



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!

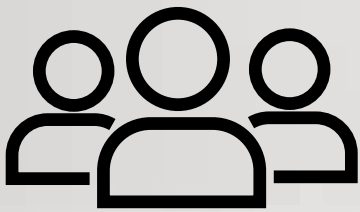
Carrie Knott

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)

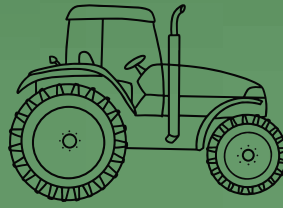


Support Provided

Completed Work Orders



Facility
75



Farm
176



IT
25



Mechanic
152



Staff
107



Created
40



In Progress
4



Active
23



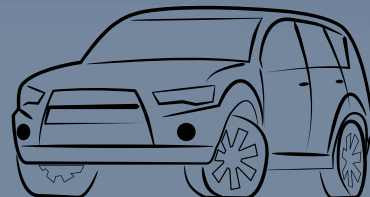
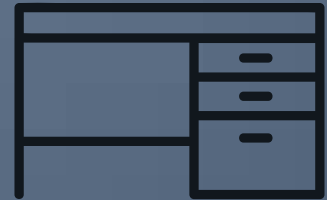
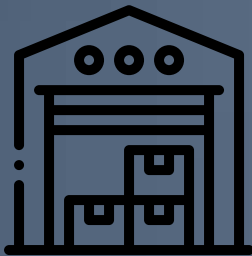
Closed
13

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

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

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

Entomology

18 Research Projects

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



Dr. Raul Villanueva

HORTICULTURE



Daniel Becker

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

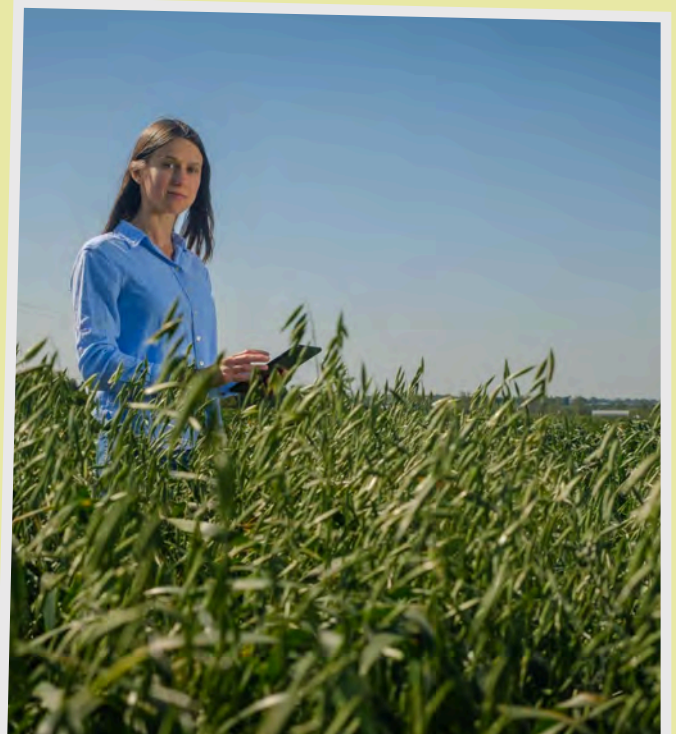


Dr. Lauren Brzozowski

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

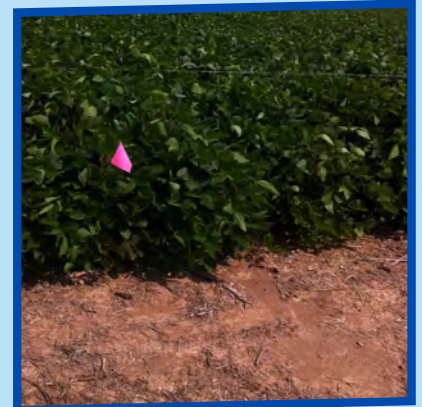


PLANT & SOIL SCIENCES

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.



Projects at UKREC



Dr. Andy Bailey

Plant and Soil Sciences

TOBACCO

12 TRIALS



- 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**





Dr. Travis Legleiter

Plant & Soil Sciences **WEED SCIENCE**

16 INDUSTRY TRIALS
10 GRANT TRIALS

Full Season Soybean



Corn



Winter Wheat



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

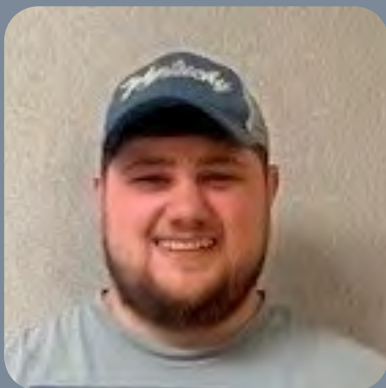
*Gabriel de
Moraes Chitolina*



- 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 Jaggers

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

FEBRUARY 6, 2024



DECEMBER 18, 2024



OCTOBER 28, 2024



NOVEMBER 8, 2024



CATTLE HANDLING -TRACT 200-

Construction Progress



FEBRUARY 13, 2024

AIR CURE BARN



AUGUST 8, 2024



JULY 22, 2024

BACK CORRAL



NOVEMBER 15, 2024

Construction Progress

FARM SHOP

FEBRUARY 22, 2024



DECEMBER 18, 2024



FEBRUARY 22, 2024



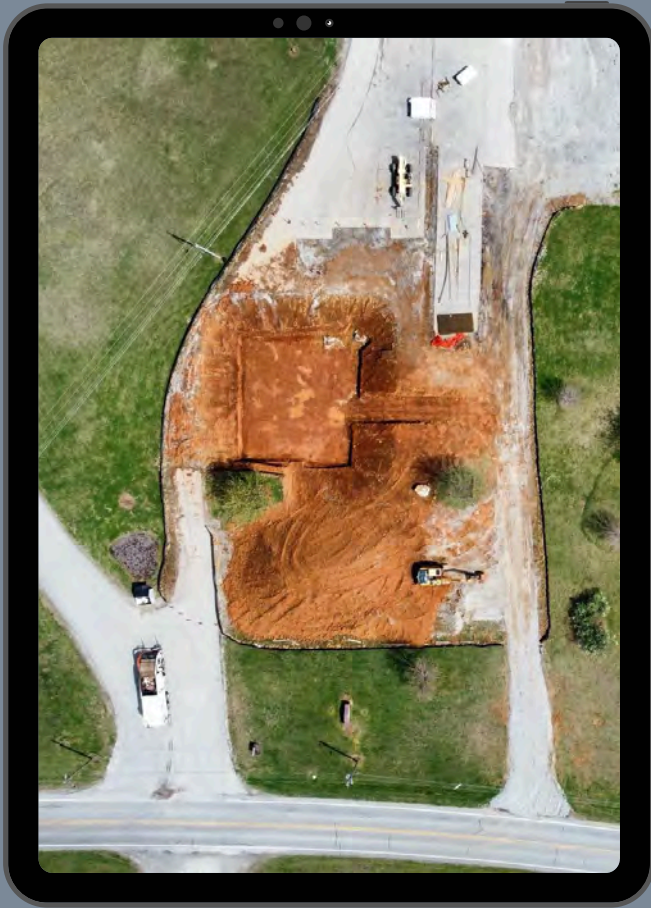
DECEMBER 18, 2024



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**