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CAFNR Office of Research Newsletter // Sept. 19, 2024 // 6(19)

A Message from the Associate Dean of Research



I plan on highlighting some of the infrastructure improvements in our college as part of this column over the next few months. Today,

I'm sharing some exciting news from our MU Foremost Dairy.

We are investing in our Dairy! The Foremost Dairy is part of the Central Missouri Research, Extension and Education Center (CM-REEC), and our investments are helping meet the goals of the CAFNR Strategic Plan. These investments are ensuring student success and helping generate research-based knowledge that empowers Missouri agriculture to compete in a global market. Student education on the farm is across all ages and life stages. From cattle pregnancy to ultrasound confirmation, students learn about genetics, animal health and economics. When new calves are being born, students are there to help and learn. From day one, our dairy cattle are a hands-on operation. That hands-on care progresses from bottle feeding to halter training and creates milk cows that might be described as gentle giants. We are moving toward a larger and more uniform herd of Holstein cattle.

Milk production from each cow is strongly tied to genetics and quality feed. Our dairy cows are milked twice daily — each morning and evening. While waiting to be milked, they are housed in a large, free stall barn where they rest on mattresses topped with cedar shavings, are fed, watered and kept cool and comfortable. Stress can reduce milk production, so we do our best to ensure that the MU dairy cows are comfortable. We are currently milking 159 cows. That number should increase to about 180 by this February. Our Holstein cows are producing great milk, with an energy corrected value of 85.5 ECM, or energy-corrected milk. This is a standardization that takes in to account the milk produced (in pounds), the fat content and protein content. We just recently exceeded a rolling herd average of 26,000 pounds of milk per cow per year, placing us at or above industry standards. Our finances are also trending in the right direction. I take this opportunity to congratulate our team of leaders, staff, faculty and students at CM-REEC and Foremost Dairy for a job well done and for your dedication to the land-grant mission.

Our goal is to continue supporting students, researchers, extension specialists and Missouri producers. The following improvements

were completed recently:

- Constructed two new heifer raising facilities.
- New equipment placed in service. This includes three new skid loaders, a tractor, TMR feed wagon, bedding shooter and much more.
- Added additional ensiled feed storage capacity.
- Renovated dry cow feeding with new concrete bunk feed lane.
- Repaired and modernized the physiology barn lab space and restrooms.
- Reconditioned and redesigned the entryway and staff breakroom.

The following facility improvements and many more are currently underway or being planned:

- New commodity storage facility.
- Lighting upgrade in free stall barn.
- Milking parlor system upgrade.
- Cow mattress replacement.
- Dry cow barn curtain replacement.
- Flush system storage tank rejuvenation.
- Feed pushing robot.

I invite you to visit the Foremost Dairy to see the improvements and learn about the exciting plans for the future.

Shibu Jose

Associate Dean for Research and Director of MOAES

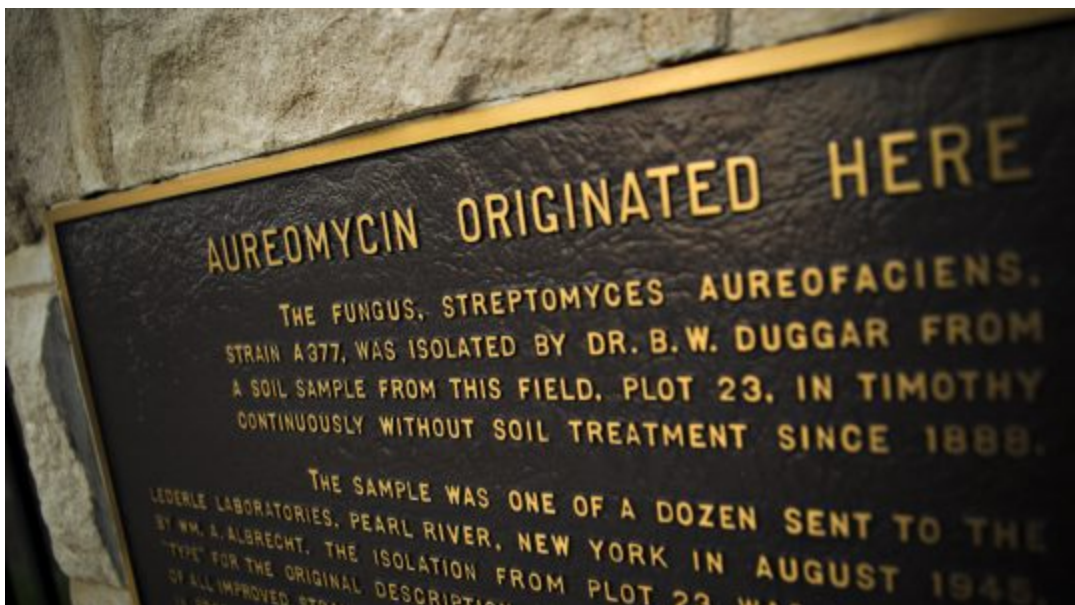
Feature Story



Tom Spencer leads by example »

Mizzou's vice chancellor for research has spent decades researching the reproductive system. Now, he's continuing to lead research into women's reproductive health with support from a NIH MERIT Award.

Research Highlights



CAFNR Research Symposium and Aureomycin anniversary: Celebrating decades of discovery »

CAFNR to hold event marking 75th anniversary of the discovery of aureomycin in conjunction with CAFNR Research Symposium.



Plant roots under drought – no longer the hidden half »

In a recent centennial review article for the American Society of Plant Biologists, Mizzou scientist Robert Sharp and team summarize key advances in the understanding of root growth under drought conditions.



Showcase returns to South Farm »

Formerly known as South Farm Showcase, Mizzou's College of Agriculture, Food and Natural Resources will host CAFNR Showcase at South Farm in September.

CAFNR Grants Office

Save the date for the CAFNR grants office's second annual fall workshop, Grants Aren't Scary. This virtual workshop takes place 1-4 p.m., Tuesday, October 29. This is a great opportunity for new faculty and other researchers to learn about the services offered by your CAFNR grants office. Topics covered include an overview of federal sponsor guidelines, budgetary requirements and limitations, campus timelines for getting proposals submitted and more! Zoom registration link coming soon.

Graduate Student Spotlight



Graduate Student Spotlight: Q&A with Harmeet Singh »

Singh is pursuing a Ph.D. in plant, insect and microbial sciences

“Regenerative Reflections” podcast now available

The MU Center for Regenerative Agriculture is excited to announce its new podcast “Regenerative Reflections,” where you can hear farmer perspectives on regenerative agriculture. Hosted by communications intern Makayla Voris, the podcast seeks to connect people on the fence about regenerative ag with producers already involved with practices like cover crops, regenerative grazing, pollinator plantings and more!

Every other week, faculty will bring you a new conversation on Podbean, thanks to a partnership with MU Extension! The first episode features Ryan Diener and Marina Osier, who are part of the Climate-Smart Fieldscapes incentive payment, as they talk about the regenerative practices they use on their farm, the benefits

of practice stacking and advice for producers starting their journey into regenerative ag.

Head over to **Podbean** to listen now! You can also go to the Center for Regenerative Agriculture's **website** to find out more information and access bonus content.

Research Roars

CAFNR faculty members have received the following recent grants (listed by Principal Investigator):

Rob Myers, On-farm Soil and Management Information Support for SHAPE, Agricultural Research Service, 8/1/2024-6/30/2028, \$3,780,261

Heike Buecking, Acquisition of Goods and Services – Mutants II, Agricultural Research Service, 9/1/2024-1/8/2025, \$19,057

Andrew Thomas, Adaptation of pasture and forestland to variable-density silvopasture and black walnut silvicultural systems in Southern Missouri, Missouri State University (NIFA), 9/1/2024-8/31/2024, \$90,000

Henry Nguyen, PARTNERSHIP: Broadening Soybean Resistance To Southern Root-Knot Nematode, University of Arkansas (NIFA), 9/1/2024-8/31/2027, \$239,421

Robin Rotman, Wetland Establishment and Restoration to Support Community Needs, Environmental Protection Agency, 8/1/2024-7/31/2027, \$373,976

Chung Ho Lin, Impact of Soil Micronutrient Deficiencies on the Plant Ionome and Selected Bioactive Compounds, Lincoln

University (1890's Universities Foundation), 10/1/2023-9/30/2024,
\$56,485

In the News

[**A passion for pawpaws: Can Missouri's state fruit tree get the admiration it deserves?**](#)

St. Louis Post-Dispatch

[**Joro Spiders Nothing to Worry About — Yet**](#)

Morning Ag Clips

[**Report: Missouri forests play role in long-term carbon storage**](#)

Herald-Whig

[**Plan to not have over-the-top dicamba for 2025**](#)

Brownfield Ag News

[**Suppressed prices are likely to stick around for several more years**](#)

RFD-TV

[**Corn, Soy Prices to Remain Near Pre-2020 Levels in Coming Years**](#)

Farms.com

[**Don't waste money on deer repellents in soybeans**](#)

Farm Progress

[**Don't blame 'corn sweat' — climate change is also making Midwest humidity worse**](#)

Nebraska Public Media

Let's Get Social!

Keep up with the latest in research news from CAFNR by following us on Twitter and LinkedIn!

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LinkedIn: **Mizzou College of Agriculture, Food and Natural Resources**



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