

# INSIDE AGRONOMY

ISSUE 31 - DECEMBER 15, 2025



Agronomy

All issues of *Inside Agronomy* are available on the Agronomy website.

## CONGRATULATIONS, DR. LEE SCHWEITZER 45 YEARS OF SERVICE!

### OTHER DEPARTMENTAL HONOREES

#### 10 YEARS OF SERVICE

Shalamar Armstrong  
Mohsen Mohammadi

#### 15 YEARS OF SERVICE

Joseph Anderson

#### 20 YEARS OF SERVICE

Jianxin Ma

#### 30 YEARS OF SERVICE

Sylvie Brouder  
Corey Gerber  
Cindy Nakatsu

#### 40 YEARS OF SERVICE

Ronald Turco



Dr. Katy Rainey recently received the ICIA Crops and Soils Merit Award at the Corn Belt Seed and Grain Conference!



Shaun Casteel, Betsy Bower, and Bryan Young (BPP) as part of the Ag Panel Update at the Corn Belt Seed and Grain Conference!

## EUGENE GLOVER RETIREMENT

THURSDAY, DECEMBER 18<sup>TH</sup>

11:30 AM - 1:30 PM

LILY 2425  
LARGE CONFERENCE ROOM

REFRESHMENTS  
& REFLECTION

RSVP



[purdue.ag/eugene](http://purdue.ag/eugene)



Agronomy

**Thank you from Roli!**

Chhoki and I were touched by the gifts and card from folks in the department. The \$\$ will be put towards the inevitable stream of baby gear that we've been learning that we need.



**Outstanding Teacher for Clinical Faculty & Lecturers**

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**Sara Allen**  
Agronomy

**PURDUE UNIVERSITY** College of Agriculture



**TOP 2 DIGITAL COMMUNICATIONS**



INDIANA CORN RESEARCH & UPDATE NEWSLETTER

AWARDED BY THE AMERICAN SOCIETY OF AGRONOMY

PURDUE UNIVERSITY

## Congratulations to Luis Vargas Ruis for successfully passing his dissertation defense!

The recorded video can be viewed at:

<https://purdue-edu.zoom.us/rec/share/QzdeFP-oN75s48dL7jtRaE0pCeUg8PeD7ZTy6tIG7-WRdyzAIYqV7af8Z7KsLTQ6.yoK8DGkrS6jikABV>



## Congratulations, Dan Quinn, recipient of the Eric G. Sharvelle Award!

Eric G. Sharvelle Distinguished Extension Specialist Award presented to a specialist who has demonstrated proficiency and professionalism, along with a track record of excellence in programming. The award was established in 1985 by Dr. Derek and Sybil Sharvelle given in memory of Eric G. Sharvelle, professor of botany and plant pathology.

## BECK FOUNDATION SCHOLARSHIP WINNERS

Congratulations to the three undergraduate students who were awarded the Beck Foundation Scholarships at the Agronomy Accolades celebration on December 11th. Thank you to Tony Beck for attending and presenting the scholarships to:

Freshman: Justin Bedel

Sophomore: Luke Foxworthy

Junior: Shelby Gillis



# Deck the Halls

## AGRONOMY DOOR DECORATING CONTEST

### Most Creative

#### Lee Lab

**B-365**

##### Decorating Team

Angelly Zharick Guarin Pava

Ariana Lazo

Elizabeth Augustine

Maria Augustine



### Best Construction

#### Soil Study Center

**3-419**

##### Decorating Team

Sherry Fulk-Bringman

Charlee Williams

Isabel Gordon

Ariana Lazo

Luke Foxworthy

Justin Bedel



### Most Agronomic

#### Student Advising & Recruitment Services

**3-440**

##### Decorating Team

Marcus Mues

Grace Beard

Jane Wiercioch

Dawn Bull

Sophia Qu



# GRADUATE STUDENT HIGHLIGHTS

To recognize the accomplishments resulting from the hard work of our Graduate Students, the Graduate Student Committee will regularly feature recently published papers, peer-reviewed or extension articles by our graduate students in the department's bi-weekly newsletter.

*Submitted by Dr. Cankui Zhang*

1. Sarkar, A., Pramanik, M. P., Teshome, F., Sehgal, V.K., Arora, A., Haque, M., Das, B., Ray, M., & Paul, S. S. (2025). Integration of smartphone imagery with topographic parameters for soil organic carbon prediction in the Indo-Gangetic Plains: an interpretable machine learning approach. *Computers and Electronics in Agriculture*, 241, 111279. <https://doi.org/10.1016/j.compag.2025.111279>

Graduate student: Abhradip Sarker; Postdoc: Fitsum Teshome

**Summary:** This study tested five machine-learning models to predict soil organic carbon in the Indo-Gangetic Plains using smartphone images and topographic data. Image-only models performed poorly, topographic data improved accuracy, and combining both produced the best results. XGBoost performed highest ( $R^2 = 0.717$ ), demonstrating a practical, low-cost approach for real-time SOC assessment to support resource-limited farmers.

2. Paul, S. S., & Mahmood, T. H. (2025). Long-term Landsat time series reveals mangrove vegetation fluctuations and drivers in the Sundarbans. *Ecological Indicators*, 181, 114401.

<https://doi.org/10.1016/j.ecolind.2025.114401>

3. Peter, L. G., Lee, L. S.\*, Burbage, C., Hoffman, K., & Richardson, A. (2025). PFAS retention and distribution in the vadose zone of three soil types impacted by biosolids application. *Journal of Environmental Management*, 396, 128137. <https://doi.org/10.1016/j.jenvman.2025.128137>

Graduate student: Lynda Godwin Peter

**Summary:** This study examined PFAS retention in soils at a biosolids-amended agricultural site. PFAS persisted across soil types, dominated by long-chain sulfonates. Concentrations decreased with depth except in Tomotley loam. Organic carbon and fine-textured soils best predicted PFAS retention, highlighting strong texture-driven hydraulic controls.

4. Openiyi, E. O., Lee, L. S.\*., Young, H. E., Carpenter, A., & Carpenter, R. (2025). High Carbon Wood Ash Impact on Grass Uptake of Per- and Polyfluoroalkyl Substances from Contaminated Agricultural Soils. *Journal of Agricultural and Food Chemistry*. <https://doi.org/10.1021/acs.jafc.5c08985>

Graduate student: Elijah Openiyi

**Summary:** A one-year greenhouse study tested low-cost, high-carbon wood ash (1.5–6 wt%) in PFAS-contaminated soil. Wood ash significantly reduced PFAS uptake by forage grasses, with 6% ash cutting PFOS translocation by over 71% and improving plant height and biomass. Results show wood ash can limit PFAS availability while enhancing growth, though field validation is needed.

5. Peter, L. and Lee, L.S. 2025. Per and polyfluoroalkyl substances (PFAS) as contaminants in agricultural soils, Chapter 3 IN: Contaminants in agricultural soils: Challenges and solutions (ed. Laureate Prof. Ravi Naidu), burleigh doddz Science Publishing, Invited, <http://dx.doi.org/10.19103/AS.2025.0151.03>

Graduate student: Lynda Godwin Peter

# DONATE WHILE *You Dine!*

Visit West Lafayette Culver's (3075 Sachem Ct S) on Tuesday, January 27th, and present this flyer or mention the fundraiser and 10% of your purchase will go to the Purdue Agronomy Club.

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