Summary

The overarching goal of the project Experiential Learning Opportunities for Limited Resource Growers through Mobile Farm Innovation in Mississippi, Alabama, and Georgia was to meet the critical challenge to farm viability faced by socially disadvantaged, limited resource, minority growers in the region who are trying to balance food safety, conservation, and financial sustainability concerns. The customized food safety training developed addresses these needs by building on the body of food safety resources previously developed and focusing on experiential learning and face-to-face technological support. With the growers' long-term food safety, conservation, and financial viability in mind, the project partners developed five Mobile Farm Innovation units equipped with multiple experiential, visual, and technological training aides, developed multimedia materials to accompany the Mobile Farm Innovation units, provided outreach to socially disadvantaged, limited resource, and minority growers in Mississippi, Alabama, and Georgia, and evaluated the effectiveness of the program. The curriculum to accompany the Farm Innovation Project includes the development of interactive activities, demonstrations, and presentations.
focusing on food safety, and computer literacy training focused on improving grower access to already existing technology-based food safety materials. While the Farm Innovation Project helped some farmers learn and build skills around food safety and conservation, there is much work to be done to more fully develop a sustainable food system in the region and build capacity among the community members.

**Coordination**

The advisory board was central to all the project coordination activities including seeking their input on this report. Members of the advisory board and the broader Black Belt agrarian community reviewed the trailer designs, factsheets, and videos. The group formally met on 8 occasions but were also in regular communication with the project partners via email, phone, and in-person visits. Perhaps their most valuable input was related to identifying the key

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**PROJECT FLOW**

1. **BUILD FARM INNOVATION UNITS** With the help of farmers from the Black Belt community, the units were designed to be eye-catching and practical.

2. **DEVELOP HANDS-ON ACTIVITIES** Using key topics from the advisory group, we developed hands-on activities.

3. **PILOT - OKOLONA, MS** Input from the advisory group and participants was used to finalize the activities and roll the program out region wide.

4. **FARM INNOVATION EVENTS** 15 events were held across the Black Belt with advisory group members as hosts and facilitators.

5. **FOCUS GROUPS** Conversations were held to determine program impact and the next steps for food system development across the Black Belt region.
concepts which became the focus of each activity. For example, members urged us to remember that farms in the region are diversified. Therefore, we needed to take a holistic approach that takes into consideration their broad interests and needs: animal operations, timber operations, agritourism, heirs property challenges, access to financial resources, access to technical assistance, and conservation planning. Given this reminder, our exclusion fencing activity also focuses on using electric fence for rotational grazing; our vegetative buffer activity also includes forage crops; and all our activities include information about USDA NRCS/FSA conservation and risk management programs. They also expressed to us that money to purchase supplies and additional technical assistance was needed in order to carry out the plans farmers had to implement practices. Midway through the project, we were able to reallocate funds to provide farmers with additional one-on-one technical assistance and kits for water sampling and cleaning and sanitizing. As of December 31, 2022, 28 technical assistance requests were met by the Deep South Food Alliance using the reallocated funds.

Another important and lasting advisory board contribution to the project was their advice on program format. During the initial pilot event, several speakers made presentations before the activities began. The farmers advised that this was the least useful portion of the event. They had been to many meetings in the past where presentations were made in this manner (one way communication from presenter to the audience) and they did not need to hear this information again. The hands-on activities and dialog with facilitators that occurred in the small groups was far more useful. This piece of advice was implemented for subsequent Farm Innovation events and will be remembered when we structure events for future projects.

The project partners dedicated an enormous amount of time to accomplish the goals of the project. In addition to individual time devoted to content creation, planning, administration, and communication, partners held 8 update
meetings to coordinate activities among themselves; 6 meetings to develop and review factsheets, facilitator guides, and videos; and 19 meetings to strengthen the outreach network and plan activities.

In total, as of December 31, 2022, 316 farmers participated in the Farm Innovation program through 15 events held in 3 states from Nov. 2020 to Oct. 2022. Additionally, the Farm Innovation units reached thousands of farmers, gardeners, and the public at events such as the SunBelt AgExpo and Alabama Bee Festival.
Materials Developed

Factsheets

- Water Sampling
- Rotational Grazing
- Field Mapping
- Cover Crops & Vegetative Buffers
- Cleaning & Sanitizing
- Cold Storage
- Building On-Farm Cold Storage Using a Coolbot
- Building a Handwashing Station
- Sanitizing

Facilitator Guides

- Water Sampling
- Rotational Grazing
- Cover Crops & Vegetative Buffers
- Cleaning & Sanitizing
- Building On-Farm Cold Storage Using a Coolbot
- Building a Handwashing Station
- Sanitizing

Videos

- Creating a Farm Friendly to Biodiversity and Produce Safety
- Rotational Grazing on a Diversified Farm
- Vegetative Buffer Strips: Water Quality and Soil Erosion
- Drip Irrigation: Water Conservation and Produce Safety

Screencasts

Project Promotion Activities

- USDA Office of Partnerships and Public Engagement Farming Opportunities Training and Outreach Meeting *Farm Innovation and Partnership Presentation,* Virtual, February 2022.
- International Association for Food Protection, Produce Safety Technical Session Panel Speaker. Diversifying the Pipeline in Food Safety Education: Engaging Historically Black Colleges and Universities (HBCUs). Phoenix, AZ, July 2021.
- Southern Region Integrated Produce Safety Outreach Conference, Moderated half day session and participated on a panel discussing the role of historically black colleges and universities in produce safety outreach. Virtual, October 2020.
Farm Innovation events were marketed to socially disadvantaged farmers in the Black Belt region across Alabama, Mississippi, and Georgia. Farmers who came to the Farm Innovation events reflected the diversity of farm operators from is region. The gender of participants closely aligns with the 2017 USDA Ag Census which, using a binary system, reports 71% of Black or African American operators as male and 29% as female. Few farmers identified as Hispanic or Native American. While there may be few in the

A few notes about the data:

- Some people arrived late
- Some people left early
- Sometimes we did not have enough surveys for everyone
- Sometimes we forgot to match pre/post surveys
- In a few cases, we think they didn’t read the questions

So, the data are not balanced. Different numbers of people responded to each question.
region, future work should incorporate methods of reaching this population who are also socially disadvantaged due to their race/ethnicity, small farm sizes, and limited farm income. Having a mixture of events where some are marketed publicly and broadly diversified across race/ethnicity and others are marketed as for Black or African American farmers, may help reach more farmers who can benefit from the program while maintaining the program identity as a safe space for Black or African American farmers.

### Demographic Information

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percent (n)</th>
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<tbody>
<tr>
<td>Male</td>
<td>71% (168)</td>
</tr>
<tr>
<td>Female</td>
<td>28% (66)</td>
</tr>
<tr>
<td>Non-binary</td>
<td>1% (2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percent (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black/African American</td>
<td>80% (187)</td>
</tr>
<tr>
<td>White</td>
<td>19% (44)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1% (3)</td>
</tr>
<tr>
<td>Native American</td>
<td>1% (3)</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>&lt;1% (1)</td>
</tr>
</tbody>
</table>

Many farmers who came to Farm Innovation events indicated that they had no produce sales the year before. When we asked them why they came to the event, we found out that they generally had 3 reasons for coming: 1) they were just beginning to grow produce and had no sales the year prior 2) they were considering adding produce to diversify their farm income or 3) a farmer or extension agent friend invited them to the event.
Awareness, Confidence, and Plans to Implement Practices

Farmers were asked questions about whether they thought food safety could be improved by implementing practices, their confidence implementing practices, and their plans to implement practices in pre/post activity surveys. While the focus groups provide us with contextualized information about program impact and current needs, this type of pre/post survey provides a foundation to present our funders with statistics showing strong program impact.

Example of a pre/post activity survey.
**Farmer Awareness/Attitudes about Food Safety Practices**

Attitudes about the effectiveness of implementing practices to enhance food safety generally improved after completing each activity, with notable exception of the activity related to cleaning and sanitizing. Before completing the activity, farmers agreed that cleaning and sanitizing was important to food safety, and they maintained that belief post activity. The greatest difference was found after farmers completed the cooling activity. After the activity, 90% of farmers strongly agreed that cooling produce could improve the safety and quality of the product. Attitudes about using vegetative buffers, using exclusion fencing, and collecting aseptic water samples also significantly improved.
Farmer Confidence Implementing Practices

Similarly, farmers were already confident in their ability to clean and sanitize, but confidence around instilling an electric fence, creating a farm map, using vegetative buffers, collecting an aseptic water sample, and building an on-farm handwashing station significantly improved.
Farmer Plans to Implement Practices

Farmers were significantly more likely to sample their water after the aseptic water sampling activity. Farmers may need additional technical assistance or financial resources in order to plan to implement other practices. While the other activities did not produce statistically significant differences pre and post survey, the trend is clearly toward the intent to implementation of practices. One-on-one technical assistance and funding is necessary to help farmers carry out their plans.
**Additional Findings**

- The smallest farmers were more likely than larger farmers to “strongly agree” that cooling can improve produce quality and safety after completing the activity.
- The smallest farmers were more likely than other farmers to “strongly agree” that they plan to build a handwashing before completing the activity.
- Some farmers were less likely to build a handwashing station after the activity. We think this could be due to the expense of building a unit.
- Farmers in Alabama were less likely than farmers in other states to plan to use vegetative buffers before the activity. This could reflect a broad lack of focus on sustainable farming methods in Alabama. After the activity, farmers in Alabama were as likely as farmers in other states to plan to use vegetative buffers.

**Focus Groups**

Focus groups were facilitated in Shannon, Mississippi and Selma, Alabama to assess program impact and determine the next steps to meet current and emerging needs. The experience of farmers seems to be widely variable across the region with some groups of farmers still lacking access to extension and USDA resources. This disparity could be even more impactful to food safety and farm viability now that FSA has a reimbursement program around achieving food safety certification. Equity considerations and access to resources was threaded into much of the focus group discussions. This narrative of concern will add to the growing awareness, and it is our hope that we can develop policy recommendations based on the direct experiences of these farmers. We know that USDA has been soliciting this type of information and we hope that the Farm Innovation Project can provide some helpful insights.

While this project included an effort to help growers access the financial resources offered by USDA FSA and NRCS, it became clear throughout the discussions that socially disadvantaged farmers also need technical assistance accessing other resources. Partnerships with organizations that have financial resources to help farmers implement climate smart practices, food safety
practices, reduce food waste, and scale up production are promising as avenues to improve equity for socially disadvantaged farmers. Technical service providers play a key role in providing a way for private, non-profit, and government financial resources to reach the farmers who need the resources the most.

The growers also requested more ways to share information and resources. A $100,000 pea picker or greens harvester is not a practical investment for a small farmer but having this equipment available in the region would enable farmers to scale up without individually burdensome capital investment. We think that equipment sharing could also improve produce safety because a system could be developed to ensure that the equipment is of sanitary design and cleaned and sanitized between uses. The collective power of farmer organizing around sharing equipment could have impact beyond production capabilities by also facilitating cost reduction through collective purchasing, collective marketing through aggregation, and expanded markets through GroupGAP food safety certification. While some farmers requested a webpage to host information relevant to them, others reminded us that the internet is not the best way to share information everywhere. The less internet savvy farmers stressed the importance of the service providers in helping them access financial and technical resources.

Our key takeaway for educators is that there are still many educational and resource needs in our region. Farmers specifically requested assistance with exclusion fencing, with emphasis on fencing to exclude hogs which are becoming an increasing problem in the region and are known to transfer pathogens from farm to farm as they forage.
Next Steps

The Farm Innovation Project was designed to help meet farmers’ technical needs related to conservation and food safety practices. While we believe the model using hands-on and interactive ways of providing assistance is sound, the process of building the network of participants, providing one-on-one technical assistance, and following up with focus groups revealed an array of challenges farmers face. Some challenges can be solved with additional research, technical assistance, and making use of the financial resources provided by agencies such as USDA. However, many challenges are structural, and policy will need to be addressed in order to provide an equitable playing field for Black Belt farmers. A systems approach that provides technical information, facilitates networking to increase access to existing resources, and stimulates policy change will be necessary to create the type of lasting food systems transformation that we desire.

Reference

2017 USDA Ag Census
Thank You to Our Funder

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

Contact

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