ANNUAL REPORT 2024 - 2025

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WELCOME TO WHERE

DISCOVERY MEETS INNOVATION

Southeastern Coastal Center for Agricultural Health and Safety

ANNUAL REPORT CONTENT

LETTER FROM THE DIRECTOR

It is my pleasure to present the Southeastern Coastal Center for Agricultural Health and Safety's Annual Report, reflecting a year defined by our theme: Discovery Meets Innovation.

Across the southeastern coastal region, our communities continue to face complex agricultural and environmental health challenges. This year, our Center responded with a renewed commitment to advancing research, strengthening partnerships, and delivering evidence-based solutions that make a measurable difference in the lives of agricultural workers and their families.

> **OUR ACCOMPLISHMENTS WERE DRIVEN BY THE BELIEF THAT MEANINGFUL PROGRESS OCCURS WHERE NEW KNOWLEDGE INTERSECTS WITH PRACTICAL APPLICATION.**

From pioneering studies that deepen our understanding of emerging risks to innovative outreach strategies that translate findings into action, our teams embodied this vision at every step. We are especially proud of the collaborative spirit that fuels our work—uniting researchers, extension professionals, industry leaders, and community stakeholders in pursuit of safer and healthier agricultural workplaces.

As you read this report, I invite you to explore the initiatives, insights, and impacts that shaped the past year. Together, we are building a future where **discovery sparks innovation, and innovation leads to lasting improvements** in agricultural health and safety.

Thank you for your continued support and partnership.

J. Glenn Morris
Director, Southeastern Coastal Center for Agricultural Health and Safety

WHO WE ARE

Evaluation and Planning Core

Deputy Director: Tara Sabo-Attwood
University of South Carolina
Arnold School of Public Health

Director: J. Glenn Morris
University of Florida
Emerging Pathogens Institute

Programs Director: Farah Arosemena
University of Florida
Emerging Pathogens Institute

Emerging Issues Program
Program Lead: Tara Sabo-Attwood
University of South Carolina
Arnold School of Public Health

Data Management & Biostatistical Program
Program Lead: Yang Yang
University of Georgia
Department of Biostatistics

Scientific Advisory Board
Barbara Lee, Marshfield Clinic Health
Linda McCauley, Emory University
Tom Bernard, University of South Florida
Cynthia Harris, Florida A&M University
Hani Samawi, Georgia Southern University
Kathy James, University of Colorado
Noreen Michael, University of Virgin Islands
Rosanna Barrett, Morehouse College

Community Stakeholder Advisory Board
Comprised of farmworker, fisher, environmental health, industry and clinical partners. The role of the CSAB is to review progress on projects, identify new concerns, and help prioritize the SCCAHS action agenda.

Research Core

Project 1
Project Lead: Christopher Vulpe
Development of Urinary Biomarkers of Occupational Stress in Agricultural Workers
Center for Environmental & Human Toxicology
University of Florida

Project 2
Project Lead: Yi Guo/Norman Beatty
Detection of Chronic Kidney Disease of Unknown Etiology in Florida by Repurposing Statewide Data Infrastructure for Surveillance
Clinical and Translational Science Institute, Biomedical Informatics
University of Florida

Project 3
Project Lead: Kimberly Dunleavy
Effectiveness and implementation of self-management strategies for low back pain among horticulture worker
College of Public Health & Health Professions
Department of Physical Therapy
University of Florida

Project 4
Project Lead: Benjamin Anderson
Integrated Risk Assessment and Environmental surveillance for Highly Pathogenic Avian Influenza (HPAI) H5N1 in Dairy Farms in Florida and Georgia: Enhancing Outbreak Preparedness and Response
College of Public Health & Health Professions
Department of Environmental Global Health
University of Florida (awarded for 2024-2025)

Pilot/ Feasibility Program

1. *Exploring the significance of agroforestry and regenerative agriculture in farmer's health and risk of zoonotic disease,* **Project Lead: Amy Vittor**
2. *Climate change impacts on farmer mental health: A participatory and systems-based approach,* **Project Lead: Christopher Weatherly**
3. *Monitoring HPAI/H5N1 transmission in backyard poultry operations in Florida,* **Project Lead: Benjamin Anderson**
4. *Youth voice on the impacts of climate change,* **Project Lead: Michelle Abraczinskas and Beatrice Pierre**
5. *Enhancing agricultural safety education (eye safety) through immersive technology,* **Project Lead: Carolyn Sheridan** (award for 2024-2025)

Outreach Core
Core Lead: Tracy Irani
Institute of Food and Agricultural Sciences
University of Florida
Ricky Telg
Ashley McLeod-Morin
Angela Lindsey
Lisa Lundy
Karlibeth Leitheiser

LEARN MORE
ABOUT THE CENTER'S ORGANIZATIONAL STRUCTURE
INCLUDING THE SCIENTIFIC ADVISORY BOARD AND COMMUNITY STAKEHOLDER ADVISORY BOARD

We serve our Southeast communities offering a tailored portfolio of research and outreach initiatives.

ABOUT SCCAHS

Center Summary

The Southeastern Coastal Center for Agricultural Health and Safety (SCCAHS) explores and addresses the occupational safety and health needs of people working in agriculture, fishing, and forestry in Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Puerto Rico, and the U.S. Virgin Islands.

The University of Florida is the lead institution of this center, partnering with the University of South Florida (USF), University of Georgia, Florida A&M University (FAMU), Georgia Southern University (GSU), Emory University, University of South Carolina, Morehouse, the University of Colorado, the University of Puerto Rico and the University of the Virgin Islands. These universities are working together on a range of interdisciplinary research and educational projects designed to promote occupational health and safety among the 240,000 farms — estimated by U.S. Department of Agriculture — to be operating in the region, their operators, families, employees, and contractors, as well as those in the forestry and fishery industries.

Our Focus Areas

- Heat stress and related illness
- Pesticide/herbicide exposure
- Musculoskeletal disorders
- Coastal fishery worker safety and health
- Disaster vulnerability of migrant and seasonal farmworkers
- Feasibility of using electronic health records to describe the health of migrant and seasonal farmworkers, inform research and measure impact of interventions.
- Geospatial Analysis of agricultural worker and fisher health: Partnering to map regional clinical indicators and neighborhood environments
- Development and implementation of training programs
- Innovative approaches to foster research to practice

Goals of the Center

1. Provide occupational safety and health education and training to the agriculture, fishing, and forestry workforce.
2. Bring evidence-based, safety and health programs, developed through the other NIOSH-funded agricultural centers into the southeastern coastal region.
3. When appropriate, translate programs into Spanish, and assist in supporting multilingual training efforts throughout the region.
4. Conduct research to practice projects focused on:
   - Evaluating whether safety and education materials produce changes in safety behaviors.
   - Documenting hazards and risks in fishery workers; testing training materials aimed at reducing injuries.
   - Utilizing remote sensing technology to map pesticide uses.
   - Looking at heat stress tolerance.
5. Forecast needed research and applied projects based on needs as they arise.

YEAR 3, 2024-2025 HIGHLIGHTS

OCTOBER

SCCAHS Deputy Director Named

New dean of the Arnold School of Public Health at the University of South Carolina

NOVEMBER

DECEMBER

Members of Administration and Outreach travel to **Washington D.C. to meet with the Association of University Programs in Occupational Health and Safety.**

JANUARY

FEBRUARY

MARCH

APRIL

Gulf Coast Caribbean SOS Meeting

SCCAHS co-sponsored 8th annual State of the Science meeting in Puerto Rico

MAY

JUNE

University of South Carolina Applied Practice Experience: MPH Capstone Project Selection

Exploring forestry worker safety and defining the Southern Atlantic seaboard working waterfronts

JULY

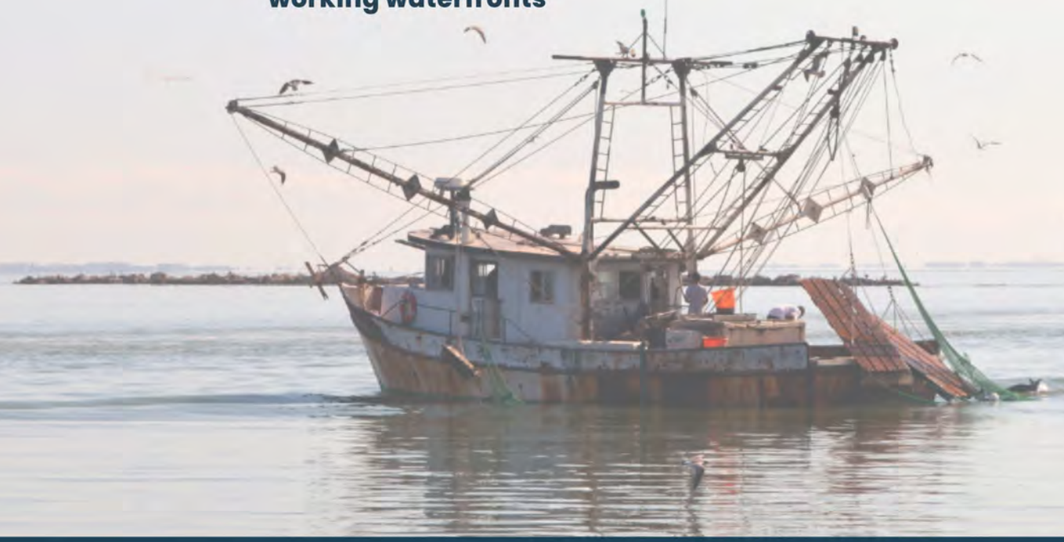
Association for Communication Excellence in Agriculture and Naural Resources **awards the 2024 State of the Science Meeting a Silver award in Issues Communication.**

AUGUST

SEPTEMBER

2025 Supplement Award: Nargiza Ludgate

Modeling New Screw Worm Infestation: Economic Impact on Florida Livestock



EVALUATION AND PLANNING CORE
GENERAL OVERVIEW

ADMINISTRATION, EVALUATION AND THE EMERGING ISSUES PROGRAM

Led by Dr. J. Glenn Morris, Administration manages the overall activities of the Center to ensure the administrative structure works synergistically to accomplish the following,

- the coordination and integration of the Core Center grant components and activities;
- oversight of the utilization of funds, including funds for pilot and feasibility studies; and
- support active interaction among the Director, Core leaders, research project Principal Investigators, relevant institutional Division of Sponsored Programs personnel and the CDC/NIOSH Program Office.

Overall Goals

Our Center goals include identification of potential hazards and development of new data sources to provide a more comprehensive picture of worker safety/health issues within the southeastern coastal region; the exploration and identification of areas needing further study; and the integration of research findings, culturally-appropriate outreach and training efforts, and new technologies to improve overall worker safety and health, working within a framework that allows us to appropriately document the impact of these improvements.

Key Accomplishments 2023-2024

Throughout Year 3, Administration provided project coordination for faculty/staff to manage their programs and research studies – guiding decisions and allocating resources where most strategically needed. The administration component of the Planning and Evaluation Core fulfills many organizational objectives, bringing together internal collaborators, such as biostatisticians, data managers/analysts, evaluation/content area specialists, budget management and information technology, with external collaborators who include study investigators, pilot awardees, and advisory board members.

The roles of data management, analysis, and administration were reviewed during the monthly IOC meetings and bi-quarterly PI-to-PI/Program Director meetings, specifically in monitoring the quality of the data and adherence to study protocols and procedures, standard and ad hoc reporting, and working with biostatisticians to generate analysis data sets as Research Core projects

Administration

- Provide overall Center leadership.
- Provide administrative support services for the Center.
- Coordinate and integrate Center components and activities, and facilitate communication among investigators, staff, and research partners.
- Organize and provide administrative support for the Scientific Advisory Board, Internal Operations Committee, and other committees which may be necessary for Center activities.
- In conjunction with the Evaluation program, establish a formal planning process.
- Provide biostatistics consultation on study design, data management, and data analysis for all research projects.
- Implement strategies and resources to achieve greater diversity among pilot project investigators and community-based partners.

WE ARE COMMITTED TO ADVANCING THE SOUTHEAST AND U.S. CARIBBEAN BY FOSTERING A CULTURE OF COLLABORATION AND CREATING FORWARD-THINKING SOLUTIONS THAT POSITION THE REGION AS A HUB FOR PROGRESS IN AGFF OCCUPATIONAL HEALTH AND SAFETY.

Evaluation

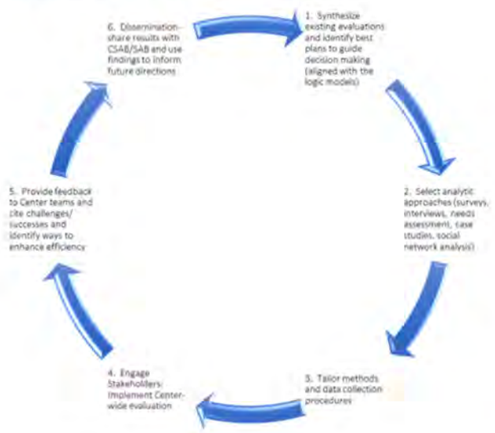
- Engage stakeholders to maintain a responsive and focused surveillance and evaluation program.
- Collect relevant monitoring and evaluation data from the Center as a whole, its cores, and individual research projects.
- Analyze and interpret data to establish the quality and impact of the center as a whole, its cores, and the individual research projects.
- Report and share evaluation findings and recommendations with key stakeholders.
- Design and implement community placed surveillance methods on air quality, fishing industry injuries and fatalities, and H-2A off-farm housing.

MIXED METHODS APPROACH

EVALUATION

The Evaluation Program supports the monitoring and measurement of the quality, pace, and new directions that SCCAHS projects undertake by systematically generating information that supports progress (Figure 1). The leadership team continues to align purpose, action and impact to better understand the benefits SCCHAS work has on the communities served. The Center follows an evaluation framework, one that is flexible and adaptable, to collect progress data more successfully. Three types of evaluation are deployed quarterly, 1) performance monitoring, 2) process, 3) outcome and 4) social network analysis. All four evaluation types are conducted simultaneously across projects.

Figure 1. Evaluation Roadmap



The Essential Need for Evidence
The SCCAHS works to identify AgFF community needs, implement research, design programs for emerging issues and develop solutions to address burden. As the Center matures, evaluation becomes more rigorous in determining the quality and usefulness of research, interventions, community engagement and outreach. The goals are to be successful in oversight, maintain accountability and improve performance.

During Year 3 the Center analyzed impact through a network science lens. Network science provides theories and methods that can be used to guide the study and practice of working in networks. Intuitively, we know the kind of connectivity that is good and that which is not. However, very few people know how to manage these processes or leverage them in any kind of strategic way that may actually result in better connectivity leading to an impact. In collaboration with the Outreach Core, the Center launched a study in partnership with the Visible Network Labs to better understand the Southeast and U.S. Caribbean network of organizations that serve the SCCAHS target population and who have worked with SCCAHS to enhance our research and outreach. This helped leadership learn more about the quality of interactions between academic, Cooperative Extension, industry and community groups in connection with our Ag Center activities.

Social Network Analysis (SNA) remains a core method in Center evaluation that focuses on the relationships and interactions among individuals, groups and organizations within a network. Social network analysis with fishing associations across the U.S. Caribbean is in development for Year 4.

UNIVERSITY OF South Carolina
Arnold School of Public Health

EMERGING ISSUES PROGRAM

THE CAPSTONE EXPERIENCE

The Capstone Experience offers an integrative learning experience for public health graduate students to work with community-based organizations and SCCAHS key personnel to complete capstone projects. In Year 3 SCCAHS selected two graduate students to complete projects in forestry worker health and safety and characterizing the Atlantic seaboard fishing communities.

SCCAHS partnered with the University of South Carolina (USC) graduate students for Year 3. At USC, Master of Public Health students are uniquely required to complete a practicum. The purpose of the practicum is to blend practical field experiences with academic learning. The practicum is a three-way partnership between the student, a USC faculty advisor and a SCCAHS preceptor. The student practicums were individually developed with SCCAHS personnel serving as preceptors in planning through completion.

Project 1: Occupational Health Issues in Coastal South Carolina Fisheries
JohnAndrew Raymond, MPH (c), Environmental Health Sciences, USC. This project aims to establish comprehensive baseline data and provide evidence-based recommendations to enhance occupational health in South Carolina fisher communities. Focusing on shrimping and aquaculture, the project is analyzing the current health hazards, regulatory gaps, and community information deficits.

Project 2: Forestry Industry Occupational Safety and Health in South Carolina
Ke'Ziyah N. Williamson, MPH (c), Environmental Health Sciences, USC.

There is an increase in research identifying high injury rates among forestry works in the United States, but a gap in assessing Southeast worker populations specifically. This applied practice experience has designed an online survey to identify safety and health concerns and needs among forestry workers. The survey was launched in November 2025. Scan the QR Code.

Tara Sabo-Attwood, Dean Arnold School of Public Health, University of South Carolina
SCCAHS Deputy Director and Emerging Issues Program Lead

OUTREACH CORE
GENERAL OVERVIEW

KNOWLEDGE TRANSFER THROUGH EDUCATIONAL AND EXTENSION ACTIVITIES, CULTURALLY COMPETENT COMMUNICATION AND STAKEHOLDER ENGAGEMENT.

Overview

The work of the Outreach Core is vital to understanding the burden and addressing the needs of agricultural health and safety in the Southeast coastal region. The Outreach Core prioritizes Center-developed research projects and pilot projects to ensure that the messages tested, materials produced, and collaborations fostered are inclusive of issues unique to the Southeast coastal region and include underrepresented and vulnerable subpopulations. Effective and efficient strategies and tools are shared with project leads and stakeholders and, based on their input, science communication strategies will be evaluated and adapted where possible. The Outreach Core's ongoing work includes continued partnership with the Center's Community Stakeholder Advisory Board (CSAB), which is comprised of relevant intermediaries in agriculture and public health, and will continue to be a significant research to practice (r2p) mechanism designed to engage stakeholders, communicate research findings, and review and evaluate interventions and materials.

Key Accomplishments

During Year 3, the Outreach Core served as a key sponsor of the 2025 Gulf Coast and Caribbean State of the Science Meeting, an event originally established through Outreach Core efforts. The 2024 State of the Science Meeting also earned a Silver Award in Issues Management from the Association for Communication Excellence in June 2025. Outreach additionally partnered with Center Administration on a visit to Washington, D.C., to meet with the Association of University Programs in Occupational Health and Safety, strengthening national partnerships and visibility.

Throughout the year, the Outreach team supported multiple Research Core projects by coordinating calls, developing informational materials for data collection and research dissemination, and providing platforms—such as e-newsletters, social media, and webinars—to broaden the reach and impact of Center-funded research.

2024 – 2025 WEBINARS

Exploring the Significance of Agroforestry and Regenerative Agriculture in Farmers' Health and Risk of Zoonotic Disease, October 2024 | Amy Vittor

Using a One Health Approach for H5N1 Response in Agriculture Settings, November 2024 | Benjamin Anderson

H5N1 Update and Developing Biosecurity Protocols, February & June 2025 | Ben Anderson, Colleen Larson, Cindy Sanders

Charting the Course: Sleep Studies in America's Fisheries, July 2025 | Julie Sorenson

Exertional Heat Stroke Considerations in a Warming Climate, August 2025 | Douglas Casa, Angela B. Lindsey

Agriculture Ergonomic and Biomechanics Research: Wearables and Exoskeletons, August 2025 | Jay Kim

Evidence-based Approaches to Support Mental Health in Agriculture: Insights from Florida's Mind Your Melon Farmer Wellbeing Survey, September 2025 | Jaime Jerrels, Carrie Baker, Sarah Bush, Marshal and Taylor Sewell

2025 Gulf Coast & Caribbean State of the Science Meeting

The Southeastern Coastal Center for Agricultural Health and Safety (SCCAHS) served as a key sponsor of the 2025 Gulf Coast and Caribbean State of the Science Meeting, held March 3–4, 2025, in San Juan, Puerto Rico. This eighth annual gathering marked a major milestone as the first State of the Science Meeting hosted in the Caribbean, expanding the event's reach to communities across both the Gulf Coast and the broader Caribbean region.

SCCAHS support was central to the program. The Center sponsored the poster session, featuring current research in coastal and agricultural health and safety, and it supported the meeting's opening speaker, Alan McCulla, who set the stage for two days of discussion on the well-being, resilience, and safety of fishing and coastal workforces. SCCAHS Director Dr. Glenn Morris also moderated the Research and Extension Panel, highlighting the Center's role in bridging scientific findings with practical outreach and community action.

By supporting this event, SCCAHS strengthened partnerships with regional stakeholders, elevated emerging science relevant to vulnerable coastal communities, and reinforced its mission to translate research into meaningful improvements in health, safety, and sustainability across the Gulf and Caribbean.

Next Steps

Looking ahead, the Outreach Core will disseminate several Extension documents currently in press and promote them broadly once published. Using recently collected public opinion data on biosecurity and its links to agricultural health and safety, the Core will develop practical tools for Extension professionals serving coastal and agricultural communities. In addition to promoting findings from recently completed studies and pilot projects, Outreach will continue collaborating with graduate students accepted into an adjacent fellowship program and Research Core leaders to produce materials that enhance the reach of ongoing research. Additionally, the Core will maintain its leadership in stakeholder engagement by supporting the 2026 State of the Science Meeting in partnership with the Southeast Caribbean Disaster Resilience Partnership, co-hosting the event in Charleston, South Carolina.

RESEARCH CORE

STUDY UPDATE

EFFECTIVENESS AND IMPLEMENTATION OF SELF-MANAGEMENT FOR LOW BACK PAIN IN HORTICULTURE WORKERS

PROJECT LEADER: KIMBERLY DUNLEAVY

Overview

Low back pain is the most frequent disabling musculoskeletal disorder among agriculture, and more specifically horticulture workers, affecting health, productivity, and workforce availability, and potentially contributing to reliance on pain medication.[1-5] Pragmatic interventions specifically designed to meet the unique needs of nursery and landscape small teams are needed. Building from interventions showing promise for similar work requirements in clam aquaculture,[9,10] this study aims to promote worker self-efficacy for limiting and managing low back pain. Self-management interventions aim to equip workers with skills that allow them to actively take responsibility for managing back pain so they can function optimally and reduce overall risk are an important target consistent with Healthy People 2030 goals.[6–8] The goal of our study is to examine the effectiveness and implementation of two variations of self-management interventions among nursery and landscape workers.

Accomplishments

Aim 1: To determine if self-management combined with individualized guided participatory ergonomic choices (video +), is more effective than self-management alone (video) for improving LBP management among horticulture workers.
We will compare changes in work-task pain and disability between intervention groups as the primary outcome. Secondary outcomes include: 1) high impact chronic pain as defined by the National Pain Strategy,[11,12] 2) medication and substance use, 3) and pain-related psychological factors.

Aim 2: To identify the contextual factors that impact engagement, adoption, effectiveness, and implementation of non-opioid alternatives for LBP self-management.
We will use qualitative methods to examine barriers and facilitators overall and among 1) participants with different levels of pain severity and persistence and, and 2) workers in the nursery and landscape sectors. Specifically, we will examine engagement, adoption, and implementation and understanding the external context, and individual and team characteristics will help explain results, and inform translation.

Goals for this phase of the study (Year 2 of the study, Year 3 for SCCHAS grant)
Enrollment
Recruitment goals by September 2025 were to enroll 64 workers and 8 supervisors (80 participants).
We have enrolled 16 employers (7 landscape, 7 nursery, 2 landscape and nursery), and 127 workers, 21 supervisors, as well as 13 workers with no pain. Our total enrollment has exceeded our projected goals for the year and should meet the apriori power analysis for the study (n=122 workers with pain) if we retain the currently enrolled participants. We have had some attrition due to workers moving jobs which was expected (n=20, 7 participants discontinued after the post visit and will still be included in the data analysis). It is possible that the variability and low pain scores for some participants may may impact results, but the qualitative data will help with explaining results and expand on contextual factors impacting adoption and implementation. We will calculate power at the end of 2025 to determine if we need to expand enrollment. Data collection for currently enrolled participants will be complete in April 2026.

Results

We are currently cleaning data for analysis. We hope to start analysis of the baseline data by January 2026 for characteristics and variability and confirm power. We have had very positive reports from the participants. Participants expressed gratitude that we are working to help them with maintaining their health and ability to continue working. Workers who have completed the study have also commented on being able to 'talk about preventing pain', while others have shown pride and ownership of suggestions for efficiency and ways to limit stress. Those who have used the content and information have been actively implementing the strategies at work and at home.

We have published the protocol for the study, submitted a paper on ergonomic analysis of weeding operations based on findings and video observations from early data collection, and have submitted an abstract for consideration for the SOPHE conference in April 2026. We are currently working on two papers documenting findings from the first Phase (see publications). We anticipate working on a paper comparing the results from the baseline and pre data collection to establish variability in measures to assist with the final analysis in early 2026.

For the second aim of the study, the qualitative transcripts are being transcribed and translated, coding systems are being tested with 11 participants who have finished the study requirements. We are documenting external and internal contextual factors and have streamlined organization of research team observations, transcription of participant comments and interviews.

The variable nature of the industry, driving forces for owners such as workmen's compensation and insurance costs, political uncertainty, and impact of weather on operations are some of the early external contextual factors identified. Internal contextual factors vary, but the importance of supervisor buy-in and support, emphasis on safety and training, varying nature of business models, and work tasks is evident.

Dissemination

We have attended Florida Nursery Landscape and Growers meetings (Treasure Coast FNGLA Chapter Jupiter FL, Front Runners Chapter, North Florida Chapter, Landscape Show Jacksonville FL) to present to members. We created short videos to send to potential participants, and distributed flyers to FNGLA members in the Northcentral, Northeast, and Central Florida Coastal regions by email. We are planning for the next phase of the study which will involve focus groups to present the data, collate feedback, and set the stage for the dissemination and sustainability plans. We are exploring inviting key stakeholders from multiple groups including extension agencies, non-profit organizations, professional associations, and insurance companies, as well as some of the owners and workers from companies who have participated in the study. In addition to asking stakeholders to contribute their thoughts on how best to move forwards with the sustainability phase, we hope to refine our current products. These include text messages and training videos and if we are hoping to explore additional materials to support supervisor training.

RESEARCH CORE

STUDY UPDATE

DEVELOPMENT OF URINARY BIOMARKERS OF OCCUPATIONAL STRESS IN AGRICULTURAL WORKERS

PROJECT LEADER: CHRISTOPHER VULPE

Overview

The research team advanced ongoing studies investigating the roles of heat and agricultural chemical exposure in chronic kidney disease of unknown origin (CKDu). Efforts focused on two areas: developing and evaluating urinary biomarkers in agricultural workers to improve early diagnosis, and establishing a controlled animal model to examine potential causal mechanisms. The team is conducting a comprehensive assessment of existing urinary protein biomarkers and novel extracellular vesicle (EV)–based biomarkers using well-characterized urine samples from agricultural workers in Guatemala (Figures 1-2). This work includes a completed pilot study and an ongoing validation study with a larger cohort.

Accomplishments

The initial pilot study, "A Pilot Study of Urinary Biomarkers and Kidney Injury Among Agricultural Workers," currently under journal review, examined 21 urinary protein biomarkers for their potential to detect early or ongoing kidney injury. Although post–work shift changes did not indicate acute injury, several pre-shift biomarkers—including NGAL, B2M, RBP-4, MCP-1, and APO-J—were elevated in workers meeting criteria for CKD, suggesting utility for detecting longer-term kidney damage. Results also indicated that combined biomarker panels may better differentiate disease status than individual markers. The team is additionally assessing novel EV-derived biomarkers, including EV lipids, surface proteins, and miRNAs, for their relevance to kidney health.

Results

A lipidomics analysis of urinary EVs, published in Metabolites as "Novel Lipid Biomarkers of Chronic Kidney Disease of Unknown Etiology Based on Urinary Small Extracellular Vesicles," identified 21 lipids differentially expressed between workers with and without CKD. Several lipids associated with kidney function—such as plasmalogens, PI(16:0/16:0), LPE species, and LPC(18:0)—showed altered expression in high-risk workers, supporting their potential as early CKDu biomarkers. The team also evaluated 37 EV surface immune proteins, identifying CD25 and CD45 as elevated in high-risk workers, particularly post-shift.

The study team characterized urinary EV surface immune proteins as potential protein biomarkers, using a bead-based multiplex flow cytometry assay to investigate 37 immune protein markers on urinary EVs purified from the sugarcane farmworker cohort.

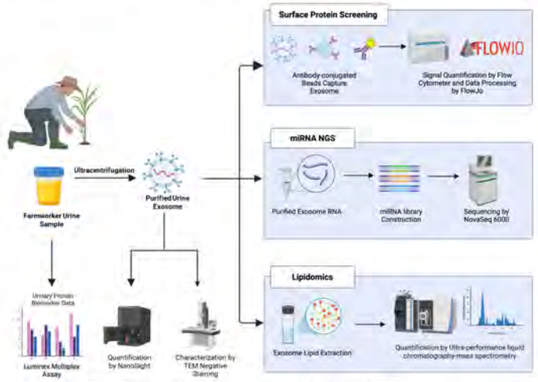


Figure 1. Overall human sample workflow

Conclusion

EV-derived miRNA analysis revealed six miRNAs strongly elevated in workers with early biomarker abnormalities or confirmed CKD, including hsa-miR-30a-3p with >200–400-fold increases. Several miRNAs, including miR-181a, decreased post-shift, indicating potential acute effects. Target gene analysis linked these miRNAs to pathways central to kidney development and injury, including MAPK, PI3K–Akt, Ras, and FoxO signaling.

The investigative team developed a novel animal model simulating farmworker heat and chemical exposures using environmental chambers and integrated AI-assisted histopathology (Figures 3-5). This system enables detailed assessment of kidney function, pathology, and thermoregulation under acute and chronic stressors.

An unexpected finding was that co-exposure to glyphosate and heat/humidity increased core temperature instability and impaired rehydration between shifts. Systematic histologic evaluation using machine learning revealed progressive pathology—initial glomerular changes followed by immune infiltration and early fibrosis—consistent with early human CKDu biopsies. Although heat alone and heat-plus-glyphosate produced similar histologic patterns, combined exposures showed more consistent effects, suggesting possible interaction. The resulting ML-assisted histopathology and biostatistical tools represent a significant advancement for early detection of kidney injury.

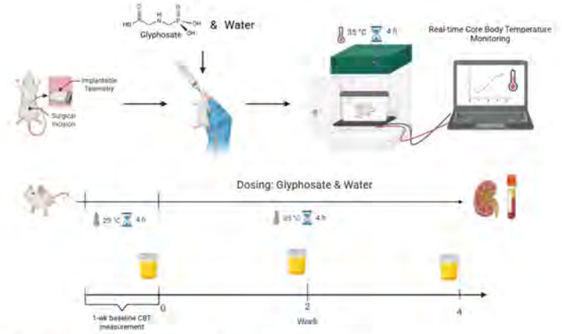


Figure 3. 2024 animal study cohort

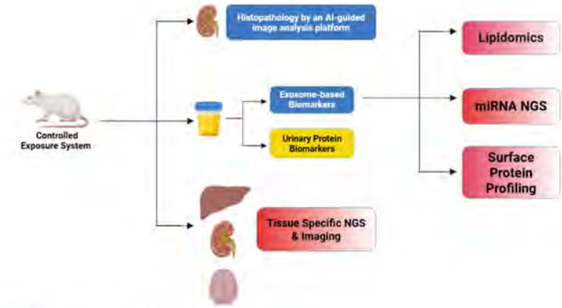


Figure 4. Animal study outline

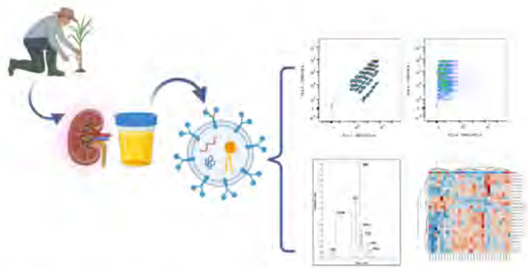


Figure 2. uEV Lipodomics

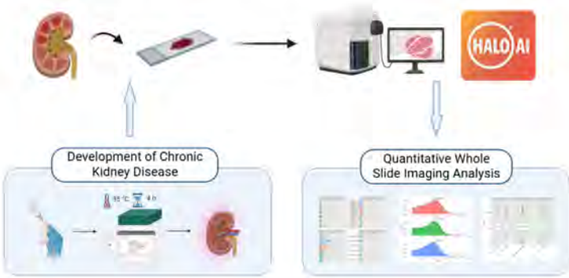


Figure 5. HALO AI Rat Kidney

RESEARCH CORE

STUDY UPDATE

DETECTION OF CHRONIC KIDNEY DISEASE OF UNKNOWN ETIOLOGY IN FLORIDA BY REPURPOSING A STATEWIDE DATA INFRASTRUCTURE FOR SURVEILLANCE

PROJECT LEADERS: YI GUO AND NORMAN BEATTY

Overview

This study will test the hypothesis that chronic kidney disease of undetermined etiology (CKDu), Also known as Meso-American Nephropathy or MEN, exists among farmworkers in the state of Florida. There is circumstantial support for this hypothesis: prior research has detected acute kidney injury (AKI) in this population, and repetitive AKI is believed to be the etiological process behind CKDu. We will test our hypothesis using the existing, extensive data infrastructure of the OneFlorida+ Clinical Research Consortium, which is one of nine Clinical Research Networks in the National Patient Centered Clinical Research Network (PCORnet).

The OneFlorida+ Data Trust comprises electronic health record (EHR) data from ten health systems that geographically cover the entire state of Florida, statewide Medicaid claims data, and a growing Medicare claims dataset. The Data Trust has been used for surveillance of both infectious and chronic diseases in the past including current uses for type 1 diabetes mellitus and COVID-19, increasing confidence that our surveillance for CKDu in this dataset will yield strong results. We will augment this dataset by selecting two community and migrant health centers (CMHCs). The primary decision criterion is the proximity of the CMHC to our target population of agricultural workers, with also a goal of incorporating occupation data.

The study team has verified a list of 10 candidate CHMCs and has collected structured, coded occupation data. Preliminary queries demonstrating both the ability to use the occupation data and the existence of migrant farmworker populations at these CMHCs has been completed.

CMHCs and their EHRs as partners and data sources are beeing added to OneFlorida+ and its Data Trust, respectively. Investigators will harmonize the occupation data into the common data models used in the Data Trust. Data analyses will look at all OneFlorida+ as well as the farmworker population identified in the two CMHCs that join OneFlorida+.

The study team will develop and validate a computable phenotype for CKDu, apply it to data analyses, and generate matched control populations. Geospatial analysis to identify clusters of CKDu will be conducted both generally and in agricultural worker patients. Through chart review, validation of the computable phenotypes as well as verification of the main results in follow up will occur. Proximity of any such clusters identified to agricultural operations in Florida known to the SCCAHS will be assessed.

Dissemination of results to SCCAHS stakeholders, to the broader agricultural center research community, to funding agencies, and to the relevant communities in Florida will occur by the close of Year 4 and into the next funding period.

Accomplishments

Aim 1. This aim focuses on the development, testing, and refinement of the CKDu computable phenotype and its use to conduct geospatial hotspot analyses of CKDu incidence/prevalence rates in Florida. During Year 3 a full dataset of CKD patients from the UF Health patient population was acquired. The CKDu computable phenotype was run against the structured data of this population to generate a CKDu subset population of the UF Health CKD patients.

The study team began conducting preliminary chart review to establish inter-rater reliability. During this process it was determined that there was a need to refine the approach to nephrotoxic drug exposure in the phenotype. With the phenotype updated and the IRR established investigators re-ran the CKDu phenotype on the UF Health population. From the resulting CKDu patients the study team randomly generated a sample of 50 patients. The team is currently over halfway through chart review and so far there has not been the identification of any patients included in the CKDu sample that have a known etiology.

In Year 3 approval was granted for the necessary IRB protocol revisions for to receive the OneFlorida+ CKD population data pull. Chart review is on schedule to finish as the OneFlorida+ data set is received. In Year 4 the validated phenotype will be run against the OneFlorida+ CKD patient population and the team will conduct geospatial analysis for incidence and prevalence of CKDu in the state of Florida.

Aim 2. This aim focuses on outreach to health clinics that serve migrant worker populations in order to onboard their data into the OneFlorida+ Data Trust. In Year 3 all contracts and agreements were executed with Suncoast Community Health Center. Suncoast is a FQHC that services Southern and Eastern Hillsborough County, including farmworkers among their patient population. Setup of their data extraction pipeline was completed, and the data quality was improved for the delivery of their full data set. This data will be used for the Aim 3 data analysis in Year 4 of the project. The Community Health of South Florida (CHI) is also working with the project to add their patient population to the study. Their data extraction process and data model conformance work is already developed and managed as part of their inclusion in Health Choice Network and participation in the ADVANCE Clinical Research Network.

Regulatory and contractual processes have moved forward with OCHIN (who performs the data releases for CHI under ADVANCE) and are ready to execute agreements in Year 4 of the project. This data set will be released to the study in a ready for research state. It will be used in Aim 3 data analysis in Year 4 of the project.

Aim 3. This aim focuses on re-running the geospatial analyses from Aim 1 on the OneFlorida+ Data Trust after the Suncoast and CHI data sets have been ingested into the Data Trust. These activities be completed in Year 4 of the project.

Next Steps

Moving into Year 4 of the project the goals for Aim 1 will be to finish the chart review to finalize the validation and refinement of the phenotype, run the phenotype against a full data pull from the OneFlorida+ Data Trust, and complete the prevalence/incidence rates calculation and geographical hot spot analysis. After refinement of the phenotype through this process, investigators will run it on the full OneFlorida+ CKD data set and then begin calculating the prevalence/incidence rates of CKDu in Florida and conducting the geographical hot spot analyses.

For Aim 2 the group will be focusing on completing the financial and regulatory processes for onboarding the data from CHI via OCHIN, as well as completing the ingestion of the Suncoast Community Health Center data. The completion of these two deliverables will mean that the project has clean data sets from both partner clinics with which to conduct our Aim 3 analyses. This work will continue through the remaining years of the project to curate ongoing quarterly data submissions from both clinics in support of Aim 3.

Given that the remaining steps for ingesting the clinic data are the completion of Suncoast's data upload and final signature on contracts with CHI, Year 4 work will be focused on data analysis.

RESEARCH CORE

STUDY UPDATE

DETECTION OF CHRONIC KIDNEY DISEASE OF UNKNOWN ETIOLOGY IN FLORIDA BY REPURPOSING A STATEWIDE DATA INFRASTRUCTURE FOR SURVEILLANCE

PROJECT LEADERS: BENJAMIN ANDERSON

Overview

This project aims to enhance outbreak preparedness and response for highly pathogenic avian influenza (HPAI) H5N1 virus in dairy farms in Florida and Georgia. The current circulation of the virus in dairy farms poses a risk, particularly to agricultural workers. The project aims to conduct integrated risk assessments and environmental surveillance in high density dairy farm regions, leveraging resources from regional partners and the NIOSH Southeastern Coastal Center for Agricultural Health and Safety at the University of Florida. Using non-invasive methods, such as testing wastewater and retail milk samples, the research will monitor viral presence and spread, allowing for continuous surveillance and early detection of novel strains that may pose an increased risk of human infection.

The project was led by an interdisciplinary team with expertise in animal sciences, dairy production, agricultural health, epidemiology, food safety, and occupational safety, aligning with the One Health framework to integrate human, animal, and environmental health perspectives. The expected outcomes include improved outbreak preparedness, enhanced surveillance capabilities, and a better understanding of HPAI H5N1 transmission dynamics. By working closely with state partners and the dairy industry, the project will improve agricultural worker safety, protect public health, and maintain the economic stability of the dairy industry. The strategy underscores the importance of building trust with farm operators, emphasizing non-invasive surveillance methods, and ensuring that the economic risks of cooperation are mitigated, ultimately contributing to the safety and sustainability of the dairy industry and public health at large.

Accomplishments

Aim 1. The team conducted a comprehensive review of existing risk assessment frameworks from the U.S. and international sources, followed by an internal workshop held in December 2024 to organize content and structure the tool. After drafting was complete, the tool was circulated for feedback from project members and external stakeholders, and revisions were made to enhance clarity and feasibility. Active recruitment to enroll commercial farms into the risk assessment portion of the study occurred at both the Georgia Dairy Conference hosted by the Georgia Milk Producers and the Florida Food Animal Conference hosted by the Florida Veterinary Medical Association in January 2025 (see attached poster and flyer). Commercial farms were also actively recruited by extension agent study personnel in Florida and Georgia, as well as direct recruitment through e-mail and phone calls by the study PI. Commercial farms were hesitant to enroll in the study and complete the risk assessment. Informal feedback as to why farms were hesitant to participate included concerns over regulatory requirements and duplicative risk assessments that were being requested through other entities.

Follow up meetings with the study team concluded that the direct risk assessment approach has merit but may not be suitable for use in commercial farms without other regulatory structures in place that ensure anonymity and minimize the risk of reputational harm. The integrated risk assessment framework is being developed into a manuscript that will be submitted to a peer-review academic journal (see citations). It is also currently being adapted to backyard poultry settings.

Aim 2. A comprehensive scoping review manuscript assessing the epidemiology of H5N1 in the U.S. up to the date of submission was published in February 2025 (see citations). Additionally, the team established and maintained multiple sample streams to monitor for influenza A and H5N1 across key environmental and agricultural interfaces. This included the collection and testing of ultra- and low-temp-pasteurized retail milk, municipal wastewater, and wildlife specimens. A total of 81 milk samples were tested by real-time qRT-PCR, of which 3 (3.7%) were positive for influenza A virus. None were positive for H5N1. A total of 155 wastewater samples were tested, of which 52 (33.5%) were positive for influenza A virus. None were positive for H5N1. A total of 46 oral pharyngeal and cloacal samples were collected from wild turkeys of which 4 (8.7%) and 3 (6.5%) were positive for influenza A virus, respectively.

In addition, given that milk and wastewater are likely highly diluted samples, we also tested RNA using a digital PCR protocol on a QIAcuity platform. This test also showed no H5N1 positives in any of the milk or wastewater samples. In collaboration with the Florida Fish and Wildlife Commission, a total of 15 nasal swabs were collected from Florida panthers and bobcats. Additionally, blood samples were collected from 5 of the swabbed panthers and placed on FTA cards. These samples are pending shipment to the University of Florida once an MTA is finalized with FWC.

Aim 3. Stakeholder engagement began to guide the development of an emergency preparedness and response plan. The team met with the president of the Extension Disaster Emergency Network (EDEN) and representatives from the Florida Department of Agriculture and Consumer Services' State Agricultural Response Team (SART) to align the plan with existing state frameworks. Discussions were also carried out with the Georgia extension team to understand the differences in policy structures between Florida and Georgia.

MEDIA ENGAGEMENT

1. UF/IFAS News. (2025, July 10). **Scientists seek to curtail bird flu's spread through education, outreach efforts.**
2. ABC News. (2025, February 14). **2nd bird flu virus detected in western US: What does this mean for prevention?.**
3. National Geographic. (2025, February 12). **How to protect yourself from bird flu as food prices rise.**
4. University of Florida College of Public Health and Health Professions. (2025, February 6). **USDA confirms new strain of avian flu in dairy cattle.**
5. University of Florida College of Public Health and Health Professions. (2025, January 23). **UF expert answers questions about local risk of bird flu.**
6. NPR Shots – Health News. (2024, December 30). **Bird flu Q&A: What to know to help protect yourself and your pets.**
7. NEWS 6+ Now. (2024, December 19). **What you need to know about bird flu: Join Q&A with expert.**
8. South Florida Sun-Sentinel. (2024, November 30). **"Hungry for this kind of food." Raw milk use surging in Florida despite law banning sales for human consumption.**
9. WebMD. (2024, November 25). **Bird flu and Thanksgiving: Is turkey still on the table?**
10. Healio. (2024, November 1). Q&A: **First case of bird flu in a US pig raises concern.**
11. Fox News. (2024, October 30). **Pig infected with bird flu for first time in US, health officials confirm.**
12. Bloomberg. (2024, October 30). **US spots first H5N1 case in a pig, raising concern for humans.**
13. Farm Policy News. (2024, October 30). **US detects first bird flu case in swine.**

PILOT/ FEASIBILITY PROGRAM

STUDY UPDATE

EXPLORING THE SIGNIFICANCE OF AGROFORESTRY AND REGENERATIVE AGRICULTURE IN FARMER'S HEALTH AND RISK OF ZOONOTIC DISEASES

PROJECT LEADER: AMY VITTOR

Overview

Agroforestry and regenerative agriculture (A/RA) are emerging as promising sustainable farming approaches that intertwine economic, social, and environmental benefits, including carbon sequestration. These practices are gaining traction globally due to their potential to enhance soil health, biodiversity, and ecosystem integrity. However, the forest-farm edge generated by A/RA landscapes may give rise to pathogen spillover from wildlife into livestock and humans. The impact of A/RA on human health and zoonotic infections has not been studied to date. This project examines the effects of these practices on farmworker health and susceptibility to arthropod-borne zoonotic diseases.

The investigative team held in-depth interviews with farmers (in person and via video) on farming practices, zoonotic risk factors, and climate perspectives and adaptations. Serum was obtained, and tested for exposure to endemic flaviviruses (dengue virus, West Nile virus, Saint Louis encephalitis virus), endemic alphaviruses (eastern equine encephalitis virus, Venezuelan equine encephalitis virus/Everglades strain, chikungunya virus), and tick-borne pathogens (Rickettsia species, Ehrlichia species, Borrelia burgdorferi). Thirty participants were enrolled, of whom 14 (47%) had been exposed to one or more vector-borne pathogens. This exposure was not significantly associated with tree cover or agroforestry practice. While the sample size is small, agroforestry practices do not appear to pose a risk for vector-borne pathogens.

Methods

Selection of farms and participants. Farms were selected based on size (<100 acres, and specific practices employed. Study flyers were mailed directly to farms, followed by emails and phone calls to inquire whether farmers were interested in participating. Farm addresses, emails and phone numbers were accessed from publicly available farm websites. Once farmers expressed interest in participating, the study team visited the farm to discuss study details, obtain written consent, and conduct the survey. Due to challenges recruiting nearby farms, the study extended reach by providing a virtual option for interviews. In these instances, Tasso self-blood collection kits were mailed out, and verbal instructions were provided.

Ethics. Informed, written consent was obtained prior to participation. The data collected in this study consisted of health metrics and biospecimen (serum samples). The University of Florida Institutional Review Board approved the study (IRB 202302182).

Human health survey. Validated health survey instruments were used, in addition to a questionnaire assessing the following study-specific factors: duration of residence, occurrence of febrile and diarrheal illnesses in the preceding month/year, exposure to ticks and mosquitoes, mosquito breeding site elimination strategies, farm characteristics, source of drinking water. Health-related quality of life will be assessed using the Patient Reported Outcomes Measurement Information System (PROMIS®) Global Health form, which assesses physical, mental and social health. Scores were calculated using the HealthMeasures Scoring Service and compared to population norms.

Methods

Given that farmers are potentially vulnerable to heat-stress, heat-related health effects were captured using the Hothaps research protocol, which queries participants about their knowledge, behaviors and experience with heat exposure.

Serology. Commercial ELISA kits were used for the detection of West Nile virus IgG, chikungunya virus IgG and Borrelia burgdorferi. Commercial IFA kits were used for the detection of Ehrlichia and Rickettsia IgG. We developed a haemagglutination inhibition assay for the detection of antibodies to West Nile virus, Saint Louis encephalitis virus, Venezuelan equine encephalitis virus/Everglades virus, dengue virus and (serotypes 1-4). Plaque reduction neutralization tests were performed to assess exposure to eastern equine encephalitis virus and to confirm exposure to Venezuelan equine encephalitis virus/Everglades virus. Viral reagents were obtained from World Reference Center for Emerging Viruses and Arboviruses (WRCEVA) (UTMB) and the Centers for Disease Control and Prevention (Figure 1).

Analysis. Tree cover, rangeland cover, crop cover and tree loss were ascertained using Sentine-2 land cover data. Farm house coordinates were used as central points, and the proportion of landcover types within a 500m buffer surrounding the house. The frequency of mosquito-borne and tick-borne pathogen exposures were compared by tree cover, rangeland cover, crop cover, and agroforestry practice using Mann-Whitney U tests.

Results

To date, over 200 farms in North/Central Florida have been contacted. 30 farmers from 25 farms have participated in the study. The farming practices are diverse and varied in the products generated and farming philosophies. The former includes honey, goat milk, cattle, poultry and eggs, hogs, blueberry, strawberry. The average farm measured 49 acres. Farms engaging in livestock and crop cultivation were in the minority (26%), while 32% engaged only in livestock rearing, and 42% only in crop cultivation. Approximately half of farms with livestock engaged in agroforestry (intentionally interspersing trees and pasture), while all of the farms cultivation crops exclusively employed organic farming methods. 14 of the 25 farms engaged in agroforestry.

Serology. Seroprevalence to endemic mosquito-borne viruses and tick-borne pathogens was assessed (Figure 2). 33% of individuals were positive for Rickettsia spp. IgG, 10% were positive for Borrelia burgdorferi IgG, and 3% for Ehrlichia spp. IgG.10% were positive for dengue virus by HI. 3% were positive for West Nile virus and Saint Louis encephalitis virus IgG each. 3% were positive for Venezuelan equine encephalitis virus/Everglades virus IgG by plaque reduction neutralization test, while none were positive for chikungunya IgG or eastern equine encephalitis virus. Tree cover, rangeland cover, and crop cover were not associated with mosquito- or tick-borne pathogen exposure. Similarly, agroforestry was not associated with either type of exposure. However, the number of ticks observed in the week prior to the survey was associated with the degree of tree loss between 2017-2023.

Figure 1. Overview of methods

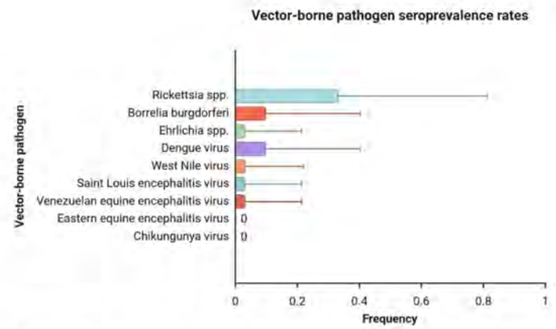


Figure 2. Vector-borne pathogen seroprevalence rates.

ENHANCING AGRICULTURAL SAFETY EDUCATION (EYE SAFETY) THROUGH IMMERSIVE TECHNOLOGY

PROJECT LEADER: CAROLYN SHERIDAN

Overview

The AHSA pilot project aimed to develop an innovative educational tool to strengthen eye-safety awareness among young adults working in agriculture. In April 2025, the Ag Health and Safety Alliance (AHSA) conducted a 360-degree video capture on the Mississippi State University (MSU) farm in collaboration with OP McCubbins. The team produced immersive scenarios featuring real agricultural activities—equipment operation, chemical handling, and general farm work—each filmed within authentic Mississippi agricultural settings. The videos showcased proper PPE use, including face shields, chemical goggles, and safety glasses. Two young adult participants with experience in chemical handling, shop work, and welding served as role models throughout the filming process.

On September 22, 2025, Jenna and Carolyn traveled to Mississippi to deliver the Gear Up for Ag program at MSU, which included the newly developed immersive Eye Safety 360° video. During this visit, a student focus group—coordinated with OP McCubbins—provided valuable feedback that is now guiding the final edits to the video.

Results and Next Steps

The final video will be accessible to young adults across Mississippi through the AHSA 360Articulate platform and via AHSA's website (aghealthandsafety.com). AHSA's prior collaborations with NIOSH AFF Centers will support efforts to feature these videos on agricultural center websites, with promotion through SCCAHS. AHSA will broadly distribute the Eye Safety 360° video by integrating it into all Gear Up for Ag programs, adding it to AHSA's eLearning course and website Resources section. Promotion of the video through conferences, agricultural health and safety presentations, social media, podcasts, and radio shows are also part of the distribution plan. OP McCubbins will support dissemination within the agricultural education community, and AHSA has submitted an abstract for a workshop at the June 2026 NACTA conference that will feature the video.

This pilot project highlights the value of immersive learning in agricultural safety education. By placing students within realistic farm environments, the 360-degree experiences provide an engaging and practical tool for understanding eye injury risks and proper protective practices. These resources are well-positioned for statewide and national use and will continue supporting AHSA's mission to advance agricultural health and safety for the next generation.

PILOT/ FEASIBILITY PROGRAM
STUDY UPDATE

YOUTH VOICE ON THE IMPACTS OF HEAT-RELATED ILLNESS AND CLIMATE CHANGE

PROJECT LEADERS: BEATRICE PIERRE AND MICHELLE ABRACZINSKAS

Overview

A yearlong pilot project conducted through a community–university partnership between the University of Florida's Southeastern Coastal Center for Agricultural Health and Safety (UF-SCCAHS) and the Farmworker Association of Florida (FWAF) is summarized in this report. The project aimed to build organizational capacity for Youth Participatory Action Research (YPAR) by engaging farmworker youth in examining the impacts of climate change and heat-related illness (HRI) on their families and communities. From January to May 2025, nine youth participants completed an eight-module YPAR curriculum—developed by UF-SCCAHS and implemented by FWAF facilitators—that introduced research methods and key concepts related to climate change and HRI. Using Photovoice, a method that combines photography with narrative, the youth documented the daily realities of farmworkers and the risks posed by heat and environmental exposure. The project concluded with two podcasts and a community showcase where participants shared their photographs, captions, and reflections with families, peers, and local stakeholders.

Key Findings

The project successfully built capacity for YPAR within FWAF, enabling the organization to integrate it into its existing youth program, and it had a profound impact on participants by fostering connection, awareness, empathy, research skills, empowerment, leadership development, and self-confidence. It also demonstrated the effectiveness of a co-design and implementation approach, supported by regular team meetings and feedback mechanisms, and highlighted the importance of community–university partnerships, flexibility in implementation, and selecting facilitators with relevant skills and experience.

Key Recommendations

Community–university partnerships should prioritize flexibility in implementation and adapt to community needs, while organizations must identify facilitators with relevant skills and lived experience. Funders are encouraged to support YPAR initiatives for longer than a year to address challenges related to university structures, and universities should develop separate CITI training for community partners to reduce barriers to engagement.

PRESENTATIONS & PUBLICATIONS

2024 - 2025 PUBLICATIONS

1. Mena, A., von Fricken, M. E., & Anderson, B. D. (2025). The impact of highly pathogenic avian influenza H5N1 in the United States: A scoping review of past detections and present outbreaks. Viruses, 17(3), 307. https://doi.org/10.3390/v17030307
2. Dunleavy, K., Radunovich, H. L., Beneciuk, J. M., Hu, B., Yang, Y., Blythe, J. M., & Gurka, K. K. (2025). Self-management strategies for low back pain among horticulture workers: Protocol for a type II hybrid effectiveness-implementation Study. JMIR research protocols, 14, e64817. https://doi.org/10.2196/64817
3. McLeod-Morin, A., Anderson, B., Morris, G., Sanders, C., Larson, C., Telg, R., & Henson, A. (2025). What Consumers Need to Know about Bird Flu (Influenza H5N1). University of Florida Cooperative Extension Service Publication Series (AN403). Gainesville, FL. https://doi.org/10.32473/EDIS-AN403-2025
4. McLeod-Morin, A., Anderson, B., Morris, G., Sanders, C., Larson, C., Telg, R., & Henson, A. (2025). What Backyard Flock Owners Need to Know about Bird Flu (Influenza H5N1). University of Florida Cooperative Extension Service Publication Series (AN402). Gainesville, FL. https://doi.org/10.32473/EDIS-AN402-2025

2024 - 2025 PRESENTATIONS

1. Mena, A., Bohlen, J., Tao, S., Bisesi, J., & Anderson, B. D. (2025, January). Integrated risk assessment and environmental surveillance for highly pathogenic avian influenza (HPAI) H5N1 in dairy farms in Florida and Georgia: Enhancing outbreak preparedness and response [Poster presentation]. Georgia Dairy Conference, Savannah, GA.
2. Revere, I. L., Sanders, C. B., & Anderson, B. D. (2025, April). Healthy herds: A biosecurity framework for livestock exhibitions [Poster presentation]. PHHP Research Day, University of Florida, Gainesville, FL.
3. Rucker, L., Mena, A., Goodnight, K., Paneque, F., Bisesi, J., & Anderson, B. D. (2025, April). Comparison of real-time reverse transcriptase-polymerase chain reaction and digital droplet polymerase chain reaction for the detection of influenza A virus in wastewater and milk samples [Poster presentation]. PHHP Research Day, University of Florida, Gainesville, FL.
4. Anderson, B. D. (2025). Enhancing biosecurity against avian influenza in Florida's backyard poultry flocks [Presentation]. Florida SART Partners Call.
5. Telg, R., Leitheiser, K., Mattox, A., & McLeod-Morin, A. (2025, October). An Assessment of Caribbean Region Agriculturalists' Occupational Health and Safety Needs. Poster presented at the 2025 Extension Disaster Education Network Annual Conference, Portland, ME.
6. Ericson, A., McLeod-Morin, A., Lundy, L., Irani, T., Leitheiser, K., Lindsey, A., & Telg, R. (2025, June). Evaluating Diverse Video Formats for Heat-Related Illness Prevention. Poster presented at the 2025 Association for Communication Excellence Conference, Milwaukee, WI.
7. Mena, A., Manrique, A., & McLeod-Morin, A. (2025, July). The Role of Social Determinants of Health in Heat Related Illness Prevention and Information Trust Among Florida Residents: A Bayesian Profile Regression Analysis. Poster presented at the 2025 Florida Public Health Association Annual Educational Conference, Orlando, FL.
8. Vanness K, Barbery I, Diehl L, Dunleavy K. Relationship between work risk measures for nursery and landscape tasks for back and upper extremity repetitive strain disorders. University of Florida, College of Public Health and Health Professions Research Day. Gainesville, FL. April 2025
9. Dunleavy K, Beneciuk J, Blythe J, Gurka K, Hu B, Radunovich H. Designing videos to match characteristics and work for horticulture workers. SCCHAS State of the Science meeting 2024. Gainesville, FL.
10. Dunleavy K, Gurka K, Beneciuk J, Hu B, Radunovich H. An implementation science approach for preparing for an intervention study for low back pain in horticulture. SCCHAS State of the Science meeting 2024. Gainesville, FL.
11. Beatty N.L., Guo, Y., Lou, X., Alvarez, L.V., Weinbrenner, D., White, S.H., Diaz, J. (2024, November 16). A retrospective analysis of chronic kidney disease of unkown etiology (CKDu) at a single-center university hospital system in the state of Florida, USA [Conference presentation]. American Society of Tropical Medicine and Hygiene 2024 Annual Meeting, New Orleans, LA, United States.
12. Alvarez, L.V., Beatty, N.L. (2024, December 4). Chronic Kidney Disease of Unknown Etiology in Florida – Bridging the Gaps and Bringing Awareness to our Agricultural Workers in Florida [Conference presentation]. National Center for Farmworker Health Agricultural Worker Health Symposium, Tampa, FL, United States

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