IMPACT EXTENDS BEYOND THE FARM

Improved yields for farmers reach beyond the farm, creating a ripple effect in the lives of Mississippians and the state's economy.

"DAFVM is deeply embedded in Mississippi's everyday life," said Dr. Steven Grice, executive director and research professor at NSPARC, who led the university's 2024 economic impact study. "From farm productivity and food safety to veterinary care and youth development, the Division of Agriculture, Forestry, and Veterinary Medicine delivers practical, science-based solutions that create real value."

BY SUSAN COLLINS-SMITH

MSU College of Veterinary Medicine to

Expand Facilities,

Student Training, and Research Endeavors

Laminitis Research Center and Equine Hospital

Laminitis Barn

Overall Farm Animal Hospital

DVM student Lauren Toole discusses a patient's treatment plan with Dr. Tyler Jumper, assistant teaching professor, during the third-year pathobiology and population medicine rotation.

Dr. Maxi Edwards, a member of the DVM Class of 2025, examines a patient while completing the equine medicine and surgery rotation.

> "These facilities will provide timely, expert care for livestock and support producers with the veterinary resources we often lack in rural areas."
>
> ANDY BERRY

In a small Mississippi town, a rancher needs assistance with a calving cow that's in crisis. Several hundred miles away on a family farm, a teen is worried about the well-being of her prized goat as he is lethargic, has a fever, and refuses to eat. On the other end of the state, a horse rider watches a mare, fearing her lameness could be caused by the debilitating disease laminitis—which can progress to the point of putting a horse down. Each of these people are facing the same challenge: they have an animal in need of medical care, and the closest veterinarian is many miles away.

These scenarios are all too common in Mississippi, throughout the Southeast, and in rural areas across the country. However, with funds appropriated by the Mississippi Legislature and a transformative gift from a generous donor, the Mississippi State University College of Veterinary Medicine (CVM) is poised to help improve access to animal healthcare in the days to come.

An $18 million appropriation from the Legislature in 2024 is funding new clinical facilities and the Center for Rural Veterinary Practice at CVM, which was established to address the shortage of veterinary services in Mississippi and in rural areas throughout the United States. The funds support the first two phases of CVM's clinical expansion project, including a newly constructed cattle handling facility and a farm animal hospital.

Andy Berry, executive vice president of the Mississippi Cattlemen's Association and the Mississippi Beef Council, called the project a vital step forward for the state's farmers and ranchers.

"These facilities will provide timely, expert care for livestock and support producers with the veterinary resources we often lack in rural areas," Berry said. "By training veterinarians with a focus on large animal and rural practice, this investment strengthens animal health, supports biosecurity, and helps ensure the long-term sustainability of farming and ranching in Mississippi."

The cattle handling facility will serve as a model for rural veterinary practice, providing students with hands-on experience. A drive-through unloading and loading area and state-of-the-art cattle handling and restraint systems will improve efficiency and allow for an increased outpatient caseload.

The new inpatient farm animal hospital will allow for increased inpatient caseload of farm animals requiring advanced medical, surgical, and reproductive services. This will also enhance biosecurity and improve safety for students, clinicians, and patients.

Faculty in the Center for Rural Veterinary Practice will actively recruit students interested in rural veterinary medicine, nurture the interests of veterinary students considering rural veterinary practice, and provide coaching to early-career veterinarians who choose to establish rural practices.

The center will expand the mixed animal training that CVM students receive, better preparing them for rural practice. It

will offer wet labs, simulation models, and other resources, as well as provide business and financial coaching for students and veterinarians who request advice about starting their own veterinary practice or buying into an existing practice.

One of the centers to be established from the transformative gift given to CVM is the Nancy Fair Link Laminitis Research Center. It will be dedicated to developing prevention and treatment strategies for laminitis, one of the most common and debilitating causes of equine lameness.

Donor Nancy Link has a passion for horses that has led to a mission to prevent laminitis from occurring. Her strategic collaboration with CVM provides for the construction and operation of the state-of-the-art research facility and equine research barn on the CVM campus, as well as the recruitment of top faculty to conduct research focused on the painful hoof disease.

CVM Dean Dr. Nicholas Frank said Link's passion and generosity, coupled with the college's expertise and commitment to advancing animal health, are destined to improve and save the lives of countless horses.

"We are incredibly grateful for Nancy's gift, and we will collaborate closely with her to establish a world-class center that conducts cutting-edge laminitis research and translates scientific discoveries into practical solutions for the equine community," Frank said. "We are recognized as a leader in veterinary medicine, veterinary education, and scientific discovery, and these new facilities, services, and research endeavors will only further solidify this recognition across the country and throughout the world."

The outpatient cattle handling facility, farm animal hospital, and Center for Rural Veterinary Practice were designed and developed with three teams of CVM faculty and staff meeting regularly with representatives of Eley Guild Hardy Architects and Susan Sharp Design, LLC. Members of these teams and the architectural firm worked closely with Dr. Kip Lukasiewicz, a cattle facilities construction consultant. Lukasiewicz is a practicing veterinarian and subscribes to the philosophies of renowned cattle-handling expert Dr. Temple Grandin, who emphasizes low stress, best practices for the animals' benefit.

A groundbreaking ceremony for the Nancy Fair Link Laminitis Research Center was held November 10. Both projects are currently under way with anticipated completion in fall 2027.

BY MELODY THURLOW

PHOTOS BY TOM THOMPSON

Dr. Amelia Woolums, Mikell and Mary Cheek Hall Davis Endowed Professor of Beef Cattle Health and Reproduction, instructs DVM student Sydney Wright during a third-year bovine testing lab.

From Farms to the Front Lines

MSU Bridges Agriculture and National Security

> “MSU is truly leading the way in cutting-edge technology as we fight for food security and farm security.”
>
> BROOKE ROLLINS
> *U.S. Secretary of Agriculture*

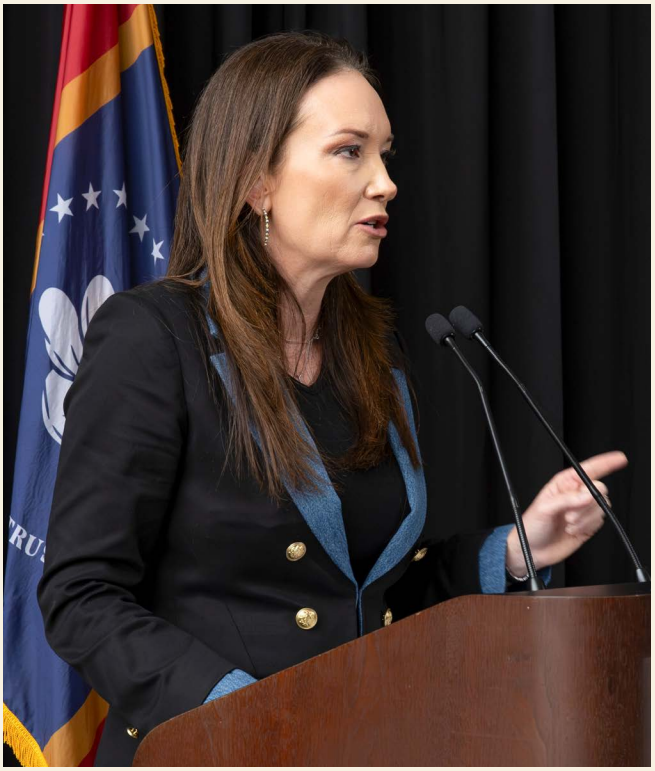
Photo by Beth Wynn

“We have no country if we cannot feed ourselves,” said U.S. Secretary of Agriculture Brooke Rollins during her visit to Mississippi State University in August. As she stood behind the podium at the MSU College of Veterinary Medicine to talk about the urgent need for rural veterinarians, she also shared her support for the university’s new Food and Agriculture as Competitive Statecraft (FACS) Collaboratory that she learned about earlier that day.

“I was able to see how MSU is truly leading the way in cutting-edge technology as we fight for food security and farm security, meaning national security,” said Rollins. “The great superpower of the world is no more if we’re not able to continue to preserve what has made America great from the very beginning, and that’s the agriculture community.”

The seed for this initiative was planted a year earlier when MSU co-hosted a conference in Washington, DC, on the intersection of competitive statecraft and agriculture. Building on that success, MSU hosted a conference on campus in spring 2025 that drew nearly 500 people in person and virtually. At the event, MSU Vice President Dr. Keith Coble announced the collaboratory’s formation.

“By launching the Food and Agriculture as Competitive Statecraft Collaboratory, Mississippi State is taking a bold step to connect expertise across disciplines,” said Coble.



U.S. Secretary of Agriculture Brooke Rollins visited Mississippi State University in August and discussed the urgent need for rural veterinarians. (Photo by Beth Wynn)

The vision resonated with participants like U.S. Army Lieutenant General Charles T. Cleveland (Ret).

"The intellectual strength of America is spread across its institutions of higher learning," Cleveland said. "The key is to harness the collective expertise of our universities, particularly our agricultural colleges, which study farming practices comparable to those in regions across the globe."

Dr. Josh Maples talks with Brianna Croft, a graduate student in the College of Agriculture and Life Sciences. (Photo by Kevin Hudson)

BREAKING DOWN SILOS

Co-directed by Dr. Ben Tkach, MSU political science and public administration associate professor, and Dr. Josh Maples, MSU agricultural economics associate professor, in collaboration with General Andrew Rendon, executive director of veterans and military affairs at the MSU Center for America's Veterans, the FACS Collaboratory is designed to be a "force multiplier" in national security strategy. Instead of different departments tackling problems in isolation, the collaboratory unites a diverse team of experts—from veterinarians and agronomists to cybersecurity and political science specialists.

"Through this collaboratory, we're bringing together a team of unlikely faculty collaborators right here at MSU to engage with our defense community to address national security," Maples explained to Rollins during her visit.

This interdisciplinary approach allows the team to tackle complex challenges, such as:

- Mapping poultry supply chains to identify vulnerabilities.
- Connecting global diplomatic strategies to policy responses for American farmers.
- Using agricultural expertise to identify future conflict zones.

Dr. Ben Tkach discusses the role of bargaining as it relates to agriculture and national security. (Photo by Kevin Hudson)

TRAINING THE NEXT GENERATION OF LEADERS

The mission of the FACS Collaboratory goes beyond academic research. It also aims to train the next generation. This fall, MSU launched its first course on the intersection of food, agriculture, and national security, which attracted students from various majors.

For Seth Gardner, a senior agribusiness major from Virginia and recipient of the Paul T. Blair Memorial Scholarship, who chose MSU because of its national reputation in agriculture, the course is a perfect fit. After seeing farmland in his hometown transformed into housing developments, he became interested in both agriculture and policy.

"Many people, at least in America, take food for granted," Gardner said. "The concern of a stable food supply being weaponized or used as leverage in trade agreements is a concern for national and global security. The opportunity to take this new class and learn about how these issues can be addressed is invaluable."

The class will conclude in a live "statecraft game" where students will showcase their new skills to strategically compete with other nations and, ideally, avoid conflict. This hands-on experience, along with a planned study abroad trip, prepares MSU students to tackle the complex, interconnected challenges of the future.

Ranked as a top 5 military-friendly school and among the top 5 percent nationally in agricultural research, MSU is uniquely positioned to bring together the expertise needed to address critical agricultural and national security challenges. As Rollins emphasized, the nation's competitive advantage hinges on this vital connection. It's a mission the university is dedicated to leading.

BY MARY KATHRYN KIGHT

Photo by Kevin Hudson

> "The opportunity to take this new class and learn about how these issues can be addressed is invaluable."
>
> SETH GARDNER

Agricultural Research and Mississippi Hospitality Create a Top Stop for

Viking River Cruises

Every two weeks all summer and into winter, tourists soaking in life on the Mississippi River stop in Stoneville to learn about agriculture in the Mississippi Delta.

This is the third year Mississippi State University's Delta Research and Extension Center (DREC) has been an integral stop on the Viking River Cruises Mississippi Delta Explorer trip. Up to 20 tourists at a time spend an afternoon in the heat, exploring the research fields and catfish ponds of the 4,700-acre station.

Richard Hamilton from Fort Bridger in southwest Wyoming raises cattle, cuts hay, and owns some forest land. He and his wife made the Stoneville stop on their cruise in mid-June.

"I like to see how you do it compared to me," Hamilton said of why he made the Delta agriculture excursion. "You have all this water, and we don't have much water. We plan on the snow in the mountains to give us water."

Ironically, rain poured down during Hamilton's humid visit to Stoneville.

"Whether you're in ag here or you're in ag there, even though it's a night and day difference, it's fun to try to compare and especially see the differences," Hamilton said.

Laura Smith and Kenner Patton, both DREC staff, guide guests around the station and explain the applied research conducted by agricultural scientists. The event begins with a slide presentation of facts and photos about the history, economic development, and research disciplines at DREC.

Each group's questions and interests determine how that particular tour goes.

"This can be a conversation that goes in different directions every time," Patton said. "After we've talked indoors, we put them on a bus and take them around the station to show them as much as time permits. They see cotton, corn, soybeans, and rice, and all those crops are in different stages of growth and research."

Like most groups, the June tour group showed great interest in catfish.

"Weather permitting, we show them the catfish ponds, and that starts a lot of questions and answers," Patton said. "Catfish is a mystery to almost everybody because it is not as widely distributed and known across the country, unlike tuna, salmon, mahi-mahi, and others, so there are unknowns. But catfish industry marketing groups, federal inspections, and labeling requirements are helping to educate the public, which goes a long way in helping support the industry and producers."

Kenner Patton leads a tour at the Delta Research and Extension Center. (Photo by Laura Hough Smith)

Laura Smith told visitors that DREC is ag-centered and ag-focused.

"We believe the welfare of the farm is vital to that of the whole country," she said. "Here, we do research, and the other side of what we do is Extension, which is sharing that research with farmers and stakeholders."

The cruise tourists who visit DREC are mainly retirees, and most have some history or experience related to agriculture. Nearly all are unfamiliar with farming in the South.

"When they get here, they realize this is a very different place from, say, California or the upper Midwest," Patton said. "It is a different animal, but at the end of the day, agriculture is agriculture."

In addition to an almost universal fascination with all aspects of catfish production, irrigation and the amount of water available to Mississippi farmers is another topic of interest.

Laura Smith said DREC visitors are interested in Mississippi irrigation systems and the lack of water use limits that farmers particularly in the western U.S. operate under. She told one group of visitors about the MSU Extension Master Irrigator program that educates Mississippi producers on irrigation practices that conserve water and lower costs.

"They're fascinated with our irrigation systems and the fact that we have the alluvial aquifer and access to so much water there, in addition to rainfall," she said.

Since 2023, an estimated 300 tourists on Viking River Cruises have stopped at DREC.

Kenner Patton shares information on a crop rotation study with guests on an excursion from Viking River Cruises. (Photo by Michaela Parker)

Before that, another cruise line made the Delta station a stop on their itinerary for two years.

"It's been a very easy and very positive experience with Viking," Patton said.

Greenville is not the only stop Viking River Cruises' ships make along the Mississippi River. Other onshore excursions include Natchez and Vicksburg as well as locations in Louisiana, Tennessee, and farther north.

Wesley Smith, executive director of the tourism office in Washington County, said the Greenville stop became Viking River Cruises' highest rated stop in the world less than one year after it was established—and for good reason.

"Everyone gets off at Greenville, and they get fried catfish and a show with country music star and Mississippian Steve Azar," he said. "Then they can choose a premium tour of either Stoneville or the B.B. King Museum or wander around Greenville and shop and visit.

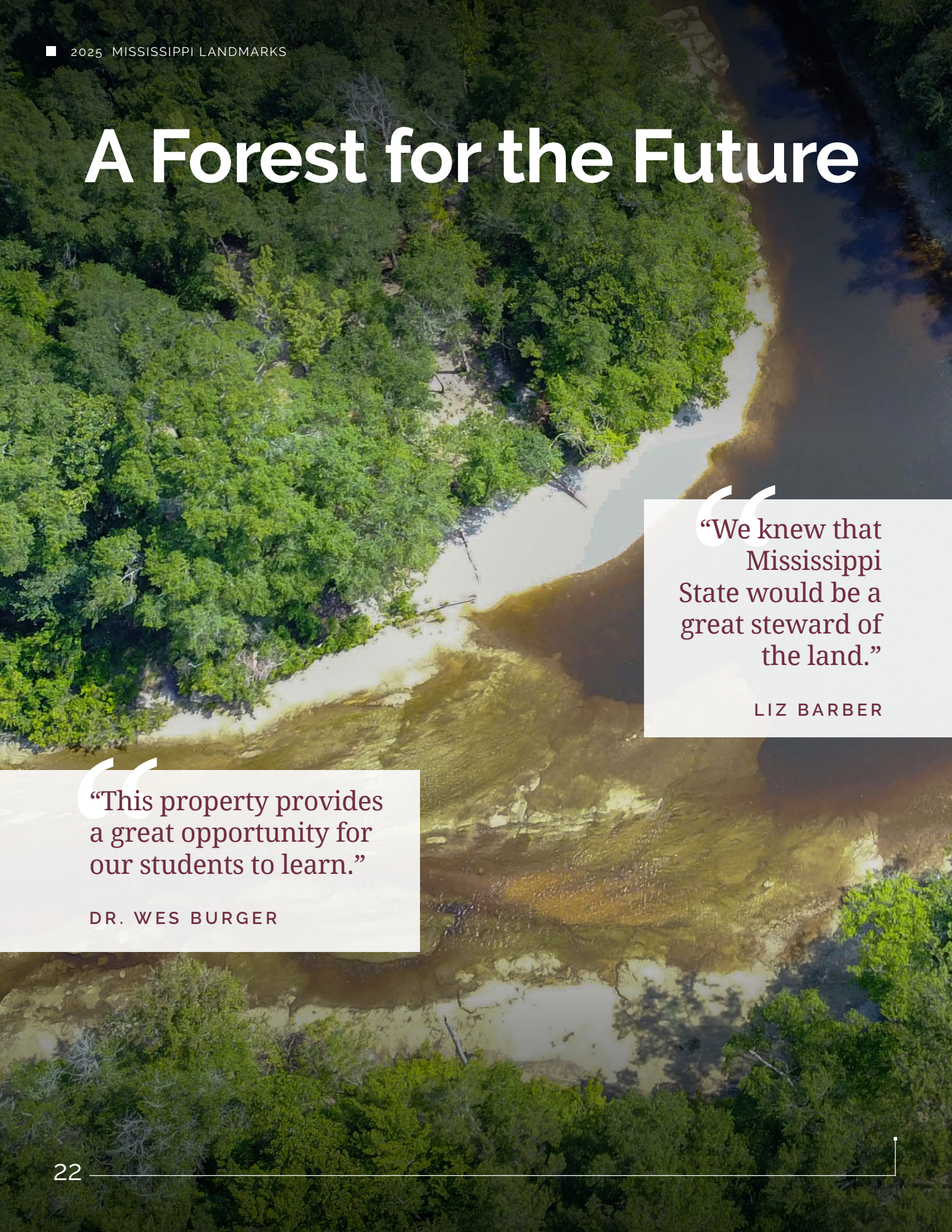
"Viking Tours are all about the history and culture of a region," Wesley Smith said. "Visitors get an authentic experience with our show. It is our food, our heritage, our culture, our music, and they just love it."

He said his office estimates an economic impact of $7 million to $10 million annually on the city and county from these river tours. Visitors stop four times a month from February through June depending on the stage of the Mississippi River, and less frequently from then through December.

"These visits benefit Greenville and the state in a number of ways," Wesley Smith said. "Because the tour stops in multiple cities, there are multiple impressions guests make of the state, and when people get to tell their own story, it makes a positive impact on visitors."

BY BONNIE COBLENTZ

A Forest for the Future



> "We knew that Mississippi State would be a great steward of the land."
>
> LIZ BARBER

> "This property provides a great opportunity for our students to learn."
>
> DR. WES BURGER

Winding its way through southern Mississippi's Harrison, Hancock, and Pearl River Counties, the Wolf River and its tributaries stretch 243 miles toward the Bay of St. Louis. A portion of the river flows through 14,000 acres of loblolly pine stands and bottomland hardwood forests—riparian and upland forest ecosystems that protect water quality, reduce erosion, and support coastal resilience.

Now, this ecologically rich corridor, recently acquired by the Mississippi State University College of Forest Resources, has a new purpose and name: the MSU Wolf River Coastal Forest Research and Education Center. Its journey to becoming a university-owned research and education site is the result of decades of grassroots advocacy, vision, and interagency collaboration.

The effort to purchase this tract began after the Deepwater Horizon oil spill, when funding for coastal restoration became available. Building on past efforts to protect the Wolf River through education, conservation easements, and public land purchases, several conservation partners began to advocate for a new, larger-scale forest conservation project near the river's headwaters. Weyerhaeuser, one of the largest private owners of timberlands, was willing to divest part of its industrial timberland along the river and joined a coalition of impressive partners—the Mississippi Department of Environmental Quality, National Fish and Wildlife Foundation (NFWF), Mississippi Forestry Commission (MFC), The Nature Conservancy, U.S. Forest Service, and the Land Trust for the Mississippi Coastal Plain—to submit a grant proposal to the U.S. Forest Service's Forest Legacy Program.

"We knew that this was a very complex transaction," said Liz Barber, MSU alumna, certified wildlife biologist, and Forest Legacy Program contract coordinator for MFC. "We also knew that Mississippi State would be a great steward of the land, creating a resource to facilitate large-scale research and education in areas like water quality monitoring, coastal forest wildlife and fisheries habitat, and prescribed fire."

Funding was secured through grants from the U.S. Forest Service's Federal Forest Legacy Program and the NFWF's Gulf Environmental Benefit Fund, and ownership of the land on the Harrison/Hancock county line was transferred to the MSU College of Forest Resources in November 2024.

Dr. Wes Burger, dean of the MSU College of Forest Resources and director of the Forest and Wildlife Research Center, sees the newly developed center as a key piece of a broader conservation puzzle. Burger said the plan will fill a gap in watershed conservation efforts along the Mississippi coast. Over the last decades, conservation agencies, working with state and federal agencies, have managed ecosystems around major coastal watersheds such as the Pearl and Pascagoula Rivers. This project will round out the work to improve all major coastal waterways flowing into the Mississippi Sound and, moreover, demonstrate that conservation and commerce can work hand in hand.

"The Wolf River property has been under the excellent stewardship of Weyerhaeuser, who managed it as a sustainable commercial forest for decades. While revenue generation will continue to be an objective, our focus will be on a more ecological forest management system centered around regionally imperiled ecosystem restoration," Burger said. "This property provides a great opportunity for our students to learn about forest and wildlife management and water conservation in coastal ecosystems, while faculty research will assist local landowners and the forestry industry."

Operations began in summer 2025, starting with road improvements, invasive species control, and site preparation, followed by prescribed burning and replanting native longleaf pine in the winter. Long-term plans include constructing facilities to host management, staff, researchers, and students. Perhaps most importantly, the agreement ensures that MSU will protect this property from future potential development in perpetuity.

"The northern Gulf Coast is rich in marine life, and the terrestrial part of coastal Mississippi is critically important to the conservation of our coastal and marine life," Burger said. "Thanks to the tremendous efforts of our partners, we will be able to protect those resources while providing abundant opportunities for research, education, and outreach that will benefit Mississippians and our unique natural resources for years to come."

BY MEG HENDERSON
PHOTO BY BARBER AND MANN, INC.

Vision 2030

Transforming Mississippi's Agricultural and Forestry Future

What if we could add billions to Mississippi's economy, revitalize our rural communities, and build a stronger future for the next generation? That's the question behind Vision 2030, a strategic plan to strengthen agriculture and forestry—the backbone of the state's economy.

Agriculture and forestry generate nearly $46.2 billion annually and account for one in every nine jobs in Mississippi. Despite this success, 75 percent of what the state produces leaves Mississippi, and more than half is processed elsewhere into higher-value products. This value-added leakage costs Mississippi more than $10 billion each year in lost jobs and opportunities.

"We are not capturing our full economic potential," said Dr. Keith Coble, vice president of the Mississippi State University Division of Agriculture, Forestry, and Veterinary Medicine. "This isn't just about growing more crops or harvesting more timber—it's about keeping the value of what we already produce right here in Mississippi, creating better-paying jobs and revitalizing rural communities."

PLUGGING THE LEAKS

To better understand where Mississippi is losing ground, MSU economists Drs. James Barnes and James Henderson are leading a value-added leakage study, analyzing more than 100 agricultural and forestry commodities.

"Our preliminary results indicate substantial opportunities for our state," said Henderson. "We don't expect to be able to keep everything we grow in-state, but even closing part of the gap could transform our economy."

Consider dimension lumber. Each year, Mississippi sells $1.5 billion in southern yellow pine lumber to companies outside the state, much of which is turned into engineered wood products, such as cross-laminated timber (CLT).

Poultry, the state's number one commodity, tells a similar story. Mississippi sells $1.6 billion in processed poultry products to out-of-state businesses, many of which are further processed before reaching the consumer.

"Retaining even a portion of these commodities for processing would lead to increased economic activity and job creation," said Barnes. "The longer a product can stay within Mississippi for all stages of processing before selling to the end consumer, the better."

Drs. James Barnes (right) and James Henderson are analyzing more than 100 agricultural and forestry commodities to determine how to reduce value-added leakages.

TASK FORCES AND PRIORITIES

Vision 2030 focuses on six critical areas where the state has both need and potential: artificial intelligence, specialty crops, agronomic crops, animal systems, conservation and resiliency, and population change and community vitality. These priorities emerged directly from conversations with stakeholders.

The specialty crops task force proposes investing in processing facilities and cold storage infrastructure to support these niche markets.

The artificial intelligence task force is developing strategies to equip farmers, educators, and communities with cutting-edge tools, building on the foundation of MSU's Agricultural Autonomy Institute. The long-term goals are ambitious: creating a statewide data infrastructure, developing virtual modeling tools for livestock and forest management, and launching certification programs to prepare a tech-savvy, AI-ready workforce.

The animal systems and agronomic crops task forces are similarly focused on modernization. The plan is to boost the animal systems industry through advanced monitoring technologies and stronger collaboration between producers and veterinarians. At the same time, the agronomic crops strategy aims to modernize the agricultural workforce and prepare for generational turnover on family farms.

Vision 2030 isn't just about agriculture and forestry—it's about supporting the people who make these industries thrive. Between 2020 and 2024, 52 counties experienced net out-migration, resulting in workforce shortages and putting rural economies under pressure. By expanding value-added processing and advancing the key priorities, Vision 2030 aims to reverse that trend, creating opportunities that encourage young people to build their futures in Mississippi.

"The value of Mississippi's agriculture isn't only in what we grow, but also in what we do with it," said Mike McCormick, president of Mississippi Farm Bureau Federation. "By identifying value-added processing opportunities and investing in technology, innovation, and our communities, we're not just creating jobs for today; we're securing a future for the next generation of Mississippians to thrive right here at home."

BY MARY KATHRYN KIGHT
PHOTO BY JON KALAHAR

On Solid Ground

Forestry and Forest Products Contribute $19B to Economy

Drive along most any Mississippi road, and you'll see trees—mostly pine—for miles. About 132,000 landowners own a piece of the state's 19 million forested acres and contribute to Mississippi's ranking fifth in the country for pine lumber production and third for pine pulpwood.

These landowners are vital contributors to Mississippi's forest and forest products industry, which had a state economic impact of more than $19.09 billion. Timber harvesting, which was a $1.48 billion industry in 2024, accounted for an additional $7.44 billion in value added (wages, profits, taxes, and so forth). Forestry and forest products—solid wood products, pulp and paper, and wood furniture—also created more than 84,000 jobs with a collective $4.42 billion in income for Mississippians and $1.59 billion in tax revenue.

Dr. Sabhyata Lamichhane, an assistant professor in MSU's Department of Forestry and MSU Extension economist, led an economic impact study on one of Mississippi's largest agricultural commodities and its impacts on the state's total economy.

"The forestry and forest products industries play a functional role in Mississippi's economy, and we aimed to quantify their direct, indirect, and induced impacts on the state's employment, income, output, and value added," she said.

Developed by Lamichhane and her colleagues, Dr. James Henderson, forestry professor and head of the MSU Coastal Research and Extension Center, and Dr. Donald Grebner, George L. Switzer Professor of Forestry and head of the MSU Department of Forestry, the 2024 report was generated with IMPLAN economic impact analysis software. Applying the most recent data from agencies such as the U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, U.S. Census Bureau, and U.S. Department of Agriculture and using IMPLAN, the team produced a detailed input-output model tailored to Mississippi's economy through a method called extraction. This process separates the forestry and forest products industries from the total state economy to calculate the multiplier, or ripple effects, representing the industries' economic contributions to other state sectors.

"Once we isolate those data, we can uncover the extensive economic links between forestry and other state industries,

demonstrating that the true impact of our forestry and forest products sectors goes far beyond their production value," Henderson said.

Lamichhane sees the study as a valuable decision-making tool for industry leaders, policymakers, economic developers, and local communities. The results can serve to guide resource allocation, prioritize infrastructure projects, attract investment, and support workforce development today and into the future.

"Mississippi's abundant forest resources position the state to capitalize on our current industries," she said. "But we can also seek opportunities from emerging industry trends, such as the global shift toward renewable energy and sustainable materials like biofuels and eco-friendly packaging solutions made from wood products."

Grebner added that the forestry jobs of the future require a skilled workforce and that educational programs and training initiatives are crucial to prepare the next generation of forestry professionals to support the industry's ongoing innovations.

"Forestry supports rural communities, supplies essential raw materials, and serves as a key economic driver for related sectors such as manufacturing, transportation, and retail, mainly in the state's rural areas," he said. "Its economic footprint makes it one of Mississippi's most vital natural resource-based industries."

Mississippi Forestry Association Executive Director Casey Anderson stressed the importance of forestry to the state's economy.

"Forestry and related industries play a vital role in Mississippi's economy, supporting 4 percent of all jobs and employing 84,000 residents. The industry's impact reaches beyond those with formal forestry training, as landowners also benefit financially through timber sales," Anderson said. "For many rural areas, forestry serves as an economic backbone, and by promoting sustainable forest management, we can help ensure these working forests continue to thrive for future generations."

BY MEG HENDERSON
PHOTOS BY KEVIN HUDSON

Scan for the full PDF report.

Finding Her Path

Former 4-H'er Pursues MSU Horticulture Degree

All young people need opportunities to figure out what they want to do with their lives. For MSU freshman Maggie Jo Phillips, from French Camp, Mississippi, the Mississippi 4-H youth development program put her on the path to self-discovery.

In Attala County 4-H, Phillips discovered a welcoming space to explore her interests and make friends. With 90,000 4-H'ers in Mississippi, the program is giving thousands of young people new and interesting opportunities.

"If you do 4-H activities, you'll automatically find people with similar interests," she said. "4-H is great for trying a variety of things."

Delivered by the MSU Extension Service, 4-H offers hands-on learning in agriculture, civic engagement, healthy living, and STEAM. In 4-H, Phillips tried everything from sewing and cooking to entering crochet and paintings in the Attala County Fair.

She also participated in 4-H workshops to train in job interviews, résumé writing, and professional etiquette—skills she knows will serve her well.

"Everyone needs to learn those skills to get a job," Phillips said. "Getting to learn them in 4-H was great."

Just two summers ago, Phillips took a big step by participating in 4-H Career Days during Club Congress. The following summer, she interned at Twigs Nursery and Landscaping in Oktibbeha County—a decision she wasn't sure about at first but soon discovered was exactly where she belonged.

"I was on the fence, but my agent explained I could shadow someone in horticulture or even biological engineering," Phillips said. "When I found out I'd be at Twigs, I knew I had to do it."

The experience gave her a glimpse into the working world and confirmed her passion for plants.

"Being in an employee-type role at Twigs was very beneficial to me even though I was only interning," she said. "I had wondered, how on earth do you work for someone? But I really enjoyed what I did, and for me, working at Twigs really solidified that I want to work with plants.

"Now, I understand how working with plants requires care and attention to detail."

Now enrolled in the MSU College of Agriculture and Life Sciences, Phillips is majoring in horticulture with a concentration in floriculture and ornamental horticulture. She is preparing for a career in the same field she discovered she loves in 4-H.

Phillips was able to discover who she is and what she wants to do in 4-H, and MSU is training her with the skills to pursue the career she wants.

BY LEAH BOWERS
PHOTO BY KEVIN HUDSON

Scott
COUNTY

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scott@ext.msstate.edu | krt261@msstate.edu

The Scott County MSU Extension office is staffed by (from left) office associate Tristen Phillipson, agriculture and natural resources agent Jason Hurdle, and county coordinator/4-H agent Rayne Arnold. (Photo by Michaela Parker)

WHAT EXTENSION PROGRAMS DO YOU OFFER?

We offer a variety of programs. Our Agriculture and Natural Resources programs include the Cattlemen's Association, Forestry Association, Master Gardeners, private applicator trainings, pond management, and soybean variety trials. Our active 4-H programs are the Livestock Project, Shooting Sports, 4-H Poultry Chain, 4-H STEM Club, Kayaking and Fishing Club, and ATV Safety trainings. Our Family, Health, and Wellness programs include the Mississippi Homemaker Volunteers.

WHAT ARE YOUR MOST POPULAR PROGRAMS?

Our most popular programs are 4-H Shooting Sports, Cattlemen's Association, and Mississippi Homemaker Volunteers.

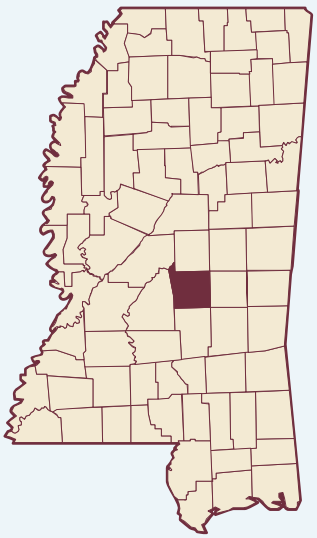
HOW CAN PEOPLE IN YOUR COUNTY GET INVOLVED?

Getting involved is easy! All you need to do is stop by the Scott County Extension office or reach out to us by email or phone. Follow us on Facebook to find out when our next event or program will be, and put your name on the list to attend. Everyone is always welcome at any program.

> Rooted in tradition and driven by community, Scott County stands as a proud testament to Southern strength, resilience, and heart.
>
> RAYNE ARNOLD
> *MSU Extension County Coordinator*

DID YOU KNOW?

The Moore Lookout Tower, built in 1940 by the Civilian Conservation Corps in the Bienville National Forest south of Forest, is listed on the National Register of Historic Places.



Mississippi is home to 82 counties.

f Scott County Extension Office **f** Scott County 4-H

DevelopmentCorner

Families Strengthen MSU's Future Through

Record-Setting Giving

THE SHEPARDS' LEGACY

For Maxine and Mike Shepard, family has always included four paws. The couple has shared 32 years of marriage alongside their Shetland Sheepdogs—Star Pooka, Star, Remy, and Sparky. They were, as the couple said, "our children." And their love for them led to a generous gift to the MSU College of Veterinary Medicine (CVM) that will create a legacy impacting generations.

While Mike built a career in plumbing supply sales and Maxine worked for the National Cotton Council, their shared passion for animals was at the heart of their lives. They told their veterinarian, Dr. James Perkins, about their dream of making a difference in veterinary medicine. Perkins, an MSU alumnus, suggested a tour of CVM, even offering to accompany them. When they made the trip, what they saw was an "eye-opener."

"I was absolutely amazed after touring the facility," Mike recalled. "Seeing the care, the students' training, and the way all kinds of animals are treated—it was wonderful. We were thoroughly pleased."

That one visit inspired a gift through the Shepards' estate to establish two endowments: the Maxine and Mike Shepard Endowed Scholarship and the Maxine and Mike Shepard Endowed Excellence Fund.

The scholarship, carefully designed by the couple, rewards students for strong academic performance, with support that grows each year until tuition is fully covered by their senior year.

"I wanted to be sure the students stay in school," Maxine explained. "Our intention is to have one student in each class [freshman through senior], helping four students every year."

The excellence fund was born out of a midnight realization.

"I woke up one night thinking about it," Mike said. "This way, students, professors, or labs can request funding through the dean for whatever is needed. It helps the whole facility, not just one part."

For the Shepards, the gift is both practical and deeply personal. They hope it relieves the burden of student debt, inspires others to give, and strengthens the care available for animals far into the future.

"I'm just grateful that we can do this, and specifically for Mississippi State University. Having the opportunity to tour the facility was not only amazing, but it's inspiring to really see what the college is doing for the students and others in the community," Maxine said.

The Shepards' generous gift highlights the many meaningful connections that helped the MSU Foundation reach a milestone of more than $102 million in private gifts raised in fiscal year 2025 in the Division of Agriculture, Forestry, and Veterinary Medicine (DAFVM).

"There are a lot of organizations that you can give to, but I wanted something that would last," Mike said. "This will help a lot of people—and a lot of animals—forever."

A FAMILY TRADITION OF GIVING

The Ishee family also contributed to this record-breaking year.

MSU has been part of Harold Ishee's life since he returned from military service and enrolled at the university, earning a degree in agricultural economics. MSU became a family tradition—his son, Sid, and grandson, Zack, followed his path, each earning undergraduate degrees from the same department. One month before he passed away, Harold and his wife, Jimmie, established a scholarship fund in the MSU College of Agriculture and Life Sciences Department of Agricultural Economics. Jimmie has since increased the scholarship.

"Harold and I, neither one of us had very much growing up, so we feel like the scholarship is a way for students to attend Mississippi State; otherwise, they may not have the opportunity to further their education," Jimmie explained. "My son and grandson have also given to this scholarship, which we hope to build and keep going. I don't think you would ever regret giving to help another child get an education."

STEWARDING THE LAND FOR FUTURE GENERATIONS

The work in DAFVM is rooted in the state's largest industries, creating an impact that resonates with donors.

"They see what you do every day, and they place value in what you do," said MSU Foundation President and CEO John Rush to faculty and staff at the annual DAFVM Summer Summit in August 2025.

Nearly 20 years ago, Rush helped establish the Bulldog Forest, which now covers 12,600 acres. Properties within Bulldog Forest like Andrews Forestry and Wildlife Laboratory and Spirit Hill Farm support research, conservation efforts, and hands-on learning experiences. Growing up in the outdoors with a father in the timber business, Rush understands the love of the land.

"Our donors enjoy their land," said Rush. "They take their children and grandchildren to their land. It's a passion for them, so when they're at a point to find someone to steward that land and teach the next generation the value and appreciation of that land, there's no better place than Mississippi State University."

BY MARY KATHRYN KIGHT

Maxine and Mike Shepard's Shetland Sheepdog Sparky. (Submitted photo)

Scan to create a lasting impact at MSU.

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MSU Extension
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Bulldog Forest

College of Forest Resources
cfr.msstate.edu

College of Veterinary Medicine
vetmed.msstate.edu

For more information on giving in support of Mississippi State University, visit the MSU Foundation website.

msufoundation.com

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Donor Nancy Link (center) joins MSU leaders at the groundbreaking for the Nancy Fair Link Laminitis Research Center, a new facility dedicated to combating a debilitating disease that causes severe pain in horses. Also pictured (from left) are MSU alumnus Richard Adkerson, College of Veterinary Medicine Dean Nicholas Frank, MSU President Mark E. Keenum, and MSU Foundation President and CEO John Rush. (Photo by Grace Cockrell)