

MTSU School of Agriculture

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Highlights for 2018-19 Academic Year

By Dr. Jessica Carter, Director

- The School of Agribusiness & Agriscience officially has a new name (effective July 1, 2018). The school was re-named the **School of Agriculture** and our building will change back to the original name, Stark Agriculture Center.
- We have added 2 new faculty members: **Dr. Keely O'Brien** (Fermentation Science) and **Dr. Kishor Luitel** (Agribusiness/Ag Economics).
- A new minor in **Poultry Science** will be offered beginning in the Fall 2019 semester (full story page 2).
- Classroom & building upgrades— **VoAg 100** was renovated during the fall 2018 semester. Stop by and check out this wonderful classroom. It seats 20 students so we will be offering small jr/sr level courses and graduate courses in this room. Dr. Mosley has been busy upgrading the VoAg Shop with new equipment as well!!
- Please follow us on Facebook (**MTSU School of Agriculture**) and Twitter **@MTSUAg** and check our website for current events!

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• Upcoming events—please check our department website for updates throughout the year:

- ◆ Aug. 26—Classes begin for fall 2019 semester
- ◆ September 4— Student organization fair, SAG front lawn
- ◆ Oct. 2—Raider Roundup Career Development and Exploration event for high school FFA students, Tennessee Livestock Center (TLC)
- ◆ Oct. 4-5—Heart of Tennessee Junior Meat Goat Classic
- ◆ Oct. 17—Junior Market Broiler Show
- ◆ Oct. 26—Homecoming, Ag Alumni tailgate - this year we will be at the Grove

Centennial Celebration in memory of Dr. Robert Garrigus!

We are pleased to announced that the Dr. Robert “Bob” Garrigus scholarship endowment has exceeded \$100,000. This endowment enables us to provide at least 2 scholarships annually to deserving students with an interest in livestock judging/beef cattle production/animal science. Thanks so much to all of our alumni and friends of Dr. Garrigus who helped to make this possible! We were honored to have Janice and Heather Garrigus in attendance at the annual Agriculture Awards Banquet to celebrate the Dr. Robert Garrigus Endowed Scholarship.



L to R: (front row: Heather Garrigus, Janice Garrigus, Jacob Tipton (scholarship recipient), Jessica Hickerson (scholarship recipient), and Mrs. Craig. Back row: Steve Cheatham, Ewin Cowley, Jim Akers, Taylor Holmes, Gen. Les Fuller, Nancy Fuller, and Larry Craig.



Thanks to all of our loyal customers. The spring plant sale was a huge success.

MTSU TO BEGIN OFFERING A MINOR IN POULTRY SCIENCE THIS FALL

Beginning Fall 2019, the School of Agriculture offer an undergraduate minor in Poultry Science. “The new minor will be the academic cornerstone as we expand our focus in poultry science at MTSU,” says Dr. Kevin Downs, poultry scientist and coordinator of the new program. The Poultry Science minor will consist of coursework in poultry production, poultry evaluation, poultry nutrition and feeding, poultry reproduction and breeder management, poultry processing, and business management. The School of Agriculture will offer a total of five poultry science courses, more than any other university in the state of Tennessee. Downs adds, “We want to be the destination school in our state for high school and community college students interested in studying poultry science and pursuing a career in the poultry industry. The School of Agriculture at MTSU is dedicated to connecting the best and the brightest with the tremendous opportunities for careers in the poultry sector.” In addition to the new Poultry Science minor, the School of Agriculture is also collaborating with Tyson Foods-Shelbyville on the Middle Tennessee Junior Broiler Program. The School has also begun efforts to engage college and high school students through the MTSU Poultry Science Club and MTSU collegiate poultry judging team. For additional information about MTSU’s poultry program, contact Dr. Kevin Downs at kev.in.downs@mtsu.edu or (615) 898-5217.



Poultry Science

ily to fund the first ever MTSU Poultry Academy, an immersive hands-on poultry science Summer educational program for high school juniors and seniors from across the State, and to support equipment purchases for small scale poultry research. The School is appreciative of the continuing poultry industry support as we further develop our academic program in poultry science.

SCHOOL OF AGRICULTURE COLLABORATES WITH TYSON FOODS IN FIRST MIDDLE TENNESSEE JUNIOR BROILER PROGRAM

Last Fall, the School began a collaborative effort with Tyson Foods – Shelbyville in developing the first Middle Tennessee Junior Broiler Program. This is an educational program for 4th – 12th grade students from across middle Tennessee. Students receive broiler chicks and starter feed and grow their birds for 6 weeks. The program culminates in a show, auction, and poultry science skill-a-thon. Throughout the program, educational sessions on broiler management, selection, and showing are held on the MTSU campus. The first year of the program was a tremendous success and the 2019 program is expected to be bigger and better. The School is appreciative of support for the program from poultry and allied industries. For additional information about the Middle Tennessee Junior Broiler Program, visit <https://www.mtsu.edu/agriculture/juniorbroilerprogram.php>.



SCHOOL OF AGRICULTURE RECEIVE POULTRY INDUSTRY RECRUITMENT GRANT

The School received a grant totally nearly \$7,000 from the U.S. Poultry Foundation and the Hubbard Farms Charitable Foundation in support of the developing poultry science program at MTSU. These grant dollars will be used primar-



Tyson employees (many MTSU alumni!) and MTSU faculty and students were proud to host the first Junior Broiler Program in middle Tennessee.



Alumni News

MTSU Alumnus Dr. Charlie Hatcher hand picked as Tennessee's next agriculture commissioner.

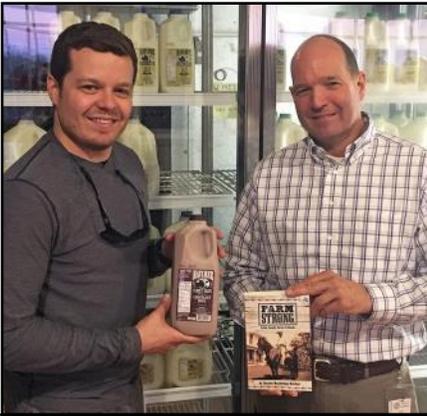
MTSU alumnus Dr. Charles "Charlie" Hatcher will join Gov. -elect Bill Lee's cabinet as commissioner of the Tennessee Department of Agriculture early next year. "It's a little bit over-

whelming," Hatcher, a College Grove, Tennessee, resident and state veterinarian since 2009, said Tuesday, Dec. 4, 2018. "I'm so humbled and honored to be chosen by the governor-elect. He's a farmer and I'm a farmer, too, and I plan on executing his (the governor-elect's) vision for agriculture for the state of Tennessee. ... I'm up to the task." Lee made the announcement during the annual Tennessee Farm Bureau Convention in Franklin, Tennessee, Dec. 3.

Hatcher is a 10th-generation farmer, a fifth-generation Tennessee farmer, and general managing partner of Williamson County-based Hatcher Family Dairy, established in 1831. "Charlie brings tremendous perspective about our state's rural resources and agricultural way of life," Lee said. "What happens in rural Tennessee matters to all Tennesseans, and Charlie has the experience to carry out the administration's key priorities in agriculture and rural economic development."

Lee takes office Jan. 19, when he'll be inaugurated at the state Capitol in Nashville. Hatcher earned his bachelor's degree in animal science in 1980 from MTSU, which he calls "a wonderful university. The education and background served me well. ... It was close (to home) and affordable. I loved my educational experience there."

Hatcher also is general managing partner for Rock-N-Roll Farms and Battle Mountain Farm in Williamson County and owns and operates Rock-N-Country Veterinary Services. He earned his veterinary medicine degree from the University of Tennessee-Knoxville.



MTSU alumnus Charles Hatcher, left, a member of the Class of 2009, stands in front of a refrigerated case of Hatcher Family Dairy milk with his father, Dr. Charlie Hatcher who graduated from MTSU in 1980.

Our students are busy with Undergraduate Research Experiences & Honor's Thesis Projects

Undergraduate Research Experiences and Creative Activity committee (URECA) provides funding opportunities for many undergraduate students to participate in research projects. 22 Agriculture majors recently completed research projects. Here are a list of the students and their mentors.

Student	Mentor
Joseph Gulizia	Dr. Kevin Downs
Britney Brown	Dr. J. Carter/Dr. Maegan Hollis
Dillon Arnold	Dr. Maegan Hollis
Hannah Hall	Dr. Tony Johnston
Kayley Stallings	Dr. Tony Johnston
Ross Thomas	Dr. Tony Johnston
Jordan Bevill	Dr. Seockmo Ku
Caldwell Charlet	Dr. Seockmo Ku
Allie Nadeau	Dr. Seockmo Ku
Fred Marino	Dr. Seockmo Ku
Justin Cooper	Dr. Seockmo Ku
Connor Ball	Dr. Seockmo Ku
James Flowers	Dr. Seockmo Ku
Vincint Tortora	Dr. Justin Gardner
Robert Eichas	Dr. Nate Phillips
Killen Middleton	Dr. Nate Phillips
Elizabeth Clippard	Dr. Nate Phillips/Dr. Iris Gao
Daniel Bess	Dr. Nate Phillips
Revathi Kuruganti	Dr. Iris Gao/Dr. Nate Phillips
Zach Stevens	Dr. Nate Phillips
Aleana Boudle	Dr. John Haffner



Animal Science major Joseph Gulizia pictured with 2 of his research project posters. He presented an abstract at the S. Section American Society of Animal Science annual meeting in Oklahoma City, OK in February.

Rock Band increases donation to \$15K for MTSU's 'CERV' program for veterans.

*Modified by Andrea Rego
from Randy Weiler, MTSU
News*

A third donation in three years — this one for \$15,000 — from Grammy Award-nominated Mississippi rock band **3 Doors Down's Better Life Foundation** will continue to benefit **MTSU** students and faculty working in equine therapy with veterans from the Murfreesboro-based **Veterans Recovery**



Center also known as CERV. The CERV program is coordinated and taught by **Andrea Rego**, an MTSU horse science instructor. 3 Doors Down's foundation now has given \$35,000 for the program since 2017. Band frontman **Brad Arnold** and his wife, **Jen**, presented the check recently at the MTSU Horse Science Center on West Thompson Lane.

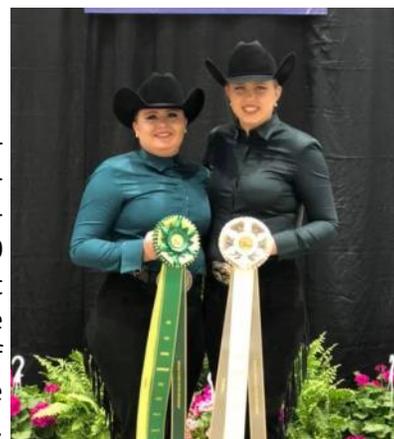
CERV offers veterans from the recovery center an opportunity to ride and benefit from interacting with horses while MTSU students gain valuable experience in helping facilitate the sessions. "This is a great, great cause," said Brad Arnold. "... We're equine people ourselves. We know how good they (horses) are for people. The relationship between a human and horse is a powerful thing. We're glad to be able to further that along and what it can do to help for our vets. ... They deserve all of our support. I believe in what they're doing here and we're just proud to be a part of it." **Jim Tranthem**, 65, a veteran from Lafayette, Tennessee, would drive the two hours from Macon County to participate in two days of therapy for nine weeks. "This is great," Tranthem said of the program. "I didn't think it would fit for what I was needing, but now I want to do more." **Gary Block**, 39, a U.S. Marine Corps veteran from Thompsons Station, Tennessee, said "I always look forward to CERV days. Normally, I do not want to get out of bed. The (equine) therapy is motivation to get moving and (be) in shape, and makes me want to do more."



Equestrian Team earns top six awards from four riders at IHSA Nationals.

By Andrea Rego

MTSU has been a "go-to" school for their riding program and still remains a place of excellence for competition. The IHSA (Intercollegiate Horse Show Association) encompasses over 400 colleges and 10,000 members. Riders must qualify through top placings at regionals and semi-finals in order to compete at the renowned National competition. In the last days of finals week in May, MTSU sent four riders to compete individually at IHSA nationals in Syracuse, New York. Mary Catherine Wade and Jenna Seal competed in



Open Reining and placed 5th and 6th, respectively. Kailey VandeKamp placed fourth in Intermediate Horsemanship and Kaylee Hayes placed 6th in Beginner Horsemanship. Riders were guided by Ariel Herrin (coach) and Andrea Rego (assistant coach). (Photos L to R, Mary Catherine Wade, Jenna Seal, Kaylee Hayes, Kailey VandeKamp).

MTSU Stock Horse Team earns Division II National Championship

Story by Randy Weiler, MTSU News

The Blue Raider team, coached by **Andrea Rego**, earned their title earlier in April at the **American Stock Horse Association Collegiate and National Show** held in Sweetwater, Texas. Students and their horses competed in cow horse, pleasure, reining and trail events, Rego said. (In cow horse, the rider's horse is tasked to work a live cow, performing specific maneuvers that include boxing the cow, turning it in a specific manner and performing a reining pattern — requiring skill, coordination and timing — as the rider guides the horse through a precise pattern of circles, spins and stops.) Division II schools including MTSU show in two divisions: Limited Non-Pro and Novice and are typically smaller, but still very competitive school teams, Rego said. MTSU finished ahead of Reserve Champion Clarendon College and third-place Missouri State. Individual national show results leading to the team title included:

Jenna Seal, a senior from Meridian, Mississippi, was the Limited Non-Pro Champion riding Catsafire.

Patricia Wingate, a junior from Hazelpark, Michigan, placed third overall in Limited Non-Pro, riding Izzie Tornado. **Hunter Huddleston**, a freshman from Franklin, Tennessee, was Youth Champion, riding My Favorite Remedy.

Taylor Meek, a freshman from Murfreesboro, Tennessee, was Youth Reserve Champion, riding Dunnits Smokin.

Kylie Small, a senior from Dallas, Georgia, was Novice Reserve Champion, riding BC Pennys from Tari.

Mary Catherine Wade, a junior from Germantown, Tennessee, was fourth overall in Novice, riding Hay Now Sunshine. **Caroline Blackstone**, a junior from Douglasville, Georgia, was sixth overall in Novice, riding Shakers Cowgal.

Jennifer Dowd, a senior from Unionville, Tennessee, was eighth overall in Novice, riding LC Jack Hancock 101.



Pictured from L to R: Lucas Brock (graduate assistant), Caroline Blackstone, Jenna seal, Patricia Wingate, Taylor Meek, Kylie Small, Jennifer Dowd, MC Wade, Lindsay Gilleland, Hunter Huddleston, Andrea Rego (coach)



Jenna Seal riding Catsafire in cowhorse class. (above)



2019-20 Agriculture Scholarship Award Recipients

Adams Family Endowment..... Jessika Benson
 Adams Family Endowment.....Joseph Gulizia
 Adams Family Endowment.....Taylor Bell
 Agriculture Endowment.....Mariah Boyt
 Agriculture Endowment.....Johnathon Dunn
 Agriculture Endowment.....Sammy Mould
 Agriculture Endowment.....Bridget Robertson
 Agriculture Endowment.....Jordan Dillenbeck
 Billie & Burton Towry Endowment.....Rex Dunn
 Boxwood Farms.....Lindsey Parsley
 Campbell Family Endowment.....Carissa Gashaw
 Carolyn Gill Endowment..... Calli Gregory
 Catherine Ellington.....Maxi Edwards
 Farm Credit Mid America.....Hailei Gibson
 Farm Credit Mid America.....Michelle Salazar
 Dr. Harley W. Foutch Endowment.....Jake Duke
 Dr. Robert Garrigus Endowment.....Jessica Hickerson
 Dr. Robert Garrigus Endowment.....Jacob Tipton
 Fowler and Ruth Nickle.....Kylan Lane
 Hayden Memorial.....Allison Parker
 Heritage Farm.....Leah Hernandez
 Hugh Burrum.....Sarah Kozuszek
 Hugh Burrum.....Andrew Fuhrmann
 Paul Cantrell Agribusiness.....Bailey Smith
 Robert Alexander.....Kimberly Gardner
 Robert Jarrell Memorial.....Erin Coleman
 TN Council of Coops.....Loran Frady
 TN Farmers Coop.....Rhiannon Overcast
 TN Farmers Coop.....Britney Brown
 TN Farmers Coop.....Morgan Vickers
 TN Farmers Coop.....Kayley Stallings
 Theodore Bigger.....Robert Clardy
 Thomas F. Rowlett Jr. Memorial.....Neal Slone
 Nat. Council of Farmer Coop. Found..... Candace Gwin
 Nat. Council of Farmer Coop. Found..... Shelby Oldham

Incoming Freshman Scholarship Awards:

TN Farmers Coop.....Lillian Steed
 Adams Family Endowment.....Mia Kuhnle & Erin Burns
 Joe Jack & Jerry Dement Endowment.....Kalyn Rouse
 TN Rehabilitation Corporation.....Erika Bates
 TN Rehabilitation Corporation.....Abigail McConnell
 TN Rehabilitation Corporation.....Maggie Wampler
 TN Rehabilitation Corporation.....Nicholas Deboer
 Agriculture Endowment.....Colby Chapman,
 Allyssa Kraker, and Kiahra Thompson



Outstanding Senior Awards

Robert A. Alexander Outstanding Agribusiness Senior Award
 Rachel Elrod
Outstanding Animal Science Senior Award
 Nolan Jolley
Sam Paschal Award for Outstanding Horse Science Senior
 Jessica Schriver
Theodore C. Bigger Outstanding Plant and Soil Science Senior Award
 Alaina Kresovic
B.B. Gracy, Jr. Outstanding Agriculture Senior Award
 Joseph Gulizia

Scholarships awarded at the Horse Science Banquet:

J.W. Cross Scholarship.....Madison Armstrong
 Kitty Adams Scholarship.....Patricia Wingate
 Mark Moskovitz.....Taylor Meek
 Tennessee Horse Council.....M.C. Wade
 Seve Scholarship.....Jessica Berthume
 Joan Hunt Scholarship.....Kaylee Hayes

Senior Honor Students (GPA 3.8 or higher):

Caldwell Charlet	Mackenzie Keaton
Johnathon Dunn	Abagayle Morton
Rachel Elrod	Elizabeth Schanie
Joe Gulizia	Kaley Vande Kamp
Brett Hughes	Morgan Vickers
Nolan Jolley	

Animal Science Academic Quadrathlon Team

In January, four students in the School of Agriculture competed as a team at the 2019 Southern Section Animal Science Academic Quadrathlon competition in Oklahoma. The MTSU team consisted



L to R: Nolan Jolly, Joseph Gulizia, Jessica Schriver, and Johnathon Dunn.

of Joe Gulizia, Jessica Schriver, Nolan Jolley, and Johnathon Dunn. The Quadrathlon is a four-part competition in the animal sciences where undergraduate students from universities across the South work together as teams in a lab practical, written exam, oral presentation, and quiz bowl. This year's competition was held on the campus of Oklahoma State University and in Oklahoma City. The MTSU team competed well finishing 5th overall out of 14 teams and first in the written exam portion of the competition. The team proudly represented MTSU and the School of Agriculture!



Pictured from L to R: Coach Dr. Maegan Hollis (coach), Sarah Mikhail, Jessica Avery, Stephanie Young, Samantha Giffin, and James Scott (coach).

Dairy Challenge Team

The Dairy Challenge team participated in the Southern Regional Contest in November in Knoxville, TN and the National Dairy Challenge hosted by the University of Georgia in Tifton, Georgia. At the national contest, four students represented MTSU (Jessica Avery, Samantha Giffin, Sarah Mikhail, and Stephanie Young). Sydney Becht and Tajah Buckingham participated in the Academy which prepares students to compete in the national contest the following year.

The three-day event began with learning stations at Pecan Grove Dairy and Grassy Flats Dairy, where students learned from industry experts on cow comfort, milking protocols, feed center management and other key areas. Other events included a career and innovation fair, corporate technology presentations as well as the contest and awards banquet. Plans are underway to prepare a 2019-20 team to compete at the national contest.



2019 National Dairy Challenge Full Group Photo Coming from 36 colleges in 29 states and provinces, 240 students participated in the three-day Dairy Challenge, held March 28-30th in Tifton, GA.

Block & Bridle Club



National Block & Bridle Convention

Ten Block & Bridle students and their advisor, Dr. Jessica Carter attended the 99th National Block & Bridle Convention that was held in New Orleans, Louisiana in conjunction with the Cattle Industry Convention. Students participated in agriculture industry tours, attended the opening session and trade show as part of the Cattle Industry Convention, and an awards banquet. Students enjoyed listening to Terry Bradshaw, Cattle Farmer, Fox Sports Broadcaster and 2 time Super Bowl MVP, who was the keynote speaker. The chapter scrapbook earned a 4th place award at the awards banquet! Our chapter is looking forward to attending the 100th B&B convention next year in Ames, Iowa.



L to R: Rebekah Brown, Jennifer Dowd, Michelle Salazar, Madison Armstrong, Lindsey Parsley, Dr. Jessica Carter, Sarah Kozuszeck, Allison Parker, Christina Davis, Jessica Schriver, and Abagayle Morton.

Collegiate FFA

MTSU Collegiate FFA has had a busy school year! One major highlight was competing at the 2019 Tennessee FFA Alumni Convention! The club brought home 1st in the scrapbook competition, 2nd place in the Ag Business Interview by Lindsey Parsley, 4th place in the Agriculture Education Interview by Hunter Holden, 3rd place in the Agriculture Profession Interview Bridget Robertson, 3rd place in the Agriculture Production Interview Allison Parker, 3rd place in the Discussion Meet by Alaina Staggs, 2nd place in the Extemporaneous Public Speaking Allison Parker, 3rd place in the Prepared Public Speaking Sarah Kozuszek, and the Quiz bowl team including Lindsey Parsley, Mack Holden, Tori Papuchis, and Rhiannon Overcast in 3rd place! For more information on how to join Collegiate FFA feel free to reach out to any of the officers or email amp9p@mtmail.mtsu.edu.



L to R: Dr. Chaney Mosley, Mack Holden, Lindsey Parsley, Bridget Robertson, Rhiannon Overcast, Alaina Staggs, Sarah Kozuszeck, Allison Parker, and Hunter Holden.

Support local dairies, look for new Tennessee milk logo

By Will Freeman, Tennessee Department of Agriculture

NASHVILLE – Consumers now have a way to know that their milk comes from Tennessee dairy farms with the new official Tennessee Milk logo. Milk labeled as Tennessee Milk must be entirely sourced, processed, and bottled in Tennessee. The program is administered by the Tennessee Department of Agriculture (TDA). “This logo allows consumers the opportunity to support Tennessee dairy farmers, who are facing challenging times right now,” Agriculture Commissioner Jai Templeton said. “We appreciate the Tennessee Dairy Producers Association for supporting the enabling legislation, assisting TDA on the development of the logo, and promoting the program to producers and processors.” Sunrise Dairy in Crossville and the Middle Tennessee State University (MTSU) Creamery are currently using the Tennessee Milk logo. Weigel’s, Hatcher Family Dairy, and G & G Family Dairy will soon follow. “Milk has been an important part of our heritage for over 85 years,” Weigel’s chairman Bill Weigel said. “This new milk logo represents the pride and dedication of our Tennessee farmers. Weigel’s is proud to announce that it will only process and distribute milk from East Tennessee dairy farms.”

The 110th General Assembly passed legislation enacting the Tennessee Milk logo. Sen. Frank Nicely and Rep. David Hawk sponsored the bill. TDA will continue working with processors to increase Tennessee Milk participation, giving consumers a broader opportunity to support local farmers. “Middle Tennessee State University is proud to be one of the first producer/processors to participate in the new Tennessee Milk program,” MTSU Director and Professor of Animal Science Dr. Jessica Carter said. “Being part of this program will allow us to brand our milk as a locally-produced product and enable consumers to confidently purchase dairy products from Tennessee farmers. Our freshly bottled MTSU milk will proudly display the new Tennessee Milk logo to help promote Tennessee’s dairy industry.”



MTSU Faculty, Staff and Students celebrate the new Tennessee Milk Logo with Agriculture Commissioner, Jai Templeton, state legislators, dairy producers, Tennessee Department of Agriculture staff, and the Dairy Alliance on September 6, 2018.



MTSU institute director discusses impact of tariffs for ginseng growers

Story by Randy Weiler, MTSU News

One of Middle Tennessee State University's newest researchers and institute directors delivered a different perspective — the political economy and economic impact of tariffs on ginseng growers — for those attending the Tennessee Ginseng Growers Fall Meeting on Aug. 24, 2018 in the Science Building. Daniel Smith, director of the Political Economy Research Institute at MTSU and associate professor in the Department of Economics and Finance, brought a presentation “analyzing the substantial costs of tariffs to Tennessee ginseng growers and provided a critique of the economic and political justifications used for tariffs” at the conference held in the Science Building. Ginseng growers, buyers and sellers and others came from all parts of the state for the conference, where they learned about history, export market analysis, preparation for the fall planting season, an added-value ginseng testing certificate and more. “The wide consensus among economists is that steel and aluminum tariffs are likely to destroy more American jobs, especially in steel- and aluminum-using industries, such as automobile industries, than they will preserve in steel and aluminum industries,” Smith said. “Trade deficits do not provide an economic justification for tariffs since trade deficits simply reflect the high level of foreign investment in the United States, helping to drive economic prosperity and job-creation,” he added.

MTSU alumnus and Murfreesboro resident Tom White (Classes of 1984 and '86), who is semi-retired after a 30-year career as an environmental chemist, took in his second meeting since May because he owns a 7-acre farm near Center Hill Lake in DeKalb County and his family has 50 acres in Monroe County in East Tennessee. “I know it's suitable for ginseng,” said White, referring to the Monroe County tract. “I have an interest to know about harvesting ginseng for income on land that's typically not agricultural because of where it's sloped and wooded. It may be a good activity for me in retirement.”

White's father, the late Ralph L. White, served as chair in MTSU Educational Leadership for nearly 30 years. State Rep. Jeremy Faison of Cosby, Tennessee, said he would “like to see us become the greatest state in America (with regard to ginseng). Those people in Tennessee are doing it right.” Ginseng is a very popular over-the-counter supplement that is used to boost the immune system. Currently, the annual world market for ginseng is just over \$2 billion, with a starting price of \$400 per pound for mature ginseng roots.

Faison added he's “excited to see what MTSU is doing through the leadership of Dr. (Sidney A.) McPhee and Dr. Gao. They're going to make Tennessee be the go-to state for exporting, and I'm excited to help in any way I can.” MTSU alumnus Paul Martin Jr. discussed the university's trip to China in May, where it was announced Guangxi Botanical Garden of Medicinal Plants and MTSU agreed to create a joint ginseng institute to study, develop and promote Tennessee-grown herbal products for sale in Asia and other emerging markets.

Other speakers included Andrea Bishop, ginseng coordinator with the Tennessee Department of Environment and Conservation, providing the history of Tennessee's ginseng program; Nate Phillips, associate professor, MTSU School of Agriculture, discussing the fall planting season; and Mengliang Zhang, chemistry assistant professor, discussing an added-value ginseng testing certificate. Dr. Iris Gao, Associate Professor in the School of Agriculture and researcher with the Tennessee Center for Botanical Medicine Research organized the meeting. For more information about ginseng, call 615-898-2430.



Tissue culture research on Ginseng is being conducted at MTSU to determine optimum growing conditions and species for Tennessee.



School of Agriculture associate professor Nate Phillips talks about the fall planting season Aug. 24 during the Tennessee Ginseng Growers Fall Meeting (MTSU photo by Kimi Conro).



Dr. Iris Gao, IGI director, is planning a symposium on the science, traditions, and economics of Tennessee Ginseng in September. For more information please visit: www.mtsu.edu/ginseng

Plant & Soil Science Club

The MTSU Plant and Soil Science Club traveled with Dr. Nate Phillips to Birmingham, AL in February to compete against other universities in the Southern Region – American Society for Horticultural Science (ASHS) horticultural competitions. The horticulture team did very well with all four members placing in the top 10 overall. As a team, they finished 2nd overall, beating teams from a number of southern land grant universities including Texas A&M, Arkansas, LSU, and Auburn. Alaina Kresovic placed 1st in Fruit Crops and tied for 2nd in Greenhouse Crops with teammate Elizabeth Clippard. Killen Middleton also placed 3rd in Greenhouse Crops. Alaina Kresovic was awarded the southern region outstanding club member



L to R: Alaina Kresovic, Robert Eichas, Killen Middleton, and Elizabeth Clippard.



award. This is the highest undergraduate award given at the Southern Region ASHS, and only the second time that a MTSU student was the recipient. In addition to the competitions, students also presented their undergraduate research. Robert Eichas presented research co-authored by Killen Middleton investigating germination behavior in *Metasequoia glyptostroboides*. Alaina Kresovic presented research co-authored with Abagayle Morton, on alternative soilless media substrates for *Vinca* production. At the collegiate branch business meeting, two of our students were elected into southern region officer positions. Robert Eichas will serve as the president-elect and Elizabeth Clippard as the secretary.



Dr. Haruna demonstrates soil & water infiltration to his class.



Dr. Haruna's Soil Fertility class visits the vineyard at Lane Agri-Park and applied fertilizer to the plants.

Raider Roundup tests high school FFA skills

Story by Randy Weiler, MTSU News

Some of the high school students came from as far away as Pigeon Forge, Pikeville, Spencer, Baxter and McEwen, Tennessee. Others attending the first Raider Roundup Friday, Sept. 21, at Middle Tennessee State University were from Cannon County, Watertown, Riverdale, Stewarts Creek, Greenbrier and Station Camp High School in Sumner County. Sponsored by MT Engage, which is focused on enhancing MTSU student academic engagement, Raider Roundup brought nearly 300 students to campus to help prepare them for state Future Farmers of America competition. From MTSU faculty, staff and students during a two-hour timeframe, they learned about agriculture mechanics, agronomy, dairy judging, equine science, veterinary science, floriculture and farm business management; and livestock, meats, poultry and soil evaluation. "It has been incredible and exciting," said Chaney Mosley, a first-year assistant professor in agricultural education for the School of Agriculture. "Our student volunteers and the level of engagement by our faculty made it all possible." About 60 MTSU students and the majority of agricultural faculty members assisted Mosley.



Butter-making and more at MTSU Farm charms City Schools 3rd-graders

Story by Randy Weiler, MTSU News

Nearly 1,300 Murfreesboro City Schools' third-graders were fascinated by the butter-making process and much more during their fifth annual "Farm2School" field trip to the MTSU Farm and Dairy in Lascassas, Tennessee. The students visited the university's Experiential Learning and Research Center, the farm and dairy, on Wednesday, May 8, 2019. The farm experience is part of a partnership between Murfreesboro City Schools and MTSU, which was led by School of Agriculture Director Jessica Carter, farm-dairy Director Matthew Wade and a number of students, faculty and staff. Participating elementary schools included Black Fox, Bradley and Cason Lane academies, Discovery School at Bellwood, Erma Siegel, Hobgood, John Pittard, Mitchell-Neilson, Northfield, Overall Creek, Reeves Rogers and Scales. School buses dropped off children at 9:15 and 11:15 a.m. for two-hour visits, where they learned about cows (and their feed), chickens, goats and other animals; bees and honey; farm equipment; the milking parlor, MTSU Creamery chocolate milk and more, with an average of 80 students at each of the five stations around the dairy and garden areas. There was a whole lot of shakin' going on at the two butter stations, as each child received a small plastic container of cream and was told to shake until the liquid turned to butter. Mitchell-Neilson student Ryleigh Mullen, 9, enjoyed the butter-making process. "I like shaking it and how that turns it into butter," she said, savoring her first-time visit to the MTSU Farm. David Howse, 9, an Erma Siegel student, said the field trip was "very cool ... seeing the goats, cow and making the lima bean necklace. It was a bunch of fun."



Animal Science professor Dr. Maegan Hollis explains the workings of a cow's stomach to third-graders from the Murfreesboro City Schools.



Children learn about goats during the "Farm2School" trip to the MTSU Farm. (MTSU photo by Andy Heidt)

MTSU fermentation science students assist with successful Grape Harvest Day

MURFREESBORO, Tenn. — Kaylee Stallings of Murfreesboro is just thankful the grape vineyard at Lane Agri-Park in west Murfreesboro pales in comparison to what she and other MTSU Fermentation Science students encountered during an Education Abroad trip to Germany in May. Stallings, 20, and her classmates assisted with the first Grape Harvest Day Saturday (Aug. 25) when more than 50 people from the university and community harvested Cynthiana or Norton variety grapes for juice, jelly and, potentially, wine. Grape Harvest Day featured Master Gardeners helping the general public harvest the fruit and demonstrating how to make jam and juice during the early-morning event.

The vineyard was established in 2006 as a cooperative project between the MTSU School of Agriculture and the Rutherford County Agricultural Extension Office. For years, anyone could pick the sun-ripened grapes. An effort was finally formalized to invite everyone to experience the grape harvest, said Tony Johnston, director of the MTSU Fermentation Science program. Johnston said the back side of Lane Agri-Park off John Rice Boulevard features 200 plants on about a half-acre — a far cry from “the sprawling hills of vineyards in Germany,” said Stallings, who is a double major in fermentation science and biochemistry. “I’m so glad we don’t have to pick all that by hand.” To support Stallings, Johnston said there literally were tens of thousands of acres and square miles of vineyards in the area bounded by Frankfurt, Germany, Strasborg, France (Alsace region) and Basel, Switzerland, where the group studied abroad. Connor Ball, 25, a junior from Savannah, Tennessee, who has been involved with the program since it began in 2017, said he “thought it (harvest) would be a lot more work-heavy. There was a great amount of people who came out early. This went very smoothly.” Ball also was pleased his peers — and he acknowledged “college students tend not to be morning people” — showed up at 7 a.m. to help.” (Maybe Donut Country doughnuts were an incentive.) In addition to harvesting, Johnston and MTSU colleague and biology professor John DuBois used a crusher/stemmer to break the grape skins before removing them from the stems and a bladder press, used to extract juice from the fruit. Participants could leave with the grapes they picked or have them stemmed/crushed and pressed into juice to take home. Carla Bush, University of Tennessee Extension Family and Consumer Sciences agent, and Master Food volunteers provided a jelly demonstration and even gave away small jars of peach jelly harvested in the park orchard. Johnston told the group to mark their calendars for Aug. 24, 2019 — the date for the second Grape Harvest Day at Lane Agri-Park. He anticipates a greater harvest, which will be open to the public.

Note: A link to video is available at <https://youtu.be/L7DKolk32OI>.



Connor Ball, Fermentation Science major, assists with the Grape Harvest.



MTSU biology professor John DuBois, left, criminal justice administration professor Carter Smith and agriculture/fermentation science professor Tony Johnston pour part of the Aug. 25 grape harvest into a bladder press, which turns the fruit into juice. (MTSU photo by Randy Weiler)



Fermentation Science

Baby chicks steal the show at MTSU Ag Education Spring Fling for elementary students.

Story by Randy Weiler, MTSU News

The new chicken exhibit area inside the MTSU Tennessee Livestock Center was a huge hit with the elementary school youngsters. You could call it Chicken Row on one side of the main arena. From incubation to newly hatched to little chicks to grown fowl, the full life cycle of the farm animal was on display Tuesday (April 16) at the MTSU Ag Education Spring Fling. Nearly 900 children experienced the fifth annual agricultural field trip where youngsters like Leah Leavy of Murfreesboro, who have never been to a farm, but can experience it under one roof. Children from area elementary schools in Kittrell, Lascassas, Eagleville, La Vergne Lake, Campus School, Middle Tennessee Christian, Dibrell (Warren County) and Auburn (Auburntown) participated this year. They were joined by teachers, parents and about 80 combined MTSU agritourism class members and agriculture students from MTSU and Smith and Cannon county high schools, who kept things hopping in the livestock center. Leavy, 6, a first-grader at Lascassas Elementary, said the event “was a lot of fun.” When asked what was the best part, she replied, “everything.” But the baby chicks, as attested by her father, Keith Leavy, were the most fun. “She loves the chicks,” he said. Tractors, bees and honey, the “Little Acres” area that featured milking a replica of a cow, MTSU Creamery chocolate milk and a popular new corn pool (thousands of kernels of corn in three kiddie pools) area in the Barnyard Playground were among the numerous stops along the way. They could also watch “Cracker Jack,” a beef cow, rest on sawdust or munch on straw. And “Gus,” an 8-year-old horse, received lots of love and attention. In the “Little Acres” area, where children could pick fruits, vegetables and other items, one youngster said he picked “bananas,” when there were pears, apples and eggs, but no bananas. Vaught’s agritourism class also presents a special Christmas season event for children in early December.



Hop Springs, MTSU Fermentation Science program celebrate grand opening with ribbon cutting.



Fermentation Science

Some 150 agritourism, music and food and beverage enthusiasts helped Middle Tennessee State University's fermentation science program and partner Hop Springs celebrate a ribbon-cutting at the beer park's operations just off John Bragg Highway on May 23, 2019. Rutherford County Mayor Bill Ketrone, venue founder and co-owner Mark Jones, MTSU fermentation science program director Tony Johnston and others proclaimed Hop Springs, which had a soft opening in late December, officially open. The crowd then ventured outside for a ceremonial ribbon-cutting ceremony. The event included music, food and beverages and tours of the new analytical and fermentation science labs in Hop Springs' building space.

The MTSU degree program, which recently graduated its first class, has gained interest from prospective students from all across the country. The recent grads had internships with Yoplait yogurt, Hop Springs and other companies. Jones, an MTSU School of Agriculture alumnus, and business partner Derrick Morse, opened their venture and partnered with MTSU to provide lab space in the large facility that features soon-to-open Steel Barrel Brewery. It's a merging of academics and agritourism.

"We have an analytical lab as well as a sensory lab," Johnston told the audience. "The analytical lab is for traditional chemical

analysis of foods and other products and the sensory lab can be used for almost anything anyone wants to evaluate. And, believe me, I am grateful to have those facilities." Jones said it is a lab that "can do analysis for companies all across the country. It can collect data. All of our tours will go through the sensory lab. I can find out colors, names of new beers, names of carpet. Whatever it is, we can gather that data, sell that data back to the company requesting the research (and) both of those labs are functioning.

For College of Basic and Applied Sciences Dean Bud Fischer, "the best part is our students get the opportunity to see the whole process while getting to perform analytical analysis and sensory testing." He added it has led to internships for several of the first-time graduates with Yoplait yogurt, Hop Springs and others. Kelly Beam with the Rutherford County Chamber of Commerce called the facility "one of the new jewels of the community" and shared how MTSU fermentation science and Hop Springs have formed a great partnership.

Fermentation science has had its first graduating class of six students, who are now working in the industry. To learn more about the fermentation science program, call 615-898-2421 or email Tony.Johnston@mtsu. The program has gained interest from prospective students from all across the country.



STUDENTS FROM THE SCHOOL OF AGRICULTURE PARTICIPATE IN U.S. POULTRY COLLEGE STUDENT CAREER PROGRAM AT IPPE

In February, nine undergraduate students from the School participated in the 2019 U.S. Poultry College Student Career Program in conjunction with the International Production and Processing Expo in Atlanta, GA. The College Student Career Program is an opportunity, funded completely by U.S. Poultry, for college students from across the U.S. to interview, over a three-day period, for internship and full-time positions with poultry companies from across the country. In addition to interview opportunities, students also had the chance to network with poultry and allied companies, big and small, from around the world. Several of the participating MTSU students have received offers for management positions or internships.

NEW MTSU POULTRY SCIENCE CLUB IN THE SCHOOL OF AGRICULTURE

Students in the School now have additional extracurricular activities available through the new MTSU Poultry Science Club. This is an additional student engagement piece as the School continues to develop a comprehensive Poultry Science program. The members of the PSC have been active in both community involvement and poultry industry connections. The PSC developed and implemented an expansive poultry display for the MTSU Ag Education Spring Fling. They have also hosted guest speakers from poultry industry companies and have plans for additional fund raising opportunities, service projects, and poultry industry engagement for the Fall. The PSC is appreciative of the poultry industry support received thus far. The current officers are: Joseph Gulizia, president; James Scott, vice-president; John Adkins, secretary; Lea Hernandez, reporter/treasurer; Nick Green, recruiting coordinator; and Dr. Downs, advisor.

TWO SCHOOL OF AGRICULTURE STUDENTS SELECTED FOR POSTERS AT THE CAPITOL

Joseph Gulizia, senior Animal Science major, and Cal Charlet, senior Fermentation



Science major, were selected as two of only 7 MTSU students to present their research at the 2019 Posters at the Capitol event. Students met with Rep. Charlie Baum and Sen. Dawn White, in addition to other legislators. The Posters at the Capitol event is a one-day showcase of undergraduate research conducted by students from all universities in the State of Tennessee. It is a tremendous honor to be selected for this event. The School is extremely proud of these students and how well they have represented our program. Way to go Joe and Cal!

TENNESSEE FARM BUREAU DISCUSSION MEET

The 2019 Annual MTSU Collegiate Discussion Meet took place April 17th. Each year participants in the competition discuss agricultural issues. This year’s topic of discussion was how farmers can break into new markets outside of the traditional channels and how the industry can develop and innovate new uses of products. The first place winner was Allison Parker, a senior in Agribusiness. In second place was Lindsey Parsley, a sophomore in Agricultural Education. Also in the final four were Jennifer Dowd, a senior in Agribusiness, and Jessi Schriver, a senior in Horse Science. The competition is sponsored annually by the Tennessee Farm Bureau Federation and the MTSU School of Agriculture. The top four competitors receive cash prizes of \$300 for first place, \$150 for second place, and \$100 for the final four. The top two winners also advance to the state finals at the Young Farmers and Ranchers Summer Conference in Columbia, TN. We are proud of Allison Parker for winning the state discussion meet in July!



From L to R: Lindsey Parsley, Jennifer Dowd , Dan Strasser (Director of Special Programs, Tennessee Farm Bureau Federation), Allison Parker, and Jessi Schriver.

Check out this cool YouTube video of the MTSU Farms that was produced by one of our students!



<https://www.youtube.com/watch?v=Q01xBI6dYyg>



Our student Agriculture Ambassadors, faculty and staff are actively recruiting at various agriculture events throughout the year. If you know of a student who's interested in MTSU Ag please contact the department to schedule a campus visit and tour of our farm laboratories and/or horse science center. We offer scholarships to incoming freshman (application found on our website and due by April 1). We would love to show you around!

Make a Gift

School of Agriculture – [mtsu.edu/supportag](https://www.mtsu.edu/supportag)

If you would like to contribute please check out this link. You can donate to one of several different funds or to the general fund for the School of Agriculture. Thank you for your support!

Contact MTSU School of Agriculture:

Dr. Jessica Carter (jessica.carter@mtsu.edu, 615-898-2169) or Mrs. Debbie Strobel, executive aide (Debbie.strobel@mtsu.edu, 615-898-2523).

Be sure to check out our Webpage:

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Dr. Song Cui, Associate Professor of Plant & Soil Science
Dr. Kevin Downs, Associate Professor of Animal Science
Dr. Iris Gao, Associate Professor of Plant & Soil Science
Dr. Justin Gardner, Associate Professor of Agribusiness
Dr. John Haffner, Veterinarian, Horse Science
Dr. Samuel Haruna, Assistant Professor of Soil Science
Ms. Ariel Herrin, Director of Equestrian Program
Dr. Rhonda Hoffman, Professor of Horse Science
Dr. Maegan Hollis, Assistant Professor of Animal Science
Dr. Tony Johnston, Professor of Fermentation Science
Dr. Kishor Luitel, Assistant Professor of Agribusiness
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