Florida (Florida A&M University, University of Florida Combined)

Plan of Work for 2023-2027

Status: Final (Approved 9/21/2022)

Executive Summary Overview

Florida Extension (also known as the Florida Cooperative Extension Service) is a collaboration between the 1862 UF/IFAS Extension and the 1890 FAMU Extension. In this plan, each institution will report separately as much as possible to provide a clear picture of the strong programs and impact FAMU and UF/IFAS have individually on Florida and its citizens.

UF/IFAS and Florida A&M research and extension supports Florida's agriculture, natural resources, and related food industries. These industries are an economic powerhouse in Florida, directly contributing a total of $182.6 billion in output (revenues). After accounting for multiplier effects, these industries support $159.7 billion in value added contributions (14.8% of Gross State Product) and more than 2.5 million jobs throughout Florida's economy in 2019.

The University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS) has facilities located throughout the state – 14 academic departments and two schools based at the main campus in Gainesville, 17 off-campus research and education facilities, and an Extension office in each of Florida's 67 counties. In addition, UF/IFAS Extension reaches clients in Florida and beyond via print and online resources such as the widely used Electronic Data Information System (EDIS). In 2021, EDIS had 7.3 million visits and 18.6 million pageviews.

The Florida A&M University (FAMU) Cooperative Extension Program, housed in the College of Agriculture and Food Sciences (CAFS) in Tallahassee, provides research-based educational information and direct technical assistance to improve the quality of life for limited resource citizens. Reaching out to serve farmers, rural and urban families, elderly, youth, entrepreneurs, small business owners, and underserved communities continues to be a rich tradition of the FAMU Cooperative Extension Program.

FAMU research programs have a particular focus to the needs of small to medium scale, limited resource farmers and industry stakeholders. Ninety percent of Florida's farms fit the definition of a small farm, which makes our mission particularly crucial in enhancing the overall economy of the state. The major areas of need are captured in the following planned programs: 1) Viticulture and Small Fruits Research; 2) Preserving Water Quality of North Florida Watersheds Research, 3) Strategic Research for the Management of Invasive Pest Species, and 4) FAMU Livestock and Crop Improvement Program.

Research and extension activities funded by capacity funds in 2023 will be shaped by the following recent developments at UF/IFAS:

-In November 2021, Dr. Andre Johnson became the new dean for UF/IFAS Extension. Strategic planning for Extension was paused during the search for a new dean. Those efforts restarted in 2022, with a new

strategic plan to be released in 2023. At this time, we do not anticipate major changes to our current Extension programs or Hatch research efforts in 2023 and continue to report under the six Critical Issues identified last year.

-A national search for a new position, Associate Vice President for Inclusion, Diversity, Equity and Access (IDEA) is underway at UF/IFAS. We expect to have this position filled by the end of 2022. A recent UF/IFAS Extension initiative is the Alliance for Inclusion Diversity and Equity (AIDE), which aims to increase cultural competence and capacity among Extension professionals and ensure Extension programs are effective in addressing the unique needs of underserved and underrepresented communities.

-In 2021 UF/IFAS Extension hired its first 100% virtual Extension Agent. This agent, called a "Life Skills and Wellness Digital Media Influencer," leads a science-based, entirely digital-media delivered program on mindfulness, wellness, and nutrition for adults and youth. This new agent role is being evaluated in 2022 to further develop the "model" and how it works. One district director is asking all new hires in 2022 and beyond to have a digital teaching component. This "component" approach will also need to be evaluated before expanding it statewide.

-A new, multistate project was created in 2021 to help increase the rates of COVID-19 vaccinations, especially in ethnic and minority communities. Funded by the CDC's Program to Alleviate National Disparities in Ethnic and Minority Immunizations in the Community (PANDEMIC) grant program, UF and FAMU agents and faculty reach community members where they are, through mobile health vehicles, health fairs and events and primary care providers. The local programs in Florida and other states partner with and prioritize migrant farmworkers and LGBTQ, Native American, Hispanic and Black populations.

-A $70 million partnership between UF and NVIDIA in July 2020 continues to drive strategic Artificial Intelligence (AI) faculty hires and initiatives across campus. Looking toward the future hiring needs of Florida's employers, a needs assessment of industry was conducted by UF Engineering leadership and innovation institute. Forty-two percent of companies said artificial intelligence (AI) skills are a factor in hiring currently, while nearly three in four (72%) said within 2-5 years AI skills will be a factor.

-In 2020, UF/IFAS created the Support for Emerging Enterprise Development Integration Teams (SEEDIT) to promote and grow integrated research and Extension team efforts toward emerging agricultural enterprises. In that first cycle 19 projects were funded, totaling $1.24 million and include 176 faculty and staff, 14 UF/IFAS academic units, and seven research and education centers. In August 2022, the SEEDIT teams reported out their results at the UF/IFAS 2nd Emerging Enterprises Summit. We also heard from about 20 other teams that are coalescing around new emerging enterprise ideas and are engaged with industry stakeholders and others. The SEEDIT program is deemed a success and a second funding call will go out in fall 2022.

Research and extension activities funded by capacity funds in 2023 will be shaped by the following at FAMU:

-Viticulture and Small Fruits Research continues to provide leadership in the development of the grape and wine industry in Florida through quality research and statewide extension and outreach activities that address the needs and concerns of stakeholders. The Center recently released a fresh fruit

muscadine cultivar and is working to release several wine grape and fresh fruit cultivars in the near future that will greatly impact the viability of the Florida grape and wine industry. Researchers are working to identify molecular markers that will facilitate the breeding program and best management practices to enhance productivity and reduce cost. Others are working to develop high efficiency technology in the production of phytochemicals and nutraceuticals from grapes to address childhood obesity, food safety and food security issues. As a member of the USDA National Clean Plant Network, the Center will continue to improve on phytosanitary techniques in pathogen testing and disease elimination therapy and the production of clean vines. The Center will evaluate IPM techniques for vegetables and non-traditional small fruits for North Florida farmers to assist them in identifying alternative enterprises.

-Preserving Water Quality of North Florida Watersheds Research is administered through the Center for Water resources. The Center continues to work with undergraduate and graduate students, conduct need-based research and work with the Cooperative Extension Program and the U.S. Forest Service, Southern Research Station, as well as a number of diverse stakeholders. Its programs are focused on water quality, soil chemistry, soil health and erosion, geospatial technologies, and aquatic entomology issues in the Florida Panhandle.

-Strategic Research for the Management of Invasive Pest Species is implemented by the Center for Biological Control. The problems posed by Invasive Alien Species (IAS) are broad, with impacts at the local, state, national and global levels. This program takes a multidisciplinary approach with activities across the spectrum from prevention to management and restoration. The specific areas of focus include offshore pest mitigation, onshore development of ecologically based management of invasive insect pests and weeds, development of electronic diagnostic tools and resources for insect identification, assessment of the economic impact of IAS and improving the safety of biological control.

-FAMU Livestock and Crop Improvement Program hosts a collaborative multidisciplinary livestock and crop improvement program that will lead to the acquisition of scientific knowledge that will enable the University/College to assist its stakeholders – the limited resource farmers to enhance productivity and profitability of their farming operations. The program will include livestock improvement, hay production, forage systems improvement, aquaculture, specialized horticultural crops, such as industrial hemp and olives, and best management practices for livestock and crop production.

-The climate change assessment and mitigation program is a multi-state research project involving all the other 1890 institutions coordinated by the 1890 Association of Research Directors. The project focuses on understanding and analyzing climate change impacts and or its consequences on persons in low-income, underserved or marginalized communities towards climate-smart practices to generate stable income and environmental benefits from climate-change solutions. This 1890 collaborative, multidisciplinary consortium of scientists, researchers, educators, and Extension professionals will promote the transformation and adaption of climate smart practices by the underserved communities through research-based practices and policies to reduce the impact of greenhouse gases and building resilience to the effects of climate change in our food and agricultural system.

Merit and Scientific Peer Review Processes

The Florida Extension Leadership Team meets monthly to discuss statewide programming, hiring, resource allocation, and professional development. These meetings serve as an ongoing evaluation of

the quality and relevance of Extension programs to state program goals as identified by our seven Extension Initiatives. The ELT consists of the UF/IFAS dean and senior associate dean for Extension, FAMU Extension Director, statewide program leaders, district directors, state specialist in program & professional development, and representatives from IT, communication services, human resources, financial services, and county operations. Under the seven Initiatives, we have 22 Priority Work Groups (PWGs). Both UF/IFAS and FAMU faculty serve on these self-directed teams. A program leader provides oversight and guidance to the PWGs. Members consist of both state specialists and county agents together working on program planning and evaluation, curricula development, and assessing the need for new research. PWGs may consult with external stakeholders as needed. Teams provide a plan of work to their program leader and these are posted in Microsoft Teams. Periodically, the Initiatives hold formal meetings to bring all the PWGs together to improve the quality and relevance of its Extension programming. UF/IFAS Extension has historically conducted at least five county program reviews per year to ensure educational programming is effective and meets local needs. For the past few years this review was on hiatus due to the pandemic and to restructure the program. This year we are piloting a new virtual format. Reviewers will continue to look at the strengths and challenges of the unit and its programmatic successes and opportunities, and provide recommendations for improvement in research, teaching and extension. More details are provided below in the Stakeholder Input section.

UF/IFAS (1862) Scientific Peer Review: All USDA funded projects must be submitted to USDA/NIFA using the NRS system and must be peer reviewed by three researchers, with final approval from the unit leader. Peer reviewers may be a faculty member of the same department, another department at the university, or from another institution. NRS projects are also evaluated annually by the unit leader and program leaders via the Annual Progress Report, as well as the individual faculty's report of accomplishments and a plan of work for the next year.

FAMU/CAFS 1890 Merit Review: All USDA funded projects are submitted to USDA using the REEport and must be peer reviewed with final approval from the unit leader. Project ideas are developed by faculty in response to stakeholder needs and fall within University and state priority areas and from Center Advisory Councils, as well as link to USDA and state priority areas. A preliminary review is made by the Research Director in consultation with Principal Investigators regarding the relevance and the impact on stakeholders, followed by a comprehensive review by subject matter specialists and at least one external reviewer. REEport projects are also evaluated annually by the unit leader and program leaders via the Annual Progress Report, as well as the individual faculty's report of accomplishments and a plan of work for the next year.

Stakeholder input: Action Taken to Seek Stakeholder Input

Periodically, Florida Extension (UF and FAMU) conducts a comprehensive statewide needs assessment using several methods that target both traditional and non-traditional audiences, including listening sessions, focus groups, and surveys. In 2021 we did conduct listening sessions with from more than 110 individuals in eight audience groups, including two Spanish-language groups. As noted in more detail below, UF/IFAS conducted a needs assessment survey of more than 1,700 Florida residents in 2022. These data, along with other data collection efforts that may be conducted in 2022 and 2023, will be used to develop our next strategic plan (2024-).

The Florida A&M Research Forum is held to encourage stakeholder participation and facilitate interaction with researchers. Other public events are conducted to gather information from stakeholders. Whenever it is feasible, efforts will be made to coordinate relevant activities with Extension to avoid duplication.

Each of the 67 county Extension offices has an advisory committee and each county faculty member is expected to have at least one advisory committee. The membership is expected to resemble the demographics of the target audience they serve and are reviewed as part of the faculty member's annual review. In 2022, most meetings were held in person or using a hybrid approach. Some virtual meetings are held but most county agents will hold at least one face-to-face meeting per year. These meeting trends in 2022 are expected to continue in 2023.

UF academic departments and UF and FAMU Research and Education Centers have advisory councils representing agricultural commodities, natural resource organizations, community, and business leaders, etc.

A Client Experience Survey is conducted annually of 12-14 counties on a 5-year rotation. Survey protocol is available at https://pdec.ifas.ufl.edu/satisfaction/Client%20Experience%20Survey%20Protocol%20-%202022.pdf. This survey was expanded to 23 counties in 2021 since only five counties participated in 2020 due to the pandemic. In 2022, the normal rotation schedule was followed. We are expecting a retirement in late 2022 or 2023 and have been discussing succession plans for the survey, but those have not been solidified yet. Infographics (https://pdec.ifas.ufl.edu/impacts/CES/) showcasing selected results are produced for each county and reviewed by Extension administration, including county Extension directors.

A new statewide survey of Florida residents was completed in 2020 and again in 2022. These comprehensive needs assessments were conducted using a Qualtrics panel of more than 1,500 Floridians. The data was shared with Extension administration and faculty, to help them develop programs to meet their local community needs. Data analysis is ongoing but early results show the ranking of issues found in 2022 is very similar to that found in 2020, with water and food-related items dominating the top ten issues. More emphasis will be placed this year on sharing results tailored to the Extension programmatic teams and more closely examining the opinions of underserved audiences.

County Program Reviews are conducted in five different counties each year to ensure the educational programming is effective and meets the needs of the county. In fall 2022 we are piloting a new virtual format for these reviews. The reviews will engage county extension office faculty and staff in substantive discussions with UF/IFAS Extension Administration regarding successes, opportunities, and challenges faced by the office. The review team will consist of the Senior Associate Dean of Extension or designee, an Extension program leader or designee, and Extension Business Services representative, and a County Extension Director (CED) from another district in Florida. A 1-day virtual visit to the county office will include interactions with the CED, faculty, staff, county administration, and stakeholders. County administrator(s) and stakeholders from each of the key program areas are invited to participate and provide feedback about the quality, effectiveness, and relevance of the Extension programs offered in the county. County directors receive a summary report from the review team within one month of the virtual visit, and then the CED will have six months to provide a response, highlighting the progress made on the review team’s recommendations and opportunities.

Stakeholder input: Methods to Identify Individuals and Groups

UF and FAMU identify stakeholders through a variety of formal and informal means, including relationships with Extension clientele, partnerships with collaborating organizations or companies, input from county administrators and other elected officials, advertising and social media, and suggestions from advisory committees and commodity groups. In addition to statewide efforts to identify key issues and stakeholders through our long-range planning process, counties and districts as well as academic departments and Research and Education centers, may conduct their own listening sessions, needs assessments, and surveys to identify stakeholders. Regarding the reach towards underserved audiences, each Extension agent in their annual Report of Accomplishment (ROA) describes how they market their programs. Finding new audiences is one of the criteria used to appraise the agent's performance.

Stakeholder input: Methods for Collecting Stakeholder Input

Florida Extension is still in the data collection phase for its next long-range plan (current one expires in 2023). We typically utilize a wide variety of methods to collect input from stakeholders, the general public, and non-traditional groups and individuals, including surveys, focus groups and listening sessions. As mentioned above, we did recently conduct listening sessions and a statewide survey and expect other data collection and/or analysis to be done in 2022/2023 as we formulate our next strategic plan.

We leverage GIS technology to collect, process, and visualize geospatial data related to socioeconomic, demographic, agriculture, and natural resources characteristics for Florida as well as internal data related to UF/IFAS Extension operations. Data sources include national-level data, data from Florida state and local agencies, and our own Extension reporting system's data. Great efforts have been put into data management, including data sourcing, maintenance, updates, and documentation. In addition, we have been developing a web-based GIS platform to offer data storage, sharing, and comprehensive geo-visualization. The web platform provides visualization of maps and data and enables users to query and download data and maps. The ultimate goal of the web GIS platform is to improve communication with stakeholders and the general public, facilitating informed decision-making. In 2022, we initiated two pilot projects that will help us learn more about our Extension clientele in terms of their demographics and participation in programs. These data will be used to begin building an Extension clientele database.

1890 Research

Stakeholder input will be collected throughout the year in informal and formal meetings. The research center advisory councils are critical since they include representatives from different stakeholder groups, such as: Florida Grape Growers and Wine Association, Florida Pest Control Association, Florida Department of Agriculture and Consumer Services representative, Florida Water Management District representative, Florida Department of Environmental Protection, and 1862 Land-Grant Institutions. Regular meetings of these Councils will be held on the campus where research results will be presented and stakeholders' input will be requested. Input will also be collected from other stakeholders identified through churches, schools, recreation centers, food banks, and healthcare providers. Additionally, and as appropriate, researchers from the university will make presentations at meetings/conferences organized by different stakeholder groups. As appropriate, specific efforts will be made to coordinate these activities with the extension program in order to avoid duplication of effort and redundancy.

Stakeholder input: A Statement of How the Input Will Be Considered

In the budget process

To identify emerging issues

To set priorities

In the staff hiring process

To redirect Extension programs

To redirect Research programs

Critical Issues

Agricultural and Food Systems

Initiated on: Nov 26, 2019
State: Florida

Term Length: Long-term (>5 years)

- Maintain and enhance production systems of all types and scales by improving knowledge and adoption of production efficiencies and effectiveness, new technologies, good agricultural practices, good food safety technologies and practices, and integrated pest management.
- Help producers and growers protect the economic sustainability of their operations through agricultural business planning, financial management and succession planning.
- Improve Floridians' knowledge about food systems, agricultural production, and the environment through public education.
- Expand the energy landscape by teaching farmers and business owners about the availability, viability, applicability, and use of alternative energy sources.
- Research (Top KAs): Plant genome, genetics, and genetic mechanisms; Pathogens and nematodes affecting plants; Integrated pest management systems; Insects, mites, and other arthropods affecting plants; Plant management systems; Economics of agricultural production and farm management; Weeds affecting plants; Plant biological efficiency and abiotic stresses affecting plants; Plant product quality and utility (preharvest); Plant genetic resources; Biological control of pests affecting plants; Reproductive performance of animals; Animal physiological processes.

Science Emphasis Area

Agroclimate Science, Bioeconomy, Bioenergy, and Bioproducts, Education and Multicultural Alliances, Food Safety, Sustainable Agricultural Production Systems

Families and Communities

Initiated on: Nov 26, 2019
State: Florida

Term Length: Long-term (>5 years)

- Improve Floridians' access to affordable housing (purchase and finance) and teach owners and renters how to operate and maintain their homes.
- Improve individual and family financial stability by teaching Floridians about knowledge and behavior aspects of money management and energy efficiency and conservation.
- Improve the lifestyle of older Floridians by educating individuals, families, and communities about aging-related issues.
- Empower individuals to make positive lifestyle choices that improve mental health, strengthen relationships, and improve parenting and child care.
- Improve economic vitality of Florida's communities by engaging community members in assessments, strategic planning, and business/entrepreneurial support.
- Strengthen communities by helping engage citizens and build capacity by facilitating communication, leadership development, and problem solving as related to community issues and social concerns.
- Improve community resiliency by facilitating responsible decision-making and policy establishment.
- Strengthening urban and rural community resources through economic development and entrepreneurship, community capacity building, public policy education, and improved community energy policy and management decision-making.
- Educate and assist communities in disaster and emergency preparedness, mitigation, response and recovery.
- Research (Top KAs): Sociological and technological change affecting individuals, Families, and communities; Human environmental issues concerning apparel, textiles, and residential and commercial structures; Human development and family well-being; Individual and family resource management; Consumer economics.

Science Emphasis Area

Education and Multicultural Alliances, Family & Consumer Sciences

Natural Resources and Environment

Initiated on: Nov 26, 2019
State: Florida

Term Length: Long-term (>5 years)

- Improve community decision-making relative to natural coastal resources and policies by providing scientific and economic information on the consequences of various options.
- Develop and sustain natural resource entrepreneur opportunities by teaching clientele how to start and maintain businesses with focus on natural resources-related jobs.
- Improve environmental quality by teaching citizens about the relevance and value of natural resources to Florida's economy.
- Research (Top KAs): Soil, plant, water, nutrient relationships; Aquatic and terrestrial wildlife; Conservation of biological diversity; Natural resource and environmental economics; Pollution prevention and mitigation; Weather and climate; Management and sustainability of forest resources; Outdoor recreation; Urban forestry.

Science Emphasis Area

Education and Multicultural Alliances, Environmental Systems

Nutrition, Health and Food Safety

Initiated on: Nov 26, 2019
State: Florida

Term Length: Long-term (>5 years)

- Empowering Floridians to build healthy lives and achieve social and economic success through health and wellness, nutrition, and food systems.
- Improve Floridians' food choices by providing education and intervention for consumers, families, and youth.
- Empower individuals to make positive lifestyle choices that improve physical health.
- Improve Floridians' ability to handle food safely by providing education and intervention for consumers, families, and food handlers
- Maintain and enhance production systems of all types and scales by improving knowledge and adoption of food safety.
- Research (Top KAs): Protect food from contamination by pathogenic microorganisms, parasites and naturally occurring toxins; Insects and other pests affecting humans; Nutrition education and behavior; Requirements and function of nutrients and other food components; Quality maintenance in storing and marketing food products; Zoonotic diseases and parasites affecting humans; New and improved food products; Hazards to human health and safety.

Science Emphasis Area

Education and Multicultural Alliances, Family & Consumer Sciences, Food Safety, Human Nutrition

Research for Management of Invasive Pest Species (FAMU only)

Initiated on: Nov 26, 2019
State: Florida

Term Length: Long-term (>5 years)

- Improving Offshore Mitigation Strategies for Invasive Pests Coming from the Caribbean and Central America
- Biological Control and Sustainable Management of the Invasive Aquatic Weeds in North Florida Springs to minimize their Negative Impacts on Climate change and water quality
- Integrated pest management of pests on fruit and vegetable crops in North Florida
- Strategies for the identification, prevention or management of invasive pest species
- Improve Floridan's knowledge of integrated pest management approaches to be adopted by farmer's to increase profitability
- Research (KAs): Insects, Mites, and other arthropods affecting plants; Plant biological Efficiency and abiotic stresses affecting plants; Weeds affecting plants, Biological control of pests affecting plants; Integrated pest management systems

Science Emphasis Area

Agroclimate Science, Environmental Systems, Food Safety, Sustainable Agricultural Production Systems

Water Quality and Conservation

Initiated on: Nov 26, 2019
State: Florida

Term Length: Long-term (>5 years)

- Conserve Florida's finite freshwater resources by teaching rural, suburban and urban audiences how to use less water.
- Improve the quality of Florida's water resources by teaching target audiences how to implement agricultural Best Management Practices, Green Industries Best Management Practices, Florida-Friendly Landscaping principles, and low-impact development standards.
- Improve Floridians' knowledge about water allocation, use, quality, and conservation through public education.
- Research (KAs): Conservation and efficient use of water; Watershed protection and management.

Science Emphasis Area

Education and Multicultural Alliances, Environmental Systems, Sustainable Agricultural Production Systems

Youth

Initiated on: Nov 26, 2019
State: Florida

Term Length: Long-term (>5 years)

- Engage youth in experiential learning using Extension's community-based 4-H Youth Development program to complement formal education that will lead to an interest in learning, development of important life skills, and workforce readiness.
- Foster learning environments to make positive 4-H Youth Development possible by educating caring adults about volunteerism and using adult-youth partnerships.
- Research (KA): Youth development

Science Emphasis Area

Education and Multicultural Alliances, Youth Development