



# UKREC ANNUAL REPORT

2024



# Letter from UKREC Managing Director

This Annual Report is a project I have wanted to do for years. Often, we all get so busy 'doing' the work that it is difficult to find the time to appreciate the importance and impact of that work.

What you will find in this document is a high-level summary of all the work completed at the UKREC facilities. The content were items that, as a faculty member, I am always curious about. All the credit for the creativity of the layout and graphics goes solely to Vickie Belt. I think she did an amazing job making the tremendous amount of data I wanted included visually pleasing and easy to understand.

Moving forward, my goal is to create an Annual Report each year so that we can share all the amazing accomplishments that occur at UKREC among UKREC faculty and staff and with departmental and M-G CAFE administrators.

As you read through this first Annual Report, if there are items that you think could make this Annual Report better, please let me or Vickie know.

I hope you all enjoy this first edition!

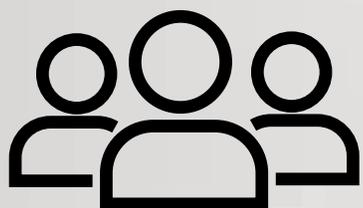
*Carrie Knott*

**Carrie Knott, Ph.D.**

# 2024 Events and Programs



## Total Attendees



437

**March 28** Italian Ryegrass Control Field Tour (19 attendees)

**May 21** Crop Scouting Clinic (16 attendees)

**June 6** Soil Properties Workshop (15 attendees)

**June 10-11** Drone Pilot Certification Class (20 attendees)

**June 27** Pest Management Field Day Showcases IPM Research (over 120 attendees)

**July 23** Corn, Soybean and Tobacco Field Day (153 attendees)

**July 25** KY High School Crop Scouting Competition (60 attendees)

**Aug 29** Pest and Spray Clinic (18 attendees)

**Sept 3** Soil Properties Agent Training Workshop (16 attendees)

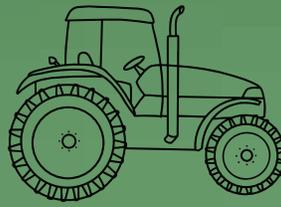


# Support Provided

## Completed Work Orders



Facility  
**75**



Farm  
**176**



IT  
**25**



Mechanic  
**152**



Staff  
**107**



Created  
**40**

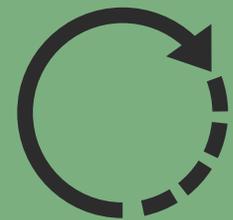
Including but not limited to  
Input and Surveys,  
Work Orders, Shared-Use  
Vehicle, Workstations,  
Temporary Resident  
Housing, and Storage Space.



Active  
**23**



Closed  
**13**

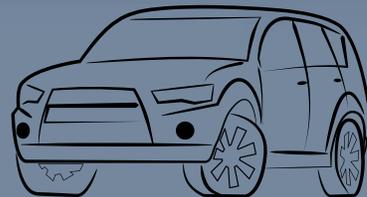
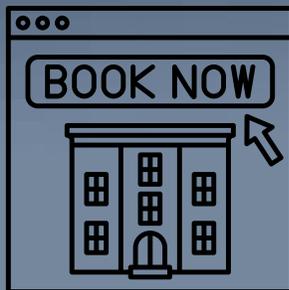


In Progress  
**4**

New Resident Hall  
Request for Supervisor  
and Student, Room  
Reservation Request  
for GFCE

# Policies/Guidelines Reviewed by Advisory Committee

All UKREC Operational Policies/Guidelines available at Internal Site:  
<https://ukrec.ca.uky.edu/internal/>



- **Two received and approved from committee:** Storage and Pesticide Application
- **Two major revisions:** Workstation and GFCE Room Reservations
- **One developed:** Shared Use Vehicles

## Projects at UKREC

# ANIMAL

## FOOD AND SCIENCES

### 3 Beef Cattle Projects Focused on Beef Nutrition and Reproduction

Total: 286 head of cattle

- 144 Cows
- 28 Bred Heifers
- 47 Heifer Calves
- 67 Steer Calves



Dr. Katie VanValin

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# *Entomology*

### 18 Research Projects

- 1 Alfalfa
- 4 Corn
- 4 Hemp
- 6 Soybean
- 3 Winter Wheat



Dr. Raul Villanueva



Daniel Becker

# HORTICULTURE

## *6 Fruits and Vegetables Trials*

- Peach and Nectarine Cultivar Trial
- NC-140 Apple Rootstock Trial
- Blackberry Response to Bed Renovation and Fertilizer Application Timing
- Fig Cultivar Demonstration
- High Tunnel Brussels Sprouts Cultivar Trial
- Performance of Powdery Mildew Tolerant, Bush and Semi-Bush Butternut Squash Cultivars



Projects at UKREC

# Plant & Soil SCIENCES



Dr. Carrie Knott

## Agronomy



1 Winter Oat Trial  
With Dr. Lauren Brzozowski

Projects at UKREC



# Plant & Soil Sciences

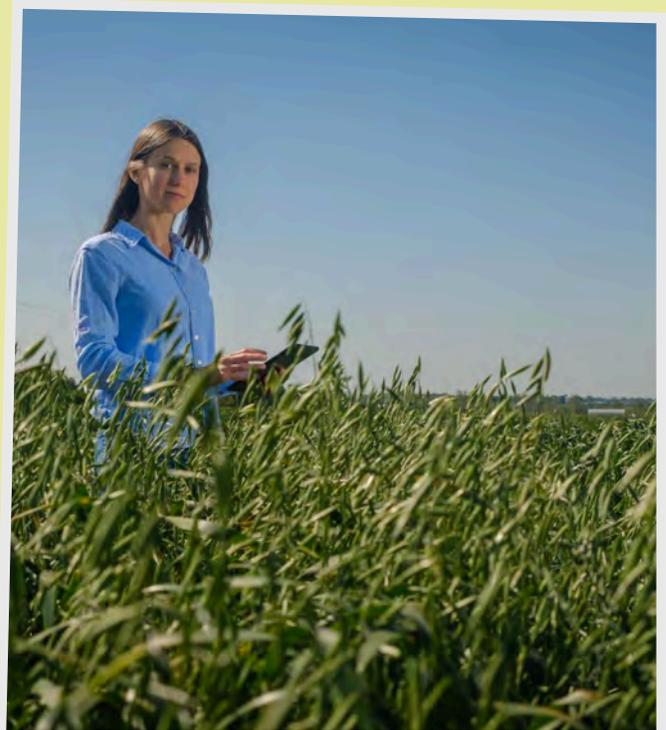


Dr. Lauren Brzozowski

Dr. David Van Sanford

# Breeding Programs

Winter Wheat - Winter Oat - Kernza



*Plant & Soil Sciences*

**Forages**

**8 Forage  
Research Projects**



**Dr. Chris Teutsch**

**Plant & Soil**

**SCIENCES**

**SOIL**



**Dr. Edwin Ritchey**

- **5 Winter Wheat Studies 2023-2024**
- **2 Wheat Studies 2024-2025**
- **2 Full Season Soybean Studies**
- **2 Corn Studies**
- **2 Alfalfa Projects**

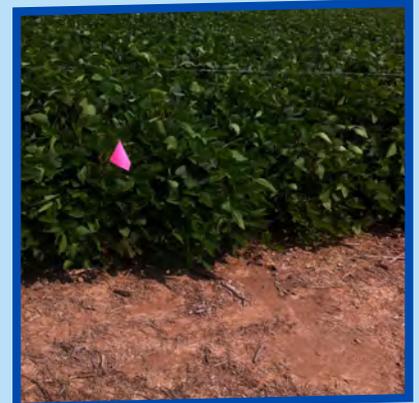


# PLANT & SOIL SCIENCES

## SOIL

**Dr. John Grove**

- **2 Winter Wheat Studies 2023-2024**
- **2 Winter Wheat Studies 2024-2025**
- **1 Tall Fescue Study**
- **2 Alfalfa Projects**
- **7 Corn Studies**
- **2 Laboratory Projects; Solubility of potential sulfur fertilizer materials; Influence of lime timing on applied phosphorus availability.**



# Plant and Soil Sciences

# **TOBACCO**

## **12 TRIALS**



**Dr. Andy Bailey**



- **Dark Fire-Cured, Dark Air-Cured, and Burley Commercial Variety Trials**
- **Burley Regional Quality Trial**
- **Experimental Dark-Fired Cured Variety Trial**
- **Experimental Dark Air-Cured Variety Trial**
- **Pesticide Residue Trials for Dark Fire-Cured, Dark Air-Cured and Burley tobacco**
- **Experimental Fatty Alcohol Products for Tobacco Sucker Control**
- **Production of burley tobacco for use as a component of moist snuff products**

## Projects at UKREC



**Bill Bruening**



**Cam Kenimer**



**Gene Olson**

## Plant & Soil Sciences Variety Testing

- **Corn**
- **Soybean**
  - Full Season
  - Double Crop
- **Small Grains**
  - Barley Variety Trial
  - Metribuzin Herbicide Tolerance Trial
  - Wheat Variety Trial
  - Low-Input Variety Trial
- **8 Forage VT**



*Plant & Soil Sciences*  
**WEED SCIENCE**



Dr. Travis Legleiter

**16 INDUSTRY TRIALS**  
**10 GRANT TRIALS**

**Full Season Soybean**



**Corn**



**Winter Wheat**

## Projects at UKREC



**Dr. Carl Bradley**

*Plant*

# PATHOLOGY

### **15 Small Grain Trials**

- 12 Soft red winter wheat**
- 2 Winter barley**
- 1 Winter cereal rye**



### **31 Soybean Trials**

- 30 Full-season soybean**
- 1 Double-crop soybean**

### **5 Laboratory Projects**

- 5 projects focused on fungicide resistance in soybean and wheat pathogens**



## Projects at UKREC

# Plant Pathology

**Dr. Kiersten Wise**

- 27 Corn Field Trials
  - Several trials support multi-state research objectives.
- 5 Laboratory Projects
  - Pathogen biology and characterization
- Coordinates corn nematode testing program for Kentucky





**Soils Laboratory  
Supervisor  
Michael Coon**

# SOIL TESTING LAB

DIVISION OF REGULATORY  
SERVICES

- **July 1, 2024**, temporary lab was opened and began receiving samples for routine testing.
- **August 30, 2024**, Processed first soil sample analyses.
- Since opening our temporary lab, we have processed and reported from August to December 2024 1,960 samples.

# UKREC FACULTY AND STAFF AWARDS/PROMOTIONS

**Carl Bradley:**

**-Top 2% of the World's most cited researchers**

<https://uknow.uky.edu/research/uk-scientists-and-scholars-among-top-2-world-s-most-cited-researchers>

**-Thomas Poe Cooper Research Award for Agriculture Research**

<https://news.ca.uky.edu/article/uk-martin-gatton-cafe-recognizes-faculty-members-achievement-research-graduate-student>



**Sam McNeill: 2024 M.D. Whiteker Award of Excellence in Extension**

**Katie VanValin: 2024 KASEP Outstanding New Extension Specialist**

<https://kasep.ca.uky.edu/>

# UKREC FACULTY AND STAFF AWARDS/PROMOTIONS



**Raul Villanueva: Promoted to Associate Professor with Tenure**

**Vickie Belt:**

**-Chi Epsilon Sigma Director UK Princeton**

<https://chies.ca.uky.edu/>

**-2024 CHIES Professional and Personal Improvement Scholarship**



# UKREC STUDENT AWARDS

**Will Fleming:**

**Advisor: Chris Teutsch**

**Professional Awards: \*2024 Gerald O. Mott Meritorious Graduate Student Award in Crop Science. \*1st Place Continuing Master's Student, IPSS Graduate Student Awards, 2024 \*Outstanding Graduate Student, North Central Soil Fertility Conference, 2023 \*3rd Place New Master's Student, IPSS Graduate Student Awards, 2023**



**Whitney Peck received a undergraduate research grant to work on a bale grazing project at UKREC.**

**Advisor: Chris Teutsch**

# STUDENT AWARDS



## Student Success:

**-Caldwell County FFA- Soil Judging Team 1st Place (Harper Ritchey, Kaylee Ladd, and Hannah, and Jesse Gray has been associated with being a coach.**

**-Harper Ritchey- Governors Scholar's Program**

**-Caldwell County 4-H ~ From UKREC Harper Ritchey, Kaylee Ladd, Paycen Rogers, Landry Dunbar and Hannah Teutsch competed with Olivia Baker and coached by our very own Jesse Gray.**

**They placed 3rd overall in both the 4-H Land Judging and the 4-H Home Site Evaluation at the State Contest.**

**-Harper Ritchey, Kaylee Ladd, and Hannah Teutsch placed in the top 10 for Land Judging.**

**-Harper Ritchey and Hannah Teutsch placed in the top 10 for Home Site Evaluation.**



*Happy*  
**RETIREMENT**



**JOHN EARNEST  
MACHINIST  
BIOSYSTEMS & AGRICULTURAL  
ENGINEERING  
33 YEARS  
1991-2024**



**DWIGHT WOLFE  
RESEARCH SPECIALIST  
HORTICULTURE  
39 YEARS  
1985-2024**



**CHRISTI FORSYTHE  
UKREC STAFF SUPPORT  
ASSOCIATE II  
50 YEARS  
1974-2024**



**DEBBIE MORGAN  
LAB TECH SR.  
UKREC SOILS LAB  
39 YEARS  
1984-2024**

# 2024 New HIRES



**FELIPE BATISTA**

POST-DOCTORAL SCHOLAR  
ENTOMOLOGY - RAUL VILLANUEVA

**JOSE BRAVO**

VISITING SCHOLAR  
ENTOMOLOGY - RAUL VILLANUEVA



**MICHAEL COON**

SOILS LABORATORY SUPERVISOR  
REGULATORY SERVICES - FRANK SIKORA



# 2024 New HIRES

## BEN GOODRUM

AGRICULTURE RESEARCH SPECIALIST SR.  
PLANT PATHOLOGY - CARL BRADLEY



## SAI NEELA KESUMALA

TEMPORARY  
TECHNICAL/PARAPROFESIONAL  
PLANT PATHOLOGY - CARL BRADLEY

## KRISTI MEEKS

STAFF SUPPORT ASSOCIATE II  
UKREC STAFF - CARRIE KNOTT



# 2024 New HIRES



**TAYLOR VALASTEK**

SCIENTIST I  
PLANT AND SOIL SCIENCES  
- LEIGHIA M. EGGETT

**PATTON WALKER**

RESEARCH FARM TECHNICIAN II  
UKREC STAFF - BOBBY ORANGE



**TAMI WIDELSKI**

EXTENSION ADMINISTRATION  
ADMINISTRATIVE SUPPORT  
ASSOCIATE (W5-W8) - JEREMY TEAL



# Graduate Students

## Will Barlow



- Advisor: Kiersten Wise
- Dissertation: Examination of fungicide applications with unmanned aerial vehicles and the characterization of *Curvularia* leaf spot of corn
- Duration: 2024-Present

## Gabriel de Moraes Chitolina



- Advisor: Carl Bradley
- Dissertation: Fungicide resistance in wheat leaf blotch pathogens in Kentucky
- Duration: 2024-Present

# Graduate Students

## Will Fleming



- Advisor: Chris Teutsch
- Thesis: Surveys, Field Studies, and Laboratory Incubation Experiments to Improve Alfalfa Production in the Mid-South
- Duration at UKREC: 2022-2024
- Currently working on his Ph.D. at the University of Georgia, Tifton Campus with Dr. Lisa Baxter

## Jacob Green



- Advisor: Carl Bradley
- Thesis: Studying potential interactions between herbicides and *Calonectria ilicicola*, the red crown rot pathogen of soybean
- Duration: 2024 - Present

# Graduate Students

## Hayden Love



- Advisor: Travis Legleiter
- Thesis: Evaluation of the management of Italian Ryegrass (*Lolium Perenne* SSP. *Multiflorum*) using harvest weed seed control at Winter Wheat Harvest in Kentucky
- Duration at UKREC: 2022-2024
- Currently a Ph.D. Candidate at University of Tennessee

## Kelsey Mehl



- Advisor: Carl Bradley
- Dissertation: Management of Red Crown Rot of Soybeans
- Duration: 2021 - Present

# Graduate Students

## Jonathan Stephens



- Advisor: Chris Teutsch
- Thesis: Red Clover Drying Study and Planting Season Study
- Duration: 2024 - Present

## Luke Warner



- Advisor: Kiersten Wise
- Thesis: Comparing the efficacy of organic fungicides for Diplodia ear rot of corn
- Duration: 2023 - Present



# **MEET** **Summer Staff**

## **Advisor: Andy Bailey**

Nathan Hale

## **Advisor: Carl Bradley**

Barbara Wren

Jacob Green

Maxton Ortt

Sai Neela Kesumala

## **Advisor: Edwin Ritchey**

Corbin Nichols

## **Advisor: John Grove**

Kaylee Ladd

## **Advisor: Travis Legleiter**

Daniel Laurent

Jacey Jagers

## **Advisor: Chris Teutsch**

Harper Ritchey

Jonathan Stephens

Katy Trimble

Landry Dunbar

Payson Rogers

Sam Kelly

Sebastian Villanueva

Taylor Wynn

Whitney Peck

Will Fleming

## **Advisor: Raul Villanueva**

Avery Harper

## **Advisor: Kiersten Wise**

Jack Kocher

# Construction Progress

## GRAIN AND FORAGE CENTER OF EXCELLENCE



## CATTLE HANDLING -TRACT 200-

# Construction Progress



# AIR CURE BARN



# BACK CORRAL



# Construction Progress

## FARM SHOP

FEBRUARY 22, 2024



DECEMBER 18, 2024



FEBRUARY 22, 2024



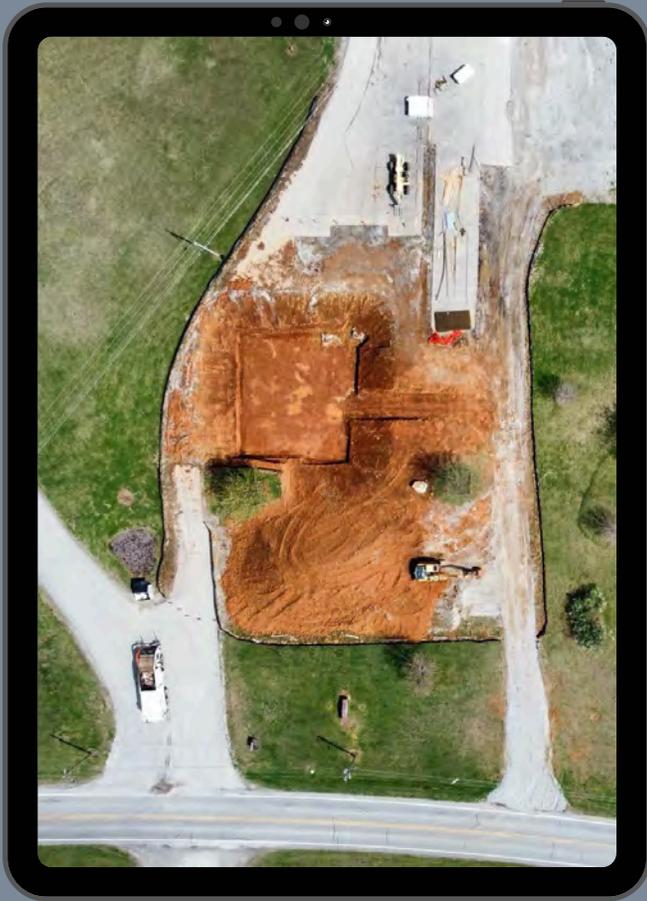
DECEMBER 18, 2024



## FIELD RESEARCH

# Construction Progress

April 4, 2024



## RESIDENCE HALL



December 18, 2024

# Construction Progress

## EQUIPMENT SHED #7



**JULY 22, 2024**



**SEPTEMBER 4, 2024**



**COMPLETED  
SEPTEMBER 25, 2024**