

# LEADERS IN **Agriculture**

**O**NE OF THE HIGHEST AND MOST NOBLE AMBITIONS is to feed and clothe the world—and that's exactly what so many MSU College of Agriculture and Life Sciences' alumni do every single day. It's a humble endeavor and yet so many of our alumni build careers on finding ways to feed and clothe a growing population and do so with fewer resources, in less time, under greater environmental pressures. This day-in and day-out translates to careers that leave lasting legacies in the industries these alumni serve. Learn how Dr. Ryn Laster, originally a pre-law major, found her passion in poultry; how Ernie Barnes brought the bacon back to Main Street America; how Dr. Jack C. McCarty has anticipated the future of cotton for more than 40 years; and how third-generation dairyman, Will Gilmer, leverages technology to educate his customer base and elevate an industry.



CALS  
ALUMNI  
HELP  
FEED AND  
CLOTHE  
THE WORLD

By Vanessa Beeson



## From pre-law to poultry

**WHEN DR. RYN LASTER STARTED** out at Mississippi State, a career in poultry was the farthest thing from her mind. She pursued a Bachelor of Arts in English, minoring in foreign languages. She had hoped her undergraduate work would parlay into law school, which was something she'd dreamed of since high school.

"I went to law school for about three days when I realized it was truly not what I wanted to do," Laster remembers. "I grew up on a farm, and I decided I wanted to do something positive within the realm of agriculture. I looked at different majors, and chose poultry science because of the 100 percent job placement rate."

Laster earned a second bachelor's—this time in poultry science—in just three semesters. She graduated with that degree in 1993. She was offered an assistantship and stayed on for her master's degree in food science and technology, earning that in 1996.

After her master's, she held two jobs before finding a permanent home at Cal-Maine Foods. For nearly 20 years, she has served as director of food safety and animal welfare for the company, which is considered the largest producer of shell eggs in the United States. Cal-Maine Foods is headquartered in Jackson, Mississippi.

In 2005, two professors Laster knew well approached her about pursuing a doctoral degree. Since she'd taken more classes than required during her master's degree, she didn't have many courses left to earn a Ph.D. She and the professors, husband and wife, Drs. J. Paul Thaxton and Yvonne Vizzier Thaxton, formulated a program of study that allowed her to continue working fulltime at Cal-Maine while raising two children. She received her doctoral degree in food science, nutrition and health promotion with a poultry science emphasis in 2008.



At Cal-Maine, Laster oversees all of the company's food safety, animal welfare, *Salmonella* prevention, and biosecurity programs.

Laster says she is passionate about the role egg production plays in the bigger picture of food security.

"I serve on the Mississippi Food Network (MFN) Board of Directors. There are so many people who don't know where their next meal is coming from. Eggs, as a great source of protein at a low cost, are an important part of the equation when it comes to establishing food security in our state and across the country," Laster says. "We have an entire nation to feed with an increasing population. Finding ways to be a sustainable part of feeding our country is something I am passionate about."

In addition to her role with MFN, she was chairperson of the board for the Mississippi Poultry Association in 2010 and 2016. Laster also serves on the United Egg Producers Food Safety Committee and on the advisory board for the Department of Poultry Science. In addition, she is on the Senior Technical Advisory Committee for the Safe Quality Food Institute. Most recently, she was selected as an advisory board member of the newly formed Thad Cochran

Agriculture Leadership Program.

Laster has kept pretty busy on the home front as well. She says her family is her support system.

"My parents, Bob and Ann Laster live nearby, and I would not be where I am today without their support. My dad is an MSU alum, earning his undergraduate and master's degrees in industrial education. He worked for Siemens and the state department before retiring from Hinds Community College. My mother taught English at Hinds for over 40 years and is the author of a very successful technical English textbook. I have two daughters, Carlee, age 19, who is a freshman at MSU and Camryn, age 15, who is a sophomore in high school."

Laster credits her former mentor as helping pave the way for women in poultry and hopes she can pave the way even further.

"Yvonne Vizzier Thaxton was one of the first women in the poultry industry at the executive level. She truly shaped my career. When I was in the poultry science department as a student, there were only a few girls. Now, half of the students in the department are female. I am proud of that. There are tremendous opportunities for women, for everyone, in this field," she said.

## Bringing home the bacon

**WHEN MOST MISSISSIPPI STATE** alumni think about the ringing of cowbells on a bright fall Saturday afternoon, a scrimmage on Scott Field immediately comes to mind. CALS alumnus, **Ernie Barnes** says the sound reminds him of a swine barn.

"Back when I was in school, you could hear the cowbells ringing on a Saturday afternoon from South Farm (H.H. Leveck Animal Research Center).

We'd be in the swine barn and our judging coach would say, 'That's right. Get fired up. We are going to judge ten or 12 more classes, then you all can go to the football game.' We usually got

to most games about the start of the fourth quarter."

The 1974 animal and dairy sciences graduate recalls his time as part of the Mississippi State Livestock Judging Team as one of the fondest memories of his life.

"The experience expanded my horizons so much. I was a small-town kid from Union County, Mississippi who got to travel to nearly twenty-five states for competition that year. I got to know people from all over the country."

The livestock judging team is what initially attracted Barnes to Mississippi State.

"I knew I was going to be on the livestock judging team. I've had a love for

animals and loved that particular program. Mississippi State's new livestock judging coach, Dr. Howard Miller from Southern Illinois, was already well known in the pork industry. I knew him by reputation and I just had to be on his judging team."

Barnes grew up in the West Union/New Albany area on a small farm with a small herd of Hereford cattle and a few Yorkshire sows.

"My dad was a Baptist minister. He liked livestock almost as much as my younger brother and I did. We showed both pigs and cattle."

Barnes' passion for livestock led him to the pork industry. For the past 30 years, Barnes has been with the National Pork Board. In his current position he serves as director of producer services. He's a central figure in the execution of the annual World Pork Expo, which brings 25,000 pork producers to Des Moines, Iowa each year. He also oversees three regional staff members tasked with making sure state boards and producers have what they need for the national organization. Another project he is heavily invested in, he says, is Operation Main Street. The program trains 1,300 pork producers on how to give speeches to groups in their local communities, including civic organizations, high schools, county commissions, dietetic groups, and more.

"Our pork producers are out there showing customers they care about the environment, the health and safety of their employees, their animals, and, most importantly, their communities and families," Barnes said.

Even though Barnes and his wife, Paula, have been in Iowa for 30 years, raising both of their children in the Hawkeye State, they all still have close ties to Mississippi State. Both of his children attended Mississippi State; his son in the PGA Golf Management Program and his daughter for a kinesiology internship.





## A geneticist eyes the future of cotton

**S**IXTH-GENERATION MISSISSIPPIAN, Dr. Jack C. McCarty, grew up on a farm in Clarke County, Mississippi. He has seen unprecedented innovation in agriculture in his 40-plus years as a research agronomist with the USDA Agricultural Research Service's Crop Science Research Laboratory.

"As a child, I remember when my father purchased the family's first tractor. Up until then, we plowed the soil with mules. During my life and career, changes in agriculture have been more dramatic than several hundred years prior to that."

McCarty has spent his career focused on cotton genetics. In 2016, McCarty was honored as Cotton Researcher of the Year at the World Cotton Research Conference in Brazil. The selection was made by the International Cotton Advisory, a committee of cotton experts representing major cotton producing countries. That international recognition is a testament to the years of McCarty's quiet dedication.

McCarty earned three degrees in agronomy from Mississippi State: his bachelor's in 1968, his master's in 1971, and his doctoral degree in 1974.

When McCarty began working as a researcher in the 1970s, the biggest pest to cotton was the boll weevil.

"I worked to develop host plant resistance from a breeding standpoint, trying to find cotton plants that were resistant to the boll weevil. We had some success in that," McCarty said. "After the boll weevil was nearly eradicated in the U.S., our research shifted to bollworms, plant bugs, and other pests as well as the management of nematodes."

Most of McCarty's breeding work in cotton focuses on developing genetic material called germplasm with useful traits that can then be passed on to cotton breeding companies. The breeding companies pick up those traits and incorporate them into cultivars or varieties,

and then they make those available to the farmers. In his nematode research, McCarty's work led to the development of genetic resistance to the important reniform nematode. Additionally, he developed more than 500 germplasm lines, which represented new sources of plant genetic resistance to insects, nematodes, and diseases.

McCarty has also been a leader in fiber research. He co-developed plant mapping technology that determined the economic worth of each boll on a cotton plant. The technology is used as a gold standard in settling legal disputes centered on cotton fruiting and retention.

McCarty served 29 years in the Air National Guard, retiring as Lieutenant Colonel. His two brothers both went into agricultural education, each earning advanced degrees from MSU; one brother was with the MSU Extension Service and the Mississippi State Plant Board (Robert H. McCarty died in 2000 and has a building on campus named after him), the other brother (Will) was the state cotton specialist for many years and retired as associate director of the MSU Extension

Service. McCarty's sister retired after teaching elementary education for 30 years.

"I'm the only one of my siblings still working."

And work he does. McCarty continues his research in nematode resistance, improved fiber quality, and genetic diversity. He's published 168 peer-reviewed manuscripts and 106 non-peer-reviewed papers. He is a member of the graduate faculty at Mississippi State and has mentored 50 master or doctoral students as a member of their graduate advisory committee. During his career, McCarty has left an imprint as a leader in agriculture. His research has improved the genetics of Mississippi's original cash crop, contributing to better, stronger plants, with greater resistance to pests and improved yield and fiber quality.

As a dedicated researcher and mentor training the agricultural leaders of tomorrow, McCarty has his eyes focused on the future of cotton. To sustain that future, McCarty recently established an endowed scholarship in the College of Agriculture and Life Sciences for students studying agronomy.



## The life of a dairyman

**B**Y 8:00 A.M. FRIDAY MORNING, WHEN most people are settling into the office and checking email, Will Gilmer is already five hours into his 12-hour work day.

The third-generation dairyman and his father milk around 210 Holstein dairy cows seven days a week, 365 days a year. Gilmer graduated from Mississippi State in 2001 with a Bachelor of Science of Agricultural Engineering Technology and Business.

"We have what's called a 14/10 rotation. Milking begins at 3:30 a.m. and starts again at 1:30 p.m.," Gilmer says. "This schedule frees us up in the evening to spend time with our families and out in our communities."

Gilmer likes to stay active in the Shiloh community of Lamar County, Alabama where the farm is located. Currently, he's the president of his county's Farm Bureau. He also submits a weekly agricultural article to the local newspaper, The Lamar Democrat. He has also spent time in the national spotlight. In 2010, he was the Young Farmers and Ranchers Committee Chairman for the American Farm Bureau. In 2015, he was one of the first "Faces of Farming and Ranching" as a national spokesman for

the U.S. Farmers and Ranchers Alliance. And he's kind of a big deal on Twitter.

Gilmer Dairy's social media following is vast. Will Gilmer's over 11,000 Twitter followers nearly surpasses the population of the entire 600-square-mile county where the dairy farm is located.

That desire to inform the public about dairy farming, he said, began during his time at Mississippi State. He started out as a computer science major, but midway through his college career, he decided returning to help run his family's dairy farm was his life's ambition.

"As a student at MSU, I realized there was a need to educate the general public about life on a dairy farm," he said. "Many of the students who weren't in the College of Agriculture and Life Sciences had no idea where their food came from."

First, Gilmer created a website for the farm. Over time, Gilmer blogged about daily life on the farm. Once social media took off, he started to engage with people via Twitter.

"Now I am conscious of branding," he says, "But it all began with a sincere desire to get our story out there and say here's what we do. We want to be ethical and good stewards of the land and good caretakers of our animals. And we want

a good end product that we can enjoy with peace of mind."

The farm has been in the Gilmer family for over 100 years. Will's great-grandfather started the farm on land purchased from his father-in-law, planted cotton as a cash crop, raised livestock, and grew food crops to feed the family and animals. Will's grandfather, Gray, the youngest of nine children, returned to the farm in the 1950s after a successful career with the Tennessee Valley Authority. Gray Gilmer transitioned the farm to focus solely on dairy. Once Gray's son, David, finished at Mississippi State University (also a graduate of agricultural engineering technology and business), he returned to help his father run the dairy. A few decades later, Will did the same.

"I worked for my father for about four years. He wanted to make sure I was fully aware of what I was getting myself into. Then he took me on as a partner in 2005. That's how the business is today—it's a partnership between my father and me."

Will says the dairy is more challenging today than it was when he graduated sixteen years ago.

"It's a global market now and margins are razor thin. You have to be on top of what you are doing. You can't leave much up to chance. You have to know what your costs are and what production you can expect. You have to be a sound business person. You can't just milk cows," Gilmer said.

The farm has about 435 Holstein cows on 600 acres of pasture. At any given time, the farm has around 220 milking cows and produces a little over 3,000 gallons of milk every two days.

The Gilmer Dairy Farm participates in the Dairy Farmers of America Gold Standard Dairy program, which also incorporates the National Dairy FARM Program. The voluntary on-farm audit assesses areas including animal care and wellness, environmental stewardship, employee training, and milk safety and quality.

Gilmer met his wife, Joni, while at Mississippi State University. Joni teaches first grade and the couple has one son, age 11 and a daughter, age seven.

