

AIW Focus Group Project: Summary Report



Focus group in Apopka with local farmers and other representatives from agricultural industries.

Executive Summary

Farmers and agricultural industry representatives were brought together in nine focus groups across the state for an assessment of their needs, barriers, and ideas for agricultural innovation in Florida. Approximately 100 people participated in the discussions from a wide range of commodity sectors. The most common needs mentioned by participants were agricultural literacy, funding, training, collaboration with other farmers and agricultural organizations, and end-product innovation. The most common barriers to innovation were linked to identifying cost-effective conservation approaches, finding and retaining a work force, managing new technology, and loss of land to development. Participants provided recommendations for new technologies, communication strategies, and new commodities.

Results realized from this assessment inform the Florida Department of Agriculture and Consumer Services multiagency Agriculture Innovation Workgroup (FDACS AIW) which seeks to bridge producers' needs to existing and future solutions that support economic and environmental improvement.

Purpose of Study

1. The data collected from this study contribute to the following specific goals:
 - a. Information sharing during future meetings addressing farmers' stated needs
 - b. Background for accessing grants on behalf of producers
 - c. Relationship-building that can increase farmer involvement in future innovation diffusion activities

Methods and Participant Demographics

Florida farmers, producers, and industry representatives from a variety of agricultural commodities provided information during a series of focus groups conducted across the state. Participants discussed the following questions:

- a. What innovations do farmers need?
- b. What barriers are keeping farmers from accessing and using innovations?
- c. What innovations concerning water and energy could be beneficial for farmers?

Nine focus groups with approximately 100 participants were facilitated by FDACS employees across the state. Most focus groups had at least two facilitators present—one to lead the discussion and one to take notes. Each focus group included approximately eight to twelve participants. Participants were primarily farmers, though some researchers and representatives from ag-related organizations were also present. Commodities and industries represented included citrus, engineering, biopesticides, cattle, horticulture, extension, aquaculture, dairy, carrots, potatoes, university researchers, fruit and nut genetics, forestry, timber, non-profit, land owners, green infrastructure, compost, aquaponics, broccoli, cut greens, cabbage, turfgrass, farm insurance, plant genetics, blueberries, tomatoes, epidemiology, sugar, oysters, yaupon holly, sustainable food studies, hemp, medical marijuana, and tree farming.

Notes and audio recordings were analyzed using Dedoose, a mixed-methods analysis software program, to identify key areas of interest, common challenges, and opportunities to pursue through the FDACS AIW.

Findings

Most Common Innovation Needs

1. Agricultural Literacy

This was the most common topic, and it was the only topic mentioned in all focus groups. Participants discussed the need for better understanding about agriculture among the general population, the stories of farmers, and the contributions that farmers make to protect the environment. One participant stated: “Two percent of us grow what 100% of us eat.” Three types of agricultural literacy were discussed.

a. Communicating the Positive Environmental Value of Agriculture with the Public

Participants emphasized the need of chronicling widespread examples of farmers working hard to protect Florida’s environment. Participants believe that agriculture’s environmental value should be accentuated, in general. In the words of one participant: “Ag is the best neighbor the environment can have. The word needs to get out that farmers are helping to conserve the environment.”

b. Communicating with Policy-Makers

Participants noted a need to educate policy-makers each year as new members join the Florida legislature. Some farmers, particularly those from small and minority-led farms, feel excluded from lobbying efforts. A range of policy considerations were mentioned including legislation and regulations concerning aquaculture, nitrogen inputs on crops, variations in consumer pricing, use of fertilizers and pesticides, labor regulations, increased funding for the Fresh from Florida program, increased cost-share and tax incentive programs, updating best management practices (BMPs), and water quality regulations.

c. Communicating with the Next Generation

Participants identified a common need of engaging and educating young Floridians about agriculture. Specific ideas and concerns discussed include extending agriculture education to elementary schools, recruiting in high schools for university agriculture

programs, concern about decreasing enrollment in university agriculture programs, exposing students from other fields (e.g., marketing, engineering, business) to agriculture, connecting kids to farmers with farm tours. One participant summarized: “Innovation in small farms is somewhat dependent on engaging the youth and appealing to their generation. The continued survival of small farms must be messaged differently to youth in the technological age.”

2. Funding

Funding was a frequently discussed need by participants from all groups, including farmers, researchers, and extension professionals. Participants expressed concern about the cost of new equipment, the need for funding for new, innovative research, and the need for funding to purchase land.

a. To Purchase Equipment

The cost of new technology was a major barrier for participants. The solution for many participants is to organize cost-share programs that fund equipment such as soil moisture sensors, driverless tractors, alternative water supply systems (e.g., reservoirs, water farming), robotics in field and packing houses, solar panels, and generator backups for aquaculture systems. Participants from small farms expressed the most need for funding support, suggesting that even small seed grants would be impactful for their operations.

b. To Fund Research

Research-based data to improve agricultural innovation was a commonly discussed need, particularly for new production methods, Brahman cattle research, data to inform updated BMPs, fish disease determination, alternative tomato harvesting, and peer review of agricultural research. Participants were interested in how to make cost effective continuous improvements with food protection, including research on managing no-harvest zones due to animal intrusion. Participants suggested that research should receive annual funding from the state.

c. To Purchase Land

Acquiring funding to keep or attain additional agricultural lands was a major need. Ideas to address this need included specific funding for conservation easements, leasing land to small farms, and assistance navigating land-use restrictions.

3. Training

“Farmers do not pursue things they are not familiar with,” one participant said. The need for training was noted by participants in the following areas: adaptive strategies to cope with environmental changes, assistance applying for grants for small farms, computer instruction for older farmers, and demonstrations of new technologies. Participants exhibited varying degrees of willingness to adopt new technologies. For those who were less willing, training was suggested to help farmers gain basic skills, especially in terms of computer-led technologies like software applications and digital monitoring systems.

4. Collaboration Between Farmers, Researchers, and Agriculture Technical Organizations

Participants recognized the need to facilitate collaborations with other farms as well as organizations that support agricultural research and technology. Farmers expressed an interest in collaborating with other farmers to share skills, resources, and ideas, and some suggested that cost-share programs where producers share equipment would help increase their access to new technology. Participants also noted that innovative technology from other fields and businesses could be developed to support agricultural operations. Specific requests were made for increased collaboration with FDACS, University of Florida, and USDA.

5. End-Product Innovation

Participants identified to a need to support innovation in the processing, packaging, and distribution phases of the production process. Ideas included innovative packaging, single-serve strawless products that appeal to younger generations, value-added incubators, as well as marketing and distribution consulting. One participant said that this is especially difficult for small farms whose owners feel their ideas are quickly usurped by bigger operations: “You only have a limited time to profit on your innovation.”

Most Common Barriers to Innovation

1. Financing Conservation Initiatives

Many producers have already incorporated conservation-driven initiatives into their operations, both to reduce costs and become more efficient with energy and water resources. Conservation is a major priority for farmers, but many participants noted that conservation incentives would help support activities that are resource-intensive. Participants noted that conservation incentives could support actions such as reduced water consumption, organic and sustainable certifications, reduced fertilizer use, biochar, water farming, carbon sequestration, soil improvement, solar power pumps for aquaculture operations, and precision agriculture. “Reducing water usage helps everyone,” one participant said. “There needs to be some cost share to help move these things forward.”

2. Workforce

A major challenge mentioned by participants was finding skilled and willing individuals to fill both technical and field jobs. The issues that make finding and retaining a workforce difficult include a lack of literacy and education among current workers, the expectation that job needs will shift to more people working on computers, the cost and complexity of the H-2A Visa Program for temporary workers, a lack of willingness from local workforces to engage in field labor, and difficulty finding and hiring migrant workers.

3. New Technology

As equipment becomes more technical and complex, some farmers are having a challenging time adapting to new technology. Participants said they have difficulty finding people to operate complex technology, they are unsure what to do with older farm equipment, and they have found that newer equipment is costly and difficult to maintain. Some participants have

suggested that, in some cases, de-innovation may be the answer. “There is a lot of technology out there. A lot of it is not practical for what we do,” one participant said.

4. Land Loss Due to Development

Competing with land developers for green space was described as a major challenge, especially land that was formerly used for citrus cultivation but now is sitting fallow. Participants discussed their desires to preserve green space and to communicate with county commissioners who are looking to expand urban boundaries into agricultural lands. The fate of former citrus lands was a notable concern: “There is a massive amount of Florida sitting with a question mark.”

Participant Recommendations for Agricultural Innovation

1. New Technologies

Focus groups’ recommendations for new technologies that are already in use or that could be implemented in Florida, included:

- Evaluating cover beds as a best management practice for water and nutrient management
- Collecting data from farms with soil moisture sensors
- Working with scientists and government agencies to evaluate the quality for water used for irrigation
- Blockchain technologies
- Automation in the dairy industry
- Agricultural nanotechnology collaborations
- CRISPR technologies
- Automation in irrigation and fertilization
- Weather mobile apps
- Cross-laminated timber products
- Plasma assisted gasification to generate synthesis gas from waste products
- Fruit-drop decision tools
- Harvesting automation in blueberries
- UV lights to control disease in strawberries
- Electric tractor
- Environmentally conscious packaging
- LED lights for green houses
- Carbon sequestration software
- Automation for cherry tomato harvesting
- Online applications to organize production schedules
- Automated root ball pruning for trees

2. Communication Strategies

With agricultural literacy identified as the primary need by participants, many ideas were suggested on how to best communicate the importance of Florida’s agricultural industry. Here are some of the ideas suggested:

- Communications campaign focused on local youth
- Focus on sharing good news and positive stories of farmers
- Emphasize alternative markets for ag products
- Use nutritionists to tell ag stories
- Leverage social media to reach younger audiences
- Sponsor ag innovation awards with FFA to generate buzz
- Host a Forestry Career Day
- Emphasize the water quality, quantity, and recharge contributions made by farmers
- Statewide competition inspired by Shark Tank to solve innovation challenges
- Create networks to connect farmers and share skills
- Host military and veteran agricultural tours
- Create statewide and regional strategic plans for agricultural industry
- Automated surplus hotline for excess ag products
- Cooking classes

3. New Commodities

Examples of new commodities were suggested by participants as well. These are crops that are currently being pursued and have shown potential for further development:

- Hemp
- Vanilla
- Pongamia tree
- Avocados
- Bamboo
- Yaupon Holly

While some of these sought-after solutions already exist, it is the aim of the FDACS AIW to bring these resources to light and pursue answers for others. Agriculture in the state can continue to improve and thrive, leaving an ever lighter environmental impact.

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