

The Produce Safety Landscape in the Southern Region

Organized by: USDA National Agricultural Library, Food Safety Research Information Office (FSRIO)

Moderator: Zeynep Diker, USDA National Agricultural Library (NAL), FSRIO

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This webinar is being recorded and will be available to IAFP members within one week.

Webinar Housekeeping

- It is important to note that all opinions and statements are those of the individual making the presentation and not necessarily the opinion or view of IAFP.
- All attendees are muted. Questions should be submitted to the presenters during the presentation via the Questions section at the right of the screen. Questions will be answered at the end of the presentations.
- This webinar is being recorded and will be available for access by IAFP members at www.foodprotection.org within one week.



Zeynep Diker, MLIS
Metadata Librarian
USDA National Agricultural Library (NAL), FSRIO

Zeynep Diker is a metadata librarian at the USDA, National Agricultural Library (NAL) within the Nutrition and Food Safety information centers. She joined NAL in 2019 while pursuing her master's degree in Library and Information Science from the University of Maryland (UMD), College Park. She served as an iFellows student with a specialization in information management. Before NAL, Ms. Diker was a student researcher at the National Archives and NASA. She was also an archives intern at the Chevy Chase Historical Society, and worked at the UMD Libraries' Special Collections division. Zeynep provides library services, data analytics, and supports the automation services for the Food Safety Research Information Office by monitoring the dissemination of Food Safety Research publications feeds, overseeing the updates to the Research Projects Database, and managing content on the FSRIO website.



Dawanna James-Holly, PhD
Technical Information Specialist
USDA National Agricultural Library (NAL), FSRIO

Dr. James has over 18 years of experience administering federal government programs as a grant's administrator for USDA competitive and capacity grant programs. She has led work in nutrition policy as a public health nutrition advisor, grant writer, grant project director and program manager of the federal Child Nutrition programs throughout Washington, DC. Dr. James is a two term USDA Team Nutrition Grant Program as the Project Director, and formerly USDA SNAP-ED Coordinator in the District of Columbia. At the US Department of Agriculture, she administered the USDA NIFA AFRI competitive grant programs for 6 years across the institute of food safety and nutrition as a program specialist. There she led the Food Safety Outreach Program (FSOP) in partnership with FDA on the implementation of the FSMA regulation. The FSOP program at NIFA was focused on small farmers, processors and producers and fresh fruit/vegetable merchant wholesalers. At USDA NAL she serves as the science content manager for the [Food Safety Research Information Office \(FSRIO\)](#) across its key databases and webpages. At NAL, she ensures all resources are 508 compliant and appropriate for food scientists in academia, government, and the private sector, both nationally and internationally. She also authors a monthly gov delivery publication reaching over 31K subscribers of the NAL Food Safety and News Listserv. In addition, she manages the Food Safety Working group in partnership with ARS national program 108, USDA NIFA representatives, and USDA FSIS's science liaison. Dr. James has had a robust career in Agricultural Research, Extension and Education.



Michelle Danyluk, PhD
Professor Food Science
University of Florida, IFAS Citrus Research and Education Center

Dr. Danyluk is a Professor and Extension Specialist of Food Safety and Microbiology in the Department of Food Science and Human Nutrition at the University of Florida (UF). Dr. Danyluk is situated at the Citrus Research and Education Center in Lake Alfred, Florida. Her primary research focuses on bacterial pathogens in produce, including production, packing, and processing environments, its movement and mitigation within these environments, and the subsequent implications for public health. Dr. Danyluk serves as the lead for the USDA-funded Southern Center for FSMA Training, a consortium of collaborators in 13 southern states, one territory, and with three non-governmental organizations.

During her academic career at UF, Dr. Danyluk has served on numerous college, department, and center committees. She received the UF Institute of Food and Agricultural Sciences Richard Jones Outstanding New Faculty Research Award in 2011; an Excellence Award for Assistant Professors in 2013; a Research Foundation Professorship Award in 2015; and a Term Professorship Award in 2019. She was elected a member of the International Commission on Microbiological Specifications for Food (ICMSF) in 2016, where she currently serves as treasurer.

As a 20-year IAFP Member, Dr. Danyluk has organized, convened, and presented several IAFP symposia at numerous IAFP Annual Meetings and actively participates in PDGs and on various Committees. She received the President's Recognition Award in 2019, 2017, 2013, and 2011, the Larry Beuchat Young Researcher Award in 2010, and the IAFP Developing Scientist Award in 2005. She currently serves as the Board Liaison on the IAFP Program Committee for both the Annual Meeting (having also served from 2017–2019) and on the IAFP European Food Safety Symposium. Dr. Danyluk served on the *Journal of Food Protection (JFP)* Management Committee from 2011–2013 and from 2019–2022. She also served on the *Food Protection Trends (FPT)* Editorial Board from 2009–2014 and on the *FPT* Management Committee from 2009–2013. She is an active member of the IAFP Affiliate, the Florida Association for Food Protection, serving on its board from 2009–2017, and as President in 2011. She is the outgoing President elect for the 2022 IAFP Board of Directors.



Kristin Woods, PhD

Regional Extension Agent, Alabama Cooperative Extension System
Auburn University

Since 2003, Dr. Kristin Woods has served in Extension roles focused on community education and economic development in the area of food safety and food systems. Her primary area of emphasis has been taking a holistic approach to the development of farming and food businesses in Alabama. She specializes in helping small farmers co-manage conservation and food safety requirements while creating a financially sustainable business. Kristin is a Produce Safety Alliance Trainer-of-Trainers and has taught Better Process Control School, Seafood HACCP, School (CNP) HACCP, Fruit and Vegetable HACCP, and ServSafe®. Prior to her Extension experience, Kristin spent five years in the food industry working in process development, quality, and management. She embraces a lifelong love of agriculture and currently owns and operates a small diversified farm in Southwest Alabama.

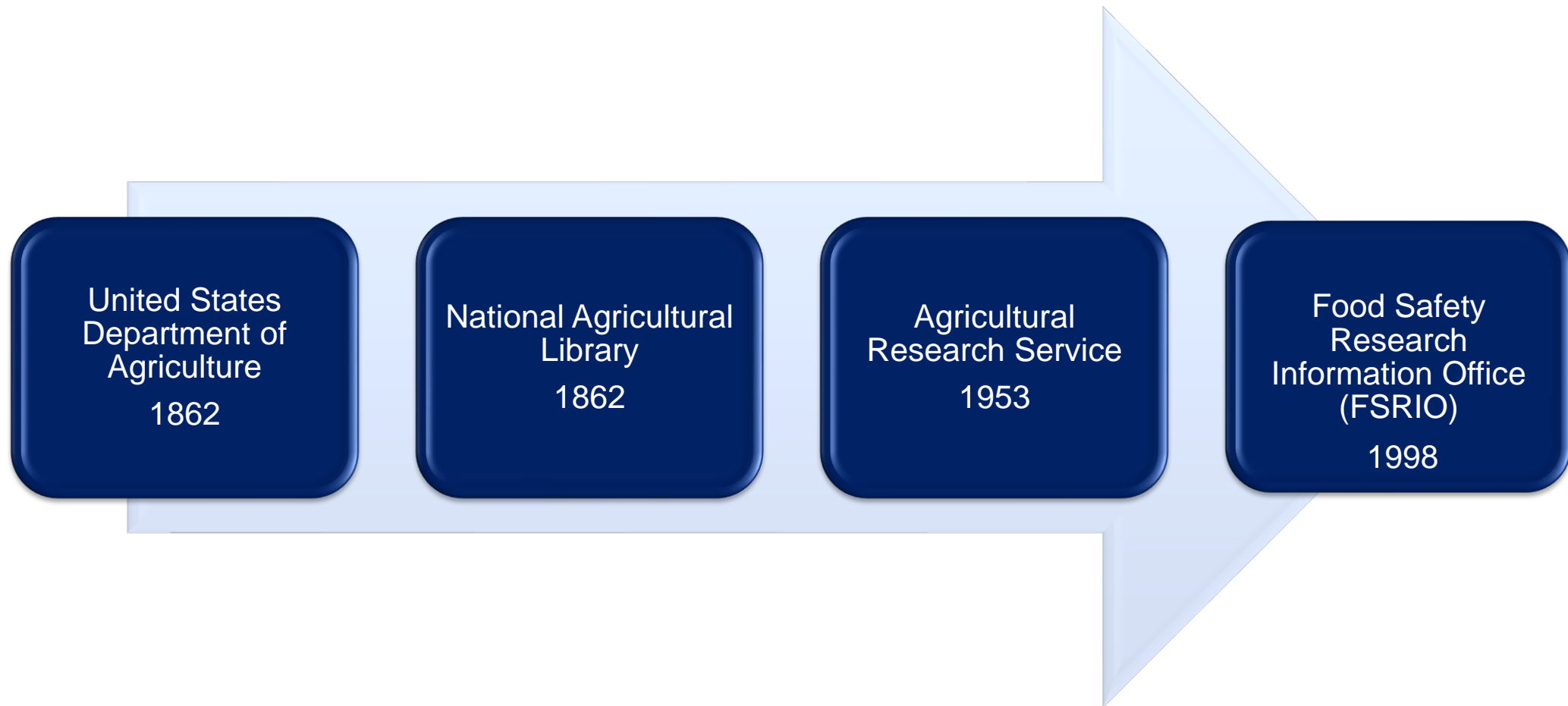
Food Safety Research Information Office

Food Safety Research Insights



USDA National Agricultural Library (NAL)

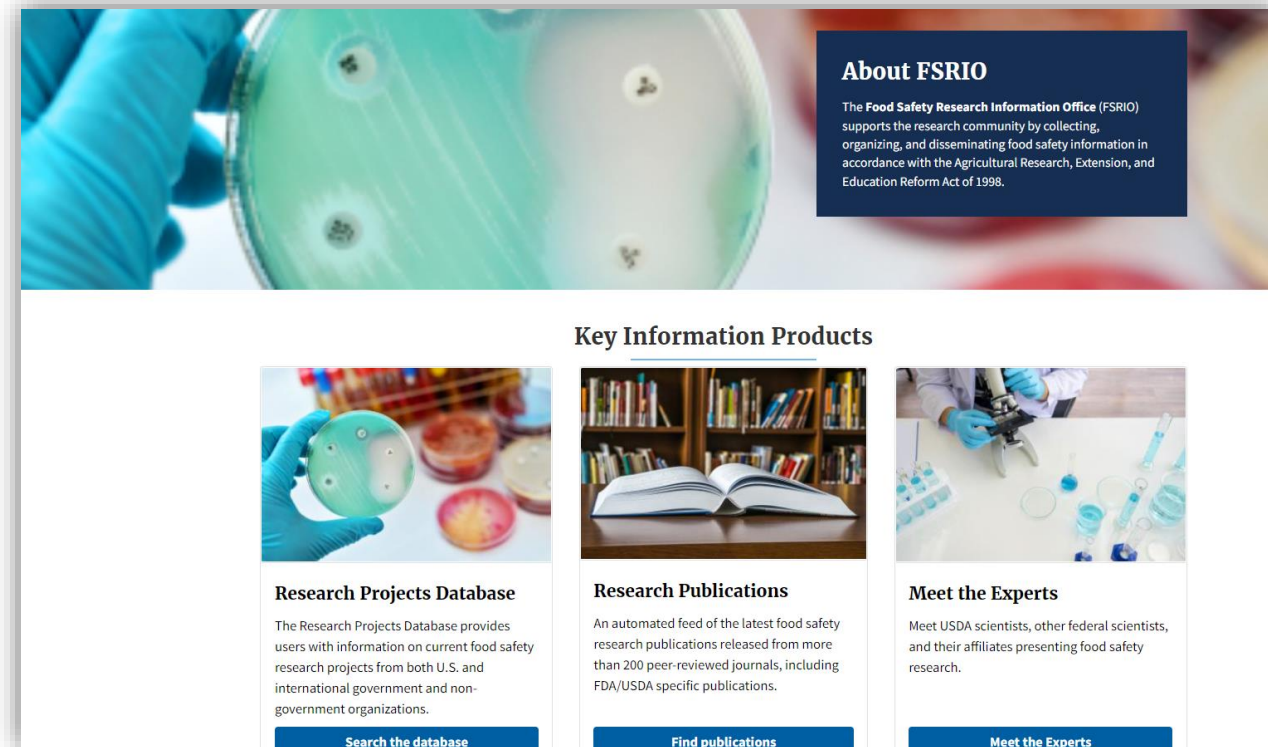
Introduction



Food Safety Research Information Office

- History
- Mission
- Audience
- Content Highlights


Food Safety Research Information Office (FSRIO)



About FSRIO

The **Food Safety Research Information Office (FSRIO)** supports the research community by collecting, organizing, and disseminating food safety information in accordance with the Agricultural Research, Extension, and Education Reform Act of 1998.


Key Information Products



Research Projects Database

The Research Projects Database provides users with information on current food safety research projects from both U.S. and international government and non-government organizations.


[Search the database](#)



Research Publications

An automated feed of the latest food safety research publications released from more than 200 peer-reviewed journals, including FDA/USDA specific publications.

[Find publications](#)



Meet the Experts

Meet USDA scientists, other federal scientists, and their affiliates presenting food safety research.

[Meet the Experts](#)

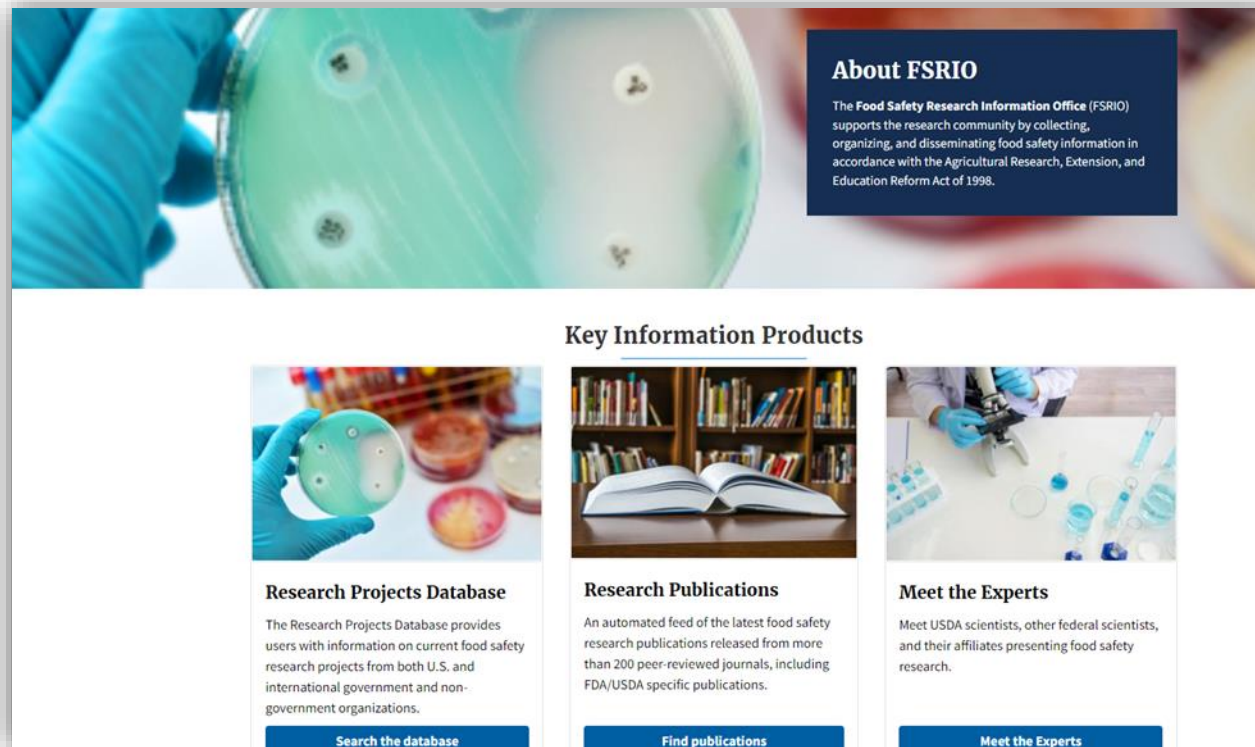
FSRIO Working Group



- Partners with the Agricultural Research Service (ARS) Food Safety National Programs to support the FSRIO mission.
- Comprised of members with expertise in food safety across USDA

NAL Web Modernization

The About FSRIO Webpage



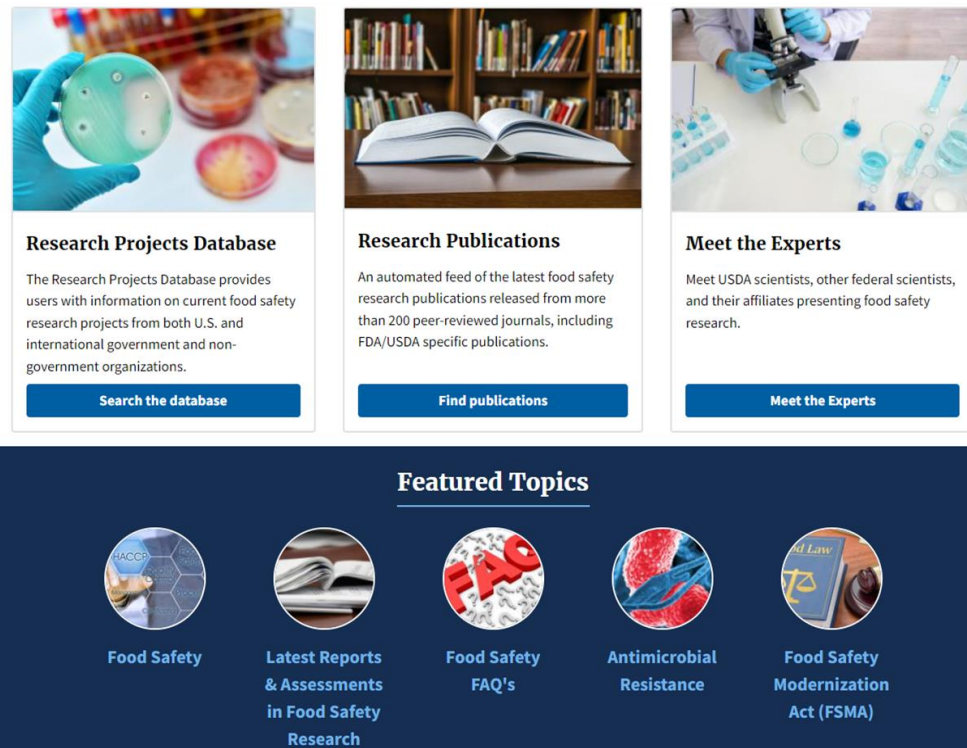
Key Information Products

- Food Safety Research Projects Database
- Food Safety Research Publications Feed
- Meet the Experts Webpage

NAL Web Modernization

The About FSRIO Webpage

Featured Topics




- Customized topics created in partnership with the FSRIO Working Group
- Latest Reports and Assessments resources (e.g. Grey literature)
- Special featured topics ie. Antimicrobial Resistance, and the Food Safety Modernization Act

Food Safety Topics

Provides resources and information across 5 key topic areas:


- Antimicrobial Resistance
- Bacterial Pathogens, Viruses, and Foodborne Illness
- Chemical Contaminants
- Natural Toxins
- Food Safety Standards



Food Safety Publications: Food Safety Modernization Act

Research publications on Food Safety Modernization Act (FSMA) from peer-reviewed journals.


[Find Current Articles](#)



Research Projects: Food Safety Modernization Act

The Food Safety Research Projects Database (RPD) contains information about research projects related to the study of Food Safety Modernization Act.

[Find Projects](#)



Meet the Experts: Produce Safety

USDA ARS scientists and researchers present their work on produce safety.

[View Presentations](#)



Resources by Type of Food Safety Standards

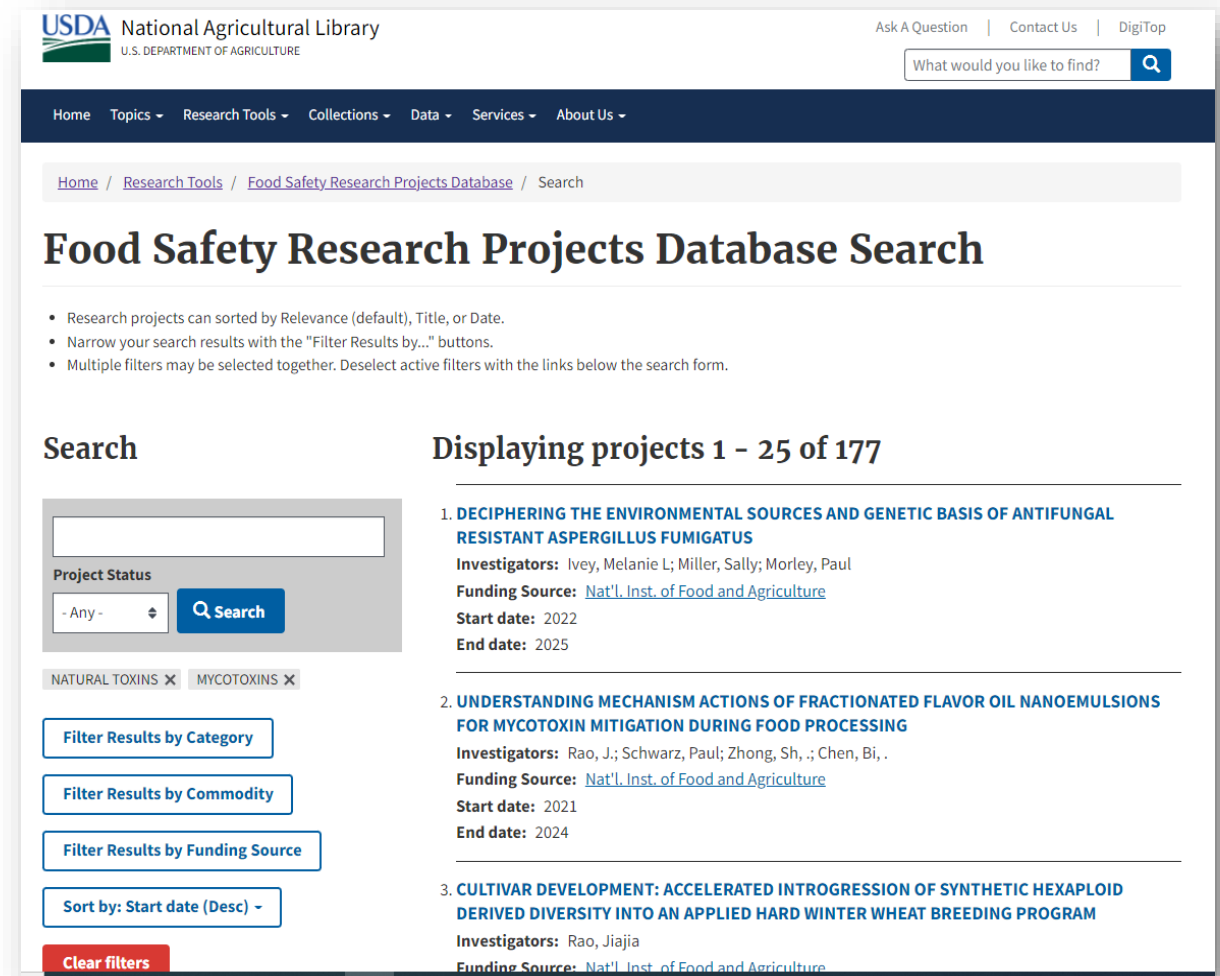
Resources below contain a collection of preventive food safety laws designed to protect the U.S. food supply from production to consumption.

Food Safety Modernization Act (FSMA)	+
Produce Safety Rule	+
Preventive Controls for Human Foods Rule	+
Preventive Food Safety Systems	+
Meat and Poultry-Hazard Analysis Critical Control Point (HACCP)	+

Food Safety Research Projects Database

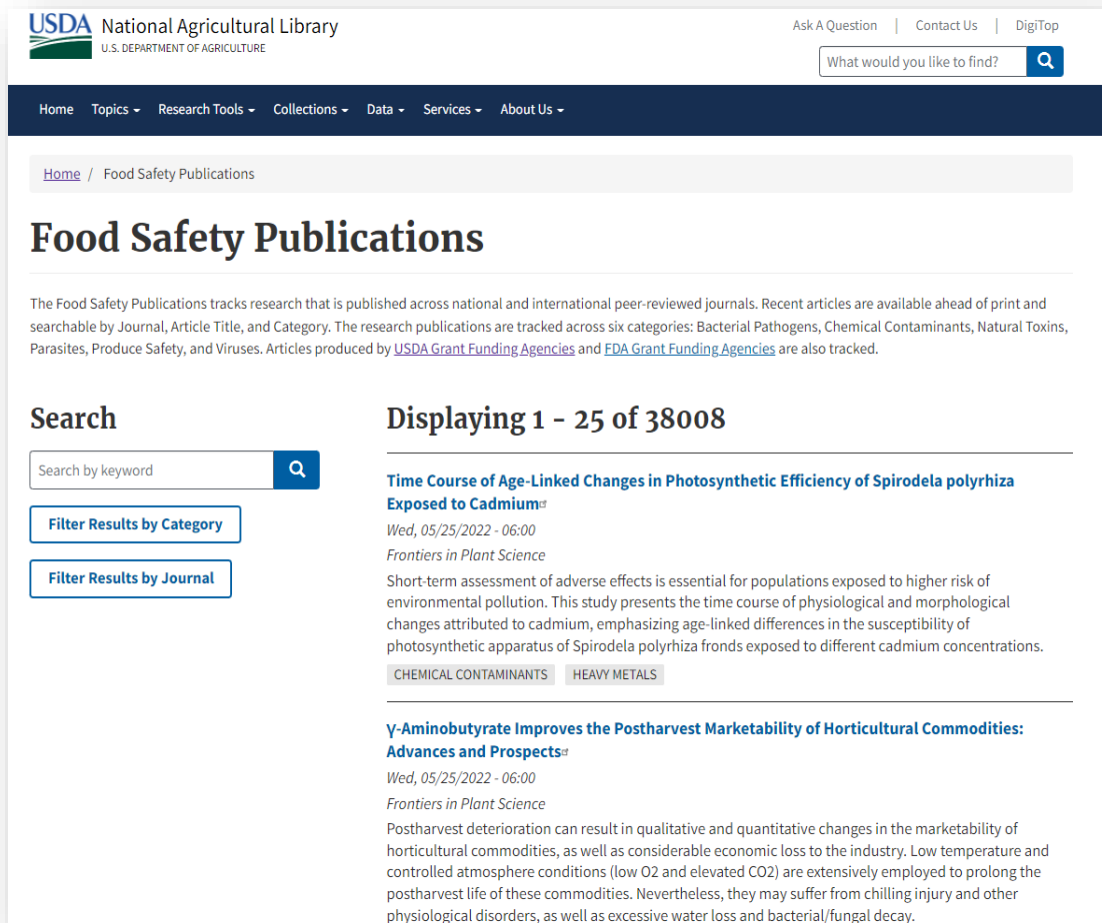
- Browse food safety categories, commodities, and funding sources from the homepage.
- Dynamic filtering in advance search; choose any combination of categories, food types, and funding agencies.
- Sort by relevance, date, or title.

<https://www.nal.usda.gov/research-tools/food-safety-research-projects>



The screenshot displays the 'Food Safety Research Projects Database Search' interface. At the top, the USDA National Agricultural Library logo and navigation links are visible. A search bar is present with the placeholder text 'What would you like to find?'. Below the navigation bar, the breadcrumb trail reads 'Home / Research Tools / Food Safety Research Projects Database / Search'. The main heading is 'Food Safety Research Projects Database Search'. A list of instructions for using the search is provided: 'Research projects can sorted by Relevance (default), Title, or Date.', 'Narrow your search results with the "Filter Results by..." buttons.', and 'Multiple filters may be selected together. Deselect active filters with the links below the search form.' The 'Search' section includes a search input field, a 'Project Status' dropdown menu set to '- Any -', and a 'Search' button. Below the search field, there are filter buttons for 'NATURAL TOXINS' and 'MYCOTOXINS'. Further down, there are buttons for 'Filter Results by Category', 'Filter Results by Commodity', and 'Filter Results by Funding Source'. A 'Sort by: Start date (Desc)' dropdown menu is also present, along with a 'Clear filters' button. The 'Displaying projects 1 - 25 of 177' section lists three research projects. Project 1 is 'DECIPHERING THE ENVIRONMENTAL SOURCES AND GENETIC BASIS OF ANTIFUNGAL RESISTANT ASPERGILLUS FUMIGATUS' by Ivey, Melanie L; Miller, Sally; Morley, Paul, funded by the Nat'l. Inst. of Food and Agriculture, starting in 2022 and ending in 2025. Project 2 is 'UNDERSTANDING MECHANISM ACTIONS OF FRACTIONATED FLAVOR OIL NANOEMULSIONS FOR MYCOTOXIN MITIGATION DURING FOOD PROCESSING' by Rao, J.; Schwarz, Paul; Zhong, Sh., ; Chen, Bi., funded by the Nat'l. Inst. of Food and Agriculture, starting in 2021 and ending in 2024. Project 3 is 'CULTIVAR DEVELOPMENT: ACCELERATED INTROGRESSION OF SYNTHETIC HEXAPLOID DERIVED DIVERSITY INTO AN APPLIED HARD WINTER WHEAT BREEDING PROGRAM' by Rao, Jiajia, funded by the Nat'l. Inst. of Food and Agriculture.

Food Safety Research Publications



The screenshot shows the USDA National Agricultural Library website. The header includes the USDA logo and navigation links like 'Ask A Question', 'Contact Us', and 'DigiTop'. A search bar is present with the text 'What would you like to find?'. Below the header, there's a navigation menu with 'Home', 'Topics', 'Research Tools', 'Collections', 'Data', 'Services', and 'About Us'. The main content area is titled 'Food Safety Publications' and includes a brief description of the database. A search section on the left allows filtering by category and journal. The main results area displays two publications, each with a title, date, journal name, and a short abstract.

Food Safety Publications

The Food Safety Publications tracks research that is published across national and international peer-reviewed journals. Recent articles are available ahead of print and searchable by Journal, Article Title, and Category. The research publications are tracked across six categories: Bacterial Pathogens, Chemical Contaminants, Natural Toxins, Parasites, Produce Safety, and Viruses. Articles produced by [USDA Grant Funding Agencies](#) and [FDA Grant Funding Agencies](#) are also tracked.

Search

Search by keyword

Filter Results by Category

Filter Results by Journal

Displaying 1 - 25 of 38008

Time Course of Age-Linked Changes in Photosynthetic Efficiency of *Spirodela polyrhiza* Exposed to Cadmium^a

Wed, 05/25/2022 - 06:00

Frontiers in Plant Science

Short-term assessment of adverse effects is essential for populations exposed to higher risk of environmental pollution. This study presents the time course of physiological and morphological changes attributed to cadmium, emphasizing age-linked differences in the susceptibility of photosynthetic apparatus of *Spirodela polyrhiza* fronds exposed to different cadmium concentrations.

CHEMICAL CONTAMINANTS HEAVY METALS

γ-Aminobutyrate Improves the Postharvest Marketability of Horticultural Commodities: Advances and Prospects^a

Wed, 05/25/2022 - 06:00

Frontiers in Plant Science

Postharvest deterioration can result in qualitative and quantitative changes in the marketability of horticultural commodities, as well as considerable economic loss to the industry. Low temperature and controlled atmosphere conditions (low O₂ and elevated CO₂) are extensively employed to prolong the postharvest life of these commodities. Nevertheless, they may suffer from chilling injury and other physiological disorders, as well as excessive water loss and bacterial/fungal decay.

- Provides ready access to the latest food safety research publications, including ahead of print.
- Tracks 200+ journals
- Publications generated are grouped by:
 - ✓ Journal
 - ✓ Subject

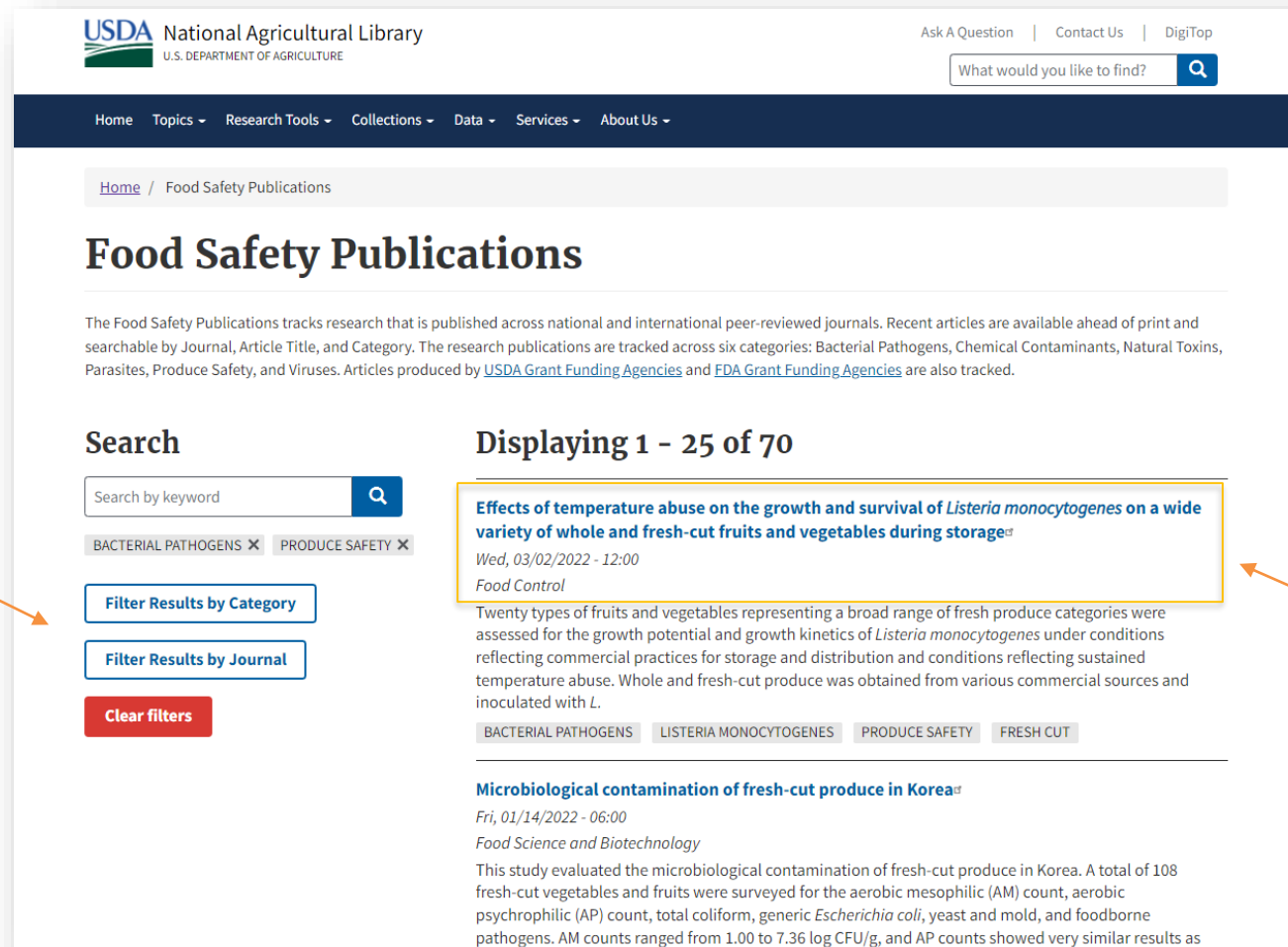
Learn more at:

<https://www.nal.usda.gov/human-nutrition-food-safety/food-safety-publications>

Research Publications Feed


Quick links to:

- Filter results by category or journal title



USDA National Agricultural Library
U.S. DEPARTMENT OF AGRICULTURE

Ask A Question | Contact Us | DigiTop

What would you like to find? 


Home Topics Research Tools Collections Data Services About Us

[Home](#) / Food Safety Publications

Food Safety Publications

The Food Safety Publications tracks research that is published across national and international peer-reviewed journals. Recent articles are available ahead of print and searchable by Journal, Article Title, and Category. The research publications are tracked across six categories: Bacterial Pathogens, Chemical Contaminants, Natural Toxins, Parasites, Produce Safety, and Viruses. Articles produced by [USDA Grant Funding Agencies](#) and [FDA Grant Funding Agencies](#) are also tracked.

Search

Search by keyword 

BACTERIAL PATHOGENS X PRODUCE SAFETY X

[Filter Results by Category](#)

[Filter Results by Journal](#)

[Clear filters](#)

Displaying 1 - 25 of 70

Effects of temperature abuse on the growth and survival of *Listeria monocytogenes* on a wide variety of whole and fresh-cut fruits and vegetables during storage^{ar}
Wed, 03/02/2022 - 12:00
Food Control

Twenty types of fruits and vegetables representing a broad range of fresh produce categories were assessed for the growth potential and growth kinetics of *Listeria monocytogenes* under conditions reflecting commercial practices for storage and distribution and conditions reflecting sustained temperature abuse. Whole and fresh-cut produce was obtained from various commercial sources and inoculated with *L.*

BACTERIAL PATHOGENS LISTERIA MONOCYTOGENES PRODUCE SAFETY FRESH CUT

Microbiological contamination of fresh-cut produce in Korea^{ar}
Fri, 01/14/2022 - 06:00
Food Science and Biotechnology

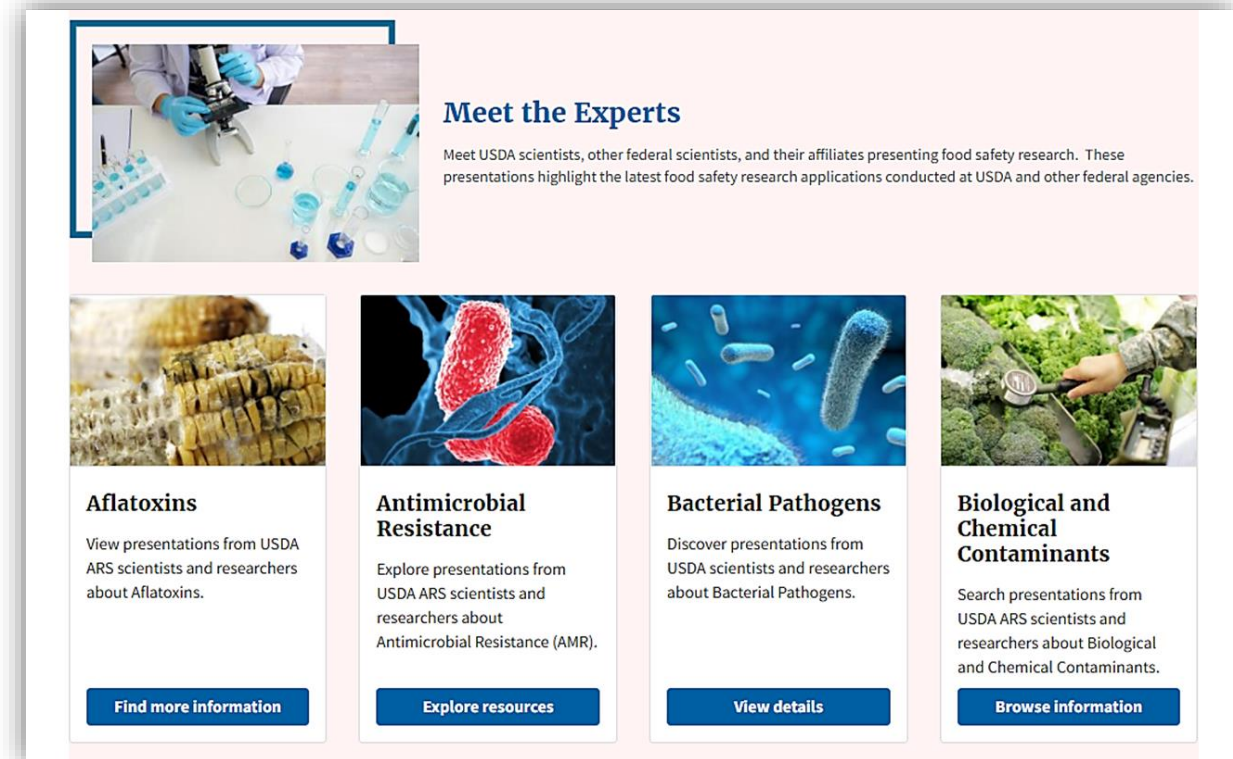
This study evaluated the microbiological contamination of fresh-cut produce in Korea. A total of 108 fresh-cut vegetables and fruits were surveyed for the aerobic mesophilic (AM) count, aerobic psychrophilic (AP) count, total coliform, generic *Escherichia coli*, yeast and mold, and foodborne pathogens. AM counts ranged from 1.00 to 7.36 log CFU/g, and AP counts showed very similar results as

See most recent publications on the homepage, including ahead of print

Meet the Experts


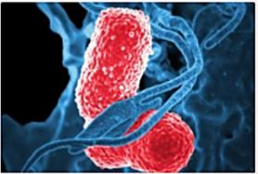


- Features videos and presentations about food safety research conducted at USDA
- Adding content on trending food safety topics
 - Mycotoxins
 - Produce safety
 - Antimicrobial resistance
 - Bacterial pathogens.
- Currently tracking USDA research, future expansion to include FDA, NIH, CDC, and NSF

<https://www.nal.usda.gov/legacy/fsrio/experts>



Meet the Experts

Meet USDA scientists, other federal scientists, and their affiliates presenting food safety research. These presentations highlight the latest food safety research applications conducted at USDA and other federal agencies.

Aflatoxins	Antimicrobial Resistance	Bacterial Pathogens	Biological and Chemical Contaminants
			
View presentations from USDA ARS scientists and researchers about Aflatoxins.	Explore presentations from USDA ARS scientists and researchers about Antimicrobial Resistance (AMR).	Discover presentations from USDA scientists and researchers about Bacterial Pathogens.	Search presentations from USDA ARS scientists and researchers about Biological and Chemical Contaminants.
Find more information	Explore resources	View details	Browse information

Meet the Experts

Scientist Videos



Cold Plasma as a Novel Antimicrobial Intervention

Investigator: Brendan Niemira, PhD
Institution: Agricultural Research Service



How Does Salmonella become Antibiotic Resistant

Investigator: Jonathan Frye, PhD
Institution: Agricultural Research Service



Rapid inactivation of *Toxoplasma gondii* bradyzoites in dry cured sausage

Investigators:
John Luchansky, PhD; Anna Porto-Fett, PhD
Institution: Agricultural Research Service



Innovative materials for use in Mycotoxin detection

Investigator: Chris Maragos, PhD
Institution: Agricultural Research Service

- Presentations and videos
- Topics include:
 - Aflatoxins
 - Antimicrobial Resistance
 - Biological and Chemical Contaminants
 - Viruses and Prions
 - Produce Safety
 - Scientist videos

Meet the Experts

- Scientist videos covering emerging topics in food safety
- Related content is linked where applicable:
 - Investigator Name
 - Institution
 - Publications
 - Presentations

<https://www.nal.usda.gov/fsrio/experts/stec-biofilms-within-microbial-communities-food>



Investigator Vijay Juneja, PhD

Institution: Agricultural Research Service

Related Publications:

<https://www.nal.usda.gov/legacy/fsrio/experts/detection-and-fate-chemical-and-biological-residues-food-and-environmental-systems>

NAL Web Modernization Meet the Experts (MTE) Webpage



Meet the Experts

Meet USDA scientists, other federal scientists, and their affiliates presenting food safety research. These presentations highlight the latest food safety research applications conducted at USDA and other federal agencies.



Aflatoxins

View presentations from USDA ARS scientists and researchers about Aflatoxins.

[Find more information](#)



Antimicrobial Resistance

Explore presentations from USDA ARS scientists and researchers about Antimicrobial Resistance (AMR).

[Explore resources](#)



Bacterial Pathogens

Discover presentations from USDA scientists and researchers about Bacterial Pathogens.

[View details](#)



Biological and Chemical Contaminants

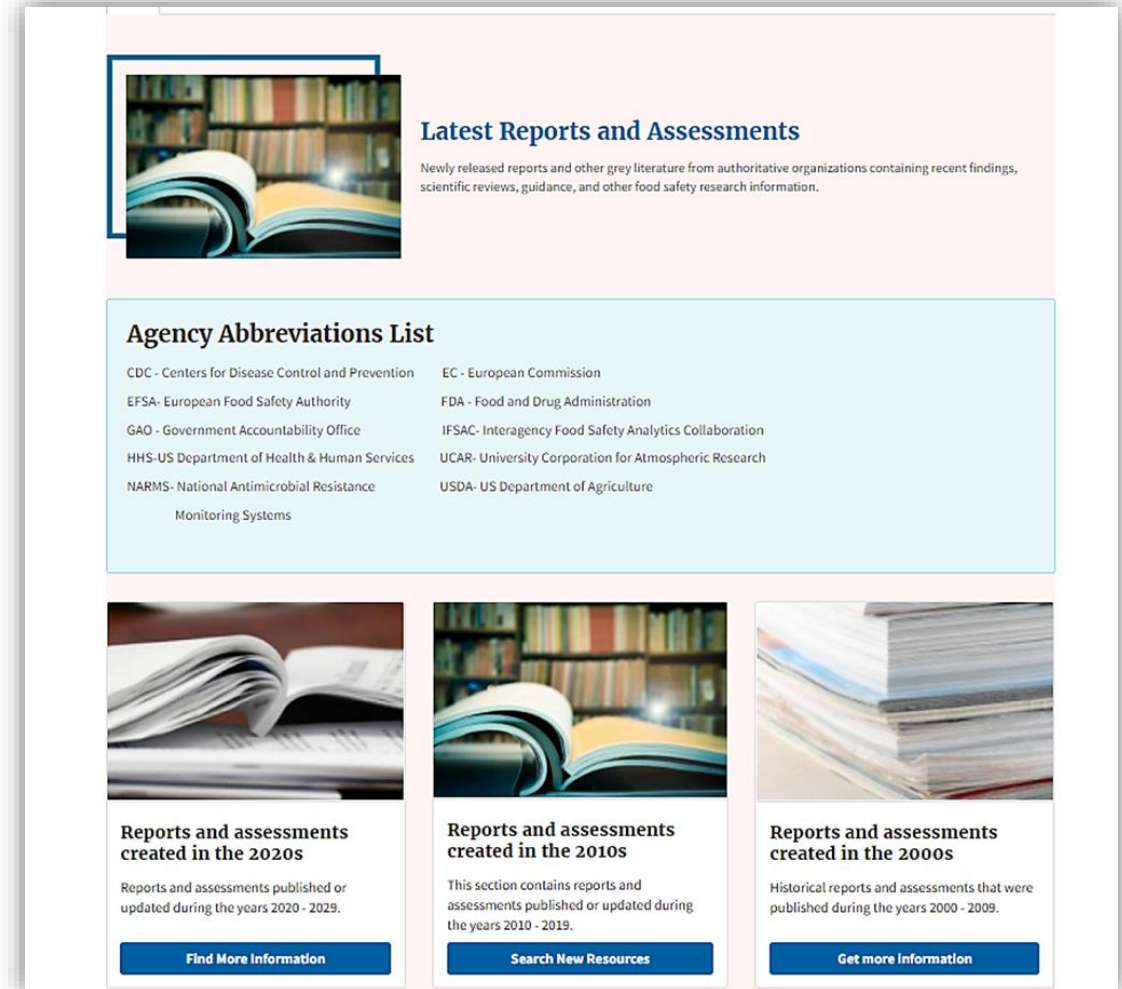
Search presentations from USDA ARS scientists and researchers about Biological and Chemical Contaminants.

[Browse information](#)

Latest Reports and Assessments

- Recent Findings
- Scientific Reviews
- Guidance Documents
- Action Plans
- Science Blueprints

<https://www.nal.usda.gov/fsrio/latest-reports-and-assessments-0>



The screenshot displays the 'Latest Reports and Assessments' page on the National Agricultural Library website. The page is organized into several sections:

- Latest Reports and Assessments:** A top section with a header image of an open book and a title. Below the title is a brief description: 'Newly released reports and other grey literature from authoritative organizations containing recent findings, scientific reviews, guidance, and other food safety research information.'
- Agency Abbreviations List:** A light blue section containing a list of abbreviations and their corresponding full names, organized in two columns.

Agency Abbreviations List	
CDC - Centers for Disease Control and Prevention	EC - European Commission
EFSA - European Food Safety Authority	FDA - Food and Drug Administration
GAO - Government Accountability Office	IFSAC - Interagency Food Safety Analytics Collaboration
HHS - US Department of Health & Human Services	UCAR - University Corporation for Atmospheric Research
NARMS - National Antimicrobial Resistance Monitoring Systems	USDA - US Department of Agriculture
- Reports and assessments created in the 2020s:** A section with a header image of an open book, a title, a description ('Reports and assessments published or updated during the years 2020 - 2029.'), and a 'Find More Information' button.
- Reports and assessments created in the 2010s:** A section with a header image of an open book, a title, a description ('This section contains reports and assessments published or updated during the years 2010 - 2019.'), and a 'Search New Resources' button.
- Reports and assessments created in the 2000s:** A section with a header image of a stack of books, a title, a description ('Historical reports and assessments that were published during the years 2000 - 2009.'), and a 'Get more Information' button.

NAL Web Modernization Latest Reports & Assessments Webpage



Latest Reports and Assessments

Newly released reports and other grey literature from authoritative organizations containing recent findings, scientific reviews, guidance, and other food safety research information.

Agency Abbreviations List

CDC - Centers for Disease Control and Prevention	EC - European Commission
EFSA - European Food Safety Authority	FDA - Food and Drug Administration
GAO - Government Accountability Office	IFSAC - Interagency Food Safety Analytics Collaboration
HHS - US Department of Health & Human Services	UCAR - University Corporation for Atmospheric Research
NARMS - National Antimicrobial Resistance Monitoring Systems	USDA - US Department of Agriculture



Reports and assessments created in the 2020s

Reports and assessments published or updated during the years 2020 - 2029.

[Find More Information](#)



Reports and assessments created in the 2010s

This section contains reports and assessments published or updated during the years 2010 - 2019.

[Search New Resources](#)

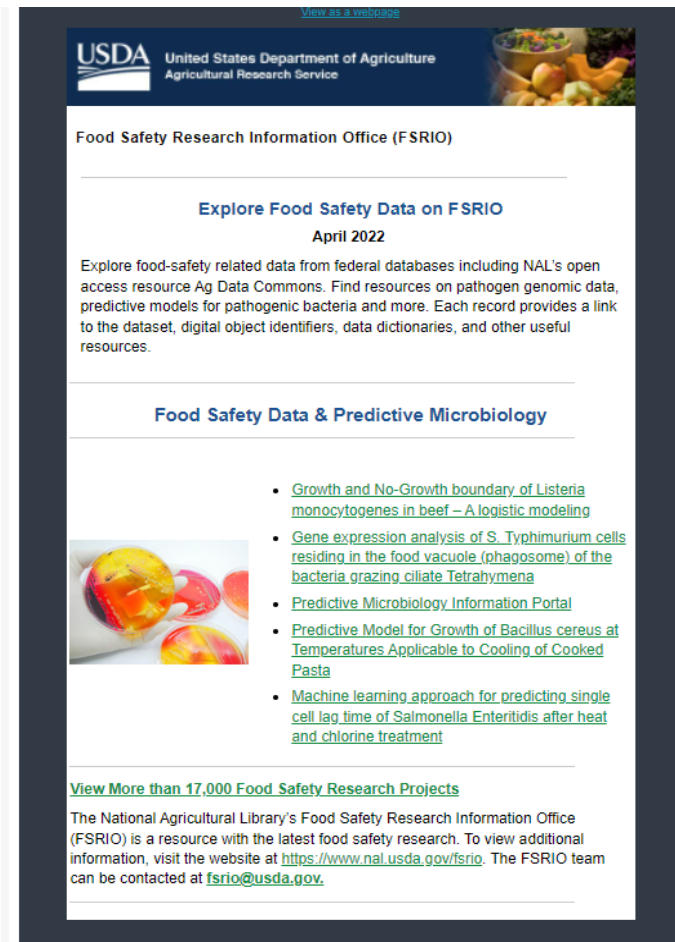


Reports and assessments created in the 2000s

Historical reports and assessments that were published during the years 2000 - 2009.

[Get more Information](#)

FSRIO Monthly Gov Delivery Bulletins



- 31K Subscribers
- Featured topics: Mycotoxin Research, Predictive Microbiology, Produce Safety, etc.
- To join, go to the NAL [Food Safety News & Information Listserv](#)

NAL Customer Service Unit

- Ask a Question Service
- Chat and Email
- Training for NAL Resources
- Research using Collection Materials
- Special Collections and Rare Books
- Literature Search and Evidence Synthesis
- Scientific Integrity and Impact



NAL Literature and Evidence-Based Reviews

- Clarify the research question(s)
- Recommend databases
- Narrow key terms and concepts
- Design search strategies
- Run searches
- Full-text retrieval
- Set up automated alerts
- Partner on evidence synthesis projects including rapid reviews, scoping reviews, and systematic reviews

AGRICOLA

<https://agricola.nal.usda.gov>

AGRICOLA database comprehensively covers agricultural literature:

- 5,200,000+ records to as far back as the 15th century
- Print and Electronic Materials from the NAL Collection



AGRICOLA

NAL Thesaurus

<https://agclass.nal.usda.gov>

- Contains over 265,000 terms, including 153,000+ descriptors in English and Spanish
- NAL Thesaurus includes hierarchical, equivalents and associate relationships among concepts
- NAL Thesaurus is used to select controlled vocabulary terms for subject indexing of AGRICOLA, PubAg and other databases



U.S. Department of Agriculture
Pomological Watercolor Collection.
Rare and Special Collections,
National Agricultural Library,
Beltsville, MD 20705

PubAg

<https://pubag.nal.usda.gov>

PubAg is a free, searchable database containing links to:

- 300,000+ full-text articles* relevant to the agricultural sciences
- indexed citations to peer-reviewed journal articles in the agricultural sciences



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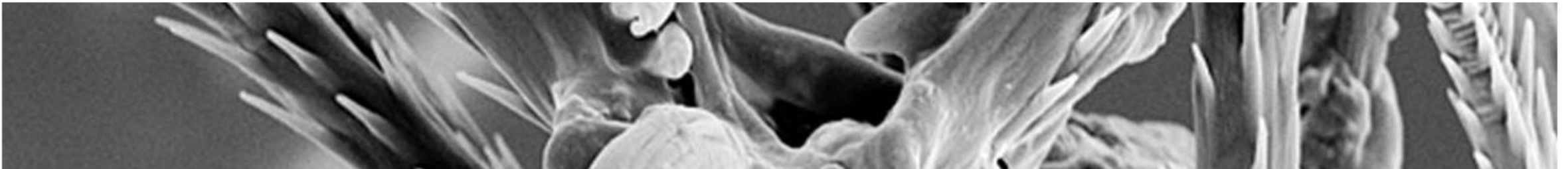
All Fields ▼

To search a phrase, use quotes (e.g., "winter wheat")


Search 

[Advanced Search](#)

Selections (0) ▼



PubAg

 **PubAg**
U.S. DEPARTMENT OF AGRICULTURE

HomeFAQPubAg APIContact UsSearch History

All Fields ▼To search a phrase, use quotes (e.g., "winter wheat")Search QAdvanced SearchSelections (0) ▼

Determination of 7 α -OH cholesterol by LC-MS/MS: Application in assessing the activity of CYP7A1 in cholestatic minipigs

Author: Yun, Changhong, Yin, Taijun, Shatzer, Katherine, Burrin, Douglas G., Cui, Liwei, Tu, Yifan, Hu, Ming

Source: Journal of chromatography 2016 v.1025 pp. 76-82

ISSN: 1570-0232


Subject: acetonitrile, cholesterol, chromatography, formic acid, liver, liver microsomes, miniature swine

Abstract: An LC-MS/MS method was developed and validated to determine 7 α -OH cholesterol in liver microsome. This method was convenient and fast with high specificity and sensitivity. Briefly, a gradient elution was performed on a Synergi polar-C18 column (50 \times 4.6mm i.d., 3 μ m). The mobile phase (consisting of 0.1% HCOOH solution and acetonitrile) eluted in gradient at a flow rate of 1ml/min. MS detection was operated on APCI (+) mode; the MRM transitions for 7 α -OH cholesterol and D7-cholesterol (I.S.) were 385.1 \geq 159.1 and 376.4 \geq 266.3, respectively. The linear response range of 7 α -OH cholesterol was covered from 1.563 to 100.0ng/ml. All of the validation items meet the requirement of FDA guidance for bioanalytical method validation. This method was applied to enzymatic studies for determination of cholesterol 7alpha-hydroxylation activity catalyzed by CYP7A1 in the cholestatic minipigs liver microsomes.


Agid: 62878

Handle: 10113/62878


Access Full Text


 PMID: PMC5358015

Citation Metrics

 Citations { 7 }

Links

 DOI:
10.1016/j.jchromb.2016.05.005

 PubMed: 27218859

Actions on this item

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PubAg Links to USDA-funded Publications

- Free public access to the best available full-text version of USDA-funded scholarly publications
- Access to full text will occur after at least a 12-month administrative interval.
- Access will be provided earlier when the publisher makes a full-text version available for free

Contact Us!

Dawanna James-Holly, PhD

NAL FSRIO Technical Information Specialist

E-Mail: Dawanna.james-holly@usda.gov

FSRIO Website: <https://www.nal.usda.gov/programs/fsrio>

Direct questions to the CSU team at:

<https://www.nal.usda.gov/ask-question>





A Snapshot of Produce Farming in the South and the Southern Center for FSMA training

Michelle Danyluk

mddanyluk@ufl.edu

Email: southerncenter@ifas.ufl.edu

<https://sc.ifas.ufl.edu/>

Twitter: @southern_center

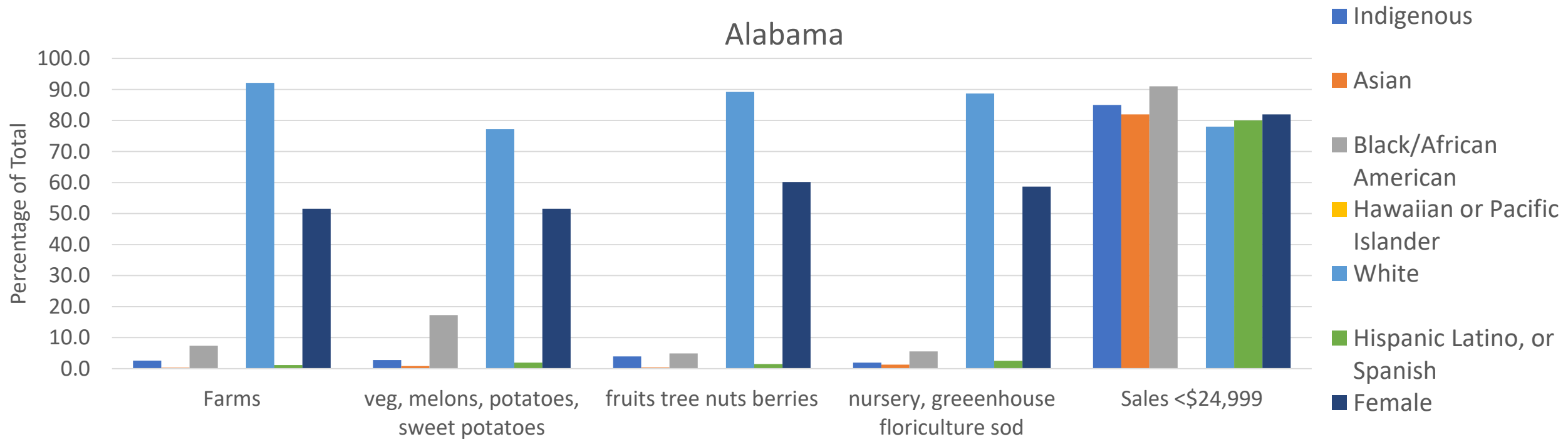
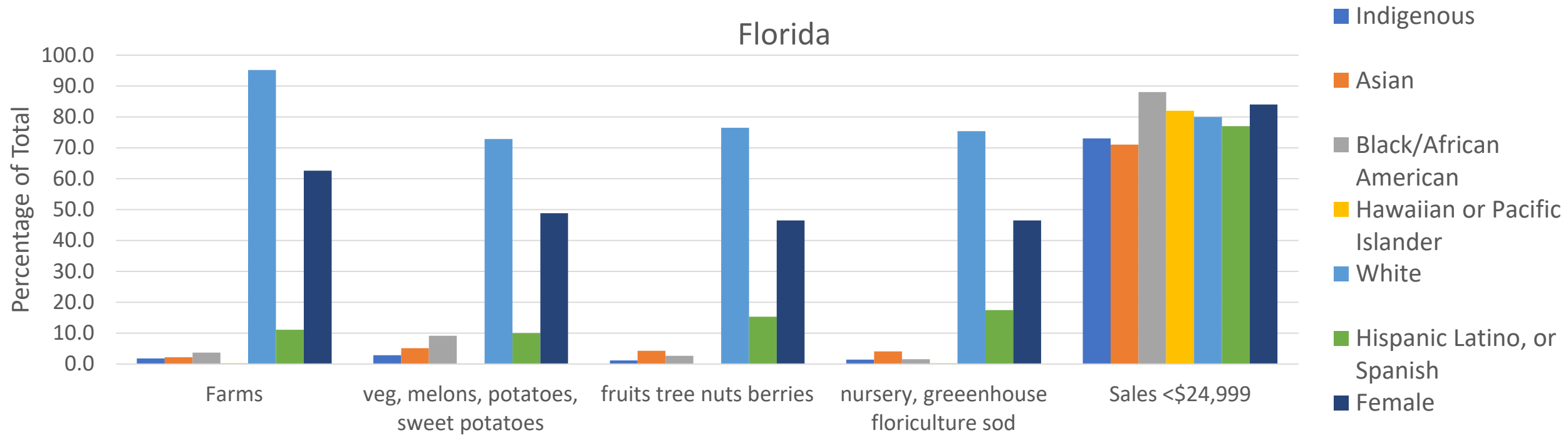
Snapshot of Farming Demographics – 2017 Census of Agriculture

FLORIDA

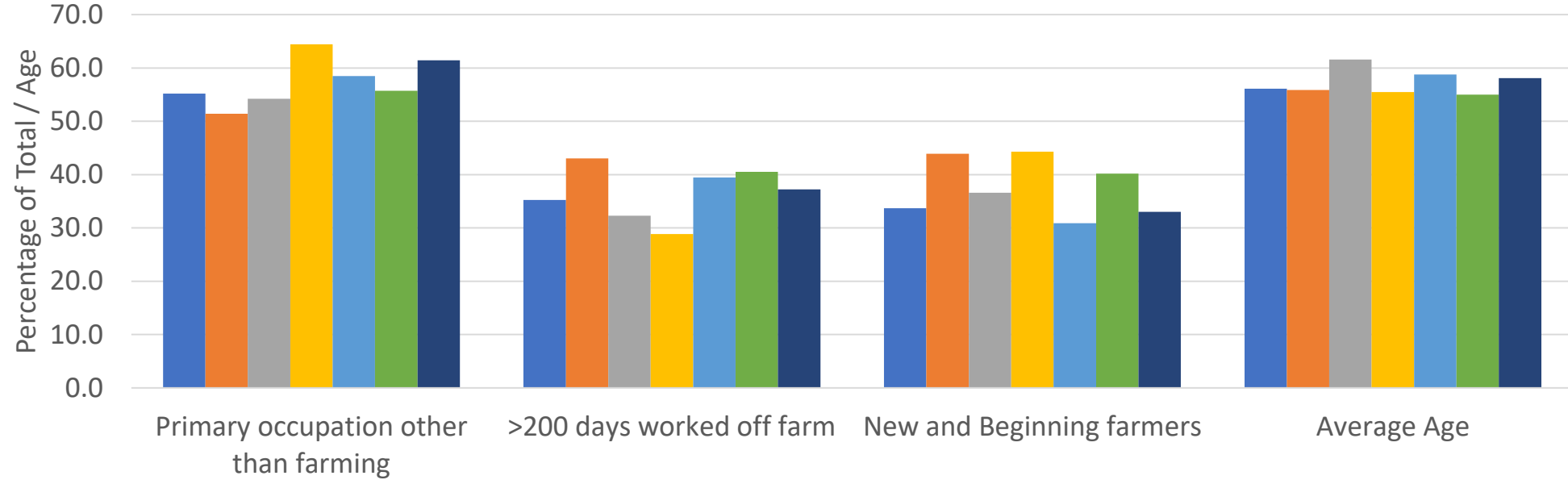
Farms	47,590
◦ Veg, melons, potatoes, sweet potatoes (4.5%)	2,138
◦ Fruits, tree nuts, berries (17%)	8,112
◦ Nursery, greenhouse, floriculture, sod (11%)	5,247
Producers (for all crops)	86,769
◦ Primary occupation not farming (58%)	50,313
◦ >200 days working off farm (39.3%)	34,124
◦ New and beginning farmers (32.1%)	27,864

ALABAMA

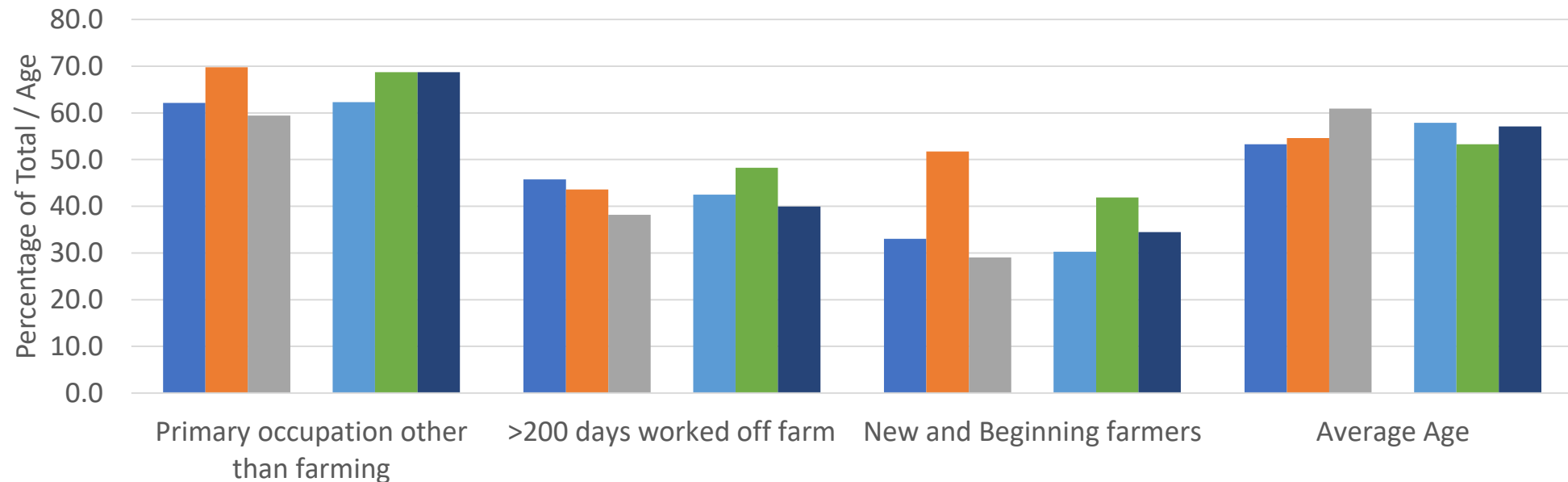
Farms	40,592
◦ Veg, melons, potatoes, sweet potatoes (3.9%)	1,583
◦ Fruits, tree nuts, berries (3.8%)	1,525
◦ Nursery, greenhouse, floriculture, sod (1.5%)	629
Producers (for all crops)	65,924
◦ Primary occupation not farming (62.2%)	40,922
◦ >200 days working off farm (42.3%)	27,910
◦ New and beginning farmers (30.4%)	20,036



Florida



Alabama



LRCC

**Lead Regional
Coordination Center**



- Three other regional centers exist – the Western, North Central, and Northeastern
- They are all funded by the USDA NIFA through the FSOP project
- They are coordinated by the Lead Regional Coordination Center housed at the Southern Center

Objectives

The third iteration of the Southern Center objectives :

1. Develop, mentor, support, and offer continuing educational opportunities to a cadre of PSA trainers and lead trainers and FSPCA Lead Instructors within the Southern US supporting the regulated industry.
 2. Develop, improve, review, and share best practices approaches for food safety training curricula (including alternative and modified curricula, add-ons, and supplemental), to ensure consistency with FSMA rules.
 3. Coordinate a regional communication strategy to discuss ongoing efforts and best practices for FSMA-related training, and education within the southern US.
 4. Evaluate the impact of the SC education and training through ongoing program assessments.
- Note that this round very specifically addresses produce safety training needs for underserved communities and stakeholders.

Southern Center Co-Partners



- PI-Keith Schneider
 - Past PI-Michelle Danyluk
 - Program Specialist-Peggy Geren
- 26 Partner Institutions
 - 23 Universities and 3 NGOs
 - One or two co-PIs from each institution
- Responsible for sending back evaluation data to Dr. Amy Harder and Dr. Matt Benge (coversheet, pre-/post-test scores, basic attendee information sheet)
- Work with both partners and other stakeholder groups

Southern Center Co-Partners



- PI-Keith Schneider
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- 26 Partner Institutions
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- Responsible for sending back evaluation data to Dr. Amy Harder and Dr. Matt Benge (coversheet, pre-/post-test scores, basic attendee information sheet)
- Work with both partners and other stakeholder groups

Southern Region Integrated Produce Safety Conference



October 5-8, 2020
12 pm - 5 pm daily
Zoom
<https://sc.ifas.ufl.edu>

Southern Region Integrated Produce Safety Conference

JOIN US FOR A VIRTUAL SRIPS CONFERENCE
OCTOBER 5-8, 2020.

From 12-5PM ET on October 5-8, 2020 join us to:

- Hear the importance, perspectives, and roles in Food Safety and the PSR from:
 - Indigenous Food and Agriculture Initiative
 - Historically Black Colleges and Universities and Hispanic-serving Institutions
 - Buyers
 - Non-governmental Organizations and Community-based Organizations
- Discuss best practices for inspections and food safety during COVID-19
 - Biological Soil Amendments
 - Cleaning and Sanitizing
 - Water
- Listen to typical inspection experiences from regulators and growers
- Participate in poster sessions and networking
- Get the latest updates from:
 - Southern Center
 - PSA
 - FDA-PSN
 - AFDO
 - NASDA
 - Southern State Departments of Agriculture

Register* (FREE!) Here: <https://bit.ly/SRIPS2020>

*registration priority goes to attendees from the southern region



October 5-8, 2020 | 12 pm - 5 pm

Project Outcomes

- Southern Center Meetings
 - Semi-Annual Check-In and Annual Meeting
 - Southern Region Integrated Produce Safety Conference
 - Included perspectives from the IFAI, HBCUs and HSIs, Buyers, NGOs, and CBOs
 - Regulatory updates from federal and state agencies
 - Educational Content
- Bridging the GAPs: Approaches for Treating Irrigation Water On-Farm
- Continuation of offering PSA and FSPCA courses by SC Partners either remote or in-person
- Produce Safety Alliance Train-the-Trainer May 2022, FL
 - Tentative PSA TTT October 2022, GA



Produce Safety Alliance Southeastern Region Grower Training Knowledge Assessment

Mari Schroeder, Alan Gutierrez, Amy Harder, Kate Shoulders, Kristin Woods, Amanda Philyaw Perez, Laurel L. Dunn, Christopher Gunter, Lynette Johnston, Elena Rogers, Chip Simmons, Paul Priyesh Vijayakumar, Casey Newcomb, Chad Carter, Thomas M. Taylor, Alejandro Castillo, Juan Anciso, Joseph Masabni, Laura K. Strawn, Amber Vallotton, Michelle D. Danyluk, and Keith R. Schneider.

Effectiveness was based on a 25-question knowledge assessment administered to participants before ($n = 2,522$) and after ($n = 2,490$) each training.

The knowledge assessment indicated an overall effectiveness of the training as average scores increased significantly from pre-test (15.91 of 25, 63.6%) to post-test (20.30 of 25, 81.2%) ($P < 0.001$).

The modules that showed the greatest knowledge gains were Postharvest Handling and Sanitation, How to Develop a Farm Food Safety Plan, and Agricultural Water.

A Trainees’ Three Month Follow-up Adoption of New or Different Practices (n=49).				
Actions taken since participating in the training:	<i>n</i>	Yes (<i>n</i>)	No (<i>n</i>)	N/A (<i>n</i>)
Did you begin to write or modify farm food safety plans?	41	27	7	7
Did you create or modify food safety record-keeping systems?	44	29	7	8
Implement new or different trainings for employees on food safety/hygiene protocols?	42	19	5	18
Implement new or different practices for monitoring on-farm facilities	42	27	6	9
Implement new or different practices for the handling of biological soil amendments of animal origin	45	22	6	17
Implement new or different strategies to reduce the risk of contamination from wildlife or domesticated animals	36	17	12	7
Implement new or different testing of agricultural water for generic <i>E. coli</i>	43	14	14	15
Implement new or different methods for cleaning or sanitizing food contact surfaces	41	29	4	8
Implement new or different pest control systems	37	12	16	9
Implement new or different methods for transportation of produce	40	13	14	13
Implement new or different traceability systems	41	8	22	11
Implement any other new or different methods related to produce safety (other than above)	48	18	30	-
Added new or modified existing on-farm infrastructure (such as irrigation systems) or equipment (such as washing equipment, vehicles, etc.) in order to improve food safety	49	21	28	-

SAVE THE DATE

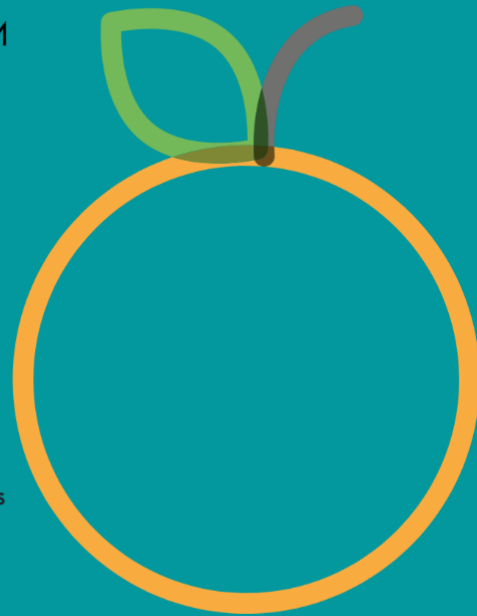
MAY 25-26, 2022

FOOD SAFETY OUTREACH PROGRAM
PROJECT DIRECTORS MEETING

WYNDHAM LAKE BUENA VISTA
ORLANDO, FL

Hosted by the USDA-NIFA Regional Centers, join other FSOP project directors for a 1.5 day conference. Project directors will submit an abstract with opportunities for in-person posters and speaking. Abstracts will be linked through Clearinghouse project pages.

QUESTIONS: K.STULL@UFL.EDU



Food Safety Outreach Program National Project Directors Meeting

Watch for the next one in
2024!



Questions?

southerncenter@ifas.ufl.edu

LRCC
Lead Regional
Coordination Center



SC | 
Southern Center
for Food Safety Training, Outreach and Technical Assistance

This work is supported by the Food Safety Outreach Program grant no. 2018-70020-28930 and grant no. 2021-70020-35740 from the USDA National Institute of Food and Agriculture.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

Experiential Learning Opportunities for Limited Resource Growers through Mobile Farm Innovation in Mississippi, Alabama, and Georgia

Kristin Woods, Ph.D.
Alabama Cooperative
Extension System



United States
Department of
Agriculture

National Institute
of Food and
Agriculture

This work is supported by Food Safety Outreach Program [grant no. 2019-70020-30349] from the USDA National Institute of Food and Agriculture





Small Farm Irrigation
Factsheet and Video Series

Experiential
Learning Guide

Whole Farm
Planning Technical
Assistance Guide

Cooperative
Agreement
with FDA



Alcorn.
EXTENSION PROGRAM
Empowering People



Local Food Safety
Collaborative



National
Farmers
Union

SC | 
Southern Center

USDA NIFA
FSOP Funded

USDA
AMS
FMLFPP
Funded

Farm to Food
Project


TUSKEGEE
UNIVERSITY



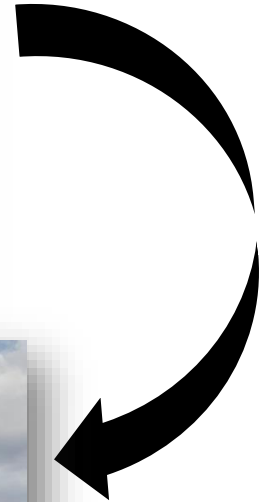

**BEGINNING
FARMER**
ALABAMA COOPERATIVE
EXTENSION SYSTEM

Farm Innovation Project Objectives

- Design and construct three Mobile Farm Innovation trailers to meet the learning needs of limited resource growers with small acreage
- Develop and implement a multimodal and modular training program that balances food safety and conservation needs
- Conduct outreach in Mississippi, Alabama, and Georgia
- Evaluate the program



Farm Innovation Trailers



- The trailers are wrapped in photographs and text depicting safe water use, hygiene practices, vegetative buffers, and safe rotational grazing.
- The inside of the trailer has been modified with cabinets, electrical outlets, and additional space to hold experiential learning activities.



Farm Innovation Project Trailers

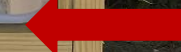
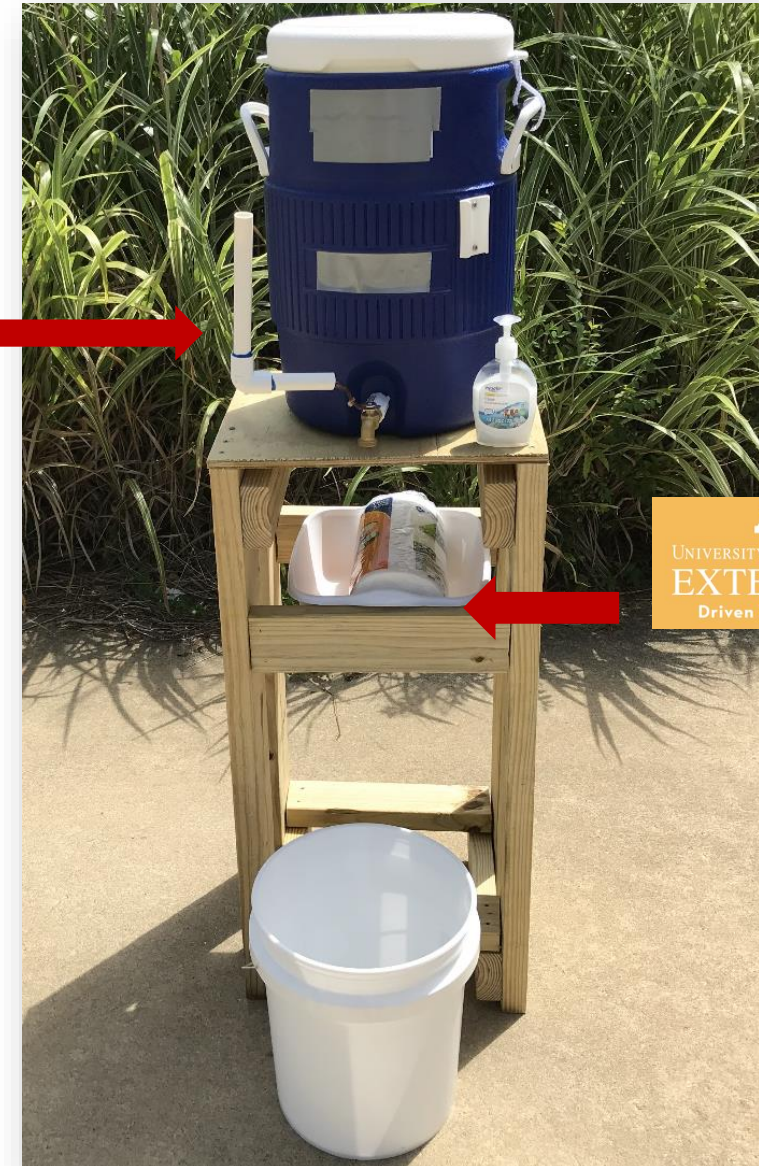
The trailers have been deployed to:

- Deep South Food Alliance in Linden, AL
- Alabama A&M University Small Farms Research Center in Normal, AL
- Fort Valley State University in Valdosta, GA





Building a Handwashing Station



Cleaning and Sanitizing





Water
Sampling



Using
Sanitizers



CoolBot Cold
Storage

Farm Innovation Outputs

15 Factsheets and Facilitator Guides:

- On-Farm Handwashing Station
- CoolBot & Cold Storage
- Cleaning and Sanitizing
- Choosing a Sanitizer
- Water Sampling
- Google Maps
- Rotational Grazing
- Vegetative Buffers



Farm Innovation Outputs

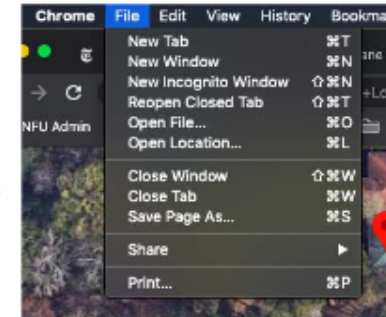
7 Educational Screencasts:

- Google Maps
- Produce Safety Alliance Required Records Document
- K-State Exemption Worksheet
- Alabama Extension Farming Basics
- National Food Safety Clearinghouse
- Vermont Peer-to-Peer Portal
- Produce Safety Alliance Sanitizer Tool

7. Click on the “satellite” button on the bottom left of the screen. This should change your view to satellite view, giving you a birds eye view of your farm and the surrounding area.



11. This will vary depending on your computer and internet browser. For Google Chrome on a Mac, bring your clicker up to the top of your screen and click on file and then click on print - even if you just want to save, click on print first. For other browsers, you may have to “right click” on your mouse to bring up the directions or try something else.



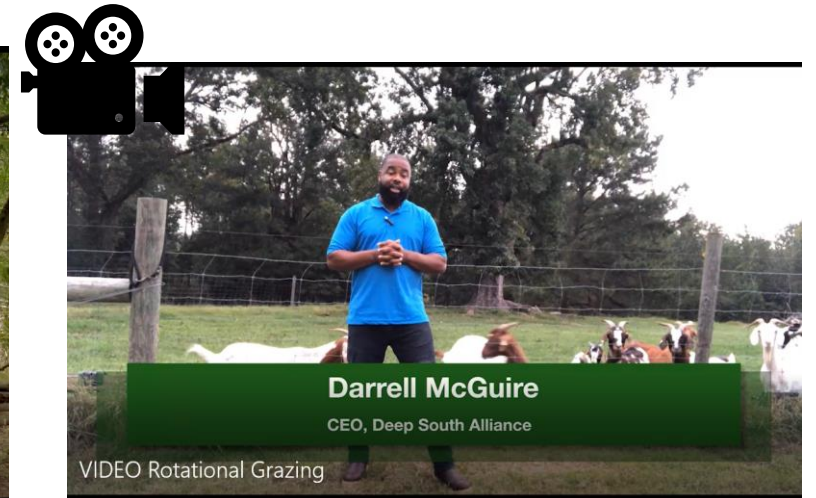
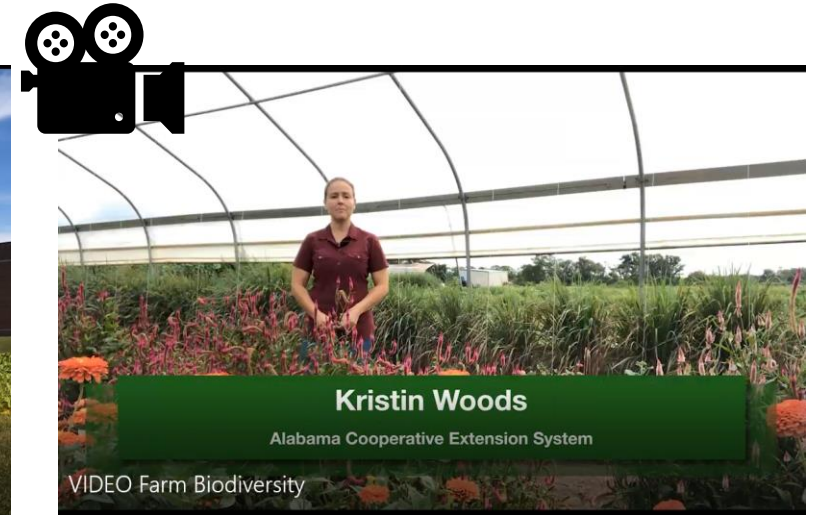
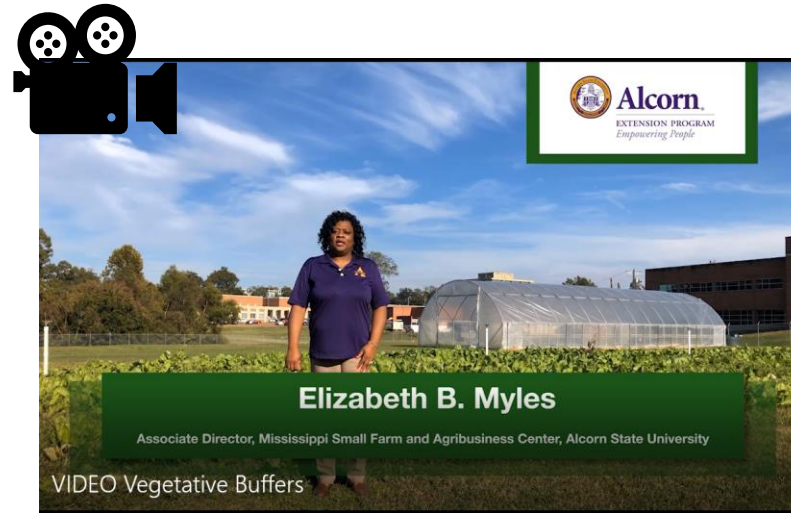
12. This will give you a couple of options, some of these may not be on every computer. You should be able to print and save as a PDF. We’re going to “Save as PDF.” Again, this may vary depending on your computer and browser.



Farm Innovation Outputs

4 Short Videos:

- Vegetative Buffers
- Rotational Grazing
- Irrigation
- Biodiversity



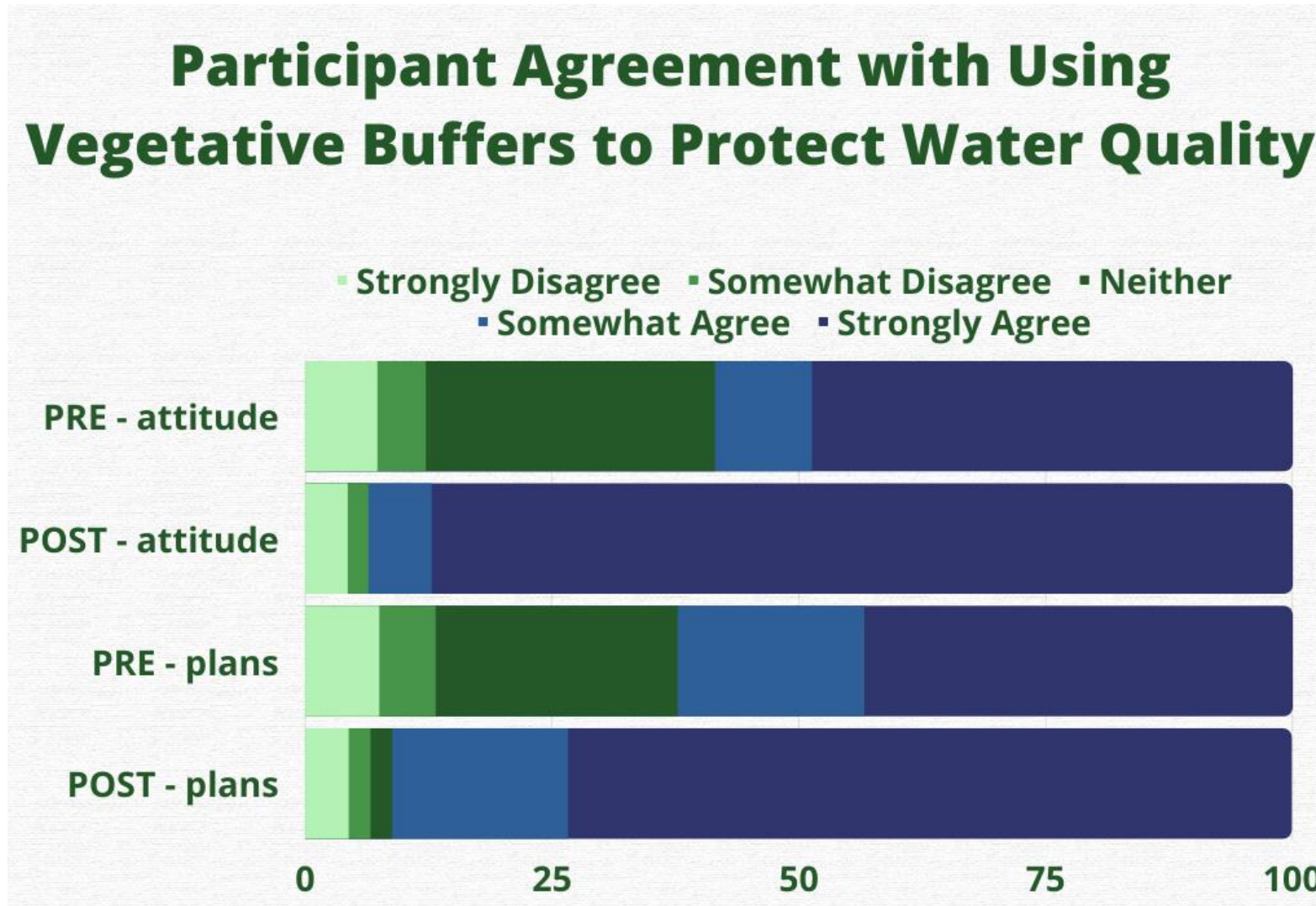


Farm Innovation Project Outreach

- Pilot event in Okolona, MS in December 2021
- Okolona, Prentis, & Mt. Olive, MS
- Valdosta, Gullah, & Waycross, GA
- 2021 & 2022 Tuskegee Annual Small Farmers Conference in Linden & Selma
- Gees Bend, Birmingham, & Tuskegee, AL
- Sunbelt Ag Expo in Moultrie, GA
- Alabama Bee Festival
- Southern Family Farmers Conference in San Marcos, TX



Preliminary Outcomes: Vegetative Buffers

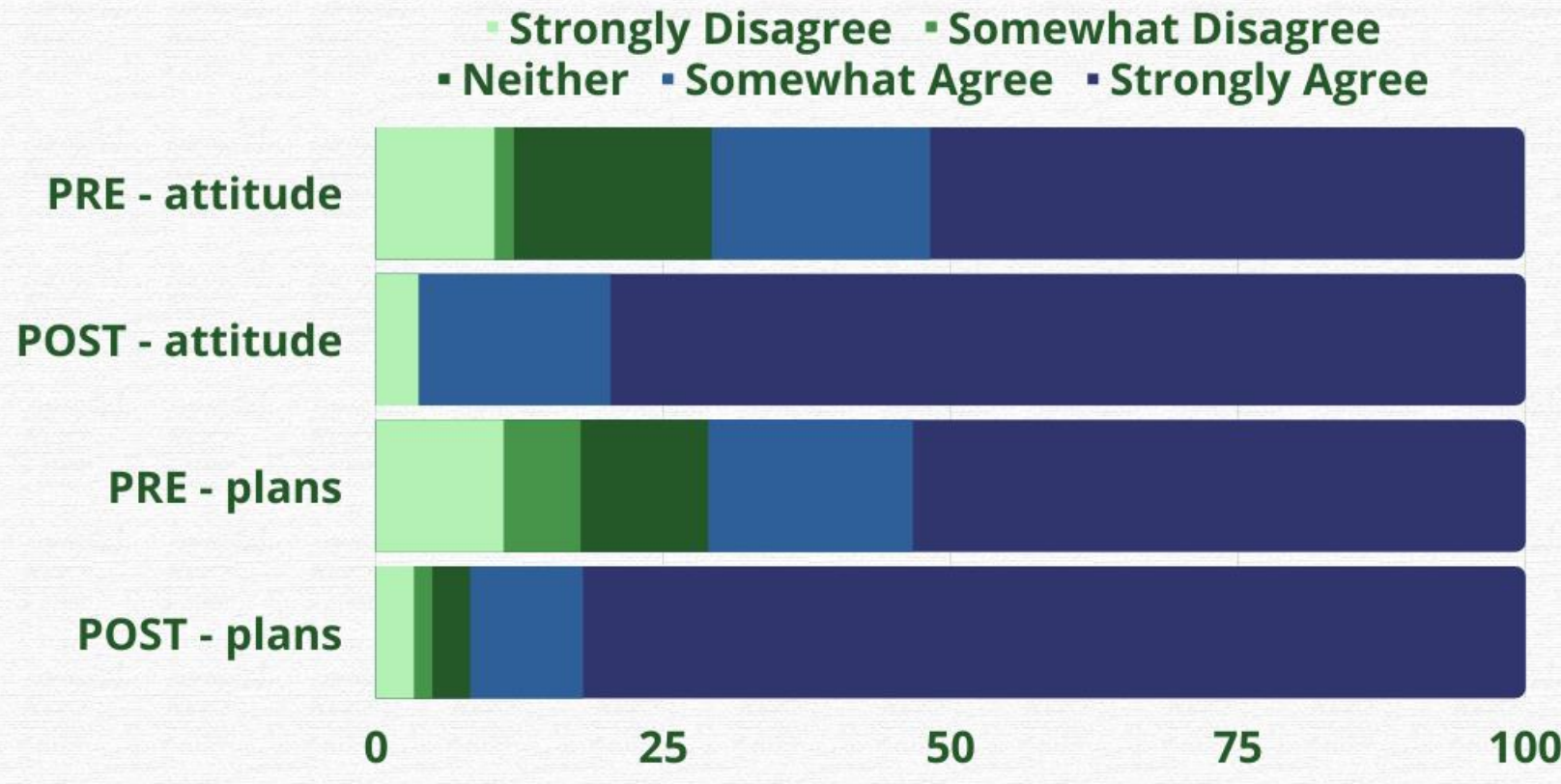


n=41, p=.042

n=53, p=.044

Preliminary Outcomes: Fencing

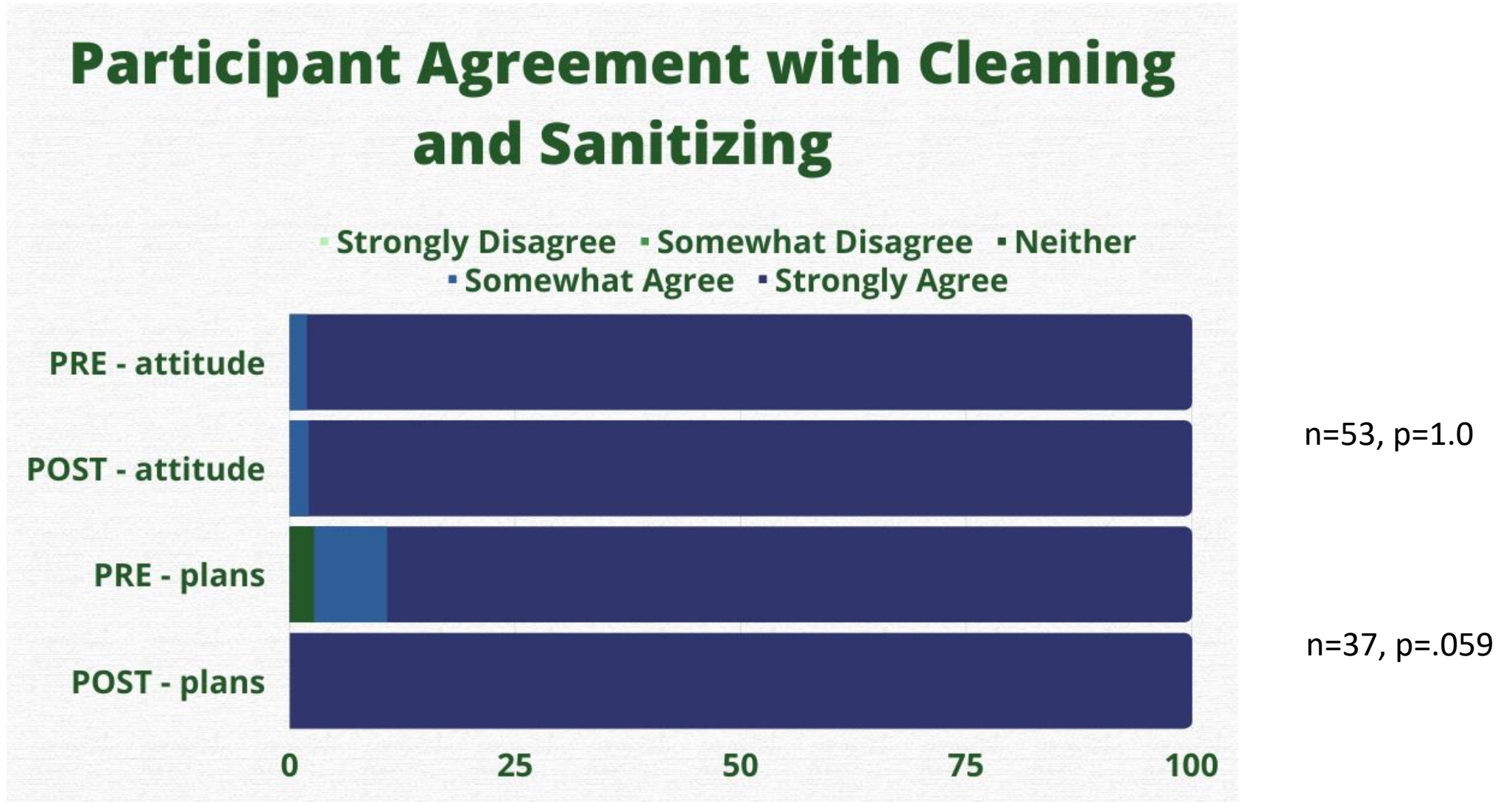
Participant Agreement with Using Exclusion Fencing to Improve Produce Safety



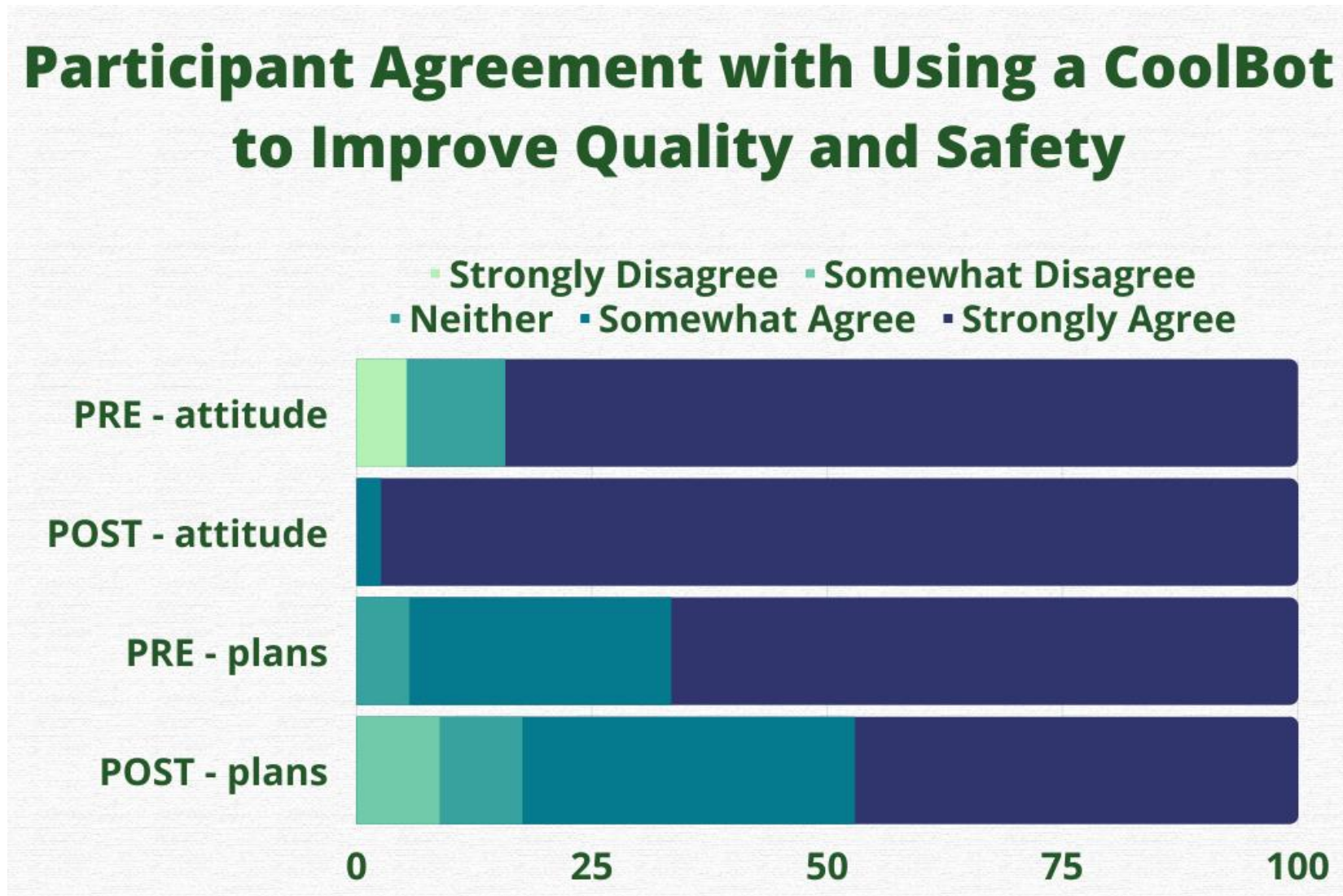
n=58, p=.024

n=45, p=.053

Preliminary Outcomes: Cleaning and Sanitizing



Preliminary Outcomes: Vegetative Buffers



n=38, p=.109

n=18, p=.48

FOCUS GROUPS

Growers would benefit from more teamwork: shared equipment and information sharing (electronic and face-to-face).

Cell service is inconsistent across the region; about ½ of focus group attendees use the internet.

Growers need financial help from USDA and technical assistance to access USDA help.

There is a need for fencing wildlife, especially hogs, out of growing areas.



Key Takeaways:

- Hands-on activities are effective at improving awareness, confidence, and intent to implement key components to safe produce production.
- Even when producers recognize the benefit of a practice, intent to implement may be influenced by other factors.
- The qualitative data collected during follow-up focus groups will elucidate barriers to implementation and emerging needs.

Farm Innovation Project Partners

Collaborators

- Andrew Williams, Deep South Food Alliance (TUCCA)
- E'licia Chaverest, Alabama A&M Small Farms Research Center
- Dr. Valens Niyigena, Darren Beachem, Alabama A&M University
- Joshua Dawson, Fort Valley State University
- Billy Mitchell and Tricia Wancko, National Farmers Union
- David Miller, Tuskegee University
- Dr. Elizabeth Myles, Alcorn State University
- Carolyn Jones, Mississippi Minority Farmers Alliance
- Janice Hall, Amelia Mitchell, Rebecca Catalena, David Daniel, Olivia Fuller, Dr. Camila Rodrigues, Dr. Audrey Gamble, Auburn University

Farmer Advisory Board

- Nancy Carnley, Machis Tribe
- Carolyn Jones (MS)
- Demetrius Milling (GA)
- Bill Minor (AL)
- Monica Ponce (GA)
- Grover Robinson (AL)
- Ozell White (MS)

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United States
Department of
Agriculture

National Institute
of Food and
Agriculture

More info at
aces.edu/farm_innovation



EXTENSION



Questions

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