INSIDE AGRONOMY

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PURDUE UNIVERSITY | Agronomy

SHARE NEWS

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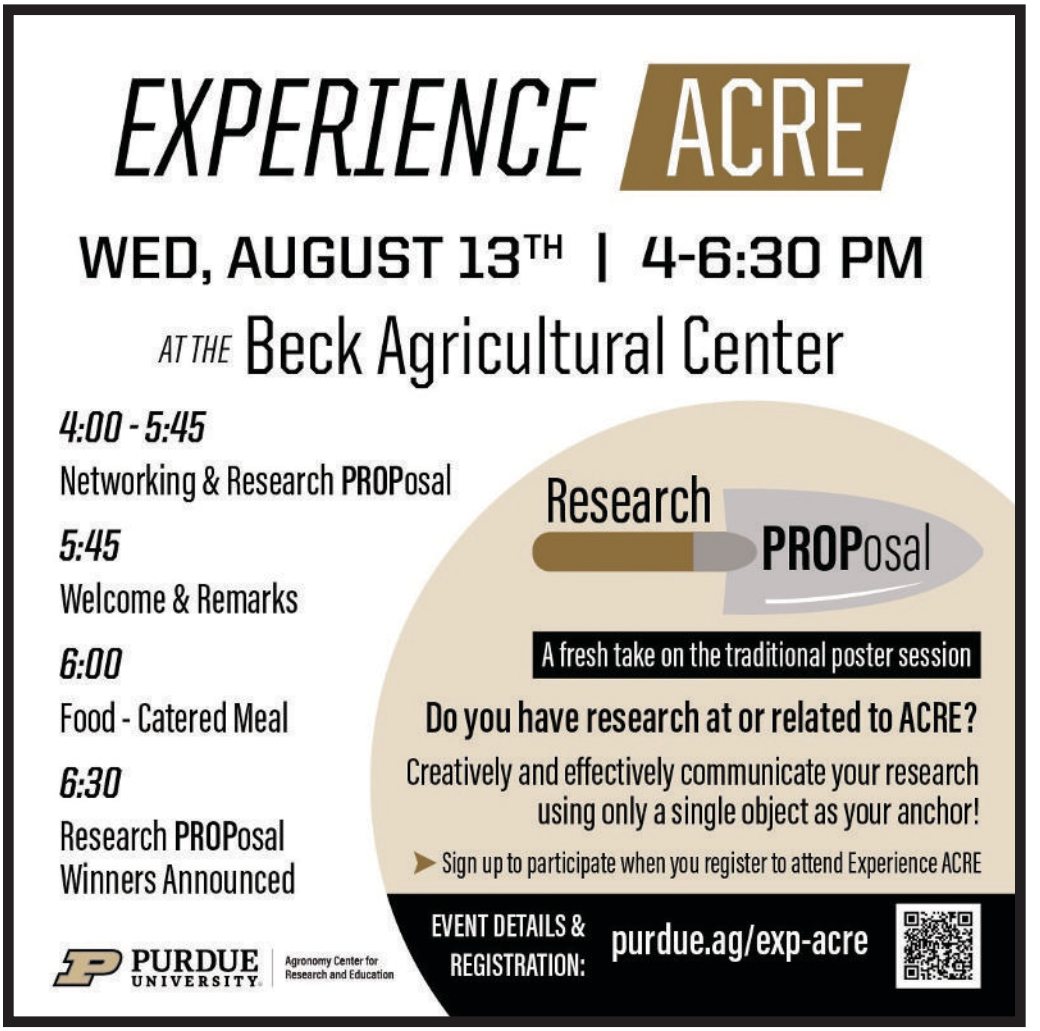
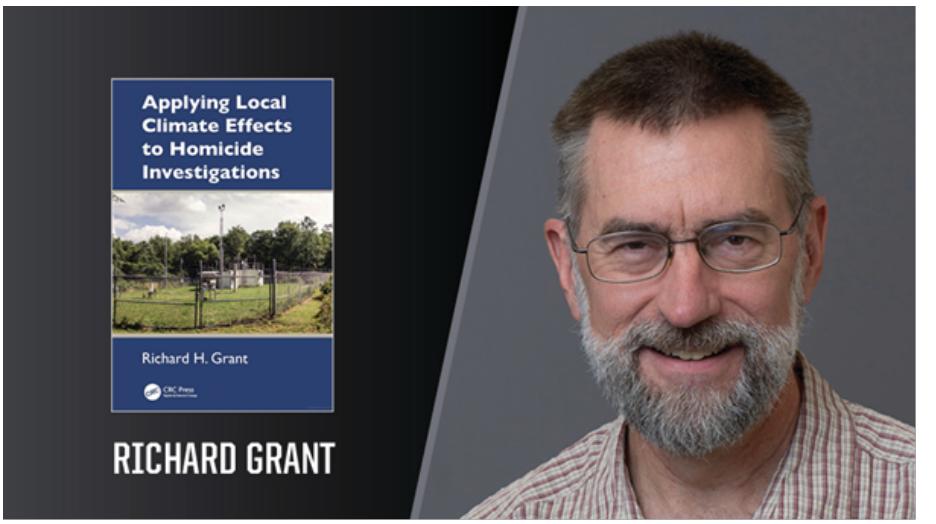
In case you missed it...

All issues of Inside Agronomy are available on the Agronomy website. Click here to view past issues.



Dr. Shams Rahmani was recently recongized by Purdue President Dr. Mung Chiang for 10 years of service at the university.

Congratulations, Shams!



In Print: 'Applying Local Climate Effects to Homicide Investigations'

Agronomy Faculty Emeritus, Rich Grant's book was recently announced in Purdue Today. Click the photo above to view the full article.

GRADUATE STUDENT HIGHLIGHTS

Congratulationsto Kwame Ampong for successfully passing his Ph.D. defense!

Title: Improving Phosphorus Use Efficiency and Modeling of Uptake in Maize
Committee Members:
Chad Penn
James Camberato
Daniel Quinn
Cankui Zhang
Mark Williams

To recognize the accomplishments resulting from the hard work of our Graduate Students, the Graduate Committee has decided to feature all the recently published papers, peer-reviewed or extension articles, by our graduate students in the Inside Agronomy biweekly newsletter.

The first two featured publications are outlined to the right.

submitted by Cankui Zhang

1) Cisdeli, Pedro, Gustavo Nocera Santiago, German Mandrini, and Ignacio Ciampitti. Maize ear sensing for on-farm yield predictions. In *Proceedings of the Computer Vision and Pattern Recognition Conference*, pp. 5402-5411. (2025).

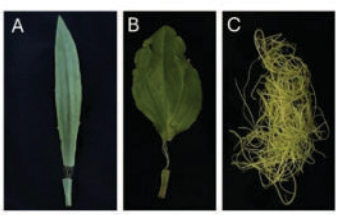
Pedro Cisdeli and **Gustavo Nocera Santiago** are graduate students; **German Mandrini** is a postdoctoral scientist.

In this study, Cisdeli et al. created a field-deployable system for nondestructive corn yield prediction using RGB + depth imaging to instantly estimate grain yield per plant. Their pipeline achieves 98.6% segmentation accuracy and $R^2 = 0.89$ with 24.1g RMSE for yield prediction in just 1 second per image, eliminating the need for destructive sampling while bridging research with practical farm applications. The team open-sourced their complete CornDepth dataset, code, and trained weights to accelerate precision agriculture development.

2) Levengood, Hannah, Lillian Smith, Shelby Gillis, Yun Zhou, and Cankui Zhang. *Plantago* species are emerging model organisms for functional genomics and stress biology. *Plant Cell Reports* 44, no. 7, pp 142, (2025) https://doi.org/10.1007/s00299-025-03530-w

Hannah Levengood is a graduate student; **Lillian Smith** and **Shelby Gillis** are undergraduate students.

The genus *Plantago* has been recognized for its significance in various research fields yet remains underutilized as a model in scientific studies. This review highlights the applications of *Plantago* as research models across scientific disciplines, including vasculature-mediated responses to abiotic and biotic stresses, plant-microbe interactions, phytoremediation, reproductive biology, and medicinal biochemistry.



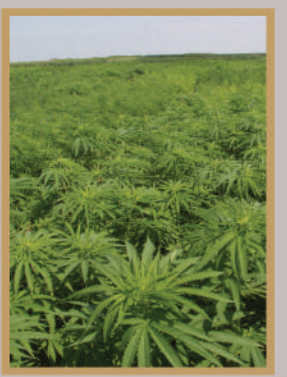
A. *Plantago lanceolata*.
B. *Plantago major*.
C. Vascular tissues extracted within few minutes.

3) Scheffer, Bruno and Daniel, Quinn. Opportunities expand as farmers discover new uses for corn stover. Indiana Corn & Soybean Post. P(28) Vol.18. (2025).

Bruno Scheffer is a graduate student.

Research from Purdue and the Indiana Corn Marketing Council shows that corn stover removal affects nutrient levels, soil health, and yields. While selling stover offers economic potential, it also removes key nutrients like N, P, and K, and may reduce soil organic matter. Findings help farmers balance profitability with long-term sustainability and nutrient management.

2025 HEMP FIELD DAY



EVENT INFO:

JULY 30, 2025 | 8:30 AM-1:45 PM EST

INDIANA CORN & SOYBEAN INNOVATION CENTER

4750 US 52-W, WEST LAFAYETTE, IN 47906

$25 REGISTRATION FEE, LUNCH INCLUDED.

EVENT REGISTRATION:

purdue.ag/hemp-field-day

The Purdue Hemp Field Day is a half-day event focused on:

- Grain and Fiber Production
- Crop Diversification
- Post-Harvest Handling
- Product Development

Speakers will present the latest research, and attendees will get the chance to speak with current hemp growers and walk through field plots. Participants will learn about post-harvest handling and processing, as well as uses of the hemp stalks and seeds in food and animal agriculture. This event is a great opportunity to connect with others interested in the future of this versatile crop. Whether you are a grower, researcher, or simply curious about hemp, the Purdue Hemp Field Day has something for you.

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Extension

EA/EOU

AGRY 624
PLANT ECOPHYSIOLOGY

AGRY624 is back again!
Come learn about the underlying processes of plant-environment interaction

Days
Tues/Thurs

Time
3:00pm - 4:15pm

Location
MATH 215

QUESTIONS?

contact: Diane Wang
dianewang@purdue.edu

SAVE THE DATES

COLLEGE OF AGRICULTURE NETWORKING GATHERINGS

INVITE A COLLEAGUE OR FRIEND! NON-PURDUE GUESTS WELCOME

LEARN MORE AT: purdue.ag/coag-networking

AUGUST 13, 2025
3:00-6:30pm

Experience ACRE
Celebrating Agricultural Field Research
▶ *Agronomy Center for Research & Education*

SEPTEMBER 5, 2025
3:00-6:30pm

CoAg Graduate Student Welcoming Poster Networking Gathering
▶ *Marriott Hall*

OCTOBER 3, 2025
3:00-6:30pm

Global One Health
▶ *Marriott Hall*

NOVEMBER 7, 2025
3:00-6:30pm

Joint Poster Networking Gathering Colleges of Agriculture & Engineering
▶ *Marriott Hall*

January 30, 2026
3:30-6:30pm

Fermentation Frenzy
▶ *Marriott Hall*

MARCH 6, 2026
3:00-6:30pm

Timely Topic To Be Determined
- Suggestions Most Welcome!
▶ *Marriott Hall*

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