FALL 2024

ISSUE 05

ALUMNI NEWSLETTER

UK PROFESSOR RETIRES AFTER 38 YEARS OF SERVICE
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SIGNIFICANT NSF GRANT AWARDED TO UK LAB
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UKREC CONSTRUCTION PROGRESS UPDATES
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Martin-Gatton College of Agriculture, Food and Environment

Department of Plant and Soil Sciences

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UKREC UPDATE

From the Chair

Greetings Alums!
Change surrounds us: the seasons are changing and the landscape around Plant Science Building is different every day, due to the new AgResearch building construction. The same is true for UKREC in Princeton. If you have visited these locations recently, you know what I'm talking about. No pain, no gain – as the saying goes. It will be lovely to have modern, attractive new buildings, but it is taking significant effort from many of us to get there. Due to the construction, **we are hosting the annual PSS RoundUp Alumni event off campus this year – at Mirror Twin Brewing – on October 11**. We hope to see you there!

We welcomed 14 new graduate students this year and 9 new undergraduates in the Agricultural Ecosystem Science (AES) degree program. We recruited one new faculty member this year and celebrated the retirement of a few folks too. We completed a successful Departmental periodic review. UKREC folks are watching the walls go up on their new main building. In Lexington, the Barnhart classroom expansion project is progressing, and the new AgResearch building is scheduled for completion at the end of 2026 (photo shown). The new USDA-ARS building on main campus has yet to break ground but is still in the works.

As always, our students and alumni are doing amazing things. We highlight a few in this newsletter. We love learning about and sharing the accomplishments of our alums! Please don't be shy about letting us know when you achieve something significant. We are proud of our unit and love celebrating the success of everyone who's been involved with it over the years.
I hope you enjoy this fifth issue of our alumni newsletter.
Sincerely,

Rebecca L McCully

New Faculty

Dr. Toshi Mizuta

Katsutoshi “Toshi” Mizuta, Ph.D., is an assistant professor who is broadly interested in precision agriculture and digital soil mapping with a particular focus on soil health, climate-smart agriculture, and ecosystem services. His expertise spans various areas, from conducting lab-based biogeochemical incubation studies to utilizing proximal, airborne, and satellite remote sensing technologies and artificial intelligence for a large scale research based on big data of soil, crop, biome, climate, terrain, geology, and human beings. He is also dedicated to developing decision-making support tools for cost-effective and sustainable management practices concerning global food security and climate change. The highly interdisciplinary nature of his work has led to collaborations with various scientists, companies, and government agencies, which has resulted in 12 publications, 6 conference proceedings, +80 extension reports, and +50 conference presentations, and +20awards. He received his BS in environmental engineering in 2014 from the Soka University in Japan. He received both his MS majoring in soil and water sciences (SWS) in 2016 and his PhD majoring in SWS (minoring in food and resource economics) from the University of Florida. He completed his postdoctoral position at University of Minnesota Precision Agriculture Center during 2021–2023. He was an assistant professor at Ohio Wesleyan University before he joined UK in July 2024.

Toshi is interested in extending his collaborations through interdisciplinary projects in research, teaching, and services to improve current agricultural production systems agronomically, economically, ecologically, and socially. He will be teaching “precision agriculture” and the honors version of our unit's introductory "plants, soils, and people" course.

Faculty Promotions

Dr. Olga Tsyusko was granted tenure this Spring.

Retirements

Dr. Jonathan D. (J.D.) Green retired from our unit on July 31, 2024 - after 38 years of service. JD expressed the following in his retirement letter:

"I have been fortunate to spend my entire professional career at the University of Kentucky, which began in July 1986 as an extension weed scientist. My affiliation with the UK weed science program actually began during my time as an undergraduate and graduate student (1977-1983). During the past 47 years, I have witnessed a number of significant advances in weed control technologies and have had countless interactions with those connected with the agricultural community and beyond."

RETIREMENTS

That's right, folks. JD is an alum of our program, receiving both his B.S. and M.S. degrees in our unit before heading to Oklahoma State for his Ph.D. As an undergrad, JD was very active in and helped lead the UK Agronomy Club. A native of Richmond, KY, JD was a very successful extension weed scientist, devoted to the clientele of the state.

Agronomy Club—First Row: Richard Morris, Jonathan Green, Susan Koehler, Cliff Hardin, Wilbur Frye. Second Row: Randy Ray, Randel Koch, Jennifer Hicks, Sally Small, Joe Cain, Lorin Boggy. Third Row: Mike Bullock, Mike Reed, Mark Hatfield, Wayne Parrott, Kevin O'Bryan, Rob Whittington, Glenn Thompson.

Dr. Green is highly respected by growers, county Extension Agents, agricultural retailers, and professional peers as evidenced by him receiving numerous awards and commendations, including the M.D. Whiteker Excellence Award in Extension in Kentucky, the Distinguished Service Award from the Vegetation Management Association of Kentucky, and by being elected a Fellow of the North Central Weed Science Society. JD was an active member in a number of weed science professional organizations and served in leadership roles for most of them (e.g., NCWSS, WSSA, SWSS). JD was involved in student training over his career, both by advising students and teaching when needed, and he oversaw the College's Herbarium of Kentucky Weeds. Those of us who worked with JD know how much he valued being out-and-about in the state, helping farmers and others solve their weed identification and management issues. We wish JD the best in retirement!

Professor Ernie Osburn received the Soil Ecology Society's Early Career Award for his work on assessing the effects of viruses on soil carbon cycling in contrasting ecosystem types.

Awards

The Don and Betty Kirkham Soil Physics Award was established in 1998 to recognize a mid-career soil scientist who has made outstanding contributions in the area of soil physics. This year's recipient was Dr. Ole Wendroth, nominated by Dr. Markus Flury from Washington State University.

In his lecture at this year's Tri-society meeting in St. Louis, entitled "Opportunities for Soil Physics to Contribute to Understanding and Managing Soils" and co-authored by past and current students and colleagues, Dr. Wendroth introduced the audience to Dr. Kirkham's overwhelming service to people and impact on the discipline.

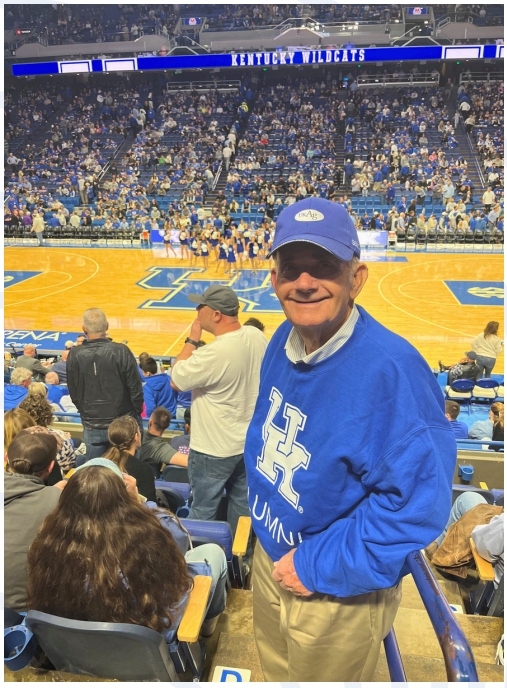
Professor Tomo Kawashima received the 2023 MG-CAFE Bobby Pass Excellence in Grantsmanship award for securing the most significant external award(s) for his work. This award is given in memory of Dr. Bobby Pass, who chaired the Department of Entomology from 1968-2001, and was dedicated to promoting scientific excellence.

Awards

Bill Bruening was the recipient of the 2023 SCC33 National Variety Testing Association Service Award. Bill has served as an officer with SCC33 for over a decade. He has served as chair in years past and currently serves as secretary, administrative coordinator, and webmaster. He is the senior editor for the Journal of Crop Variety Testing. In 2010, he merged several regional Mulitstate variety testing projects to form the National Variety Testing Association. The group meets annually and brings diverse ideas and direction to the science and coordination of variety testing.

Rankin Powell was the recipient of the 2023 Shirley Phillips No-Till Award

The No-Till Seminar was held November 17th with award recipient Rankin Powell; a long-time extension agent, Kentucky farmer, and No-Till pioneer.



Awards

Distinguished Alumnus Award

On April 12th, the Department celebrated Carey Johnson, recipient of the 2024 Distinguished Alumnus Award. Mr. Johnson then presented a seminar, detailing his journey as an environmental scientist working in the Kentucky Government. Mr. Johnson received his MS under the guidance of Dr. Karathanasis (pictured on the right) in 2002.

Early Career Award

On May 3rd, the Department celebrated Sarah Hall, recipient of the 2024 Early Career Award. Dr. Hall then presented a seminar covering her interdisciplinary work in Appalachia.

Awards

New IPSS Graduate Students

ABDAAL ALI
ADV. REVOLINSKI

CASEY BYRD
ADV. LING

BERRYISH M. CHELLAPANDIYAN
ADV. KAWASHIMA

GABRIEL DE MORAES CHITOLINA
ADV. BRADLEY

JACOB GREEN
ADV. BRADLEY

MADDY JENKINS
ADV. OSBURN

EMILY MARSH
ADV. C. LEE

New IPSS Graduate Students

SUMI MCCARTY
ADV. DURHAM

JOSEPH RAY
ADV. SMITH

COOPER SAMUELSON
ADV. MOE

AUSTIN SKENANDORE
ADV. MOE

JONATHAN STEPHENS
ADV. TEUTSCH

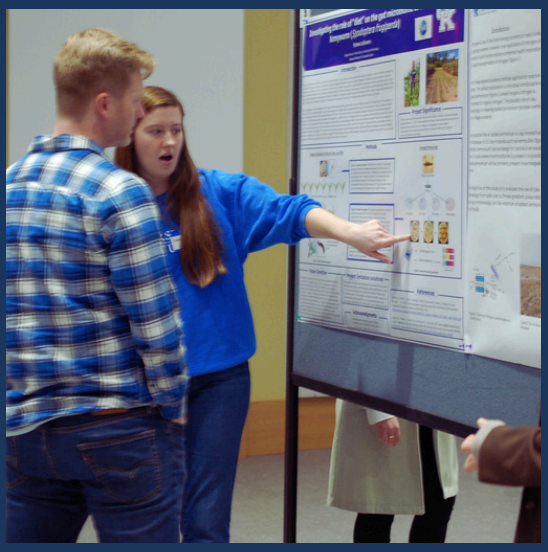
VICTOR UGWUEGBO
ADV. MIZUTA

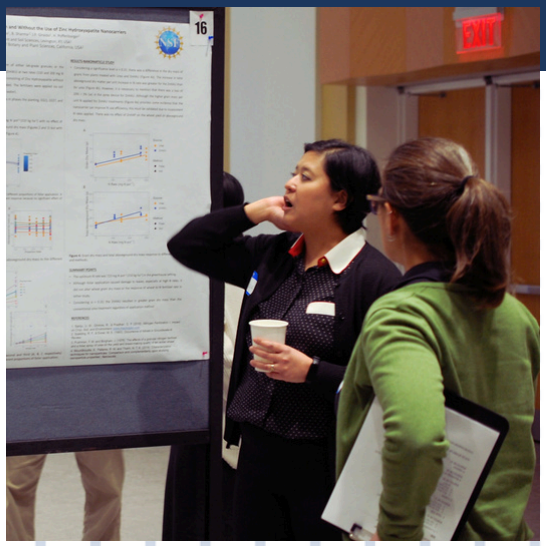
RILEY JASON WALTON
ADV. WENDROTH

IPSS SYMPOSIUM 2024

JANUARY 5TH, 2024
GATTON STUDENT CENTER
HARRIS BALLROOM

The 2024 IPSS Symposium took place in the Harris Ballroom of the Gatton Student Center, attracting approximately 100 presenters, judges, and supporters.





AWARDS

ORALS

1ST PLACE -
PAUL CÖCKSON

2ND PLACE -
TRAVIS BANET

3RD PLACE -
JACK EAKER

POSTERS

1ST PLACE -
SHELBY WATKINS

2ND PLACE -
JOYCE ROBINSON

3RD PLACE -
JENNI FRIDGEN

Johnston Carringer Award

Paul Cöckson (Adv. Pearce)

Brian Rinehart (Adv. Poffenbarger)

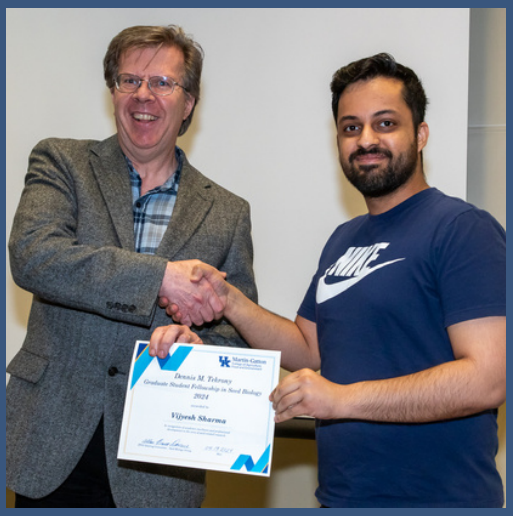
Peaslee/ Phillips Award

Gerald O. Mott Meritious Award

Rob Nalley (Adv. C. Lee)

Dennis Tekrony Seed Biology Travel Award

Ashwini Shivakumar & Vijyesh Sharma (Adv. Kawashima)



Graduate Student Awards

‘From the field to the finished product’ — hemp plants made into flooring at North Farm

BY GRACE SOWARDS

Hemp fibers are among the strongest materials grown in Kentucky. Developments have allowed farmers to experiment with making hemp into rope, even clothing. At the University of Kentucky Martin-Gatton College of Agriculture, Food and Environment's North Farm, UK Cooperative Extension Professor Bob Pearce led a project to turn their hemp crop into flooring.

Pearce had worked with Kentucky company HempWood in the past and seen its flooring product up close. He knew quickly he wanted to bring this process to North Farm so his students could participate and learn alongside him.

"In a lot of the work we do, once the product is sold off the farm, we don't see what happens to it," Pearce said. "In this instance we were able to see it go from the field to the finished product." Read the full article at pss.ca.uky.edu/department/news

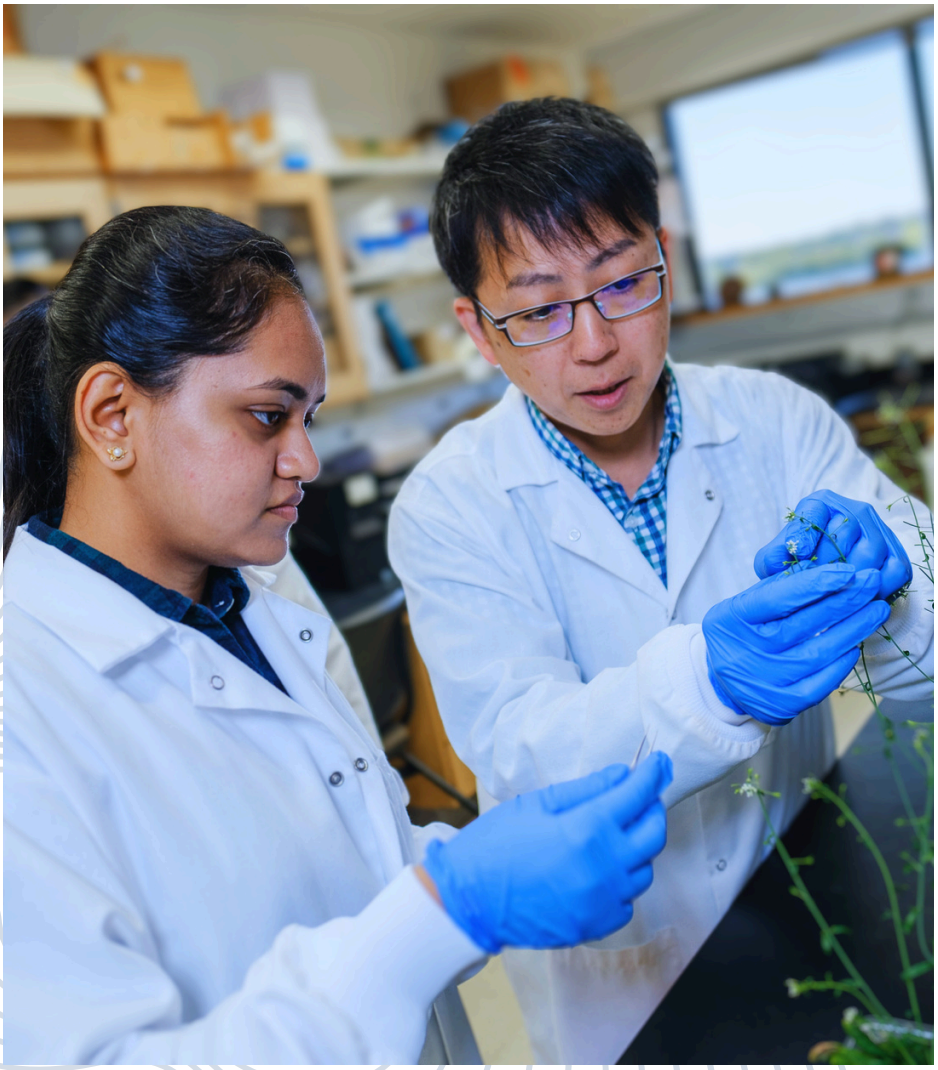
Innovative plant fertilization study awarded significant National Science Foundation grant

BY JORDAN STRICKLER
PHOTOGRAPHY BY AG COMMUNICATIONS

A pioneering University of Kentucky Martin-Gatton College of Agriculture, Food and Environment research initiative aimed at decoding the secrets of plant fertilization has been granted a significant boost, receiving $870,396 from the National Science Foundation (NSF). This investment marks a pivotal step forward in understanding plant reproduction mechanisms, with profound implications for future agricultural innovation and food security.

"It's not just about the science; it's about unlocking the potential to improve crop resilience and productivity."

- Professor Tomo Kawashima



The grant, part of a larger $1.2 million collaborative project with the University of Tennessee, Knoxville (UTK), stresses the critical importance of advancing knowledge in plant biology and addressing the pressing challenges facing global agriculture. The study, led by Kawashima, investigates the complex process of double fertilization in plants — a unique reproductive strategy key to seed development and the survival of flowering plant species.

Double fertilization involves two distinct fertilization events that occur within a single seed, forming both an embryo and a nutrient-rich tissue known as the endosperm. This dual process is essential for seed growth and development, yet its underlying mechanisms remain largely uncharted territory. Read the full article at pss.ca.uky.edu/department/news

Kendall Foster named 2024 Student Employee of the Year

by Hal Morris

Kendall Foster, a University of Kentucky student employee in the UK Department of Plant and Soil Sciences, is the recipient of the 2024 Student Employee of the Year award from UK Human Resources.

Foster, a senior majoring in agriculture, was one of 10 finalists chosen for the award. She is a research assistant in the department's Agroecosystem Nutrient Cycling research group. The group conducts research to advance the productivity, profitability, and environmental performance of grain production systems in Kentucky and beyond.

Foster is the only undergraduate student in her research group trained in inorganic nitrogen analysis.

"She plans her time well and prepares laboratory supplies carefully to work as efficiently as possible," said Hanna Poffenbarger, Foster's nominating supervisor. "She follows detailed protocols carefully, never cutting corners, and always monitors quality controls to ensure that our research results are reliable. She is also adaptive to the unpredictable nature of field research."

Foster said she is honored and credits Poffenbarger for her success as a research assistant.

"I am very blessed to be recognized as UK's Student Employee of the Year," Foster said. "I am thankful for the research team I work with and especially for my supervisor who has helped me so much to learn and grow."

Read the full article at pss.uky.ca/department/news

UK graduate student named National Corn Growers Association Research Ambassador

BY CHRISTOPHER CARNEY

Earlier this year, the National Corn Growers Association (NCGA) announced eight Research Ambassadors for 2023-2024. Current University of Kentucky graduate research assistant Travis Banet (pictured furthest on the left) in the Department of Plant and Soil Sciences at the Martin-Gatton College of Agriculture, Food and Environment was selected—embarking on a corn production travel experience like no other.

The NCGA's Research Ambassador program, now in its third year, is designed to build a network of future leaders in the agricultural sector—selecting students who demonstrate academic excellence, leadership potential and relevant research in corn production.

"I was excited to represent Kentucky and UK as one of eight research ambassadors selected by the National Corn Growers Association," Banet said. "I was able to travel the country and take part in NCGA meetings to learn more about how my research, along with my future career, can better serve farmers across the country."

Along with receiving monetary support, research ambassadors receive fully-funded travel to participate in NCGA events throughout the year. This includes attending grower research committee meetings, conferences and congressional visits at the state or federal level.

Banet, who grew up in a one-stoplight rural town in southern Indiana, was able to travel to St. Louis, Houston and Washington, D.C.

The NCGA Action Team Meetings in St. Louis were the first stop for Banet, where sustainable agriculture took center stage. Banet joined in on the Sustainable Agriculture Research Action Team (SARA) and other NCGA action teams meetings. Speakers also addressed issues such as the economic feasibility and outlook for corn.

Additionally, Banet got a behind-the-scenes look at how the NCGA works with Congress on political agreements such as the United States Farm Bill.

"I got to hear and listen to a lot of the country's top experts associated with corn production," Banet reflected. "These are not connections that I would have been able to make without the support of his research ambassadorship experience."

Read the full article at pss.uky.edu/department/news

Congratulations to the graduating Agricultural Ecosystem Sciences Cohort of 2024!

From left to right:

Jed Greene,

Katie Fortney,

Elijah Lewis,

Kendall Foster,

Cortne Curnel

UKREC

The rebuilt UKREC campus will consist of 24 buildings (about 228,000 square feet). Currently, 13 structures (approximately 47,000 square feet) are completed, including all tobacco facilities, fertilizer storage, and equipment sheds.

Five buildings are under construction, such as the Grain and Forage Center of Excellence and a new residence hall for 14 students with private quarters and shared bathrooms. Six facilities are in the final design stage, including cattle handling and greenhouse complexes. The campus is projected to be completed by the end of 2025.

UK Department of Plant and Soil Sciences ALUMNI ROUND-UP

Join us for Refreshments, Snacks, and Good Times!

OCT 11

4:30PM-6:30PM

Mirror Twin Brewing - 725 National Ave, Lexington KY

Martin-Gatton College of Agriculture, Food and Environment

Department of Plant and Soil Sciences

Plant and Soil Sciences

Interested in staying connected?
Update your contact information:
https://bit.ly/35Yh9mV

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