INSIDE AGRONOMY

ISSUE 3 - OCTOBER 28, 2024

PURDUE UNIVERSITY | Agronomy

November

10-13 - Tri-Society Annual Meeting (San Antonio)
11 - Boilermaker Reception @ ASA
12 - Keith Johnson Virtual Forage Seminar
22 - Agronomy Accolades & Retirements
27-30 - Thanksgiving Break

December

7 - Classes end for the semester
9 - 14 - Finals Week

News from the MEME Team

Submitted by Roland Wilhelm

(Right) The MEME Team was awarded funding from the ISA and ICMC to continue our work to disentangle the sources of biological phosphorus to corn and soy.

*(Left)*Former lab technician in Roland Wilhelm's lab, Abigayle Simpson spearheaded an effort to improve data curation for an important method in soil microbiology. Abigayle was mentored by Dr. Cindy Nakatsu and is now a PhD student at UC Irvine. Click the link below for full details.

https://academic.oup.com/gigascience/article/doi/10.1093/gigascience/giae071/7817747

Monday, October 14th was the final day of Dr. Rich Grant's instruction for the AGRY 601 class, and the class gathered for a group photo to commemorate the occasion. Dr. Grant's dedication to teaching the new graduate students has been invaluable, providing them with knowledge and insights that extend far beyond the classroom. The skills and understanding gained from his instruction will greatly benefit the students in both their academic and professional futures.

Submitted by Sophia Qu

PURDUE AGRONOMY 53RD SOPHOMORE DINNER WITH THE FACULTY

On Wednesday, October 16th, the Purdue Agronomy Department hosted its annual AGRY 398 Sophomore Seminar Dinner in the John Purdue Room at Marriott Hall. The evening brought together sophomores, faculty, and staff in a relaxed and engaging setting to foster connections and strengthen the Purdue Agronomy Family.

The event kicked off at 5:30 p.m. Dr. Laura Bowling, Department Head of Purdue Agronomy, welcomed everyone, shared the history of the Department of Agronomy, and facilitated the introduction of faculty and staff members, allowing students to learn more about their professors and staff in a personal and approachable setting. These introductions served as a perfect opportunity for sophomores to connect with the faculty guiding their academic journey.

As the evening drew to a close at 7:30 p.m., Dr. Lee Schweitzer took the stage to offer a thoughtful conclusion. He reflected on the importance of gatherings like this in nurturing a sense of community within the department, and he encouraged students to take full advantage of the relationships and resources available to them as they continue their journey at Purdue. His words left everyone inspired, reinforcing the idea that the Agronomy Department is not just a place for learning, but a close-knit family dedicated to supporting each other's growth and success.

Submitted by Sophia Qu

DR. GARY STEINHARDT HONORED BY INDIANA FFA

From the Indiana FFA Organization Facebook post , October 15, 2024

"For over 50 years Dr. Gary Steinhardt has impacted hundreds of youth and adults in the world of Soil Science and Soil Judging. His passion and dedication has built the Soil Judging program in Indiana to be elite and successful at the national level for many years. Dr. Steinhardt is one of the key authors of the Soil Evaluation manual that is used to teach young people about soil evaluation. He has dedicated his time and talent to the state soil evaluation CDE for many years and the time has come for him to retire. We want to thank him for his tireless efforts and dedication to so many!"

Ismael De Lara, an undergraduate student in Dr. Yichao Rui's lab, has been awarded a $500 CATE Undergraduate Research Grant from the Office of Academic Programs of the College of Agriculture. Ismael's research proposal aims to study the soil carbon sequestration potential of organic farming in Indiana and review carbon sequestration policies at the local, state, and federal levels.

Submitted by Yichao Rui

The Indiana State Climate Office: Your In-House Weather and Climate Data Support

Article and photos submitted by Austin Pearson and Beth Hall

Above is one of our weather stations (mentioned in 2nd paragraph)

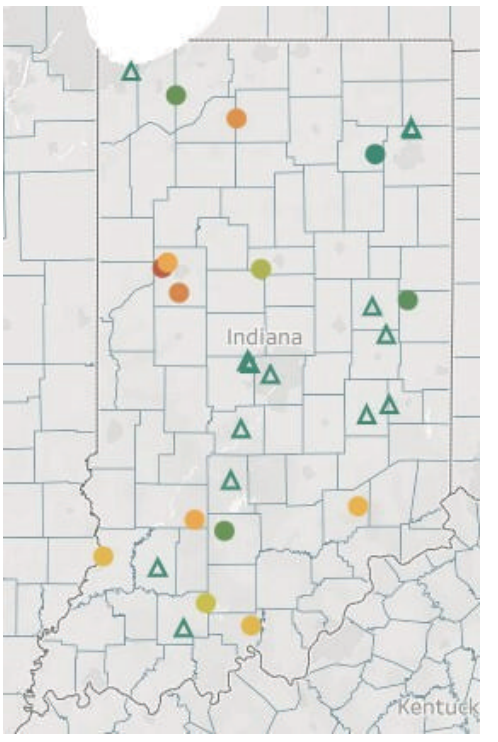
The Indiana State Climate Office(INSCO), led by State Climatologist Dr. Beth Hall and hosted by Purdue University's Department of Agronomy, has been the heart of applied climate science in Indiana since 1956. We're here to keep an eye on the state's climate conditions and impact on agriculture, drought, and all other environmental issues that keep us on our toes. Our trusty sidekick in this mission? The Purdue Mesonet—a statewide, research-grade weather network that provides observational data to help users make informed decisions.

The INSCO serves a wide array of sectors in Indiana, from agriculture and legal to construction, forensics, government, insurance, news media, research, education, and utilities. For instance, agricultural producers tap into thePurdue Mesonet's Data Hubto monitor temperature inversions which can cause air-borne pesticides to wander off-target. Purdue Agriculture researchers rely on our data for decision-making before, during, and after crop trials at Purdue Agricultural Centers (PACs) across the state. Our data are also a go-to for tracking growing degree days (GDDs) to assess crop progress and the environmental conditions favorable for plant disease development.

Every week, INSCO leads statewide drought task force meetings, with input from various state partners, to provide input to theU.S. Drought Monitorauthors who determine Indiana's drought status. We use various data sources, including soil moisture data from the mesonet—an increasingly vital tool in tracking the drought expansion in 2024.

Even with our limited capacity, we're all about making new friends and strengthening old partnerships. Take our collaboration with theIndiana Geological & Water Survey's Water Balance Network, for example. Together, we're forming theIndiana Mesonetwith a goal to install at least one weather station in each of Indiana's 92 counties. With comprehensive, research-grade weather data at our fingertips, we aim to boost weather safety, water management, and economic prosperity across the state. We've even recruited several data users and enthusiasts to help guide this expansive process.

So why are we sharing all this with you? Because we need to better communicate what we do! We've only covered a snippet of our activities. Stay tuned to 'Inside Agronomy' for future articles and news from the INSCO. You'll likely also hear about resources available at theMidwestern Regional Climate Center, conveniently located next door on the second floor of Lilly Hall. If you have any climate data requests or are interested in pursuing a funded project with us, we'd love to hear from you.



On the right is a Meso map showing the location of stations that comprise the Indiana Mesonet (mentioned in the 4th paragraph).

Anna Paltseva's Urban Soils Guide:
A step-by-step field and lab manual for students and newer gardeners

"It's important to understand what's under our feet because soil is vital for life; everything starts and ends with soil as part of a larger biocycle. We often underestimate the value simply because we don't always see it." -**Anna Paltseva**, clinical assistant professor in Purdue University's departments of **Agronomy** and **Horticulture and Landscape Architecture"**

See the full story about Anna's book at

https://ag.purdue.edu/news/2024/10/anna-paltsevas-urban-soils-guide-a-step-by-step-field-and-lab-manual-for-students-and-newer-gardeners.html

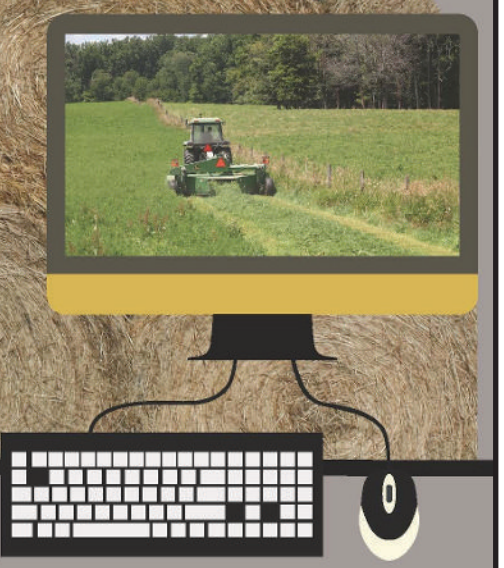
On October 16th, Anna participated at the Get The Dirt Conference organized by the Urban Soil Health Initiative, where she had the opportunity to showcase her work at a table representing the Department of Agronomy at Purdue University. She engaged with attendees (small farmers, environmental consultants, governmental officials, non profits, etc) on topics like urban soil contamination, remediation, and public health, highlighting her *Urban Soil Guide* and various soil samples. "It was a rewarding experience to share insights on urban soils and exchange ideas with fellow professionals dedicated to sustainability and environmental science."

Hey There, Hay Here

Understanding Forage Quality Virtual Seminar

TUESDAY
NOVEMBER 12th

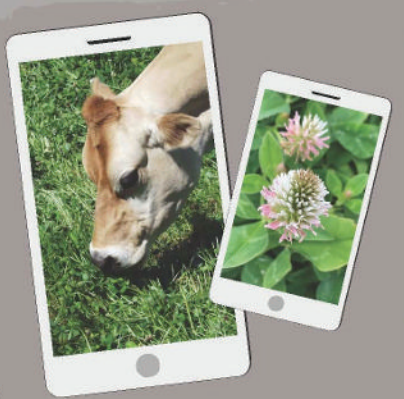
6:30 PM- 8:00 PM EST



JOIN US:

The Indiana Forage Council and Purdue University Extension will host a virtual seminar covering forage quality on November 12th, 2024. Join the event by scanning the QR code, visiting the website or in-person at one of great Indiana satellite locations.

Slow Connection, Poor Connection or No Connection? No problem - take part in the free seminar by joining one of our virtual viewing locations across Indiana. To find a location near you, **contact us: 765-494-4783 or use the QR code / web address below for more details.**



JOIN US

Free Virtual Seminar

Purdue.ag/hayquality

EA/EOU

PURDUE UNIVERSITY Extension

IFC

FOR MORE INFORMATION +765-494-4783 PURDUE.AG/AGRYEXT INDIANAFORAGE.ORG

Agronomy Accolades & Retirements

November 22, 2024
11:00am - 2:00pm at ACRE

Join us as we celebrate another year of agronomic achievements and recognition, and as we bid farewell to two of our retiring faculty.

Keith Johnson
1981-2024

Rich Grant
1985-2024

11:00-12:00
OPEN HOUSE

12:15-1:00
LUNCH

1:00-2:00
PROGRAM

REGISTER:

purdue.ag/agry-accolades

SPRING 2025

Geospatial Informatics

Learn cutting-edge tools in GIS, Remote Sensing, and Digital Soil Mapping

Course #: AGRY 59800GI (3 credit hour) | **CRN #:** Lecture - 29998 / Lab - 29999

Lecture: TR 1:30-2:20pm, LILY G428 | **Lab:** R 2:30-4:20pm, LILY G428

Course Overview

This course delves into advanced topics in geospatial science, focusing on practical applications in soil, agriculture, and natural resource management. Students will learn state-of-the-art techniques in geographic information systems (GIS), remote sensing, and spatial modeling. The course aims to equip students with specialized skills relevant to sustainable soil management, precision agriculture, and environmental sustainability.

Topics Covered

- Emerging Remote Sensing Techniques
- Digital Elevation Model, Global Positioning System, Geodatabase
- Digital Soil Mapping
- Precision Agriculture and Site-Specific Management
- GIS-Based Decision Support System
- R, ESRI ArcGIS Pro, and ArcPy

Prerequisite: Any GIS and/or Remote Sensing course (e.g. FNR 210, ILS 250, ASM 540) **OR** relevant work experiences. Contact the instructor for further information.

Instructor: Dr. Sidd Paul, Assistant Professor of Geospatial Science (sspaul@purdue.edu)

PURDUE UNIVERSITY | Agronomy