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EPAF

Extension Professional Associations of Florida

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Epsilon Sigma Phi - Alpha Delta Chapter

Florida Association of County Agricultural Agents

Florida Association of Extension 4-H Agents

Florida Extension Association of Family and Consumer Sciences

Florida Association of Natural Resource Extension Professionals

Extension Professional Associations of Florida

Facing the Future Together, Stronger

36th PROCEEDINGS OF ORAL AND POSTER PRESENTATIONS

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The EPAF Board Offers Special Thanks To:

- Chairs and members of the ESP, FACAA, FAE4-HA, FEAFCS, and FANREP abstract committees who reviewed and selected presentations
- All county and state Extension faculty who submitted abstracts
- UF/IFAS Extension Administration, under the leadership of Dean and Director, Dr. Andra Johnson, for continued support of the EPAF Conference

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Agriculture and Horticulture
Sponsored by FACAA

Room Hosts: Danielle Sprague and Caitlin Bainum

Healthy Farm Workers Program

Mussoline,W*, wmussoli@ufl.edu, UF/IFAS Putnam County Extension
Massey, L, UF Health Cancer Center

Background: Putnam County has approximately 8,300 acres of cropland according to the 2017 Census of Agriculture. The majority of this acreage is owned and managed by white males, however, more than 95% of farm workers are minorities. **Objective:** After recognizing this disparity, the Agent intentionally and actively engaged this underserved audience to implement a farm safety program that would improve the overall health of the participants. **Methods:** The Agent collaborated local farm owners to provide specialized training for their seasonal labor crew that comes every year to harvest and grade potatoes. The Agent initiated and established a collaboration with the UF Health Community Outreach Program and participated in discussions, planning, and preparations for six months. Specialized trainers from UF Health assisted with the outreach program for the underserved farm workers. The educational program was administered on April 8, 2022, and it focused on sun safety, health screenings, COVID vaccines and boosters, and pesticide safety. **Results:** A total of 13 participants (all minority status) received sun safety training and specific gear to use during their daily work activities such as protective hats and sunscreen. The average knowledge level of attendees (n=13) increased from 64% to 97%, based on results from the pre- and post-exams. As a result of the immunization education, a total of 8 COVID vaccine and booster shots were administered to program participants. **Conclusion:** Underserved farm workers increased their knowledge of farm safety and increased their COVID immunity through health interventions.

Agricultural Best Management Practices Working Groups: Enhancing BMP education and implementation in Florida

Albertin, A.*, albertin@ufl.edu, FACAA and FANREP, UF/IFAS Northwest Extension District;
Zhuang, Y.*, yilinz@ufl.edu, FACAA and FANREP, UF/IFAS Central Extension District.

Background: Farmers have implemented Best Management Practices (BMPs) on their lands for many years on a voluntary basis. However, the 2016 Florida Water Bill mandates farmers implement BMPs if they are in an area with a Basin Management Action Plan. Multiple stakeholders, including Extension, state, and federal agencies work with producers on BMP education and implementation but it can be difficult for those involved to understand who is doing what and to obtain current information in order to be most effective. **Objectives:** To better assist producers, stakeholders consolidated as regional working groups to discuss BMP updates, needs and to increase collaborative efforts to enhance BMP implementation. **Methods:** BMP Working Groups formed in the NW, Central, SE, and SW Extension Districts in

2017, modeled after the Suwannee River Partnership in the NE District. Each group meets quarterly. In the NW and Central Districts, attendance ranges from 16-28 members per meeting from UF Extension and Research, FDACS, Water Management Districts, NRCS, FDEP, Farm Bureau, Soil and Water Conservation Districts, and others. **Results:** In the Central District, survey results showed that working group members found the meetings very helpful. Respondents increased their knowledge about collaboration between agencies in the region (77%), Ag BMP regulations and/or technologies (69%) and 54% increased communication with researchers. The group has also developed a factsheet on cost-share opportunities and requirements from different agencies in the region. In the NW District, results include collaboration among members in joint field days and farm tours, the purchase of a rain/runoff simulator to be used at educational events, and multi-institutional grants ($1,000,000) of which more than $700,000 were distributed as cost-share for producers to implement BMPs. **Conclusion:** Through effective regional stakeholder collaboration on BMPs, promotion is enhanced and producers may be more likely to implement practices and remain compliant with state laws.

From the Ground Up: Starting an Arboriculture Program in Brevard County

Wells, B.*, bcwells@ufl.edu, FACAA, UF/IFAS Extension Brevard County; Figart, L., lfigart@ufl.edu, FACAA, UF/IFAS Extension Duval County; Fletch, P., pfletch@ufl.edu, FACAA, UF/IFAS Extension St. Johns County; Scalera, S., sasc@ufl.edu, FACAA, UF/IFAS Extension Brevard County; Orfanedes, M., morf@ufl.edu, UF/IFAS Extension Broward County; Ricketts, G., gricketts@ufl.edu, FACAA, St. Lucie County; and Sussman, D., dana.sussmann@fdacs.org, Florida Forest Service.

Background: Trees have social, environmental and economic benefits. They increase serenity and healing, moderate temperatures, improve air quality, support biodiversity, and increase property values. However, trees pose maintenance and safety risks if not properly managed. Professionals well-trained in arboriculture are a much-needed resource for urban landscape management. Becoming an International Society of Arboriculture (ISA) Certified Arborist® can help meet this need, while adding another level of expertise for landscape management professionals. As an agent serving urban landscapes with little-to-no prior arboriculture experience, I was faced with the overlapping need for arboriculture professional development for myself and an education program for clientele. **Objectives:** I started an arborist program with the objectives to (1) increase clientele knowledge and adoption of tree care best management practices, and (2) increase the number of ISA Certified Arborist's® in Brevard County, including myself. **Methods:** With leadership from experienced ISA Certified Arborist® Extension agents, I co-taught a two-day workshop that prepared attendees to take the certification exam. The exam was offered two weeks post-workshop. Ten ISA Certified Arborist® CEUs were offered for those seeking recertification. **Results:** Total workshop reach was 29. Post-participation surveys (n=27) indicated a consistent knowledge increase in all aspects of tree health care, including pruning, installation, integrated pest management, risk assessment, as well as an increase in confidence in taking the exam. Six out of nine workshop participants passed the exam and are now ISA Certified

Arborists®. Since obtaining my Certified Arborist® recognition, I have expanded my program to include golf course tree care and landscape palm management. These programs have reached an additional, 74 and 249 individuals, respectively. **Conclusions:** I will discuss the outcomes and impacts of pursuing an arborist certification for professional development while building a program for clientele. This program is ongoing and adaptable to other counties in Florida and beyond.

Beef Cattle Clinic: Multi-County Collaboration to Provide Advanced Youth Education
Dossin, C.*, cdossin@ufl.edu, FACAA, UF/IFAS Extension Clay County; Whitehead, L.*, liz.whitehead@ufl.edu, FACAA, UF/IFAS Extension Bradford County; Conner, S.*, sconner04@ufl.edu, FAE4-HA, UF/IFAS Extension Clay County

Background: In Northeast Florida, beef projects are a popular activity for youth to become involved in agriculture and participate in shows across the state. Through raising steers and heifers, youth can learn about animal agriculture, be involved in their communities, and develop professional skills such as responsibility, setting goals, and decision-making. Bradford and Clay County Extension agents collaborated to offer advanced level education in beef cattle management and showmanship to prepare youth for both counties' upcoming livestock shows. **Objectives:** The Beef Clinic targeted youth ages 8 to 18 with the objective to increase knowledge of beef cattle nutrition, showmanship, and grooming, and develop and practice skills in animal handling. **Methods:** A beef clinic was developed, bringing in expert presenters and agents to educate youth in key livestock topics, including nutrition, grooming, handling, and management at the Clay County Fairgrounds. The clinic offered participants the opportunity to learn hands-on with their animals; during showmanship practice, youth worked with their cattle and were given one-on-one feedback and direction from instructors before putting their new knowledge into action through a mock show to win prizes. **Results:** 10 youth participated in the Beef Clinic. Post-program surveys revealed that 70% increased their knowledge of cattle nutrition and 60% increased knowledge of show cattle grooming. 90% of participants intended to use the knowledge and skills gained to inform their feeding, grooming, and management program. One participant won 2nd place senior showman at the Clay County Fair and one participant was 2nd place junior showman at the Bradford County Fair. One participant won Grand Champion Steer at the Clay County Steer Show and one participant won Grand Champion Heifer at the Bradford County Beef Breeding Show. **Conclusions:** The Beef Clinic was successful in providing youth with advanced education in livestock topics to improve their beef projects.

4-H and Drones: Reaching Youth Through STEM
Bearden, J., bearden@ufl.edu, FACAA, UF/IFAS Extension Okaloosa County

Background: In 2021, the agent partnered with an Educational Foundation that focuses on STEM education. A day camp was held for youth aged 8-18 where they learned drone flight skills, autonomous flight skills and simulated flight skills as well as remote pilot knowledge.

Following this day camp, the agent started a 4-H Drone Club that meets 3-4 times per month. **Objectives:** This club was created to introduce youth to remote pilot career opportunities as well as to teach youth basic drone knowledge and help them develop remote pilot skills. **Methods:** Traditional lectures are used to teach remote pilot knowledge. Experiential learning is employed for youth to develop remote pilot skills. Youth practice piloting the aircraft with a controller, coding the aircraft to fly a course and through flight simulation exercises. Youth are encouraged to work together to fly through courses manually and autonomously. The agent debriefs with youth after each practice to reinforce learning and to provide encouraging feedback. **Results:** In 2021, the agent was able to teach over 45 youth remote pilot skills through the day camp and club. The club membership is 25 youth ages 8-18. Five elementary aged youth competed in the Drone Team Challenge. The team took first place in Mission Possible, second place in simulated flight and third place in autonomous flight. In just the first year, the youth have learned enough and developed remote pilot skills sufficient to compete and place in their first competition. Using Kahoot tests, youth increase their drone knowledge by an average of 50%. **Conclusions:** Youth participation in drone programming trainings have shown significant improvement in spatial visualization and sequencing skills. They are learning science, technology, engineering, and math as it relates to drones. Belonging to a 4-H Drone Club also develops other life skills such as teamwork, decision-making, leadership, planning, and communication.

DIY Home Hydroponics – Food Systems for Beginners, Rhoden, J. * Jeremy.k.rhoden@ufl.edu, FACAA, UF/IFAS Extension Marion County

Background: During the Covid pandemic, food shortages occurred all over the country and many sought information on growing their own food. Two years later, Extension continues to receive contacts from individuals wanting to grow their own produce. We are pointing individuals to hydroponics; the most resource-efficient, fastest, and simplest ways of growing produce successfully. **Objectives:** To provide individuals with the skillset and tools to create and replicate a Kratky Hydroponic System to grow produce successfully. **Methods:** Participants received training on various types of hydroponics, including the Kratky Hydroponic System, and the principles of hydroponics. The training was 90-minutes, and the cost was $30. Each participant received supplies for a Kratky System, which included seedlings harvestable in four weeks, and seeds and media to transplant into the system after the first harvest; providing two crop cycles. A demonstration was provided to set-up the Kratky System and the lettuce seedlings were put in place. Prior to leaving, participants prepared the media and sowed lettuce seeds for the second crop cycle. **Results:** Program evaluation results demonstrated participants increased their interest in growing their own food, as well as substantial knowledge gain in using hydroponics to grow their own food. Approximately 81% (n = 36) of participants indicated their Kratky System will be set up and producing one month from the training, and 91% of participants found the content and set-up to be *Extremely Easy*. We found the 90-minute time cap did not provide enough time for thorough question and answering at the end of the presentation. **Conclusions:** DIY Home Hydroponics is a potential gateway for residents of all kinds to begin growing their own food with limited space and resources. Providing residents

with training, an affordable and easy growing system, and continuous educational opportunities, encourages them to grow their own fresh food.

Garden in a Bag

Waters, K., kalyn.waters@ufl.edu, FACAA, UF/IFAS Extension Holmes County

Background: Having access to fresh fruits and vegetables in rural areas can be challenging, especially in economically/socially disadvantaged populations. Increasing the availability of produce and encouraging the intake of fresh produce is a critical need in these populations. While gardening is a staple practice for many, typically these populations do not practice it. In addition, these clients typically do not engage in traditional Extension education. **Objectives:** The objectives of Garden in a Bag (GB) are to: 1) increase sustainable and sustenance gardening practices by economically disadvantaged clients, 2) to increase availability of fresh fruits and vegetables in food deserts and rural areas, 3) increase client's knowledge of gardening practices, and 4) develop a platform to educate non-traditional Extension clientele. **Method:** Garden in a Bag provides free sets of seeds to residents of the county. The GB's are distributed in the spring and fall with seeds appropriate for the growing season. Each GB typically include three vegetable crops and one fruit crop. An informational packet is attached to each GB with planting, growing and harvest information. The GB's are distributed at public offices, local stores, and food distribution sites. **Results:** Annually, since 2018 a total of 3,243 GB's have been distributed. Data suggests that 83% of residents plant their gardens and report increased access to fresh produce and increased consumption. Recipients also report they have begun or increased their sustenance gardening practices because of the program. **Conclusion:** In a county where 65% of the residents receive food assistance, access to fresh produce is a critical need. By providing socially/economically disadvantaged clients residing in food desserts with garden seeds and educational materials, you can increase the quality of their diets, access to produce and ability plant sustainable sustenance gardens for their families.

Walk in the Shoes of a Florida Farmer

Stauderman, K.*, Kstauderman@ufl.edu NACAA, UF/IFAS Extension Volusia County, Merendino, A., Merena@ortho.ufl.edu , DPM, UF Health Orthopaedics and Sports Medicine Institute, Division of Foot and Ankle/Orthopaedics and Rehabilitation, Gainesville, FL

Background: Foot health is often overlooked in the workplace especially when it comes to farmers and agriculture/horticulture professionals. Florida outdoor environmental conditions often result in hot, damp feet, improper footwear, or work boot, which leads to poor foot health overtime. Many of us are reluctant to seek help for our feet which leads to serious complications later. **Objectives**: 1) After three months, 50% of attendees in three programs will change one behavior and/or adopt a new practice to improve their foot health (exercises, inserts, socks) and improve their physical mobility and 2) Increase knowledge gain of 50% attendees on foot care, safety, and potential foot health risks. **Methods:** 174 ag/horticulture

professionals from three commercial horticulture classes were instructed on foot safety and surveyed on work footwear brand, type of shoe, money spent, and current foot issues. Attendees (n=22) were invited back to an expanded program collaborating with a podiatrist, Doctor of Podiatric Medicine (DPM). He spoke on foot care, safety, improved mobility and increase awareness of personal foot health risks. Also, he assessed and diagnosed all attendee feet. **Results:** 69% of the audience in attendance were experiencing foot issues. 48% experience foot pain or soreness, 15% had bunions, foot/toe/nail fungal issues, 7% fallen arches and 21% experience daily leg pain. After the extension program with the physician, 89% reported increased knowledge of foot care, safety, and potential foot health risks. 92% were committed to change a behavior to improve foot health including: 73% leg/feet exercises, 50% change shoe type/brand, 27% topical creams and 32% added orthotic/insoles. **Conclusions:** Twenty-two attendees provided a self-assessed survey after three months for improved or change in foot health. 100% attendees found the information to be helpful and 97% gained relief and improved foot health!

Grain Corn Variety Selection in the Suwannee River Valley of North Florida

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Background: Grain corn is an important commodity crop in the Suwannee River Valley of North Florida. In 2021, approximately 37,000 acres of corn were harvested in counties surrounding the North Florida Research and Education Center-Suwannee Valley (NFREC-SV). Each season, producers must choose a variety when making planting decisions, which can be a daunting task. In the past producers have depended on yield data generated from similar trials conducted by industry and Extension from regions with differing environmental and soil conditions. **Objectives:** (1) To increase knowledge of Florida Best Management Practices and (2) encourage producers to incorporate new grain corn varieties. **Methods:** Grain corn seed companies provided two varieties appropriate for the North Florida area along with $400 to help encumber the cost of incorporating this trail at the NFREC-SV near Live Oak. Current recommended production practices are followed during the production season to manage fertility and irrigation to remain in compliance with Florida Best Management Practices. Harvest data is collected and used to create fact sheets and presentations that are distributed or presented at local and regional production meetings in North Florida. **Results:** Post-training evaluations from grain corn production meetings showed that 89% of the producers (200 of 225) increased their knowledge of grain corn variety selection and 85% of attendees (191 of 225) increased their knowledge of production practices that encourage Best Management Practices. **Conclusions:** In 2021 the efficacy of 20 grain corn varieties were compared under management practices compliant with Florida Best Management Practices. This research has allowed Extension agents the opportunity to provide producers with timely information to

encourage adoption of Florida Best Management Practices in grain corn production and assist with variety selection. Follow-up discussions with local producers have indicated that this data has been utilized to implement new varieties in their existing production system.

Soil School: Growing an Extension Program

Bennett, L.*, laurahbennett@ufl.edu, FACAA, UF/IFAS Extension Pasco County; Williams, A.*, allisonwilliams@ufl.edu, FACAA, UF/IFAS Extension Hillsborough County.

Background: Due to the rising cost of fertilizer, stakeholders are searching for proper soil management information more than ever. This can be overwhelming for both new and experienced Extension faculty. Because of high stakeholder interest, this can be a great way for new agents to build relationships and to provide outreach in their county. **Objectives:** The Soil School seminar was developed to educate pasture managers on soil testing, pH, soil types, fertilizer application, and soil nutrients. Best management practices that both improve fertilizer efficacy and preserve water quality were included. The program was offered by an experienced agent and a new agent for the purpose of both supporting current stakeholders and growing a new program. **Methods:** An in-person seminar was provided with portions of the program taught by both agents. Participants received a take-home packet that included handouts, soil sample forms, and soil sample bags. A reflective survey was used to evaluate knowledge gain; additional survey questions evaluated intended behavior change and impact of the program. **Results:** Knowledge gain averaged 91% across all segments of the seminar. Total number of acres managed by attendees was 1,176 with 655 cattle. All attendees indicated they would implement at least one best management practice with most listing soil testing as a practice they would adopt. Eighty-three percent of the group anticipated an increase in economic profitability with the average expected increase being 14%. Additionally, the new agent received requests from stakeholders to repeat the program in their county which has now been scheduled. **Conclusion:** Collaboration between experienced and new Extension faculty provides ways for both programs to grow while creating enhanced educational opportunities for stakeholders.

Florida-Friendly Landscaping Principles for Community and Property Management

Munroe, L. , lnmunroe@ufl.edu, Environmental Horticulture Agent I and Master Gardener Coordinator, Indian River County

Background: Promoting Florida-Friendly Landscaping management techniques in Indian River County has been difficult because of previous misinformation and misunderstanding of messaging. This has been especially so in planned communities where the impression is that adoption of this management method will compromise property values. **Objectives:** Encourage adoption of FFL in planned communities by clarifying the purpose and message of the program. Promote accessing Extension for all their landscaping and gardening guidance. **Methods:** The Agent leveraged networking opportunities by reaching out to other organizations that have similar focus in the community. We partnered with the Indian River Neighborhood Association and planned a “Lunch and Learn” event. They helped us directly market to people who live in or

manage Homeowner or Condominium Associations. Lunches were provided by the Master Gardener Volunteers. The Agent used a PowerPoint lecture to deliver information and guide the discussion. A pre/post survey was used to assess knowledge gained and to help the agent plan additional classes for this audience. **Results:** Forty-seven people participated in our "Lunch and Learn" event. This is more than double our expected/planned for number of participants. We have scheduled another talk to accommodate the overflow. Over 50% of respondents indicated a knowledge gained of more than 20%. We have scheduled site visits with decision makers in 6 communities. **Conclusions:** We need to work on further expanding our network to include a community partner for our lunches. We will also have to work on event budgeting to determine a price for future "Lunch and Learn" style outreach. There is a desire and need for our Florida-Friendly Landscaping programming in our county, including and especially community members who live in shared landscape spaces.

4-H Livestock Judging Teams: Engaging Youth in Advanced Livestock Education

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Background: Livestock judging is a youth team competition that involves the evaluation of livestock and presentation of oral reasons to a judge. During livestock judging competitions, youth execute decision-making, critical thinking, and public speaking skills that are put to the test when evaluating cattle, sheep, goats, and swine. To address the need for 4-H livestock judging teams and events stressed by Bradford and Clay County stakeholders, the livestock agents in Bradford and Clay counties developed a livestock judging program that was offered to the youth. **Objectives:** The 4-H livestock judging teams in Bradford and Clay Counties targeted ages 8 to 18 with the objectives to increase knowledge in evaluating cattle, swine, sheep, and goats, and for youth to show development in skills such as decision-making and public-speaking. **Methods:** Presentations were given to teach the youth about how to judge the different species and how to judge breeding versus market animals. The livestock agents have worked one-on-one with coaching the youth in their counties and have taken them to other competitions that included the state 4-H Livestock Judging Contest while using experiential teaching techniques. The livestock agents in Bradford and Clay counties organized the Bradford County Livestock Judging Contest which included six livestock classes, a set of reasons, and provided a questions class. **Results:** A total of twenty-two youth participated in a series of classroom instruction and activities, on-farm practices, and mock contests as part of the Bradford and Clay County Livestock Judging Teams. Post-program surveys revealed that 100% reported an increase in knowledge from participating on the livestock judging teams. A total of ninety-five individuals participated in the Bradford County Livestock Judging Contest. **Conclusions:** The livestock judging program in Clay and Bradford Counties was successful in developing youth skills and continues to offer opportunities for knowledge gain to Florida youth.

Spray Rodeo Day: Utilizing a Hands-On Approach to Teach Spray Equipment Calibration

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Background: Integrated pest management strategies are crucial for crop production in Florida's Everglades Agricultural Area (EAA), however, safety for both applicators and the environment is a priority. Grower needs assessments indicate that proper maintenance and calibration of equipment used for applying pesticides and fertilizer to sugarcane and leafy vegetables is important for best management practices (BMPs) and environmental preservation, in addition to maximizing profits. Thus, the need for organized spray calibration workshops is necessary prior to the growing season to ensure that large-boom spray equipment operators have an opportunity to learn the methods for proper spray calibration and maintenance. **Objective:** Interactive spray equipment calibration field days were organized to teach pesticide applicators the methods for proper equipment calibration. **Methods:** Five Spray Rodeos were held between 2015-2020 (2016 and 2021 events were canceled) at the Everglades Research and Education Center in Belle Glade, FL. Spray applicator and supervisor teams, including their respective spray equipment, progressed through three "stations", measuring ground speed, spray calibration (gallons/acre), and on-board software instruction. Following spray equipment calibration, extension faculty explained the calibration methodology to each spray applicator/supervisor team, reviewed all calibration errors that were addressed, and collected sprayed crop acreage data. **Results:** From 2015-2020, 218 participants with 49 large-boom spray rigs attended Spray Rodeo Day. Surveys indicated that participating spray equipment teams were responsible for spraying 611,534 cumulative acres of sugarcane and leafy vegetables from 2015-2020. Calibration results revealed that 46.9% of spray equipment possessed nozzles with >10% error, indicating that up to 286,809 acres could have been sprayed incorrectly from 2015-2020. **Conclusions:** With this knowledge and hands-on training, operators will be able to calibrate their spray equipment which will result in more effective spray coverage, reducing the cost of pesticide application and limiting excess pesticides from entering waterways.

Developing a Sports Field Management Academy

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Background: Requests to UF/IFAS Extension Agents for sports field management assistance from county and city parks, recreation departments, and school athletic departments are evolving into a sports field management educational program. Managed sports fields, especially municipal fields are facing enormous challenges including increased activity and play demand, oscillating weather conditions, pest and disease pressures, increased pressure from state and local governments to address nonpoint source pollution, and budget constraints. **Objectives:** Program objectives are to provide sports field managers and support staff with education and training that will protect their organization's investment, reduce maintenance costs, encourage

quality playing surfaces, heighten self-confidence and professionalism, emphasize cultural practices and environmental stewardship principles, and improve the public perception of athletic field management in-light of water quality and conservation concerns.
Methods: Agents collaborated with UF/IFAS specialists, industry experts, county partners and professional organizations to 1) establish a steering committee, 2) determine needs based on present and emerging concerns facing sports field managers, 3) develop a mission statement, 4) determine educational content and delivery platforms, 5) pilot, adjust and deliver educational programs, and 6) evaluate programs. An academy logo was designed for program recognition.
Results: Modules were presented to 51 attendees in collaboration with the Central Florida Sports Turf Managers Association. The post program survey (n=30) demonstrated 90% satisfied with program, 100% satisfied with presenters, 95% had knowledge gain regarding water quality concerns, 97% had knowledge gain in sports field nutrient management, 83% intend to implement new BMPs as a result of attending, and 87% intend to use the referenced national BMP manual as a supplement to training. **Conclusions:** Collaboration with partners and industry experts provided the guidance necessary for establishing a desired educational program to meet staff training needs, improve workforce development, and encourage best management practice implementation and environmental stewardship.

Conservation for Generations
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Background: Hunting, fishing, and outdoor recreation are a key component to wildlife conservation within the United States. According to data published by the U.S. Fish and Wildlife Service, there were 11.5 million hunters in 2016, representing a decline of 2.2 million from 2011, with the populations of those participating continuing to age. This aging trend of the hunting population causes a need for youth to become involved in wildlife conservation.
Objectives: To address these issues the agent has developed a Progressive Natural Resource (NR) program with the objectives to: 1) increase the knowledge of conservation in the county/region, 2) increase the number of youth who participate in natural resources management and conservation minded hunting and fishing, and 3) provide platforms that facilitate multigeneration interactions and education that will increase mentorship of youth in conservation, while encouraging the aging populations of outdoorsmen/women to continue to participate in outdoor reaction and conservation activities. **Method:** A series of innovative programs were hosted that facilitated conservation education. These programs included: a catfishing tournament that required participants to have team member 16 years of younger, turkey calling and call makers contest, webinars/workshops, hunter education certification events and a social media platform. **Results:** A total of $61,025 of revenue enhancement was generated. Program participants reported a 91% gain knowledge of NR management, 100% reported participating in outdoor activities with youth improved their quality of life, 89% of participants, including youth intended to increase their conservation practices. In addition, 14 youth have received lifetime hunting/fishing licenses as a direct result of the Conservation for Generations Program. **Conclusion:** This NR program increased the participation of youth in conservation-based hunting/fishing, increased client's knowledge of NR management and

created a source of funds to purchase lifetime hunting/fishing license for youth. This strengthens the future of conservation in this region.

Natural Resources, Sustainability, and Communities
Sponsored by FANREP

Room Hosts: Kaydie McCormick and David Outerbridge

Qualtrics isn't just for Surveys: Multiplicative effects of an Extension Communication Tool,
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ANREP, FANREP

Background: Communication to Extension clientele varies broadly across program areas and county offices. Effective communication must be accessible, relevant, and timely. **Objective:** To effectively communicate with Extension clientele and develop a two-way channel of communication, a new tool was developed for the Residential Horticulture program in Manatee County. **Methods:** Using Qualtrics, a template newsletter style communication (Horticulture Blasts) was developed which included upcoming classes, newsletter links, online submission form for plant clinic inquiries, overall extension program advertisements and options for the clientele to provide feedback. Feedback fields included topic suggestions, opportunities to thank specific volunteers and general program feedback. This monthly communication is sent to a stored contact list of over 6,000 individuals who have self-selected to receive our communications. Similar communication methods such as Constant Contact are cost prohibitive while Qualtrics is freely available. **Results:** The monthly Horticulture Blasts began in the fall of 2020 and to date has received 784 responses. Special thanks were extended by 12 (1.5%) responses to volunteers and staff, 212 (27%) responses selected potential class topics, 43 (5%) wrote in class topic suggestions and 222 (28%) responded to level of happiness with programs. **Conclusions:** As Extension agents, creativity in delivery method, cost reduction and multiplicative results in communication can increase our efficiency and provide valuable data from our clientele to inform future programming. As a result of this combined communication method, 3 new classes have been developed to better fit the needs of clientele.

Cross Pollinating Program Areas with an Edible Landscaping Field Day
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Background: The growing trend of backyard gardening has also heightened demand for programs on edible ornamental landscaping. Agents from multiple program areas at the UF/IFAS Marion County Extension Service worked together to develop an Edible Landscaping Field Day. **Objectives:** Homeowners from North-Central Florida will learn about and intend to plant Florida-friendly edible ornamental plants; they will maintain their edible landscapes using FFL principles such as efficient irrigation; and they will intend to eat from their edible landscapes therefore increasing their consumption of fruits and vegetables. **Methods:** The

Edible Landscaping Field Day included field demonstrations and classroom presentations. Participants were introduced to 1.) how to develop and maintain an edible ornamental landscape utilizing FFL principles with Florida-friendly edible and non-edible plants, 2.) basic harvesting, pruning and propagation techniques, 3.) microirrigation tips and methods, 4.) food tastings, preservation methods, and nutritional aspects of the plants. Participants went home with a rosemary plant sponsored by a local nursery and mulberry cuttings to propagate. **Results:** 30 people participated in the field day. All participants (100%) said they gained knowledge of FFL; and how to select plants for, create, maintain, and efficiently irrigate their edible landscape as well as fruit and herb preservation methods. Most (96%) intended to plant edible ornamental plants for food production and use the FFL principles to maintain their landscapes. 100% intended to feed themselves or their families from their landscapes, use best management practices to efficiently water their plants, and to eat more fruits and vegetables. **Conclusions:** The Edible Landscaping Field Day was a successful cross-programmatic effort. By incorporating multiple Agents and program areas, this program had impacts across many Extension initiatives and should be replicated and repeated.

Community engagement in a deliberative forum to address debris in the City of Miami

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Background: Litter and debris are pervasive issues around the world and in the City of Miami, Florida. In 2021, the Ocean Conservancy (TOC) procured the University of Georgia to perform a Circularity Assessment Protocol (CAP) to determine debris accumulation, sources of debris, and opportunities to mitigate debris within the City of Miami. The CAP report is a 90-page document that is publicly available. Beyond the final report, TOC envisioned community work that would make recommendations from the CAP a reality. TOC asked the Miami-Dade Florida Sea Grant Extension Agent to design and facilitate an engagement strategy for City of Miami community members to better understand the findings of the CAP and to take ownership of selected recommendations. **Objectives**: Convene a working group (WG) representing at least three of the five City commission districts, communicate the findings of the CAP, engage the WG members in a deliberative co-learning process to develop and prioritize the CAP recommendations into a smaller, Action Guide to be presented to City commissioners by TOC. **Methods:** In partnership with the State Specialized Agent in Facilitation, the Miami-Dade Florida Sea Grant Agent designed and facilitated a process for the TOC CAP WG. **Results:** A total of 14 WG members representing four out of five City of Miami commission districts participated in the process. Five of these members were Spanish-speaking only. At the recommendation of the Miami-Dade County agent, professional interpretation services were procured, allowing for full participation in both English and Spanish. The group achieved its three objectives. **Conclusions:** The group successfully reached its objectives, increased their knowledge of marine debris and has fostered new connections across languages and communities. With the assistance of the agents, TOC is now developing the Action Guide. The WG members are continuing to work together and pursue solutions to debris accumulation within the City of Miami.

"Sprinkler-Free" Landscapes in Florida's Springs Regions: Moving the Needle with Innovative Partnerships and Data-Driven Applied Research

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Background: Protecting Florida's freshwater supply, most of which is drawn from the Floridan aquifer, is a high-priority goal for UF/IFAS Extension and The Nature Conservancy. Toward this shared goal we partnered on an applied research study funded by the Florida Fish and Wildlife Foundation aimed at shifting the market away from the status quo of resource-intense, irrigated landscapes. **Objectives:** Our goal was to better understand incentives, benefits, and tradeoffs associated with the adoption of non-traditional 'sprinkler-free' landscapes (i.e., those that do not use automatic irrigation systems beyond the initial landscape establishment period.) **Methods:** We used a data-driven approach to evaluate four new subdivisions in Alachua County that were constructed without permanent landscape irrigation systems. We compared these 'test' subdivision homes' metered water use, property values, and homeowner perspectives—collected through an online survey instrument—with the same metrics for a sample of conventionally-built 'reference' subdivisions. In all, these data were evaluated for 2,079 homes and a subset of 166 survey respondent homes. **Results:** Average monthly water use of 'sprinkler-free' subdivisions ranged from 97 to 146 gallons per day (gpd) per household vs. 209 to 287 gpd used by reference homes; this equates to 'sprinkler-free' homes using 49-61% less water than homes with conventional irrigated landscapes. We found no statistically significant differences between the two groups' year 2021 assessed property values, with averages ranging from $247,000 to $273,000. Despite reporting statistically equivalent degrees of satisfaction with their landscapes, the 'reference' group of homeowners reported typical landscape maintenance expenses over three times higher than those of 'sprinkler-free' landscape homeowners. **Conclusions:** 'Sprinkler-free' landscapes in new construction represent a potential "win-win-win" situation for homeowners, developers, and our shared freshwater resources. The new communities of tomorrow can serve as "living laboratories" for Extension to accelerate the adoption of low-impact, water conserving landscapes.

Wildlife Webinar Series: Virtual Learning Opportunities Continue to Boost Environmental Literacy

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Background: While many Extension programs are transitioning back to traditional in-person formats, certain virtual programs continue to deliver positive impacts. In particular, interest remains high for online classes about wildlife. Shorter, online classes are accessible to a wider range of audiences while still improving environmental literacy. **Objectives:** The objectives of the program are 1) Following the class, 75% of participants increase their knowledge about Florida wildlife as measured by an in-class Zoom poll, and 2) 50% of attendees indicate they are

more likely to support wildlife conservation efforts. **Methods:** The Wildlife Webinar Series is a monthly 1-hour virtual class via Zoom. It takes place over the lunch break to help reach a wider audience. Topics so far include the gopher tortoise, black bears, Florida panther, venomous snakes, and wading birds. The classes incorporate pictures and videos as visual learning aids. Mid-presentation questions are encouraged for better interactivity. **Results:** In total, 102 participants have attended 5 wildlife webinars in 2022. According to the in-class Zoom polls, 83% of attendees (n=102) improved their knowledge about wildlife. In addition, 62% indicated they are more likely to support conservation efforts based on the information they learned. **Conclusions:** Virtual programs continue to provide accessible learning opportunities to citizens who otherwise may not be able to attend an Extension program. Environmental literacy is linked to important social and environmental impacts such as a better sense of belonging, environmental stewardship, and support of environmental policy measures. By providing an accessible way for residents to learn about wildlife, the Wildlife Webinar Series improved their knowledge of and connection to Florida's precious environment.

Geographically separated, virtually connected: co-teaching across the state utilizing Zoom

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Background: The Covid-19 pandemic brought many changes to Extension programming delivery, largely, the transition into virtual platforms. Utilization of these technologies allowed for safe participation. The Florida Sea Grant agents in Okaloosa and Miami-Dade counties and Okaloosa County Commercial Horticulture agent collaborated and offered an entirely virtual module of the Florida Master Naturalist Program (FMNP), which historically had only been offered in person. **Objectives**: Offer an FMNP module delivered entirely via Zoom and make the experience as engaging as possible without the in-person component. **Methods:** Three UF/IFAS Extension Agents planned and delivered the course. In addition to the required lectures and videos, they coordinated guest speakers, planned other in-class activities and developed guidelines for self-guided field trips and report-out sessions. **Results:** 20 students participated in the June/July 2021 Freshwater Systems course. Pre and post test scores indicated a knowledge gain of 18%. 18/20 students completed the post-course evaluations, with 10 rating the course as "Excellent," 5 "Very Good," and 3 "Good." Open-ended responses reflected the overall high level of satisfaction with the course. Follow-up surveys documented further impacts including volunteer time, information shared with others, working for an organization that promotes advocacy based on science, and more. **Conclusions:** Virtual platforms allow expanded collaborations between agents, across disciplines and physical location. Carefully planned activities successfully build relationships across a virtual space and enhance the learning experience. Zoom provided a unique opportunity for three agents, geographically distanced by 630 miles to teach together.

Multi-Agency Collaboration On Endangered Plant in Marion County, A Natural Resource Leadership Institute (NRLI) Team Project

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Background: Central Florida is home to unique habitats that support plant and wildlife species not found anywhere else in the world. The Natural Resources Leadership Institute (NRLI) Class XXI Clasping Warea Group (Project Team) facilitated a stakeholder meeting to review the status of conservation work on the federally endangered annual wildflower Clasping warea, *Warea amplexifolia* (Nutt.) Nutt. The NRLI Project Team identified a population of this rare plant in sandhill habitats in an unincorporated community in Marion County, Florida near Ocklawaha. **Objectives:** The purpose of this project was to review this largely undocumented population which has faced many challenges associated with low community awareness, insufficient habitat management (lack of prescribed fire) and ongoing development resulting in loss of habitat. Past and present conservation efforts by government agencies, non-governmental organizations, landowners, and residents have lacked strategy and effective coordination. **Methods:** The Project Team identified, contacted, and invited multiple stakeholder groups (53 individuals) to meet as a collective on April 1st, 2022 to discuss goals, known strategies, potential strategies, challenges, future efforts, and available resources. Techniques for organizing this effort included use of the Situation Assessment Matrix, phone interviews and questionnaires, empathetic listening, issue framing, and the circle of conflict. Many process design formats were built into the meeting agenda including presentations, structured go-arounds, listing activities, categorizing, prioritizing ideas, brainstorming and open discussion. **Results:** The methods utilized provided a space where attendees felt free to provide input, advance individual thinking, make decisions and empower themselves to collaboratively initiate recovery efforts at the local level. **Conclusion:** The use of NRLI techniques observed and learned during the 2021-2022 training allowed for a successful meeting that reinvigorated a shared desire, with all parties largely reaching consensus regarding plans for combining efforts, funding, and expertise in support of more collaborative, effective management moving forward.

Getting Wormy with It: A Multi- County Approach to Vermicomposting Education

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Background: The state has set targets for each Florida county to achieve a 75% waste stream recycling rate. Leon and Sarasota Counties are working to increase rates through recycling efforts, food waste diversion, and educational programs. In 2021, Leon and Sarasota Counties' recycling rates were 55% and 49%, respectfully; however, both rates fall short of the state's target. A recent audit of the landfill waste stream shows that 13.8% of the material collected was food waste. Decreasing food waste can therefore increase overall diversion rates in

landfills, which in turn decreases landfill methane emissions that contribute to climate change. **Objectives:** Leon and Sarasota County agents collaborated to conduct virtual and hands-on Vermicompost 101 Workshops to educate citizens on the importance of recycling food waste and the process of vermicomposting. **Methods:** Agents teamed up to conduct 5 virtual and 2 in-person workshops in 2021-22 focused on reducing food waste using vermicomposting. At the hands-on workshops, participants assembled the bedding, food, and earthworms into their pre-drilled multi-tiered vermicompost systems to take home. Attendees were also provided an agent-created vermicompost factsheet. **Results:** A total of 275 participants attended the workshops in 2021-22. An average of 87% of 59 participants surveyed post-workshop increased their knowledge of the benefits of vermicomposting, materials to make a vermicompost system, and vermicompost system maintenance. In tracking behavior change, an average of 95% stated they would share information they learned with others and would use their vermicompost system to recycle food waste and make castings to use in their landscape or garden. **Conclusions:** Residents of Leon and Sarasota Counties have demonstrated that there is a need and demand for vermicomposting education. These educational workshops have effectively decreased food waste and positively impacted the community by teaching participants how to be successful at recycling food waste by vermicomposting.

The Ochs Garden: A Blended Community Garden

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Background: The Ochs (pronounced “oaks”) Garden goal is a connected and diverse community teaching garden. Diversity can reflect culture, age, race, life experiences, and more. The Ochs Garden blends three groups: 4-H, Master Gardeners, and community members. The mission of the Ochs Garden is to provide fun, innovative urban agriculture education to Tampa Bay residents of all ages, backgrounds, and cultures while fostering a community built on teamwork, trust, and integrity. This program could be replicated anywhere appropriate for a community garden or an existing community garden. **Objectives:** Objectives of this program include building a community garden for the surrounding neighborhood, blending youth and adult gardeners, and utilizing Master Gardeners, extension faculty, and staff to educate. **Methods:** An existing 4-H garden was reconfigured to create three spaces, an in-ground community garden for residents, a raised bed Master Gardener demonstration garden, and a container garden for 4-H education. Regular classes and tours are held for all ages, most open to the community at large. Extension faculty and staff visit weekly to teach and observe. **Results:** Extension faculty, staff and volunteers learned the social challenges of building a community garden. Leadership, conflict resolution, and communication skills are learned each growing season. Community gardeners have learned recommended gardening techniques demonstrated through observed behavior change. 70% of educational observations in 2021 have included behavior changes like proper pest control, weed identification, and proper watering. **Conclusions:** Blending a diversity of people into a community is complicated and often difficult but the positive outcomes outweigh the challenges.

Quantifying Impacts of Water Quality Education: Handling Fertilizer Runoff in a Wild and Scenic River Basin

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Background: Seminole County is home to the Wekiva Springs River, a National Wild & Scenic River that is impaired by nitrogen and phosphorous. This water resource is economically and environmentally tied to the area through recreation, property values, wildlife support and aquifer recharge. Research by Florida Department of Environmental Protection in the Wekiva Springs Basin estimates 26% of the nitrate entering the basin comes from urban turfgrass fertilizer. **Objectives:** At least 90% of participants will report an increase in knowledge about invasive species, at least 80% will report the intent to adopt one or more practices, and at least 70% will report utilizing one or more practices learned. **Methods:** Sept. 2018 – Sept. 2020 Fertilizer Workshops educated participants on Best Management Practices (BMP's) for landscapes. Workshops targeted homeowners, who received a free bag of fertilizer, and FDACS licensed landscaping professionals, who received over 520 fertilizer CEUs (271 professionals). **Results:** Through 70 classes, 2,142 people were educated about fertilizer BMP's. Of those participants, 1078 completed reflective post-surveys which revealed 97.2% increased their knowledge on the impact's fertilizer run-off had on local waterbodies, 98.8% intended to use the information to fertilize their yard appropriately, and 95.3% were more confident they could fertilize appropriately. In a 6 month follow up survey, 86.5% of 579 participants reported they were using BMP's. **Conclusions:** Using UF/IFAS research on nutrient leaching, these outcomes were estimated to reduce annual N leaching by 112.7 to 1,469 pounds, providing an economic benefit of $56,350 to $734,500. These educational efforts resulted in data that shows significant behavior changes which resulted in a reduction of nitrogen leaching, which can lead to harmful algae blooms and impairments. Participants better understand sources of water contamination resulting from fertilizer misuse and acted to change those behaviors.

Water Wednesday Workshop: Bringing Virtual Program to Life

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Background: In response to the COVID-19 pandemic, a team of the UF/IFAS Extension agents in Central District started a webinar series entitled Water Wednesday in May 2020. This water

awareness program educates urban residents on water conservation and water quality protection practices. In the 2021 annual program evaluation, 86% (n=35) of the respondents indicated that they would be interested in attending an in-person Water Wednesday event. Therefore, eight agents in five Central Florida counties partnered with the Lake County Water Authority and developed the first annual Water Wednesday Workshop. **Objectives:** This in-person workshop aimed to further engage urban residents who are interested in learning sustainable landscape practices in water conservation and protection. **Methods:** This Water Wednesday Workshop was a half-day hands-on workshop. Attendees attended a plenary session about the current and future water supply in Florida, and then rotated between eight stations in the Lake County Discovery Gardens. Stations included interactive watershed and groundwater models, construction and application of rain barrels, design and functions of rain gardens, plants that protect the waterfront, irrigation systems and calibration, different uses of mulch in landscapes, backyard water features for wildlife, and at home composting. **Results:** Forty people attended the Water Wednesday Workshop. Thirty-eight attendees took the post-program evaluation surveys. Ninety-eight percent of the respondents (n=38) rated the workshop "very helpful". Over 95% of respondents reported that they improved their knowledge about sustainable landscaping practices in water conservation and protection. Eighty-nine percent of the respondents indicated that they would adopt at least one of the sustainable landscape practices that were demonstrated at the workshop. **Conclusions:** While virtual programs may reach a broader audience, they cannot fully replace the relationships built by in-person interactions. The combination of annual in-person events with regular webinars can help fill the gap and enhance programmatic success.

Leon County Extension Tackles Food Waste Prevention

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Background: According to the Environmental Protection Agency, the US throws away 35 million tons of food waste annually. This waste combines with anaerobic conditions in landfills to create methane, a gas 25 times more harmful than CO2. Landfills comprise 18% of total methane emissions in the US, contributing to climate change. **Objectives:** During Florida Food Waste Prevention Week, six Leon County agents sought to teach Leon County residents strategies to reduce and prevent food waste in their daily lives by collaborating on two multi-program area workshops. **Methods:** The Food Waste Prevention workshop was conducted via Zoom and streamed to 277 Leon County residents via Facebook Live. This workshop tackled food waste from multiple approaches, including cooking with leftovers, meal planning, reading food labels, reducing waste in the garden, and how to compost food waste. The second workshop, Backyard Composting 101, was attended by 135 participants via Zoom, targeting more specifics about how Leon County residents can successfully compost food waste. Each workshop included resources to help participants implement these changes in their daily lives. **Results:** 93% of participants surveyed in follow-up evaluations reported that they implemented

at least one of the following strategies for reducing food waste: utilized foods that would otherwise be thrown away; paid more attention to expiration dates, “use-by”, and “sell-by” labeling on food packages; used succession planting methods in their vegetable gardens; composted food scraps; and conducted better food safety practices. **Conclusions:** By highlighting the programming strengths of each Leon County agent, the Florida Food Waste Prevention Week workshops were able to incorporate multiple aspects of food waste prevention. This approach taught 412 Leon County residents that steps to reduce and prevent food waste are comprehensive, starting long before a meal is prepared, and continuing long after a meal is concluded.

Supporting Large Audiences Through Virtual Invasive Species CEU Workshops

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Background: Invasive species pose significant threats including economic losses in agriculture, human and animal health hazards, disruption of native ecosystems and more. Nationally, losses due to invasive species are estimated to cost over $120 billion annually. Florida has a high risk for the establishment of invasive species and thus, education on related topics is critical to protecting agriculture and natural resources. The agents partnered with the Central Florida Cooperative Invasive Species Management Area (CFCISMA) to host educational opportunities. **Objectives:** At least 90% of participants will report an increase in knowledge about invasive species, at least 80% will report the intent to adopt one or more practices, and at least 70% will report utilizing one or more practices learned. **Methods:** In 2021, we hosted two invasive species webinars. Speakers from multiple agencies were invited, including experts from UF, the Florida Department of Agriculture and Consumer Services (FDACS) and the United States Department of Agriculture (USDA). The webinars were approved for FDACS pesticide Continuing Education Units (CEUs) in 10 categories. Post-webinar and 3-6 month follow up surveys were utilized to measure outcomes. **Results:** The two webinars were highly successful with over 590 participants from across the state, and more than 450 pesticide CEUs were issued to attendees. In a post-webinar survey, 99.6% (528/530) increased their knowledge on invasive species and 98.3% (521/530) intended to adopt at least one practice learned (ie. reporting suspect pests, using caution to avoid spreading invasive species, etc.). In a 3-6 month follow-up survey, 97.1% (304/313) had adopted at least one practice since attending. **Conclusions:** The virtual webinars increased the capacity to teach larger audiences without geographic limits and offer CEUs to professional clientele. As a result of the webinars successes, CISMAs in other regions have requested guidance on hosting programs in collaboration with outside agencies.

Science and Technologies for Phosphorus Sustainability (STEPS) Initiative: Mechanism for Knowledge Transfer

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Background: Phosphorus (P) is a critical component of all life forms and an essential element in the productivity of food systems as a key nutrient in fertilizers. Yet many challenges exist around the availability, application, management, and disposal or reuse of P. STEPS is a National Science Foundation supported convergence research center that addresses the complex challenges in P sustainability by integrating disciplinary contributions across the physical, life, social, and economic sciences. **Objectives:** The STEPS vision is to facilitate a 25% reduction in human dependence on mined phosphates and a 25% reduction in losses of point and non-point sources of P to soils and water resources within 25 years, leading to enhanced resilience of food systems and reduced environmental damage. Over the next years, the STEPS vision is to enable a world in which workers (e.g., farmers, agronomists, environmental managers) choose from a broad portfolio of effective and efficient technologies to implement locally, selecting them because of their relevance to meet local needs, while considering their future impacts on the P cycle and the necessity of growing circular economies for critical elements rather than dependence upon single-use extractive practices. **Methods:** STEPS implements an interactive stakeholder engagement process to understand stakeholder needs and integrate these within the innovation of new materials, technologies, and practices focused on sustainable P management. **Results:** Results from stakeholder outreach and engagement activities highlight several effective ways to manage P sustainably across a range of sectors. Strategic stakeholder engagement is needed to ensure research outcomes align with stakeholder needs and perspectives to help lead development of useful solutions. **Conclusions:** In 25 years, the outcomes of STEPS will have contributed to advancing multiple Sustainable Development Goals adopted by the United Nations, including Zero Hunger, Clean Water and Sanitation, and Sustainable Cities and Communities.

Master Gardeners: Key players in growing food for Urban Agriculture Systems

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Background: Since May 2019, the Broward County Master Gardener Volunteer program (MGVs) has collaborated with UF/IFAS FLREC Landscape Ecology program led by Dr. Jiangxiao Qiu focused on urban sustainability, UF/IFAS FLREC Sustainable Plant Production program directed by Dr. Kimberly Moore, and UF/IFAS EREC Dr. Germán Sandoya focusing on lettuce cultivar development to launch the first Sustainable Urban Food Production program. **Objective:** This multi-disciplinary approach brings together UF statewide and county extension faculty to train MGVs on new sustainable urban food production practices. The overall goal is to reach an audience in unique urbanized landscapes, support food desert areas, and provide research-based learning experiences. This course is a pilot for a new Sustainable Urban Food Production program in urban areas. **Method:** We introduced an *Urban Food Production* MGV module into

the current MGV training in Broward County. MGVs learned practices on sustainable urban agriculture, water and energy conservation, and implementation of various technologies including rain barrels, drip irrigation, composting, hydroponics, and growing plants in small spaces. They expanded their knowledge by growing UF Lettuce lines in a Hydro Kit (Deep-water culture system model) designed explicitly for this purpose. **Results:** MGV's gained knowledge on urban food production principles. The pre-and post-survey results indicated a 97% level of program satisfaction. After the workshop, participants (100%) agreed that well-managed and adopted urban agriculture could promote sustainability. **Conclusion**: The MGVs are in unique position to trains others in urbanized landscapes, support food desert areas, and provide research-based learning experiences. Future applications of this program will expand to Broward schools in collaboration with 4-H faculty.

Youth Development Programming
Sponsored by FAE4-HA

Room Hosts: Julia Kelly and Crystal McCazzio

Destination: Work! A 4-H Workforce Preparation and Career Exploration Program for Teens
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Background: *Destination: Work,* developed in response to a county needs assessment, engages youth in workforce preparation, and career exploration. The 4-H advisory board recommended the agent focus on the following priorities 1) workforce preparation, 2) communication skills, 3) career exploration. The program developed encompasses these priorities. **Objectives:** Youth will develop or improve life skills related to workforce preparation in the areas of research, teamwork, problem solving, critical thinking, and communication. Youth will receive introduction to a career resource site to research a job of interest. **Methods:** The program was held twice virtually using the TEAMS platform and once as an in-person, 3-day workshop. Reflective questions and problem-solving activities were woven throughout the program as youth discussed solutions for solving potential workplace challenges. The U.S. Bureau of Labor Statistics Occupational Outlook Handbook website was used to research career options. During the in-person event, guest speakers provided career insight and connected the key life skills to their job success. A visit to the Public Safety Academy at a local community college introduced law enforcement career options. The virtual delivery programs allowed youth to practice telecommunication skills necessary in many workplaces today.
Results: Forty-nine teens improved or developed workforce skills and explored career options. Ninety-two percent of youth improved job research skills and established a SMART career goal. Ninety-six percent improved communication skills. Eighteen youth completed career exploration project books. Eighty-eight percent improved understanding of proactive steps to prevent stereotypes in the workplace. **Conclusion:** The response from youth, parents, and community partners was enthusiastic. The agent reviewed this program with County Commissioners who voted to support the agent's work with funds to purchase 6 additional laptops for career exploration. Additional programs scheduled will focus on workforce preparation and career exploration in the healthcare and public safety fields for 2022.

Roaches and Spiders and Scorpions, Oh My: How to Set Up a 4-H Arthropod Zoo Program in Your County
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Background: Youth in Jacksonville's urban communities lack opportunities to explore nature and receive experiential education in environmental science. Duval County elementary school teachers regularly request hands-on environmental education programs for the classroom. **Objectives:** The 4-H Arthropod Zoo Program was created to meet a growing need for hands-on

environmental education in schools. Program objectives were for students to 1) make observations and inferences about the natural world 2) keep records describing observations 3) recognize ways animals and humans impact the environment 4) relate science to real life experiences 5) verbalize concern for living things 6) exhibit interest in STEM careers **Methods:** This program blends direct education from 4-H professionals and teacher volunteers. 4-H provides an intro lesson covering skills and vocabulary students will need for the project. Over two weeks, students use a 4-H arthropod journal and Google Site to learn about, observe, and draw native arthropods. 4-H then returns for a closing lesson and live animal interactions with our native and non-native arthropod zoo animals (tarantula, scorpion, vinegarroon, roaches, millepedes, darkling beetles, and more!). **Results:** Observation forms from teachers and youth responses indicate an increase in knowledge of bugs' and humans' impact on the environment, the ability to make and record observations, the ability to relate science to real life experiences, concern for bugs and other animals, and understanding of careers in entomology. **Conclusions:** Creating a 4-H Arthropod Zoo is an exciting way to meet demands for environmental science education in classrooms and community programs. Teachers describe the program as a "field trip in the classroom," and students are excited to learn about each day's "featured bug." This program is easy to replicate in any county. Session participants will learn how to fund, purchase, care for, and use live bugs and 4-H resources for their own 4-H Arthropod Zoo.

Florida 4-H Dairy Heifer and Goat Chain

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Background: The dairy project area is high content and high context, creating an opportune situation for positive youth development. The 'spark' of a dairy animal can propel a youth to a positive future. **Objectives:** The project provides 4-H members with an opportunity to win a registered project animal. Objectives include reaching new populations of youth, increasing the quality of genetics in the 4-H dairy program, and helping youth strengthen connections with industry and one another. **Methods:** Dairy producers donated registered animals to start this program. 4-H members selected through a rigorous process were granted one of these animals. The selected 4-H member cares for and exhibits their animal. The 4-Her works with the SSA to have the animal bred and the resulting heifer calf or doe kid is cared for by the 4-H member for three months after birth; and then the process will start over for another 4-H member who will win this new animal, and the process will continue as a chain. After the first female offspring, any future offspring that the animal has will be the property of the original 4-H member. **Results:** So far nine youth from eight counties have been awarded animals. The first three animals awarded have calved, and these heifers are in the process of being placed with new 4-H youth. The original youth will serve as mentors to the calf's new owner. **Conclusions:** It is hoped the spark of the dairy projects will help positively develop youth, and the spirit of mentorship from one generation to the next will foster a community of belonging which is fundamental to positive youth development. Several participants are already exhibiting an interest in careers related to the dairy industry, so it is hoped that this project will help them on their journey to thrive as adults.

4-H Recruitment Campaign for Post-pandemic Recovery

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Background: Due to the global pandemic, 4-H youth and volunteer membership declined substantially in Florida. The goal of our recruitment campaign was to address concerns related to 4-H participation in our geographic district. We developed a strategic campaign utilizing research-based tactics and strategies to help our 4-H programs recover from the COVID-19 pandemic. **Objectives:** Our objectives included: 1. improve visibility and awareness of opportunities to develop skills for work and life through 4-H, 2. increase awareness of 4-H opportunities, and 3. recognize contributions of 4-H members and volunteers to their communities and the 4-H organization. **Method:** Our target audience included current 4-H families and volunteers following our social media accounts, as well as potential 4-H families and volunteers. Tactics for this campaign include blog articles, social media posts, and in-person outreach events. We used Facebook marketing to promote blog and social media posts. The campaign began the first week of August 2021 and ended with culminating county events during National 4-H Week in October. **Results:** Counties reported there are at least 21 new clubs since the campaign concluded. Our visibility and social media presence substantially increased. During our two-month campaign, engagement on social media increased by 4,700%. We also gained 52 new page followers on Facebook and 70 new page followers on Instagram. Because we used Facebook marketing, we were also able to see that 190 people visited our online enrollment link embedded in campaign materials. The most surprising result was a 67% increase in blog readership. **Conclusion:** Targeted recruitment campaigns can increase visibility and awareness, which is the first step to recruitment. However, the campaign must be strategic with communication tailored to the market- in this case parents and potential volunteers. Based on the results of our first campaign, we plan to repeat this campaign in 2022.

Global Virtual Exchange Expands Possibilities for 4-H and Non-4-H Members

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Background: Travel restrictions, quarantines, and safety considerations have made participation in global exchange programs daunting and more difficult. However, youth still need opportunities to develop cultural competencies, empathy, and connection. To succeed in this today's modern global society, students must be far more knowledgeable and curious about world regions and global issues, attuned to diverse perspectives, able to communicate across cultures, and disposed to acting toward the common good (Boix Mansilla, et al., 2013). In response to this need, this team of youth development professionals delivered a six-week, summer virtual exchange program for teens in Florida, Kentucky, and Iraq. **Objectives:** The three main objectives of this program were that youth develop cultural competencies in a safe environment, youth engage in meaningful experiences that build relationships and foster collaboration across cultures and youth acquire an appreciation of their own culture and cultures of others. **Methods:** One, six-week, virtual exchange program was developed and offered to youth 14 and older living in the participating states/country. Participants met on Zoom each Saturday for 6 weeks. The sessions were specifically designed to encourage interaction and sharing amongst participants to foster relationship development. Youth also received weekly assignments to complete between meetings. These assignments were designed to challenge youth to learn more about their own culture. **Results:** Based on a post program evaluation, 100% of participants were able to define culture, demonstrate the ability to communicate cross-culturally, and self-reported a greater understanding of their own and the culture of others. In addition, 30 % of participants continued to communicate after the exchange because of the relationships they developed. **Conclusion:** Becoming a world-minded person often begins with global awareness and grows as individuals begin to appreciate the viewpoints, experiences, and worldviews of others, (Merryfield, 2001; Noddings, 2005), which is what these participants experienced through this program.

Archery Summer Day Camp Fosters a Sense of Belonging in the Archery Club

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Background: For several years, the county offered an archery day camp focusing on basic archery skills. The retention rate of Toxophily (love of the bow) 4-H Archery Club members who were former day campers was 57% (club members for at least six months). The archery club leader, who also co-led the summer day camp, decided to make the day camp more purposeful to encourage campers to become long-term club members. **Objective:** Create a safe and inclusive environment to foster a sense of belonging, leading to a higher retention rate of club members who were former campers. **Methods:** At camp, seven lessons were taught: eye dominance, shooting safety, shooting form, archery equipment, instinctive shooting, archery disciplines, and building a bow. Lessons targeted three of eight life skills: teamwork, critical thinking, personal safety, decision making, self-responsibility, self-motivation, problem solving, and planning/organizing. Each lesson identified the three life skills targeted in the lesson. Each lesson included introductory questions, an activity, and scripted reflection and application questions. The county parks and recreation department provided the facility and allowed the county naturalist to deliver the lesson on building a bow. The remaining lessons were taught by

the archery club leader, 4-H agent, and teen camp counselors. **Results:** After checking in on Day One, campers took a 30-question multiple-choice and open-ended answer pre-test. At the end of Day Two, the leader administered the post-test. The two-year average knowledge increase was 36% (*n*=31). Different proficiencies were evaluated for each lesson. Some lessons had multiple forms of evaluation. Equipped with archery knowledge and skills, new members (former day campers) started the year more evenly matched with returning club members. After two years of the new format, 94% of club members (*n*=17) are former day campers. **Conclusion:** Creating a sense of belonging in the regular club through summer day camp participation is possible.

"Why Do People Act That Way? Understanding Differences" - An Experiential Learning-based "Discovery Workshop" About Diversity, Inclusion, & Belonging for Teens

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Background: This three-hour experiential learning-based "discovery workshop" offered for teens and chaperones attending 4-H University, a statewide 4-H youth development conference held at the University of Florida. It is annually filled to capacity and evaluated highly. **Objectives:** To provide a low-key, fun means to teach about the importance of diversity, inclusion, and belonging; such as interpreting aspects of your personality and how it relates to others, recognizing culture and how it influences your views of the world, and Identifying cultural competency skills needed to overcome conscious and implicit biases. **Methods:** This session provides participants the opportunity to interact with diverse youth statewide, through which they engage in a variety of hands-on activities to learn about themselves and others. A favorite activity youth consistently find valuable is learning the results of a personality inventory**.** Although this training was developed as a "discovery workshop" for a statewide, university-based conference for teens, it could easily be used at county, state, or district levels in shorter session at regular meetings or other settings**. Results:** Through this training offered for the past six years, 150 youth have gained new insights into working with others different than themselves. Through program evaluation, youth reported their intentions to use their new knowledge and changed attitudes that will influence their leadership roles in their counties and districts. Most important, the training has proved to be a subtle, low-key way to teach about the importance of diversity, inclusion, and belonging. **Conclusions:** Participants reported they are likely or very likely to: Consider cultural differences when interacting with others, recognize their biases when forming my opinions of others, consider differences in learning styles when teaching youth or working with others, and consider differences in privilege as possible explanations for the behavior of others.

Citrus County 4-H Progressive Agriculture Foundation Safety Day

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Background: According to the Centers for Disease Control and Prevention (CDC), the number one cause of death for children is injury. A review of agricultural fatalities in Florida, 2010-2019, revealed children under the age of eighteen accounted for 8% of fatalities. In Florida, ninety-eight children died from drowning in 2021, an increase from sixty-four deaths in 2020. Citrus County 4-H partnered with Progressive Agriculture Foundation to offer one of the first safety events in Florida. **Objectives:** The objective of this Safety Day was to teach youth about agricultural safety and health in a fun, safe, and age-appropriate manner. **Methods:** The Safety Day was held at a local blueberry farm. Youth rotated through five hands-on, educational stations, including water safety, electrical safety, power take-off (PTO) safety, nutrition, and mental health awareness. **Results:** Youth learned to be safe on the water with whistles, sharing a water plan, and avoiding swimming alone. Youth attendees were surprised to learn how much sugar was in their favorite sodas and juices. When presented with the choice of a sugared beverage or fruit-infused water, 75% chose the water as a drink lower in sugar and "better for staying hydrated". At the mental health awareness station, youth self-identified stressors, including homework, school, chores, and family responsibilities. They shared peer to peer strategies for reducing stress. One youth demonstrated a breathing technique that has worked for them. As a result of attending the Safety Day, youth were able to interact with safety-trained adults (100%) and practice safety skills (100%). **Conclusions:** The Safety Day engaged youth in doing, applying, and reflecting on positive experiences. Incorporating safety lessons and activities into youth development programs is essential to build the skills youth need.

Northeast and Central 4-H Agent Summit

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Background: Through professional development, 4-H Extension agents, develop competencies to lead successful youth development programs. The 4-H summit provided professional development workshops, opportunities for district planning, and networking time. **Objectives:** There were two objectives of the summit. First, agents will develop youth leaders in county 4-H programs by evaluating current youth opportunities and planning actionable items. Second, to develop a sense of belonging within each Extension District to form and/or expand partnerships and teamwork opportunities. **Methods:** A two-day summit, in Crystal River, FL, which brought agents to an external location to learn, plan and network. Topics included the "why" of what we do, youth mental health, teen leadership, volunteer recruitment, and environmental education. 4-H Agents were given the new youth master naturalist curriculum and then practiced activities to use with youth in outdoor programming. In addition to this resource, agents received information on risk management for planning Environmental Education programs to reduce and minimize the potential for unwanted outcomes. By including planned, informal time in the meeting schedule peer relationship were nurtured within the 4-H districts. **Results:** According to the results of a post-event survey of 17 4-H Agents, the summit objectives were met. Agents (82 %) reported opportunities to plan actionable items for youth leadership. As a result of attending the summit, agents were able to develop relationships with peers (100%) and

practice teamwork (94%). Many agents reported "the summit was an opportunity to meet many new agents for the first time". **Conclusions:** Professional development engages 4-H Agents in doing, applying, and reflecting on positive experiences for youth. Incorporating time for professional development is essential to build the skills that 4-H agents require to develop strong youth development programs.

STEAM to Go! Crafty Clover Kits

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Background: During a time when many kids have had their learning style disrupted or changed the "STEAM to Go! 4-H Crafty Clover Kits" gave educators a fun way to teach about the world around us focused on science, math and art. Each of the lessons are directly correlated to the 1st grade Florida educational standards. **Objectives:** To provide youth an opportunity for hands on learning that can be taught by the teacher or 4-H Professionals. To provide kits for youth to experience the program even if their school cannot have outside visitors. The kits also allow 4-H professionals to reach more youth during a time that they may not be allowed into schools or to travel. **Methods:** This program consists of six lessons completed monthly based upon the season or holiday that month. Each lesson plan contains a book (AR) which will be read to the students, a math and/or science activity, and a craft to be taken home to be enjoyed by the student's family. The lesson topics include: Bats (October), Pumpkins (November), Snowflakes (December), Groundhog Day (January/February), Butterflies (March), and Flowers (April). **Results:** During the first year over 250 youth in 14 classes participated with 5 of these classes opting for kits and 9 classes were taught in person. Teaches have asked for the program to be offered again next year with additional teachers also asking for the program. **Conclusions:** This program is designed to be easily replicated. A TEAMS folder is available of all lesson plans, worksheets, fact sheets, and how to craft sheets. Along with a list of books to use and supplies to buy.

Teaching Best Management Practices in the School Garden

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Background: Lafayette County is located in the Suwannee River Basin Management Action Plan (BMAP) which is a project to improve water quality by reducing pollutants and implementing Florida's Agricultural Best Management Practices (BMPs). **Objectives:** To educate third grade students in Lafayette County about their impact on water quality and demonstrate how to execute BMPs through the school garden. **Methods:** Curriculum was developed from a variety of resources to provide lessons to students about water quality as well as educate them about using a soil analysis to guide nutrient application, use drip irrigation in the garden as part of water conservation, and use integrated pest management to control unwanted insects while attracting pollinators to the garden. The remaining five weeks of the program consisted of

students implementing BMPs in the school garden as well as students learning from guest speakers from the Lafayette Soil and Water conservation district and local ag producers. Curriculum and videos prepared by the Suwannee River Partnership were integrated in lessons throughout the twelve-week program. **Results:** Seventy-six Lafayette Elementary School third grade students were chosen to participate in this environmental educational program due to their capacity to understand BMPs, being of 4-H age and their active participation in the school garden which was relevant in teaching agricultural BMPs. **Conclusions:** This ag literacy program was very successful in increasing third graders' knowledge of BMPs and the importance of BMPs being used in all agricultural production including home, school, and community gardens. The program was able to bring awareness to environmental concerns the youth were unaware of while using hands-on activities in the garden to teach BMPs. Furthermore, results from surveys given to third grade student participants indicate the youth are enthusiastic about making changes in present and future garden projects that include BMPs.

Jr. Paleontologist 4-H Summer Camp

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Background: Attracting new audiences to 4-H can be accomplished by seeking innovative ways to teach unique topics. Using the popularity of dinosaurs, the Jr. Paleontologist 4-H Summer Camp studied the world of paleontology beyond the Hollywood experience and explored some of the lesser-known scientific careers in the field. **Objectives:** The Jr. Paleontologist 4-H Summer Camp provided youth an opportunity to learn about the different types of fossils, the four major divisions of geologic time, the unique prehistoric life that thrived in each era, and how fossils are formed. Additionally, this camp was designed for youth to gain interest in the various career opportunities within the field such as paleobotany, museum curation, and more. **Methods:** A multifaceted learning environment was constructed using games, videos, and activities which accompanied lessons provided by the National Park Service and UF/IFAS Extension faculty. Youth completed a mock fossil dig with identification, a dinosaur bone build activity, created plant and animal trace fossils, made invertebrate fossils using soap to imitate amber, and designed a prehistoric diorama using their finds from the week. A field trip with a tour of the Florida Museum of Natural History's Paleontology Collection concluded the camp. **Results:** Twelve youth attended the camp. For 83% of the group, this was a first-time 4-H experience. Post-reflective surveys (n=9) showed that the average increase in knowledge for the group was 154% across all topics including types of fossils, paleontology, megafauna, geologic eras, and prehistoric invertebrates. Furthermore, 100% of youth could relate prehistoric animal characteristics to animals of today. At least 93% of participants stated their desire to join 4-H and/or return to day camps next year. **Conclusions:** Collaboration among extension faculty with varied backgrounds can provide a holistic learning experience to youth with non-traditional 4-H interests and increase exposure to 4-H programming.

The Value of 4-H According to Parents of 4-H Club Members in Florida

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Background: In order to maximize the strengths of the 4-H Youth Development Program and promote its value to the public and funding agencies, Extension staff must know the value of 4-H as it is perceived by others. Since parents are key stakeholders in the 4-H program because they approve of their children being members and because they are taxpayers and voters, this study aimed to find what parents saw as the value of 4-H. **Objectives:** To determine how 4-H has been valuable to their children, problems faced by 4-H, and other beliefs of 4-H parents about 4-H. **Methods:** The descriptive survey research used mixed methods of mailed and online questionnaires, with an online version offered in Spanish as well as English. Announcements were made to Extension/4-H staff in advance and multiple follow-ups were mailed to study subjects, resulting in 377 usable responses and yielding a margin of error of +/- 4.95 percent at a 95 percent level of confidence. The questionnaire was developed by the researcher, reviewed by a panel of experts, and field tested by adults similar to respondents. **Results:** Findings included how 4-H has been valuable to their children, problems faced by 4-H, and other beliefs of 4-H parents about 4-H. For example, 96 percent of 4-H parents believe 4-H has been valuable or very valuable for their children. **Conclusions:** Because a representative statewide sample of parents of current 4-H club members realize that not enough people know about 4-H and that the public often thinks 4-H is only for kids who live on farms, it shows that even strong supporters of 4-H understand that not everyone else feels the same way about 4-H because they simply don't know enough about 4-H to realize its value. This validates the need to diversify 4-H program development and audiences served.

I Want to Join 4-H, Now What? Removing Barriers and Fostering Belonging to Engage Families in 4-H

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Background: 4-H is a complex program. Connecting new youth and families to 4-H presents challenges: lack of opportunities for families to understand 4-H, cumbersome procedures, and fewer club volunteers. For youth to achieve higher outcomes, they must feel as though they belong. Belonging is fostered through a positive and supportive environment to learn, the opportunity to develop skills, and a place where a youth's family and community come together. Being intentional about creating a sense of belonging is important, especially when youth first connect to a county 4-H program. This goal is accomplished through At-Large 4-H Clubs; county-level 4-H clubs offering 4-H project learning, skill development, and education about 4-H events and activities. **Objectives**: (1) create a place for youth and families to immediately connect to the 4-H program, (2) provide opportunities for parents to learn more

about 4-H, (3) teach about 4-H projects, events, activities, and (4) provide openings for teens and volunteers to teach and lead. **Methods**: Two counties created At-Large 4-H Clubs. Faculty, staff, and volunteers taught youth ages 5-18, and their families, about different 4-H project areas, events, and activities. They also modeled components of a 4-H club. **Results:** Since the start of these At-Large 4-H clubs, engagement of new youth in the At-Large 4-H clubs increased 82%. Participating youth increased knowledge about projects, events, and activities. 65% indicated a stronger sense of belonging, as indicated by pretest-posttest. Youth also demonstrated higher-levels of engagement in 4-H. Observation data indicated that families new to the 4-H program felt a lower level of frustration. Results also included the start of new 4-H clubs, providing additional positive youth development experiences to more young people. **Conclusion**: Intentionality in creating places for potential new 4-H members and families to belong is important in creating a quality 4-H youth development program.

4-H After-School Garden Clubs: A Model for Reaching Underserved Youth for Better Health

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Background: Nearly one in three school-age children and adolescents in the United States are overweight or obese, and only half of all children ages two to seventeen meet federal diet quality standards. Maintaining a healthy, age-appropriate diet is one way in which students can protect themselves against unhealthy weight gain and serious long-term health effects that come with it. 4-H Garden Clubs encourage healthy lifestyle habits with the goal of reversing this trend toward poor health outcomes for teens and adults. **Objectives:** (1) 50% of youth participants will report increased knowledge regarding healthy food choices and growing their food. (2) 50% of youth will report consuming more vegetables because of participation. **Methods:** After-school 4-H clubs utilize the "Learn, Grow, Eat, and Go" (Texas A&M) curriculum to teach gardening and nutrition. Lessons are planned by the 4-H Agent and taught by the 4-H Teaching Assistant either directly or through volunteers using prepared 4-H kits. New sites receive a raised bed garden, soil, fertilizer, seeds, and transplants to grow seasonal vegetables. Returning sites continue to receive seeds and transplants each season. Garden consultation and greenhouse transplant starts are provided by the Horticulture Extension Agent. The program targets students in grades 3-5 and includes a full year with twenty-four lessons. Most are delivered in communities populated by traditionally underserved and underrepresented youth. **Results**: In 2021, 194 youth participated in the 4-H garden club programs. Youth (n=134) were surveyed in the spring to determine if they had increased knowledge or improved their eating habits. 65% learned more about healthy food choices, 73% learned how to plant a garden, and 56% reported trying to eat more vegetables. **Conclusions:** Youth that experience growing their own food, weekly vegetable tasting, and engaging nutrition lessons are likely to improve eating habits which can contribute to better health.

Health, Personal Finance, and Housing
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Room Hosts: Andrea Nikolai and Jenny Rodriguez

Addressing Chronic Disease Through a Mediterranean Online Cooking Series
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Background: The top four causes of death in Polk County are lifestyle-related chronic diseases. The age-adjusted death rates are higher in Polk County than they are for the state of Florida for each of the four most common causes of death: heart disease, cancer, chronic lower respiratory disease, and stroke, as well as diabetes (1). Eating the Med (Mediterranean) way has been shown to reduce the burden or even prevent cardiovascular disease, diabetes, some cancers, and cognitive decline (2). **Objectives:** To increase knowledge of how to eat the Mediterranean way and to increase chronic disease prevention behaviors, such as choosing healthier foods. **Methods:** Med Instead of Meds is a six-class series that teaches participants the seven steps to eating the Med Way. Two food demonstrations were included with each class. The classes were online, so participants were encouraged to cook along to learn to prepare the recipes and get to try them. Each recipe the participants made was an entry into a drawing for five $20 Publix gift cards. **Results:** Thirty-three people registered for the series, and an average of 20 people attended each session. Sixteen participants (48%) cooked recipes for the contest for a total of 88 recipe entries. Ninety-six percent of survey respondents (22 of 23) were very or extremely satisfied with the class, 96% increased their knowledge on how to eat more like the Mediterranean way, and 96% indicated four or more healthy changes they have made as a result of the class. Participation also correlated with overall health changes. Eight participants reported weight loss, five reduced blood pressure, three reduced cholesterol, and two reduced the amount of medicine they take. **Conclusions:** This class was not only enjoyed by participants but resulted in behavior change and improved health and could be used as a tool to help prevent chronic disease.

Hybrid: Healthy Florida Lifestyles
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Background: Health education's long history in Florida Extension focused primarily on nutrition and physical activity. In 2019 a multidisciplinary approach was used to engage in

comprehensive wellness education, linking local foods, agriculture, and environment to nutrition, exercise, and mindfulness. **Objectives:** To teach strategies blending health and wellbeing domains with food systems resulting in adopting practices. The Healthy Florida Lifestyle desired impact was to increase the number of Floridians who are healthy at every stage of life by focusing on five domains of wellbeing: physical, social, environmental, mind, and financial. Agents and the SNAP-ed food systems specialist joined Family and Consumer Sciences to teach in-person classes, develop a google site, materials, activities, and finally, an evaluation. Unfortunately, the Delta variant required agents to transform program delivery using a hybrid approach. **Methods:** The google site was chosen for a more comprehensive learning experience and access to materials upon program completion. Each virtual session lasted 2 hours, with different agents and topics each hour. The recordings of the initial three sessions were added to the site and emailed to absent participants. To keep participants engaged, the program was structured to offer new lessons and materials each week. **Results:** A total of 106 participated in the multi-class wellness series. Post-series surveys of all participants (n= 70) indicate 90% (63) increased knowledge about agriculture in Florida, 83% (58) increased knowledge about nutrition, 91% (64) increased knowledge about exercise, and 84% (59) increased knowledge about financial wellness. Nine-month follow-up surveys (n= 14) indicate that each participant has adopted at least one healthy lifestyle behavior. One respondent reported that the session on finance helped lead to the purchase of a first home. **Conclusion:** Integrating health and wellbeing domains with local food systems leads to the adoption of a healthy lifestyle.

Wheeling & Dealing: Buying your New Ride reaches youth audiences with financial education by appealing to interest in car ownership

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Background: Capturing the attention of youth to participate in a financial literacy program requires creative marketing and innovative delivery. As the limited supply and increased demand of vehicles pushed used car prices higher, a team of multi-county extension agents collaborated to educate youth on financial topics through a program focused on vehicle ownership. **Objectives:** Youth participates will improve their financial literacy in areas of research, setting financial goals, understanding finance options, budgeting, and negotiation while determining the true cost of vehicle ownership. Agents will develop a creative way to attract youth to financial programs. **Methods:** This was a multi-county collaboration to provide financial education to youth from limited resource communities. The program was implemented in two formats: virtual and in-person. The curriculum consisted of modules on goal setting, saving, research, finance, and negotiation. The in-person delivery included a mock used car lot, the opportunity to complete a vehicle inspection checklist, a role-playing activity to practice negotiation strategies and guest speakers. Agents integrated real-life connections to adult responsibilities like paying bills, staying on budget, setting financial goals, and tracking expenses throughout the car-buying educational experience. **Results:** Twenty-six youth and

four adults participated. Four vehicles were purchased using lessons learned from this program: two by participants and two by family members who received the shared information. Ninety-five percent of participants indicated that they could create a budget and eighty-four percent could write a SMART financial goal. One hundred percent stated they felt confident they could negotiate for a better price after attending the program. **Conclusion:** Teaching financial concepts is easier when youth are engaged and interested in the topic. Imbedding financial literacy concepts in a first-time car buying program is a creative way to attract youth audiences to financial education programs.

Rental Education for Limited Resource Families in Tri-county Communities. *Rodriguez, J. jennyarodriguez@ufl.edu, FEAFCS, UF/IFAS Extension Orange County; *Gomez, J. jgramirez@ufl.edu, FEAFCS, UF/IFAS Extension Osceola County; Marin, K., kathymarin@ufl.edu, FEAFCS, UF/IFAS Extension Miami-Dade County; Duncan, L., laduncan@ufl.edu, FEAFCS, UF/IFAS Extension Sumter County; *Hamilton, L., hamiltonl@ufl.edu, FEAFCS,UF/IFAS Extension Volusia County; *Anderson, J., griffinj@ufl.edu, FEAFCS, UF/IFAS Extension Orange County

Background: Rent Wise is a rental program, a valuable resource for those looking for help navigating the rental market's complex world and preventing evictions. UF/IFAS Extension Agents from Orange, Osceola, Miami-Dade, Sumter, and Volusia counties in partnership with the Family Self Sufficiency Program and the Orange County Bar Association created a bilingual rental program to help families find suitable rental housing. Some common signs that a rental may be a poor fit include high rental costs, poor property conditions, or unexpected fees and restrictions. The program educates individuals and families about their rights and responsibilities when leasing a home. **Objective:** To help residents navigate the rental process, prevent evictions, and assist families in finding solutions that will support a healthy home environment. **Methods:** Six Extension Agents, in partnership with 2 government agencies delivered rental education in 5 workshops and 5 home maintenance presentations to 47 participants. Content included basic rental process, financial readiness, credit worthiness, healthy home principles and overall well-being. A unique aspect of the program was the questions and answer segment by two Legal Aid Society Housing attorneys. They covered eviction prevention, lease terms, tenants' rights and responsibilities. Participants receive financial counseling and were pre-screened for the Counties Family Self Sufficiency Program. **Results:** Forty-seven participants attended. Post survey respondents (n=39) indicated a 100% increase knowledge in rental practices, 94% understood their credit score and adopted tools to create a spending plan and 97% increased their knowledge on the principles of a healthy home. **Conclusions:** It is essential to be aware of the rental process and what can lead to an eviction. The program educates individuals and families about their rights and responsibilities when leasing a home. By being mindful of potential rental issues and working closely with landlords, we can help families avoid problematic rental situations and prevent evictions.

Choices Beyond High School: Careers in Urban Horticulture, Agriculture and Living on my Own Simulation (LOMO)™

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Background: High school students benefit from learning about careers and the financial realities of life after graduation. Collaboration between Commercial Horticulture, Agriculture, and Family and Consumer Science (FCS) agents provided a unique experiential learning opportunity for youth to engage in developing positive life skills including job skills, financial literacy, and entrepreneurship. **Objectives**: Students will increase awareness of careers in horticulture, agriculture and understanding costs of living, budgeting, and managing money. **Methods**: Three agents provided education and demonstrations to students across four consecutive weeks during Agricultural Education classes at New Smyrna Beach High School. The Commercial Horticulture agent engaged students in landscape design by the installation of warm and cool gardens in an urban setting (at the school). The agriculture agent provided a series of speakers who covered careers with Florida Forestry, entrepreneurship, drone technology, and alternative crops. The FCS agent provided a *Living on My Own*™ (LOMO) simulation. **Results**: *Horticulture*: 100% (n=25) The students successfully demonstrated both French (cool) and Mexican (warm) landscape designs in an outdoor hands-on activity. *Careers*: 86% (n=22) of students who participated in the career showcase, self-reported that the guest speakers allowed for exploration in new careers of interest. 100% (n=22) self-reported learning gains on new careers. 95% (n=22) self-reported knowledge gained on education and training needed to pursue these careers. *LOMO*: 100% (n= 20) of students reported a better understanding of the costs of living independently, the importance of budgeting and tools needed to track spending. **Conclusion:** Students observed how design can impact one's perception of both temperature and culture and pricing considerations as a profitable option in a horticulture career. Student comments affirmed their understanding of the high costs of daycare and insurance, the impact of poor credit on loan costs, and the importance of investing early.

Addressing COVID-19 and Influenza Vaccinations in Rural and Minority Populations

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Background: As part of a multi-million Centers for Disease Control and Prevention funded grant, *Our Community. Our Health. (OCOH)*, the Cooperative Extension System infrastructure is leveraged. Community relationships and existing educational programs aid in OCOH efforts to strengthen COVID-19 vaccination efforts among rural communities across Florida, with a special emphasis on racial and ethnic minority populations. **Objectives:** Extension District Immunization Leads (DILs) will collaborate with existing program events or creating new events

to apply whole health education including preventive actions like vaccination. OCOH will participate in at least five events and provide at least two methods of health outreach at each event. **Methods:** A team consisting of two agents in each district of Florida (DILs) and four University of Florida faculty worked together to plan and execute outreach events throughout the state. These OCOH grant efforts deliver education, vaccinations, and surveys of community member's perceptions around COVID-19. **Results:** Through the nine events attended, we reached 3,395 in general attendance and administered 82 COVID-19 doses. 277 Total surveys of perceptions were collected, with the audience reached at all 9 events identifying as 36.5% female and 63.5% male. Mean age for females and males were 53.7 (SD 14.9) and 51 (SD 16.8), respectively. The majority of people reached identified as White at 77.1%, with African Americans following at 12.7%, American Indian/Alaskan Native at 2.2%, Asian at 2.2%, and Other at 5.8%. The majority surveyed were 89.0% Non-Hispanic/Latino(a), with only 11.0% identifying as Hispanic/Latino(a). **Conclusion:** Building upon national Extension framework and success, the *Our Community. Our Health.* Grant efforts have been able to reach thousands of community members and administered vaccines to marginalized populations. Knowing that people look to trusted leaders/organizations, partnerships cultivated through OCOH/Extension have allowed open lines of community to aid in health discussions and assistance in areas often left behind.

***From Seed to Salad*: Community partnership outreach collaboration**

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Background: *From Seed to Salad* program was a collaboration with the Northwest Regional Library System, Bay County Public Libraries, in conjunction with their annual library card drive. The Bay County horticulture and family and consumer science Agents created a virtual program to encourage fall vegetable gardening and food preparation of nutritional meals from their harvest. **Objectives:** The purpose of this program was to collaborate with community partners to encourage library use, fall gardening, and healthy food preparation. **Methods:** The library consulted with the horticulture Agent and selected vegetable seeds appropriate for a Northwest Florida Fall Garden. Master Gardener Volunteers (MGVs) created instructions for the 5 different seed types: kale, radish, lettuce, carrots, and arugula. Seed kits with instructions were assembled by MGVs then additional materials were packaged by library volunteers. Additional materials included nutritional facts and healthy recipes about each vegetable created by the FCS Agent. **Results:** During the months of August-October 2021 a total of 2,500 seed kits were distributed to library patrons. Local participants posted pictures of their gardens on a closed Facebook page. Thirty-one participants attended the live webinar session and an additional 15 viewed it on YouTube. A survey was completed by 18/31 (58%) of the live viewers. 18/18 (100%) increased knowledge of vegetable gardening, 17/18 (94%) reported they planned to grow vegetables in the Fall, 17/18 (94%) reported they planned to cook with more Fall vegetables, 16/18 (89%) planned to use more fresh herbs. **Conclusions:** The program strengthened the collaborative efforts between the Extension Office and public library system. First-time gardeners used their newly learned skills in their gardens and kitchens. *From Seed to*

Salad webinar and seed kits were helpful in expanding the reach of the Bay County Extension Office and the Northwest Regional Library System.

Home Maintenance for the Florida Home

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Background: Florida migration in 2019 (pre-pandemic) was 126,789 people. Pandemic migration rates were higher, placing a demand for affordable housing. This need includes knowing the difference between caring for a home in another state and Florida and the best way to protect the homeowner's housing investment. **Objectives:** Florida homeowners will make wise purchasing decisions and reduce the cost of home maintenance to protect their housing investment. **Methods:** Members of the statewide Housing Team with Specialists and other Agents taught home maintenance principles during pre-purchase housing programs, new homeowner programs, and programs targeted to low-income families receiving down payment and home repair assistance. Agents delivered 45 pre-purchase home buyer classes to 1,287 participants in virtual and in-person formats. The home maintenance section teaches buyers to assess the potential maintenance needs of prospective homes. There were 18 home maintenance classes for 75 low-income households. In addition, Agents offered twelve Home Maintenance for New Homeowner programs to 315 participants in the fastest growing Senior Community, The Villages. **Results:** In-class polling and follow-up surveys indicate that most participants increased their knowledge of home maintenance topics. Thirty-four percent (n=53) of home buyers reported that they would consider home maintenance costs when viewing prospective homes. Sixteen percent (n=8) of homeowners adopted a home maintenance schedule and prepared a home repair budget. Twenty-five participants received home rehabilitation funds of $260,000. The majority of seniors (50% - 95%) (n=157–299) reported that they would implement mold prevention, integrated pest management, and water conservation practices. **Conclusions:** A variety of in-person and virtual collaborations have proven successful in helping homeowners understand Florida home maintenance and protect their housing investment.

Cooking Counts When Applying Scientific Principles In 4-H Day Camp

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Background: Cooking is an essential skill that can be used to deliver STEM lessons. Elements of science, reading, and math are found in the simplest of recipes. Cooking teaches youth to see physically changes and make the connection. **Objectives:** This program aims to provide youth an opportunity to develop STEM skills and apply those skills through food preparation. **Methods:** Cooking Counts is a 4-day, 3-hour, science and cooking camp for 4-H youth aged 8-13. Each day featured a different theme and included a science experiment, related recipe, and physical activity brain break. The themes included thickeners, acid and bases, leavening agents, and states of matter. Youth worked collaboratively to follow a recipe, measure, and prepare ingredients, and conduct a STEM experiment. An observational journal was developed to help participants record experiments and included a recipe card for the prepared food item. Physical activity brain breaks included using resistance bands, hula hoops, making butter, and pedaling a blender bike. **Results:** A total of 10 participants attended the program. Youth completed a pre and post-test to determine a change in cooking and science interest levels. A three-month follow-up parent survey was collected via phone from 70% (7) of the participants. Of those collected, 100% (7) reported a knowledge gain in basic cooking skills, following a recipe, kitchen and food safety, food experiments, and how science is used in recipes. Since the program, 100% (7) have reported using knife skills, baking, measuring, and mixing. **Conclusions:** Offering hands-on, fun experiences such as cooking classes with STEM objectives reinforces academic learning in science, reading, and math. Gaining and increasing knowledge of cooking basics will boost the confidence of youth participants and help them gain independence, one of the four Essential Elements of 4-H.

Taking it to the Next Level: Multi-county Social Media Collaboration for Financial Programs.
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Background: Participants of the first-time home buyers' workshops were offered the virtual Take Control of Your Money series to increase credit scores, budgeting, savings, and debt management. Although interest was high, attendance was low. To address this issue, multiple agents created on demand videos delivered across multiple social media platforms. **Objectives**: 1. To increase reach and engagement in financial education. 2. To develop a multi-county collaborative system for agents to create and post videos across multiple social media platforms. **Methods**: Seven agents meet biweekly to record videos on timely financial topics. Each agent records a three-minute video segment on the topic. Videos are edited for social media engagement and include the link/QR code to access the evaluation. Videos are promoted to the First-Time Home buyer workshop participants and posted to agents' county Facebook pages. **Results**: The agents increased educational content from two 45-minute webinars per month to ten, three-minute videos. In 2021, the average number of participants was three per webinar. In 2022, seven agents have recorded 28 video segments in the first quarter with reach ranging from 35 to 116 participants on one platform. The impact of this

educational format has warranted use of a social media marketing and management dashboard. This dashboard allows the team to cross post on multiple platforms to optimize the best times to increase reach. **Conclusion**: Collaboration among FCS agents can provide opportunities for creative educational content and direct education for a larger audience.

Homebuyer Education in the Panhandle: A Hybrid Approach

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Background: Due to rising rent, lower mortgage interest rates, and increased availability of down payment assistance funds, the demand for First-Time Homebuyer Education classes has increased. In response, Family and Consumer Science Agents from five counties partnered together to offer classes using a hybrid model of in-person and online program delivery methods. **Objectives:** The purpose of the hybrid structure for the First-Time Homebuyer Education classes was to expand the program to counties that were not offering it, enabling Agents to reach a larger audience. Agents were able to leverage each other's strengths in teaching the 6-hour curriculum. By offering an in-person option instead of just virtual, participants were able to interact with their local Agent and receive one-on-one assistance. **Methods:** Agents in Washington, Holmes, Jackson, Bay, and Walton Counties teamed together to co-teach synchronous, in-person classes that were live-streamed via Zoom to participants in the partner counties. The six-hour homebuyer education class was offered monthly to prospective buyers, including those applying for USDA loans and/or down-payment and closing cost assistance through the State Housing Initiatives Partnership program. Participants attended the classes at their local Extension office and engaged with their county FCS Agent. **Results:** From November 2021 – April 2022, 149 participants completed the homebuyer education classes. The hybrid model has expanded the reach of the homebuyer education program to two new counties and facilitated the onboarding of new Agents to teach the curriculum. It also has increased awareness of the local Extension office and other programs offered. **Conclusions:** The hybrid model saves travel time and expense, eliminates internet accessibility challenges for participants, and leverages resources to reach a broader audience. The team approach to managing the homebuyer education program improves customer service, allows Agents to share the workload, and provides more direct support to team members and clientele.

Healthy for Life®, an Evidence-Based, Community Health and Well-being Program to Change Dietary Practices and Empower Individuals to Improve Overall Health

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Background: Heart disease continues to be the leading cause of death in the United States (CDC, 2020). In Florida, heart disease is responsible for "approximately two out of every ten deaths each year" (FL Charts, 2018). One fourth of all cardiovascular deaths "are avoidable by addressing the modifiable risk factors" including "physical activity, dietary intake, smoking, and alcohol consumption" (Deepika, et. al, 2021; CDC, 2019). **Objectives:** Participants will 1) increase knowledge of health behaviors to improve overall health 2) increase confidence in applying heart healthy strategies 3) report intent to implement heart healthy practices in dietary intake and/or physical activity. **Methods:** Healthy for Life®, a community nutrition and well-being program was delivered in a hybrid format in six weekly educational experiences: *Feed Your Potential, Developing Mindful Eating Habits, Exercise within Reach, Eat a Rainbow: Colorful, Seasonal Fruits and Veggies, Herbs for All Seasons,* and *Save it Now, Savor it Later.* Each session was delivered online, and in person sessions rotated between six Central District counties. Experiences included health and well-being education, a demonstration, and reinforcement activities to support a heart healthy lifestyle. **Results:** 86% (25/29) increased knowledge of behaviors to improve overall health such as physical activity recommendations and eating fruits and vegetables. 65% (11/17) increased confidence in applying heart healthy strategies such as eating produce in season and removing barriers to physical activity. 89% (25/28) intend to implement a heart healthy practice such as preparing meals with fruits and vegetables. Behavior change will be collected in a 3-month follow-up survey scheduled for June 2022. **Conclusion:** Healthy for Life® addressed two of the modifiable risk factors of heart disease: dietary intake, and physical activity. The educational experiences equipped participants with the knowledge and skills needed to make healthy dietary changes and incorporate physical activity routines to improve their heart health.

FCS Meet the People: Access needs and program delivery through social engagement

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Background: E-learning has grown exponentially within the last decade. While the pandemic bolstered online learning infrastructure, the digital world continues to become even more significant and oftentimes crucial for the modern learner. Furthermore, due to screen fatigue and busy work and personal schedules, overall attention span and time commitment continue to decrease in the individual learner. As such, the need for achieving objectives through small bytes of information, rather than lengthy lectures or synchronous meetings, is evident. **Objective:** Increase awareness and visibility for Family and Consumer Sciences programs by posting small bytes of useful educational content via social media. **Methods:** Multimodal, cohesive interactive educational content was created and regularly posted and cross-posted under the unified umbrella of social media campaigns such as Meet the People, Under Pressure, Food Business, Take Control of Your Money, Meal Prep, and others. Social media

engagement was tracked and analyzed using Meta analytics and other professional systems. **Results:** Thus far, the data show all accounts associated with the social media campaign model (namely, Facebook, Instagram, and TikTok) have seen a robust influx of audience reach and engagement as evidenced by increased views, page visits, link-clicks, likes, shares and comments. **Conclusion:** Adapting extension programming to fit an audience who thrives on very brief, concise, and targeted content infers an overall increase in Family and Consumer Sciences exposure and engagement, especially when these efforts take place collaboratively, across county lines. This model also provides a conduit for additional programming and recruitment, while creating an environment that fosters community connections and organizational partnerships.

University of Florida Extension Collaboration on Immunization Teaching and Engagement (UF EXCITE): Successes and Challenges of a COVID-19 Communication and Education Program in Rural Communities

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Background: Due to the disproportionate risk of severe illness due to COVID-19 among rural and minority communities, UF EXCITE collaborated with local faith communities, health departments, health care providers, and non-profits organizations to implement a comprehensive communication and education program to promote vaccine uptake among rural African Americans. **Objectives:** The program aimed to reach the primary audience through multiple channels to support an increase in positive attitudes and improve community norms related to COVID-19 vaccines. **Methods:** UF EXCITE implemented a social media campaign, hosted virtual educational forums, and participated in community engagement at in-person events in four rural counties. Participant reach was recorded for each communication and engagement strategy over the 12-month program. **Results:** UF EXCITE developed 16 new partnerships, recorded 5,637 impressions through the social media campaign, reached 20 individuals through virtual education programming, and connected with 588 individuals through community outreach events. Observation of successes and challenges related to program implementation contributed to an iterative implementation process with stronger engagement by the end of the project period. **Conclusions:** UF EXCITE provided the foundation for developing new partnerships to promote vaccine uptake among rural African Americans. Additionally, adopting comprehensive communication and education campaigns have the potential to support changes in knowledge, attitudes, norms, and behaviors related to vaccine hesitancy among high-risk populations.

Healthy People, Healthy Finances: A comprehensive high impact program in Family and Consumer Sciences (FCS) Central District

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Background: The prevalence of chronic diseases, food and financial insecurity are some of contemporary society's most pressing issues (The UF/IFAS Extension Roadmap, 2013). FCS addresses these challenges by offering a comprehensive high impact program: Healthy People, Healthy Finances which provides individuals with the knowledge and skills needed to make positive health and economic changes. **Objectives:** Participants will 1. adopt a healthier eating pattern 2. improve health parameters 3. demonstrate improvement in financial capability and 4. achieve an important financial milestone. **Methods:** Participants engaged in group education as well as one-on-one coaching. Programs were delivered using a multi-platform approach. **Results:** 1. 86% (393/458) adopted a healthier diet. 2. 46% (80/175) improved health parameters including body mass index, blood pressure, blood glucose, or physical fitness. 3. 67% (416/623) set financial goals, 30% (2717/9120) tracked their spending. 4. Twenty homes were purchased, and 19 foreclosures were prevented. **Conclusions:** Central District's Healthy People, Healthy Finances program has "empowered individuals and families to build healthy lives and economic success" (The UF/IFAS Extension Roadmap, 2013). This high impact program has facilitated health behavior changes and financial security, playing a vital role in helping to build strong and stable communities.

Educational Technology, Leadership, and Innovation Sponsored by ESP

Room Hosts: Qingren Wang and Samantha Kennedy

Does Recognition on Social Media Positively Contribute to Volunteer Motivation?

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Background: Recognition is key to volunteer management because researchers have found strong, positive relationships between volunteer recognition, motivation, and retention. However, many organizations do not recognize volunteers because they perceive recognition programs to be too costly. Volunteer recognition on social media may be a low-cost option to motivate 4-H volunteers by recognizing their contributions to the organization and community. **Objectives:** The purpose of this study is to investigate if volunteer recognition on social media positively contributes to motivation. Three questions guided this study: 1. What are 4-H volunteers' attitudes towards social media? 2. What type of motivation does this type of recognition fulfill? 3. Does recognition on social media satisfy volunteer motivation? **Method:** This study utilized survey research to examine volunteers' attitudes towards social media, their attitudes towards recognition and their need for motivation. Participants were Florida 4-H volunteers enrolled in the 4Honline database. **Results:** generally, volunteers' attitudes towards social media were very positive, with most volunteers (78%) favoring Facebook and Pinterest over Instagram or Twitter. Eighty-six percent of participants indicated that their motivation style was affiliation, which concurs with other research on 4-H volunteer motivation. Volunteers (68%) indicated that recognition on social media does motivate them, but a simple thank you or note from a youth would mean more. Volunteers were asked an open-ended question about concerns with social media, and 32% indicated they would like more training on how to use social media with youth. **Conclusions:** Volunteer organizations should consider using social media to communicate the impacts of volunteers and recognize their contributions. However, social media recognition should be part of a comprehensive, year-round effort to appreciate volunteer engagement and help motivate volunteers. Future research will include interviews to explore volunteers' social media identity, concerns about using social media with 4-H youth, and general preferences for format.

Developing a Standardized Tool for New Faculty Onboarding

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Background: During the COVID-19 pandemic, UF/IFAS Extension experienced high turnover of Extension Faculty positions. During a conversation at a SW District CED meeting, a need for

tools to support new faculty onboarding was identified. **Objective:** To create a standardized tool to assist CEDs and faculty in the successful onboarding of new Extension Agents; determine new agent needs, set expectations from day one, and provide resources to new agents. **Methods:** Two SW District CEDs worked together to brainstorm ideas for this project. We determined that Extension Agent input was crucial to developing a successful tool. The first step was to identify existing onboarding tools. We invited CEDs to share their own onboarding documents with us by creating a shared TEAMs folder. Next, we facilitated a group activity at a SW District Faculty meeting which consisted of two breakout sessions. Session 1 was randomized. Groups were assigned these questions, "What happened vs. What had you hoped for?", "What does a new Extension Agent need to be successful from the first day?", In Session 2, agents were grouped by program areas and asked, "What information/resources are needed for new agents in your program area?" CEDs then compiled responses, reviewed existing tools and worked to identify information pertinent to the new tool. **Results:** Extension Agents identified many commonalities and needs consistent throughout program areas as well as program specific needs. This feedback is being developed into a standardized document that will be useful to CEDs, DEDs, and Extension Administration statewide. **Conclusion:** A standardized onboarding document that addresses real issues encountered by Extension Agents has the potential to be shared statewide, engage new faculty, and lead to increased faculty job satisfaction and retention.

District-Wide Programming and Coordination Among Agents Leads to Signature Programs. Harlow, E.*, eeeck@ufl.edu, UF/IFAS Extension Columbia County; Clem, T.*, taylorclem87@ufl.edu, UF/IFAS Extension Nassau County; Lamborn, A., alamborn@ufl.edu, UF/IFAS Extension Baker County; Figart, L., lfigart@ufl.edu, UF/IFAS Extension Duval County; Barry, S., savanna.barry@ufl.edu, UF/IFAS Extension Nature Coast Biological Station; Nazario-Leary, C., cnazarioleary@ufl.edu, UF/IFAS Extension Alachua County; Strange, L., lstrange@ufl.edu, UF/IFAS Extension Taylor County; and Warner, L., lsanagorski@ufl.edu, Department of Agriculture Education and Communication.

Background: Connecting with agents across a district, being a new agent and trying to develop successful programs and developing signature programs that are rooted in scholarship are all difficult. In 2019, during a Northeast District faculty meeting, agents within their respective program areas were challenged to develop a signature, district-wide program during a breakout activity. The Green Team met including horticulture agents, Master Gardener Volunteer coordinators, and regional specialized agents' chose to develop an advanced training program related to water resource awareness. **Objective:** The objective of this presentation is to discuss the steps to successful district-wide programming from conception to awards, how to work successfully as a group, and maximize a program for promotion purposes. **Methods:** The "Follow the Water" – a multi-day tour where individuals followed a drop of water through the Suwannee River Watershed program was developed at that meeting in 2019. While agents may have changed over the years due to turnover, seven members continue to be actively involved. A roadmap that includes collaboration, IRB evaluations, specialist involvement, awards, journal articles, and presentations has been developed for the program and continues

to be followed and adjusted even through COVID. **Results:** The Green Team has successfully created and piloted their Follow the Water program three times to 41 individuals which totals 96 hours of training. After several years of pilot testing the team is beginning to move into later phases of their program roadmap. **Conclusions**: Agents across multiple county lines can successfully create signature programs that have impacts across the state. These programs can be excellent collaborations, capitalizing on each person's strengths while also providing a program with a high level of scholarship if it is well planned. The Northeast District Green Team has created a successful model for program development that can be adopted by any group.

Multistate Partnering to Increase Spanish Speaking Educational Materials
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Background: During 2017, two hurricanes affected the Commonwealth of Puerto Rico leaving the residents of the islands with many limitations. Approximately 80% of the agriculture crops were ruined and less than 8% of the roads were opened, creating challenges for food distribution. **Objectives:** Creating a Master Gardener Volunteer Program in Puerto Rico was vital to train additional educators in the communities to help others to grow edible gardens in the future. **Methods:** In 2018, after various meetings with the University of Puerto Rico and University of Florida/IFAS, an In-Service Training was created to train a group of agents. The training was developed with a diverse group of agents and state specialist from UF/IFAS to provide the University of Puerto Rico agents the tools to initiate the Master Gardener Volunteer Program on the island. After attending the training, the five participating agents developed a mission, strategic plan, and vision of what for the UPR Master Gardener Volunteer Program. **Results:** Despite additional challenges like earthquakes and COVID, the Puerto Rican agents launched the MGV Program, training and developing volunteers, recruiting new agents, and establishing plant clinics around the island. UPR Agents applied for a Forest Service grant sponsored by the Recovery Act after Hurricane Maria and obtained $45,000 to provide free registration for the first classes and equipment for five plant clinics. Additionally, specialists and other faculty members are now part of the training. They have been able to offer two training series to twenty-nine volunteers and have recruited three new agents to work with the MGV Program. **Conclusions:** This multi-state collaboration has helped with the development of Spanish material which is a great resource for the UF/IFAS with the growing Spanish speaker population in the state.

Urban Extension Educates Urban Planners About Agriculture
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Background: Orange County's population is projected to swell by 700,000 new residents by 2050, exceeding 2 million. Orange County is updating their strategic plan with sustainability elements but failed to consider food. Locals celebrate "foodie" culture supporting 600+ local farms—small, large, urban, rural—but lack of food system planning threatens the resilience of Orange County farms and communities. **Objectives:** Common among local government decision makers, the County's Chief Sustainability Officer prioritizes food but needs agricultural expertise to draft effective ordinances supporting agriculture, especially, urban agriculture. Realizing the need for education, county government partnered with UF/IFAS to receive two 1.5-hour workshops to 29 planners and department directors during May and June 2021. **Methods:** Preceding workshops, an IRB Approved survey was administered (n=19) assessing participants' baseline perceptions of and knowledge about urban agriculture and local food policy. The first interactive presentation explained urban agriculture and food systems. The second hybrid collaborative session sought department specific solutions to increase agricultural resilience. **Results:** The result is cooperation among UF/IFAS Extension and local government who is developing language to incorporate food into the strategic plan. A 9-month follow up survey was administered to planners and policy makers (n=15) where 87% of respondents indicated increased knowledge about the significance of agriculture in Florida and urban farming techniques, and 80% increased knowledge about food system complexities indicating that it is somewhat or extremely likely that urban agriculture will be incorporated into Orange County plans. Respondents desire more training about physical locations, successes and failures, and funding initiatives well-suited for urban agriculture to determine next steps. **Conclusion:** As a result of responsive, targeted workshops, the county continues to turn to UF/IFAS Extension for local expertise related to food, farms, fertilizer, and trees and a focus on educating planners and policy makers is key.

Breaking the Dam Between Program Areas. Janney, H.*, hfutch@ufl.edu, FAE4-HA, FEAFCS, ESP, UF/IFAS Extension Columbia County; Tomlinson, P.*, apt@ufl.edu, ESP, FACAA, FANREP, UF/IFAS Extension Columbia County; Corbitt, H.*, hcorbitt@ufl.edu, FEAFCS, ESP, UF/IFAS Extension Columbia County; Capasso, J.*, jcapasso@ufl.edu, FACAA, UF/IFAS Extension Columbia County; Harlow, E.*, eeeck@ufl.edu, FACAA, FANREP, UF/IFAS Extension Columbia County.

Background: A water resources education program was initially developed by 4-H and Natural Resources Agents to introduce youth in-school, grades K-5 or ages 5-12, to two of the most valuable assets: springs and farms. With the county population of 70,000 increasing yearly by 7% and agriculture remaining a strong commodity, a strain on water resources for quantity and quality has become very apparent. **Objectives:** To expand the water resources education program to include other programmatic areas in the county. To increase the number of participants reached by the program in a multitude of age groups. **Methods:** Lead agents for the programming met independently with other agents within the county and invited them to collaborate in different areas of water resources education. Whereas, youth were only learning about the scientific aspect of springs and aquifers, agents were able to include the importance of water in their diets, the importance of water to row crops, and how much water quality and

conservation affects other areas of life. **Results:** As a result of the collaboration, since 2019, Extension was able to reach nearly 2,500 youth and adults. These participants were involved in 24 multi-programmatic events based in water resources education. Most youth participants (80%, n=1,852) reported that they increased their knowledge of water quality and conservation and all shared that they would make a behavior change to protect our water. **Conclusions:** Each extension programmatic area can provide programming in some topic that involves water. The collaboration involved in a "whole systems" approach for water resources education helps to reach a much broader audience and results in millions of gallons of water being saved. Our water resources are growing more and more vulnerable, and this type of programming can assist in reducing the vulnerability.

Extending Extension's Mission Through Students
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Background: Cooperative Extension is uniquely positioned to provide college students a conduit for community-based learning and serving-learning experiences. Condo and Martin (2002) state "Extension, rooted in community involvement, is the ideal vehicle for providing opportunities in student learning through community involvement." (https://archives.joe.org/joe/2002august/a2.php). Engaging college students in Extension programming provides an opportunity to promote awareness of Cooperative Extension, increase capacity of Extension programs, increase the level of student interest and support related to Cooperative Extension, and teach students workforce development skills. **Objectives:** The objectives of this program are (1) to extend the Extension mission through student interns, volunteers, and service-learning class project participants, (2) promote awareness and knowledge of Cooperative Extension through these student activities, (3) provide college students with practical, relevant work experience. **Methods:** UF/IFAS Extension Seminole County 4-H provided multiple opportunities for college students to engage in Extension programming through internships, volunteer opportunities, and service-learning projects. Examples of student experiences include leading 4-H SPIN (SPecial INterest) Clubs, developing and implementing a marketing campaign, and teaching educational workshops. **Results:** College students (n=10) reported an increase in knowledge and skills including effective communication, community-based teaching strategies, and reading and interpreting peer-reviewed publications as indicated by self-reflection and end of semester survey data. 100% (n=10) of students indicated an increase in knowledge about UF IFAS Extension and its mission through a post-reflective survey. 85% (n=10) of students stated that they have a better understanding of how to apply knowledge and skills they learned to future experiences. **Conclusion:** Creating opportunities for college students to intern, volunteer, and participate in service-learning projects with Cooperative Extension is mutually beneficial to both the Extension organization and the students.

Economic Recovery through Commercial Incubator Kitchens: A Partnership Model.
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Background: The Pasco County Commercial Incubator Kitchen is a partnership between Pasco County Government, Pasco Economic Development Council (EDC), Welbilt, Inc., and University of Florida Extension Service. **Objective:** The incubator kitchen was started as a result of community needs assessments which demonstrated a demand for commercial kitchen space and entrepreneurial training. Pasco Extension developed a partnership with Welbilt, Inc. to donate the commercial kitchen equipment, and the Extension Service redesigned a county-owned building to support the kitchen. Out of the same facility, Pasco SMARTstart Small Business entrepreneurial classes are provided with the goal of helping citizens start new food-based businesses while removing many of the identified barriers. **Methods:** Certifying new food business owners and ensuring compliance with state and local regulations, entrepreneurial trainings, resource sharing and commercial kitchen space were offered to clients. Key performance indicators include the number of new businesses started, number of new jobs created, and the number of professionals certified in food safety. **Results:** Twenty-seven new businesses have been started. Most of the businesses were started after the Covid Pandemic began. Three new businesses are in various stages of development and scheduled to open in 2022. One business opened a store front because of the program. Nine citizens are now back to work after losing jobs caused by the pandemic. One owner now has a store front, and another started a food truck business. Eight of the new business owners now operate online sales and five owners have been certified in food safety. Several of the food products are showcased in restaurants and many are sold nationwide. **Conclusions:** It is estimated that 30 new jobs have been started with thousands of dollars infused into the local economy. Most of the owners are minority and/or Veteran owned.

Connections Can Make or Break a Program.
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Background: Due to the required distance during the COVID pandemic most people communicated virtually. However, this became less effective as the amount of virtual communication became overwhelming. New treatment options were being made available, but providers had tons of emails everyday with new information and community members weren't sure which sources to trust. Extension partnered with UF Health and U.S. Dept of Health and Human Services (HHS) to provide treatment opportunities (monoclonal antibodies, mAB) for free to individuals, but the education and resources had to reach the people. **Objectives:** To reach communities, in a time of distance that may not have virtual capabilities or are too overwhelmed by the virtual method, with education and resources about treatment options. **Methods:** Lead agent took a "boots on the ground approach" visiting offices in person to create connections and educate local providers, community members, and partners on education and treatment opportunities available for COVID. Offices visited were based on great influence in county so not only was the education shared by them, but also shared amongst the community. **Results:** As a result of the direct communication approach, 10 local providers were educated and as a result provided resources to clients for treatment options. There were also 282 community members who participated in webinars about COVID and the mAB treatment options, 568 clients sought mAB treatment options, and 134 individuals who were treated via

the mAB treatment. **Conclusions:** In a time when our world was completely virtual, making connections with local providers via face to face provided the opportunity to educate, provide resources, and start a new path for communications to community members. Community members were able to get the information from resources they trusted and the treatment they needed.

Gardening in the Panhandle LIVE! Encompasses team collaboration and online educational technologies

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Background: In 2020, the COVID-19 pandemic forced cancelation of in-person activities. Meanwhile, requests for assistance with landscaping and gardening increased as people were homebound. **Objective:** Inspired by "Ask an Agent Anything" by Agents in South Florida, the Northwest District Horticulture Team collaborated to create "Gardening in the Panhandle LIVE!" panel discussion webinars to reach clientele during the shutdown. **Methods:** The series is broadcast using Zoom Webinar videoconferencing technology and Facebook Live. To comply with ADA guidelines for hearing impaired clientele, episode recordings with closed captioning are archived on the YouTube Gardening in the Panhandle LIVE! Playlist https://tinyurl.com/3p2r2v82. Delivering each episode requires a team of 7-9 agents in the following roles: 3-4 panelists, episode "host", Zoom technician, and "behind the scenes" moderators. While the host and panelists are answering questions for the audience, the moderators are adding resource links to chats, answering pop-up questions, and forwarding potential on-air questions to the host. In addition to the NW District Horticulture team, we have included Extension Agents and State Specialists from across Florida as panelists. **Results:** This collaboration has created 26 episodes with 1,676 live viewers on Zoom and Facebook and 926 views on YouTube. A survey link is shared after each session; 402/1676 (24%) were completed, 395/402 (98%) reported knowledge gain of one or more Florida Friendly Landscaping Principle (FFL), 340/402 (85%) reported a plan to adopt one or more FFL Principle. Two hundred eighty-

six participants were emailed a follow up survey 6-8 weeks following a session to determine adoption of FFL practices. Completion rate was 86/286 (30%) and 33/86 (38%) reported adopting at least one FFL Principle. **Conclusions:** The ongoing success of Gardening in the Panhandle LIVE! demonstrates how a team can work together to create innovative programing to meet the needs of stakeholders even when faced with unusual circumstances.

Reaching New Audiences with YouTube Live

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Background: The COVID-19 pandemic created new needs for Extension clientele along with new opportunities to extend Extension's reach online. County faculty from the Central District collaborated to offer a series of classes titled "Food Systems in Season" to residents through YouTube Live. **Objectives:** Our primary objective was that viewers would demonstrate improved knowledge of food systems including food production practices, hydroponics, safe food preparation and preservation methods, leading to adoption of self-reliant food system practices. **Methods:** Two, five-week workshops were held in the Winter and Spring of 2022. Each interactive workshop was offered live on the UF/IFAS Extension Central District YouTube channel via StreamYard and featured county faculty from every program area to teach participants how to improve their family's food systems. Live viewers could ask questions in the chat, and all sessions were saved as recorded videos for later viewing. The 16 participating agents utilized multi-media presentations, recorded videos, and live demonstrations to deliver their food systems topic and create an engaging experience for viewers. **Results:** The ten workshops had a live audience of 149, and the recordings have been viewed an additional 1029 times. Twenty-six participants completed the post workshop surveys. Eighty-five percent (16/19) reported knowledge gain of food systems. 61% (11/18) intend to apply this knowledge to create a home garden. When asked, 84% (16/19) increased confidence in their ability to implement self-reliant food system practices such as creating a home garden, reducing food waste, and preserving food. **Conclusions:** Utilizing innovative technology makes it easier for agents to collaborate and to reach audiences that may not normally participate in Extension activities. Food Systems in Season provided education on self-reliant food system practices

which “may have positive benefits for food security and conservation implications” (Niles, 2021).

Innovating Extension Through Podcasting: Two Bees in a Podcast

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Background: Agricultural communicators must learn to evolve technology skills as mediums evolve. Podcasts are projected to become increasingly popular in upcoming years with audiences currently spending more time listening to podcasts than reading books, newspapers, magazines and using social media (Goldberg, 2019). **Objectives**: “Two Bees in a Podcast” exposes listeners to honey bee research, helps to understand the resources available at the UF IFAS Honey Bee Research and Extension Laboratory, and answers practical beekeeping questions from listeners, such as management, pests, disease, nutrition, pesticides, and other stressors. **Methods**: Domestic and international honey bee researchers are invited to discuss their published research with the hosts from the lab. Hosts record two hours of audio each week. Episodes are recorded on Zoom and edited to create a full episode. Once complete, episodes are uploaded to Anchor.fm and distributed on Apple Podcasts, Spotify, Anchor, Podbean, Google Podcast, Facebook, Twitter, an e-mail listserv, and the honey bee lab’s website. Episodes are released weekly, with all episodes being 45 minutes to 1 hour long. Information collected include the overall number of plays, weekly estimated audience and unique listeners, geographic location, gender, and age. Each episode has additional notes and resources available on the honey bee lab’s website. **Results**: 100 episodes have been released since 2020. Out of all the episodes, there have been 372,000 all-time plays, with an estimated audience of 2,614 weekly. Listeners from all over the world wait weekly for episodes to be released, fill out an annual survey, and provide feedback through e-mails. **Conclusions**: Podcast can be an easy way to create audio content as a method to disseminate agricultural science, while using minimal resources.

Thinking Beyond 182s: Ideas for Alternative Methods of Funding Programs- Foundations, County Departments, and More

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Background: Extension Agents are encouraged to increase outside funding sources, but that is easier said than done. Some programs are better suited for fee-based models than others, so thinking beyond 182 funds can help in diversifying funding sources to grow programs. **Objectives**: Sarasota County has worked over several years to grow staff and program offerings through multiple types of funding. The objectives of this session would be to share some of those creative approaches to help other counties think beyond registration fees. **Methods**: In Sarasota County we have relationships with various enterprise-funded county departments that provide funding for agents and program assistants. This has increased the county’s willingness to fund positions and capacity, while reducing vulnerability to budget cuts. We also have

valuable relationships with local foundations that have resulted in collaborative funding arrangements with local non-profits, increasing resources to make tangible changes within the community. Grants from federal and state agencies have also been valuable, but come with challenges that are important to be aware of. In addition, Master Gardener Volunteers are fundraising for a multi-year garden project. We have added a webpage outlining all the ways people could donate to support Extension. Other counties will also be surveyed to get other ideas of creative funding strategies for the presentation. **Results**: Five agents or staff are funded through these creative approaches. In total, Sarasota County has been involved in millions of dollars in grants and shared funding arrangements, which have increased capacity in Extension and resulted in quantifiable financial savings for county residents, non-profits, and taxpayers as well as clear impacts in environmental, economic, and social realms. **Conclusions**: Opportunities for funding can be challenging to find. Learning from each other about creative approaches in various county Extension offices will benefit all agents across the state.

Application of Association Responsibilities to Reporting.

Janney, H.*, hfutch@ufl.edu, FAE4-HA, FEAFCS, ESP, UF/IFAS Extension Columbia County; Corbitt, H.*, hcorbitt@ufl.edu, FEAFCS, ESP, UF/IFAS Extension Columbia County; Crawson, N.*, ncrawson@ufl.edu, FAE4-HA, ESP, UF/IFAS Extension Walton County.

Background: Agents joined professional associations and have become very involved on a national level in committees and programs led by these committees. **Objectives:** To develop a way to report on national activities in packets and ROA/POW that would make national involvement a productive endeavor. **Methods:** Agents worked with national committees to provide programming to professionals, nationwide. Surveys were developed to include programmatic objectives for all group leaders. Surveys were provided to association participants. Agents took leadership roles and helped to continue programming. **Results:** As a result of the collaborations, agents were able to include data in reporting for reaching professionals nationwide. Individual agent objectives in reporting were taken into heavy consideration and this data was easily included in overall state reporting. **Conclusions:** Agents have developed relationships with colleagues from across the nation. Multiple agents have been committee chairs, elected to national board, or have plans to run for national board. Agents feel connected with their national associations and supported through this connection.

Drawing from Consumer Preferences in Promoting Green Industry Professional Standards

Goodiel, Y.*, goodiel@ufl.edu, ESP, UF/IFAS Extension Martin County, Pelham, J.*, jenjen15@ufl.edu, FACAA, UF/IFAS Extension Martin County

Background: Licensed landscape professionals on the Martin County Commercial Horticulture Extension Advisory Committee sought help in raising awareness of licensing and professional credentialing. **Objectives:** Determine customer preferences for their landscape professionals, in terms of willingness to pay for licensed/certified professionals and familiarity with Florida-Friendly Landscaping™ (FFL), through an online survey. Create marketing products for

licensed/certified green industry professionals and raise awareness of the value of licensing/certification. **Methods:** Urban Horticulture Agent Jennifer Pelham and Commercial Horticulture Agent Yvette Goodiel obtained funding from the FFL program to survey homeowners and help licensed professionals market their businesses. Survey results were communicated to green industry professionals through a blog (https://go.ufl.edu/cmknd9t), a new webpage (https://go.ufl.edu/mcfyngibmp), a new online course "Business Basics for your Landscape Business" requested by the Advisory Committee, email, and e-newsletter. The Agents also worked with Advisory stakeholders to create marketing products for licensed/certified green industry professionals. **Results:** Most survey respondents (61%, n=132) said it was "very important" to them to hire a licensed and insured landscaper, and 70% of respondents said they would choose a licensed and insured professional, even if it cost them a little more money. More than 75% of respondents said they would choose a landscaper that uses FFL practices over a landscaper who does not. The initial grant-funded project became part of a larger initiative, including a new FFL Certified Professional training, a short IFAS calendar feature on hiring licensed landscape professionals, and additional blogs to raise awareness of licenses/certifications and their value. The blogs have had a total of 488 pageviews. However, the marketing materials have not been widely utilized. **Conclusions:** Through promoting licenses and certifications, we can help the green industry increase professionalism and protect our natural resources. Work remains on how to best assist professionals in marketing their credentials.

2022 EPAF Poster Presenters-at-a-Glance

Tuesday, August 30, 1:30 p.m. to 2:30 p.m.

1	Yvette Goodiel, Serap Gorucu	Extension Supports County Partners by Providing Annual Trainings and CEUs
2	Yvette Goodiel	Designing Climate-smart Extension for the Commercial Horticulture Industry in Florida
3	Brittany Justesen, Joe Walter	Mycotoxin Concerns in Warm-season Perennial Grasses
4	Chris Prevatt, J.K. Yarborough	The Disruption that is Blockchain Technology on Remittance Payments for Florida's Seasonal Farm Labor
5	Izabella Toledo	Small Ruminant Connections Events: Fulfilling the Needs of Small Ruminant Producers in the Northeast District
6	Jamielyn Daugherty, Dallas Meringolo	Creating a Successful After School Youth Education Vegetable Garden
7	J.K. Yarborough	Backyard Chicken Class: Virtual Twist
8	John Roberts, Emily Marois	Extending Extension: Communicating a Career in County Extension to a Class of UF/IFAS CALS Students
9	Kalyn Waters	Evaluation of Fertilizer Timing and Rate on Cool-Season Forage Varieties for field day
10	Kate Rotindo	Master Gardener Volunteer Trainees Final Project: Design a Florida-Friendly Landscape
11	Luis Orlando Rodriguez	2022 Honey Bee Seminar: A Collaboration with Polk's Ridge Beekeeper Association to Teach the Community About Proper Beekeeping
12	Taylor O'Bannon	Food Safety Extension Programs Prepare Florida Produce Growers for FSMA Produce Safety Rule Inspection
13	Dr. Yilin Zhuang	Expanding Engagement: Virtual Content for Farmers About BMPs
14	Allison Leo	Increasing 4-H Membership through Library Partnership
15	Brian Estevez, Aly Schortinghouse, Nick Simmons	Connecting the Clover: Sparking Interest in a Variety of 4-H Programs in Escambia County
16	Elizabeth Moore, Abbey Tharpe, Michael S. Jackson	Chick Chain Expansion
17	Julia Szczes Kelly	Club Member Practices Conservation and Demonstrates Generosity through Wildlife Rescue

* Full list of poster presenters listed in abstracts.

2022 EPAF Poster Presenters-at-a-Glance

Tuesday, August 30, 1:30 p.m. to 2:30 p.m.

18	Julie Pigott Dillard	An Exploration of Current and Potential Resources to Support Florida 4-H Volunteers
19	Karen Henry, Morgan Pinkerton, Kaydie McCormick, Sara Murphy, Shane Michael	Teaching Youth About Food Systems through Farm to Fork 4-H Food Prep Camp
20	Michael S Jackson, Emily Beach	Build It Camp Teaches Life Skills and Encourages Youth to Explore Construction as Career Choice
21	Paula Daniel	Fishing and Conservation with Okeechobee 4-H
22	Sabrina Hayes	Tech Changemakers Bridging the Digital Divide
23	Shreemoyee Ghosh, Shayla Reighter	Expanding 4-H STEM Opportunities through Agent Collaborations
24	Brenda L. Marty Jimenez, Kimberly Bragg-Armatrout	Food Safety Considerations in Food Preservation and Meal Preparation
25	Laurie B. Osgood, Lisa Hamilton, Natasha Parks, Jill C. Breslawski, Heidi Copeland	UF/IFAS Extension Master Money Mentor Volunteer Program: Volunteering Through the Pandemic: An Unexpected Success Story
26	Lee Hayes Byron	DEI Inside and Out: A Comprehensive Approach to Diversity Initiatives at the County Level
27	Rebecca Elliott, Gabriel Vicari	Trying New Foods for the First Time: A Novel FCS Approach to Health Promotion and Food Access
28	Shari Bresin	Adding More Movement with Workout Wednesdays
29	Lorna V Bravo	Fostering Synergies for Growing Extension
30	Kimberly Bragg-Armatrout, Wendy Lynch	Engaging Leaders Through the Pandemic
31	Dr. LaToya O'Neal	Florida VIP (Vaccinate, Immunize, Protect) for Healthy Communities
32	Sheri Trent, Allison Williams	South Florida Beef Forages Program: Collaboration and Support for the Livestock Community
33	Dr. Sandra Guzman, Dr. Yilin Zhuang	Successful Collaborations Between Agents and Specialists for the Adoption of Precision Irrigation Tools
34	Dr. Angie Lindsey, Ashley McLeod-Morin	Using Communication Toolkits to Expand Extension Efforts Related to Agricultural Health and Safety Topics

* Full list of poster presenters listed in abstracts.

1. **Extension Supports County Partners by Providing Annual Trainings and CEUs**
Goodiel, Y.*, goodiel@ufl.edu, FACAA, UF/IFAS Extension Martin County; Gorucu, S.*, serapgorucu@ufl.edu, ESP, UF/IFAS Agricultural and Biological Engineering, Modlin, S., smodlin@martin.fl.us, Martin County Parks and Recreation Department, Weeks, B., benweeks@ufl.edu, UF/IFAS Agricultural and Biological Engineering

Background: For more than a decade, Extension Martin County has collaborated with municipal partners to offer annual employee trainings and CEUs. In so doing, Extension provides a valuable service to municipalities, while also promoting the adoption of best practices in municipal operations. **Objectives:** Municipal employees attending the Protecting Florida's Resource program will demonstrate knowledge gains, measured by pre-/post-tests and increased adoption of best practices, measured by post-program surveys. **Methods:** Extension Martin County hosts an annual "Protecting Florida's Resources" training, typically consisting of six to eight weekly two-hour sessions. **Results:** An average of 64 people, primarily grounds maintenance staff, have attended annually since 2018. Sessions cover topics requested by an advisory team of county and city staff. CEUs are offered for most sessions, and some provide certifications. Though these are large classes, instructors incorporate hands-on and interactive learning. In 2021, we quantified outcomes for the Equipment Maintenance & Safety session (IRB202101319). We planned the session, developed evaluation tools and co-taught. Knowledge gain averaged 10.6% across all modules, which covered best practices for safety/maintenance with power tools, PTO equipment, skid steer loaders, and ladders. Follow-up surveys were administered via Qualtrics four months after the 2021 training. All respondents (n=11) stated they had made changes in the way they maintain or use equipment as a result of the program. Best practices respondents reported that they now more frequently follow include checking surroundings for hazards before using equipment, placing extension ladders the correct distance from structures, and using a seatbelt with cab rollover protection. **Conclusions:** Equipment safety represents one example of the best practices we have promoted over the years. By helping county staff obtain CEUs and learn best practices, Extension demonstrates our value to funding partners.

2. **Designing Climate-smart Extension for the Commercial Horticulture Industry in Florida**
Goodiel Y.*, goodiel@ufl.edu , Cohen, H., hamutahl.cohen@ufl.edu , Orfanedes, M., morf@ufl.edu , Mayer H., hmayer@ufl.edu , RobertsJ., jwr.09@ufl.edu, Leonard Mularz, M., mleonard@ufl.edu , Ricketts., G. gricketts@ufl.edu

Background: Florida ranks sixth in the US for total greenhouse gas emissions and the state's large and diverse green industry has a large carbon footprint. Climate change and rising sea levels are already affecting nurseries and landscapes as well as those who work in this industry, yet there is a dearth of extension programming on this issue. Green industry professionals can either exacerbate or mitigate their greenhouse gas emissions depending upon the equipment they use and horticultural practices they provide **Objectives:** To develop a model for state-wide climate education that enables green industry personnel to better understand the climate crisis, their role in it and opportunities to mitigate their footprint and promote their businesses as climate-friendly enterprises. **Methods**: In the Spring of 2022, a group of commercial

horticulture agents conducted a needs assessment utilizing focus groups, an on-line survey and a literature review to better understand clientele attitudes toward climate changes and help identify programming needs, objectives, and curriculum resources to educate the industry on this critical issue. **Conclusions:** This poster will share results from the needs assessment that can be used by extension educators to design effective programs that help the green industry in Florida address the issue of climate change and resilience.

3. **Mycotoxin Concerns in Warm-season Perennial Grasses**

Justesen, B.*, brittanyjustesen@ufl.edu, FACAA, UF/IFAS Extension Osceola County; Walter, J.*, jwalter@ufl.edu, FACAA, UF/IFAS Extension Brevard County; Blount, A., paspalum@ufl.edu, UF/IFAS North Florida Research and Education Center; Mendez, V., valeriemendez@ufl.edu, UF Soil and Water Sciences Department

Background: Beef cattle producers in Florida have expressed concerns of the potential presence of mycotoxins in warm-season perennial grasses and their effect on cattle health. Although fungi associated with cool-season grasses have been known to produce mycotoxins that can lead to economic losses in the cattle industry, little is known about the existence of mycotoxins in warm-season perennial grasses. **Objective:** To evaluate mycotoxin occurrence and severity in warm-season perennial grasses. Method: Specialists and Extension Agents collaborated in a multi-year study with the aim of evaluating mycotoxin occurrence and severity. Forage samples of limpograss, bermudagrass, and bahiagrass were collected from 13 ranches across Florida from 2017-2019. Additional forage samples were taken in Osceola and Brevard Counties during 2021-2022 with focus on seasonal changes of fungal populations and mycotoxin levels. **Results:** Over 500 samples have been collected for multi-mycotoxin testing and analysis of fungal community. Results showed that forage species affected the fungal community and mycotoxin profile of the samples. Our results confirmed the identification of Fusarium, Alternaria, and Aspergillus, and the presence of several lesser-known mycotoxins termed “emerging mycotoxins”. Co-occurrence of two or more mycotoxins was common. Of importance to cattle health, levels of zearalenone, along with derivatives, α-zearalenol βzearalenol, and zearalenone-4-sulfate, were prevalent in higher concentrations in bermudagrass and limpograss. Fumonisin, beauvericin, enniatin, ergonovine, elymoclavine, lysergol, diphydrolosegol, agroclavine, alternariol, and alternariol methyl ether were also present in samples. During a sample collection in Osceola and Brevard Counties, the fungal stroma of Myriogenospora atramentosa was first documented in limpograss (c. Floralta). **Conclusion:** Although results confirm the presence of mycotoxins in Florida pastures, there are many contributing factors that can influence whether concentrations are of concern for animal health. Additional sampling and further research should determine tolerance levels for beef cattle exposed and pasture management strategies that mitigate mycotoxin in forage grasses.

4. **The Disruption that is Blockchain Technology on Remittance Payments for Florida’s Seasonal Farm Labor**

Prevatt, C.*, prevacg@ufl.edu, FACAA, UF/IFAS Range Cattle Research and Education Center; Yarborough, J.*, jyarborough@ufl.edu, FACAA, UF/IFAS Orange County Extension; and Bainum, C., cbainum@ufl.edu, FACAA, UF/IFAS Marion County Extension.

Background: In 2021, the UF/IFAS Blockchain Project began examining the underlying technology that blockchains provide, as well as assessing their prospective impact on society. One use case our team wanted to further evaluate was the potential to reduce remittance fees and provide a digital bank for Florida's migrant farm workers. Florida has over 175,000 seasonal farm workers from the Caribbean and Latin America. During the year, these workers will send over $650 million home to their families. Traditionally, these payments are slow, incur high fees, and safety can be a concern on the receiving end. During 2021 alone, Florida's seasonal farm workers incurred over $47 million in fees when sending remittance payments. **Objectives**: Begin providing education and resources to clientele on new alternatives for sending and receiving remittance payments, as well as setting up their own digital bank from a smartphone. **Methods**: In early 2022, an effort began to educate clientele on the attributes that blockchain technology offers society and provide hands-on training by sending and receiving instant low fee cross boarder remittance payments at Extension programming events through presentations, exhibits, and displays. **Results**: Over the course of eight Extension programs fifty-eight individuals have downloaded their first digital asset wallet and forty-three have received and sent their first cross-border payments. **Conclusion**: Most participants can now send and receive money instantly, anywhere in the world, at almost no cost. Blockchain technology is and will continue to bank the unbanked and disrupt the $700 billion remittance payment market all over the world. This technology is cheaper, faster, more inclusive, secure, and innovative than the traditional remittance system. The new partnerships that were created through these programs will put a dent in the $47 million in annual remittance fees that Florida's Seasonal Farm Laborers pay to the traditional financial system.

5. **Small Ruminant Connections Events: Fulfilling the Needs of Small Ruminant Producers in the Northeast District**

Toledo I, izatol@ufl.edu, RSA-Dairy, UF/IFAS Extension Northeast District, Halbritter, A., aliciah1221@ufl.edu, ANR UF/IFAS Extension Baker County; Dossin, C., cdossin@ufl.edu, ANR UF/IFAS Extension Clay County

Background: Due to a lack of available trainings to small ruminant producers, a small group of agents from the Northeast District created the Small Ruminant Connections. This series of events provide producers with multiple opportunities to learn more about small ruminant topics, participate in trainings, and get certifications. **Objectives**: To provide FAMACHA training and certification to small ruminant producers in the Northeast District. **Methods**: The authors of this abstract partnered with other Northeast District UF/IFAS Extension faculty to create a collaborative learning environment for small ruminant producers. The extension faculty worked together and developed a FAMACHA training and certification program at the UF Sheep Unit. Producers were able to get trained on how to use the FAMACHA card and practice on the sheep in order to get certified. **Results**: Twelve producers attended the first training and became FAMACHA certified. This certification is only available by trained and verified instructors, making it difficult to access for producers. The Small Ruminant Connections group aims at certifying more extension agents as instructors in order to fill a larger need identified by producers. **Conclusions**: The development of trainings to small ruminant producers in

collaboration among extension faculty can provide a great learning experience, increase the knowledge and fulfill the needs of small ruminant producers in the Northeast District.

6. **Creating a Successful After School Youth Education Vegetable Garden**
Daugherty, J*., jaugherty@ufl.edu, FANREP, FACAA, UF/IFAS Lake County Extension*
Meringolo, D*., hendersond@ufl.edu, FAE4-HA, UF/IFAS Lake County Extension*

Background: The Eustis Community Garden targets underserved youth through a partnership with the city of Eustis Parks and Rec afterschool program, Lake County Master Gardener Volunteers (MGV), and Lake County 4-H Volunteers to encourage the use of nutritious and locally available foods. The ages of youth involved in this program range from 5-13 years. **Objectives**: This garden provides the opportunity to learn how to grow nutritious foods, utilize crops grown, and give back to the community by donating plant surplus. The benefits of a community garden extend beyond food security and will be a morale boost for the youth, community, and involved organizations. Community gardens help bring people together and satisfies the basic need for food and a reliable source of nutrition. **Methods**: The City of Eustis provided the land for the garden. The partnership with the Eustis Parks and Rec program allowed 4-H and MGV to set up raised garden beds and deliver educational programming. Agents and volunteers visited the garden twice a month during the spring school semester to provide garden programming. The Parks and Rec program leader took enrolled youth to the gardens weekly to tend to the garden. **Results**: The demographics of youth involved are 66% African American, 20% Caucasian, and 13% Hispanic with 53% males and 46% females. At the conclusion of six sessions 100% of participants (n=79) exhibited knowledge gained in one or more topics taught. **Conclusions**: Youth involved in this program gained knowledge in areas such as identifying bugs, parliamentary procedure, and growing seasons. Youth applies their knowledge by planting a variety of plants. Program success has led to the expansion from a spring program to a full year program for the 2022-2023 year. This program is easily replicated; however, it does require time and patience from plan development to program implementation.

7. **Backyard Chicken Class: Virtual Twist**
Yarborough,J.*, Walter, J., jyarborough@ufl.edu, FACAA, Orange County

Background: Since the start of the COVID-19 pandemic Extension Agents have been flexing their adaptability skills. One such way has been to covert classes into an online platform. One key to a successful online class is to have another person available to answer text questions in the chat box. **Objective**: The UF/IFAS Extension Agents from Orange/Seminole and Brevard Counties who were responsible for teaching their Backyard Chicken classes desired to team up and transition their successful in-person class to an online format. **Methods**: Since teaching on an online platform, the class has been offered monthly using the Zoom Meetings platform. By utilizing a unique combination of MS Forms and Zoom the class has 100% pre-test completion. To register for the class participants needed to complete a pre-test and then in the thank you message you could register for the class. To incentivize post-test completion, participants can receive the presentation in PDF format upon completion. **Results**: The class is regularly well

attended (n~50) compared to in-person. And with a greater audience the duo can spread their knowledge within and beyond their respective counties. Using pre-tests and post-tests allow for data capture to measure outcomes. On a 7-question test, pre-test average scores were 72%, while post-test average scores were 94%. **Conclusion**: By combining their areas of expertise and moving to an online platform, the agents were able to still have an effective class during the pandemic. An unexpected positive was the global audience that they were able to reach.

8. **Extending Extension: Communicating a Career in County Extension to a Class of UF/IFAS CALS Students**

Roberts, J.*, jwr.09@ufl.edu, FACAA, UF/IFAS Extension Palm Beach County; Marois, E.*, emarois@ufl.edu, FACAA, UF/IFAS Extension Palm Beach County; Klein, R., ryanwklein@ufl.edu, UF/IFAS Environmental Horticulture Department

Background: There is often a lack of public awareness about the mission, scope of work, and institutional structure of the extension network – even within UF/IFAS. This can be problematic since UF/IFAS College of Agriculture and Life Sciences (CALS) students may have knowledge gaps on extension and these students can go on to be stakeholders or even extension employees with relevant technical training. **Objectives**: Therefore, we set-out to determine a baseline of student knowledge of UF/IFAS Extension while also assessing potential career interest in the organization. **Methods**: A lecture was given for UF/IFAS CALS students about county extension and responsibilities of agents within the cooperative extension system. Initial pre-test data was taken via a web-based platform (i.e., Kahoot!) for both in-person and remote students enrolled in Arboriculture (ORH 4242C) Advanced Techniques in Arboriculture (ORH6932). A follow-up test and survey were conducted through Qualtrics to capture post data and programmatic perceptions. **Results**: For questions about cooperative extension and the roles of extension agents, the pre-test responders (n=16) correctly answered questions on extension and the role of horticulture agents at a rate of 39.6%, while the post-test responses (n=11) showed students improved to a rate of 87.8%. For the survey, relatively few students reported to be “very interested” in Extension as a prospective employer before the class (i.e., 18.2%), while almost half were “very interested” afterward (i.e., 45.5%). **Conclusions**: Although the sample size from this class was relatively modest, it should impress the point that extension is still a relatively “unknown commodity” to prospective employees that have highly transferable skills in fulfilling the needs of extension. The presented lecture was oriented towards horticulture students, but similar collaborations between extension agents and other departments and classes within CALS would likely be beneficial to students, professors/specialists, extension agents, and UF/IFAS as a whole.

9. **Evaluation of Fertilizer Timing and Rate on Cool-Season Forage Varieties for field day**

Waters, K., kalyn.waters@ufl.edu, FACAA, UF/IFAS Extension Holmes County, Dubeux, J., dubeux@ufl.edu, UF/IFAS Extension, NFREC Marianna, and Blount, A. paspalum@ufl.edu, UF/IFAS Extension, NFREC Quincy.

Background: Cool-season forages are widely used in the Florida Panhandle as a supplement for cattle during the fall and winter months. These forages are typically planted from October to

December typically provide grazable forage from January to mid-April. **Objectives:** 1) evaluate common on farm fertilizer practices and their impact on the performance of cool-season forages and 2) determine if fertilizer rates impacted various cool-season forage varieties. **Method**: Treatments were a result of common practices from cattlemen in Holmes County. Planting dates, treatments, and fertilizer application were done according to weather and managed on-farm. Four fertilizers treatments that mimics common practices by cattlemen in the county were used. Treatments were randomly applied to selected varieties of Oats, Rye, Triticale, and Ryegrass over a two-year period. Samples were taken in two-foot square area and converted to acres to determine total forage yield per acre every 2 weeks for 6 weeks following the initial sample date. The samples were taken in the same area for each collection to mimic grazing and measure regrowth. **Results**: Overall forage yield totals by forage type rank: 1) Oats, 2) Triticale, 3) Rye, and 4) Ryegrass. Overall forage yields by treatment were impacted by fertilizer treatment establishing relevancy of common recommendations. The average dry matter yield by forage type in response to timing and rate of fertilizer applications (treatments). **Conclusion**: Years of research has established how cool-season forages respond to fertilizer treatments. This study is a snapshot in time and provides information on how different fertilizer rates and timing can impact forage yield. Through this multiyear trial we were able to demonstrate the relevance of those established guidelines and visually present those results in a field day setting.

10. **Master Gardener Volunteer Trainees Final Project: Design a Florida-Friendly Landscape**
Rotindo, K., krotindo@ufl.edu, FACAA, UF/IFAS Extension St. Lucie County

Background: St. Lucie County, like many areas in Florida, is experiencing rapid population growth and development. Many new residents are unfamiliar with best practices and have misconceptions about proper landscape care that can often result in waste of water, fertilizer, and pesticides. Residents can benefit from a knowledgeable and motivated group of Master Gardener Volunteers that provide research-based horticulture education. **Objectives**: A 12-week training program is designed to prepare these volunteers with relevant horticultural knowledge. A final project was introduced into the curriculum of the St. Lucie County training program in 2021 and 2022. Trainees were asked to design and present a Florida-Friendly landscape, in which the nine FFL principles would be incorporated and implemented. **Methods**: Trainee designs were to be based on existing or hypothetical landscape areas. They each created PowerPoint presentations and provided the “details” of the design with photos, drawings, site plans, etc. and information about the designed area (sun/shade, soil conditions, water sources, etc.). Plant selections and management practices were to be based on UF/IFAS recommendations. Florida-Friendly Landscaping™ principles were incorporated in the design and were described in the presentation to the class. **Results**: During the 2021 and 2022 Master Gardener Volunteer training program, twenty trainees completed a Florida-Friendly landscape design and presented these projects during the class session. Self-reflective surveys results show that 100% of participants felt that this final project helped them to improve and solidify their knowledge of Florida-Friendly Landscaping™. Trainees also felt that this final project was an effective culmination of 12-week training program. **Conclusions**: The final project presentations allowed the trainees to creatively implement knowledge they gained during the

training course. Based on the results from the 2021 and 2022 training programs, this final project will continue to be utilized in the St. Lucie County Master Gardener Volunteer training.

11. **2022 Honey Bee Seminar: A Collaboration with Polk's Ridge Beekeeper Association to Teach the Community About Proper Beekeeping**

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Background: Honey bees pollinate approximately 85% of all crops in Florida. This creates an interest in the community to learn about Beekeeping. Unfortunately, not everyone has access to scientific-based education in order to start correctly as a beekeeper. **Objectives**: The 2022 Honey Bee Seminar was an all-day family event with the purpose of teaching the local community and beginner beekeepers about basic scientific knowledge about how to property start keeping honey bees, as well as to increasing basic knowledge on their management, insect biology, pest and diseases, and commercial products we obtain from this type of livestock. **Methods**: An educational event was planned and implemented in collaboration with Polk's Ridge Beekeeper Association. This event was held at the UF/IFAS Polk County premises and consisted of 10 different stations, each with a different speaker, teaching a specific scientific based topic about beekeeping in Florida. Participants switched stations every 25 minutes in small groups until they completed visiting all 10 stations. At the end of the program, all participants were grouped together for a final review of the program and a giveaway items were provided to help motivate them in starting their apiculture venture. **Results**: Surveyed participants (n=30 of 44) reported an average increase in knowledge in bee biology (22%), pest and diseases (41%), beekeeping tool use (30%), apiary transportation and construction (37%), and commercial products obtained from honey bees (35%). Furthermore, 91% of all participants reported that they will implement practices that they learned, while 52% reported they would evaluate their current management practices to make improvements. **Conclusions**: Beekeeping education is an interest to the community members of Polk County. UF/IFAS Extension Agents have the resources to provide science-based information to educate about importance of beekeeping. Collaborating with the local beekeepers helps reach and increase in practice adoption.

12. **Food Safety Extension Programs Prepare Florida Produce Growers for FSMA Produce Safety Rule Inspection**

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Background: The Food Safety Modernization Act (FSMA) Produce Safety Rule (PSR) was the first legislation to establish minimum standards for growing, harvesting, packing, and holding fresh

produce in the United States. The new regulation meant Florida produce growers would require education and technical assistance to prepare for compliance of the PSR. **Objective**: The University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) and the Florida Department of Agriculture and Consumer Services (FDACS) collaborated, since 2017, to provide education and outreach through Produce Safety Alliance (PSA) Grower Training Courses and On-Farm Readiness Reviews (OFRR) to assist growers in meeting the requirements of the PSR. **Methods**: PSA Grower Trainings were hosted at UF/IFAS county extension offices and research centers throughout the state based on identified need from extension colleagues, number of produce farms, and FDACS farm inventory. On-Farm Readiness reviews were conducted based on grower request for assessors to visit their farm and provide technical assistance and feedback on the requirements of the PSR and food safety principles. Pre- and post-test scores from PSA grower trainings (n=1,444) and OFRR surveys (n=52) indicated knowledge changes and highlighted areas where more education was needed to meet minimum requirements. **Results**: Post-test score means (22.15/25), were significantly higher than pre-test score means (19.02/25), indicating an increase in knowledge after participation in the training ($t=-2.14$, $P< 0.05$). The OFRR surveys indicated sanitation, post-harvest water, and worker training required the most improvements and 46.15% met the requirements, 42.31% needed minor improvements, and 11.54% needed significant improvements to meet the FSMA PSR requirements. **Conclusion**: The results of the PSA Grower Trainings and OFRR program demonstrated improvement of knowledge and practices of Florida farms regarding the FSMA PSR. As inspections continue throughout the state of Florida, education and outreach programs are ongoing to ensure Florida farms are prepared for implementation of the FSMA PSR.

13. **Expanding Engagement: Virtual Content for Farmers About BMPs**

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Background: Agricultural Best Management Practices (BMPs) are designed to improve water quality while maintaining agricultural production. Some farmers, however, are unaware of or have misconceptions on BMPs. With the increasing use of social media, YouTube has become one major search engine for educational materials. Therefore, a virtual program “Let’s Talk About Ag BMPs” has been developed to increase awareness and dispel misconceptions about BMPs. As part of the Active Learning Program, two interns were recruited to work on this virtual program. **Objectives**: This internship aimed to create educational videos to increase BMP awareness for young farmers. **Methods**: In each educational video, the UF/IFAS specialists were interviewed to answer some commonly asked or misconceived questions about BMPs. The interviews were recorded through Zoom and the footages were edited into one 10 minute video through the program DaVinci Resolve. A survey was created to evaluate the effectiveness of the video and understand the demographics of the video viewers. Promotional materials were created through the program Canva and distributed through Facebook to advertise livestreaming event on Facebook and YouTube. **Results**: Two educational videos were produced during the internship. One video was livestreamed. Three people attended the first

livestreaming event and two completed the survey. One out of the two responses was completed by a non-multigeneration farmer who gave positive feedback The first video has received 11 YouTube views and 53 Facebook views in two weeks after the video was livestreamed. However, none of these views have led to the survey completion. Due to the time limitation of this internship, a multi-dimensional social media campaign was not able to be launched to reach a broader audience. **Conclusions**: Further work is needed to gain a larger audience as well as survey completion. A more engaging experience for the viewers is essential in future endeavors.

14. **Increasing 4-H Membership through Library Partnership**
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Background: Strong partnerships help 4-H agents expand the potential audience for their programs, which adds value to their programming. Leon County 4-H and the Leon County Library Branch System wanted to develop an educational program to increase both 4-H membership and youth library attendance. **Objectives**: The objective of the First Friday Fun with 4-H at the library was to provide an educational program in an open club format in a public space with the primary goal of increasing 4-H membership. **Methods**: First Friday Fun with 4-H at the Library was offered the first Friday of every month during the months of September to April in the school years 2020/2021 and 2021/2022. The one-hour program started off in a virtual format and transitioned to in-person December 2021 at a local library branch. Insurance was taken out for each event to accommodate youth who were not 4-H members. Each month, a new educational theme was featured, and participants were guided through hands-on learning activities led by UF/IFAS faculty and special guests. The Leon County Library Branch System provided take-home educational activity bags and book lists related to the themes. Each event was concluded by a story read by a library staff member. **Results**: A total of 39 youth participated in the program and 17 of those youth joined Leon County 4-H as a result of participating. **Conclusions**: Participation in Frist Friday with 4-H at the Library increased 4-H membership by 17 youth and overall 4-H participation by 39 youth over a two year period. 100% of participants surveyed stated they learned something new while participating in the program and 100% of participants surveyed stated they would recommend this program to a friend.

15. **Connecting the Clover: Sparking Interest in a Variety of 4-H Programs in Escambia County**
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Background: Florida 4-H provides many opportunities for youth in areas of agriculture, STEM, leadership, expressive arts, and citizenship. Many Extension agents find it difficult to bring all of these opportunities to youth and create outreach opportunities for the 4-H program. Escambia County created the Connecting the Clovers program to highlight multiple program areas and bridge these areas of learning into concise learning and experience. **Objectives**: 1. Engage youth interested in 4-H but could not find their fit, 2. Expose youth to the many agricultural education

programs that Florida 4-H offers youth in Escambia County, and 3. Increase enrollment in county programs. **Methods**: Delivery of the program was provided in bi-monthly night sessions that focused on common programs within Florida 4-H. The first Connecting the Clover program focused on animal science opportunities, while the second focused on STEM. Multiple Extension Faculty with expertise in the subject areas presented brief but in-depth lessons on the topics such as horse quiz bowl, drones, photography, and judging teams. Youth were able to experience new program areas and were encouraged to try new activities and enroll in clubs that sparked their interest. **Results**: Two Connecting the Clover events joined 18 4-H youth in Escambia County to experience new and exciting programs offered. Evaluations of the two Connecting the Clover workshops concluded that 37.5% of youth completing evaluations showed interest in at least one new 4-H program that they were currently not associated with, and at least four youth (22%) enrolled in new/additional clubs. **Conclusions**: The Connecting the Clover workshop series introduced multiple programs areas to Escambia County 4-H members and youth who experienced project areas unknown to them. Future plans for Escambia County 4-H Connecting the Clover programs are in the areas of statewide 4-H events, preparing for the fair, and cooking.

16. **Chick Chain Expansion**

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Background: Madison County is home to the North Florida Livestock Show and Sale. This cattle and swine show invites 4-H and FFA members from 6 area counties to participate. However, Cloverbuds are unable to participate because of 4-H large animal restrictions. Also, many families do not participate because they cannot afford the cost of a large animal, or they do not have a place to house a large project. After seeing the success of the West Florida Chick Chain Project, it was decided the Chick Chain project would be an ideal project to offer the youth of Madison County and eventually surrounding counties. Objectives: Participants will learn poultry nutrition and care, communication and record keeping skills, personal responsibility, as well as preparation for a show and showmanship skills. Methods: Participants, including Cloverbuds (ages 5-7) raise at least 6 chicks during the six-month project. Two birds are chosen to be shown in the fall show and judged for best in show category and showmanship. Cloverbuds follow the same showmanship protocols but are only awarded for participation. All participants must attend at least two schedules poultry related educational meetings. Results: The first year there were 17 Madison County participants. The second and third years the program was expanded to include Taylor and Lafayette Counties (approximately 35 participants each year). Suwannee County will join this year. 94% of participants reported learning new information on poultry care and nutrition. 82% reported improved record keeping skills. 98% of participants' parents reported an increase in their child's sense of responsibility. Conclusion: Collaboration among area extension agents provided a positive learning experience for all 4-H youth participants. The program also sparked interest in poultry projects and a new poultry club was formed in one county. New 4-H partnerships were established with local stores and individual poultry enthusiasts.

17. **Club Member Practices Conservation and Demonstrates Generosity Through Wildlife Rescue**

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Background: According to the United States Census, in St. Johns County, from 2010 to 2020, there has been a 44% increase in the number of people per square mile (316.4 to 455.4). One consequence of this development is a decrease in natural lands. While there are several county parks, relatively little remains wild, limiting the opportunities for youth to see Florida wildlife in its natural environment. Without environmental science education, youth will underappreciate native plants and wildlife. **Objectives:** To motivate youth to engage in wildlife conservation practices. **Methods:** The six-member club met monthly from September through May. Each month, a different native or invasive Florida animal was featured using slideshows (behavior, tracks, and physical characteristics) and discussions, preserved specimens, and concepts reinforced with topic-related crafts. Animals featured included deer, wild hogs, Osceola turkeys, owls, pollinators, bobcats, and black bears. **Results:** Youth were able to name two characteristics of each animal along with whether it was native or invasive. One club member was motivated to engage in an impactful conservation practice. He found an orphaned great horned owlet, brought it home, and fed it raw chicken. The next morning, he contacted the local wildlife rehabilitation center for the bird to be taken to. His actions led to the successful release of the fully mature owl at the Extension Office property five months later. Even though the club was discontinued in 2021-2022, the release was attended by four of the six former club members. He also independently saved his allowance from the time the owl was in rehabilitation and donated it to the rehabilitation center. **Conclusion:** Youth who learn about wildlife engage in conservation practices. Additionally, caring about the environment is an example of the Essential Element of Generosity: how other people relate to nature (concern for others) and recognize how wildlife reacts to human impacts (empathy).

18. **Exploring Current and Potential Resources to Support Florida 4-H Volunteers**

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Background: Volunteers are critical to the success of Florida 4-H—a volunteer-led program. They increase program capacity and broaden programmatic scope with their individual experiences, skills, and expertise. While there is abundant literature on volunteer motivations and organizational benefits derived from volunteer service, research addressing volunteer learning needs and resources to support volunteers is scarce. **Objectives:** Four research questions guided this study: 1) What resources does Florida 4-H provide for its volunteers? 2) What resources do Florida 4-H volunteers identify as helpful in fulfilling their roles and responsibilities? 3) What resources do Florida 4-H faculty members identify as helpful for volunteers to successfully fulfill their roles and responsibilities? 4) How do the beliefs of Florida 4-H volunteers and Florida 4-H faculty members differ as related to resources helpful in successfully filling volunteer roles and responsibilities? **Methods:** A document analysis was used

to systematically analyzed existing resources available to volunteers. A survey study using questionnaires and interviews were used to gather both quantitative and qualitative data from stakeholder groups. **Results:** The results of this study indicated that volunteer resources should be delivered using a wide variety of methods that directly support volunteer work. . In addition, study results indicated facilitating, improving, and supporting communication between 4-H volunteers and 4-H faculty and 4-H volunteers and Florida 4-H. **Conclusions:** Findings from this study could help to establish a framework for resource development to support the Florida 4-H volunteer development program. In addition, there are findings from this research that could be generalized and applied to other Extension programs that utilize a volunteer workforce such as Master Gardeners, Master Naturalists, Master Money Mentors, or Master Food Preservationists.

19. **Teaching Youth About Food Systems through Farm to Fork 4-H Food Prep Camp**
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Background: Seminole County is the fourth most densely populated county in Florida. Despite the population and urbanization of the county, agriculture is an important part of the community. Diekmann, et. al (2017) speak to the importance of working with a variety of stakeholders, including youth, when educating about urban food systems. Research by Knoblach et. al (2007) indicated a benefit to students who learn about agriculture is connectedness. Connectedness indicates that students have a greater appreciation for where they live, including the fields and farms. **Objectives:** (1) increase youth knowledge about agriculture and food systems, (2) engage youth in science-related activities, (3) increase youth knowledge in healthy living. **Methods:** A week-long multi-disciplinary Farm to Fork 4-H Food Prep day camp was implemented to teach youth ages 11-13 about Florida agriculture, food systems, and healthy living. Teaching methods included hands-on food preparation, educational games, and demonstrations. **Results:** Pre-test-post-test surveys indicated that youth (n=9) increased their knowledge about where food comes from by 85% and increased their understanding of how food gets from farm to table by 72%. Youth reported they were 68% more likely to tell others about where their food is grown. Youth were also more likely to consider a science-related job. Youth indicated an 86% increase in their knowledge on the importance of eating a variety of foods. **Conclusion:** Providing opportunities for youth to learn about agriculture and food systems is important, especially as Florida rapidly urbanizes. Additionally, these experiences help increase knowledge of healthy living on the individual, family, and community levels.

20. **Build It Camp Teaches Life Skills and Encourages Youth to Explore Construction as Career Choice**

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Objective: Wood working is a valuable skill youth can use as a hobby or in a career. In the 4-H Build It Camp, youth ages 14-18 learned to use different types of wood for different purposes, how to properly use wood working tools and construct a basic 6'x8' wooden building. **Methods**: On the first day of 4-H Build It Camp, youth were introduced to all wood working tools that would be used in camp. Most of the tools were simple to use and mastery accomplished quickly. Some of the tools such as the circular saw require one on one training and supervision while in use. The first day of camp was also a day of learning the different types of wood, the purpose of each and you youth were presented written plans to build a small building. Youth would put learned skills into practice the following four days of the camp. **Results**: Of the participating youth, 100% (n=12) gained knowledge that can be used in marketable skills. 100% (n=12) were able to use a circular saw and 100% (n=12) were able to properly use a drill upon completion of Build it Camp. 71% (n=12) of the youth indicated they were now considering a career in construction or engineering. One third of those were female, which are under-represented in that field. **Conclusions**: A 5-day wood working camp is appealing to older youth and teaches wood working skills that can be used around the home and in a career. By completing this 5-day camp, youth were able to apply learned wood working skills, safety practices and build a small 6'x8' structure with 8' ceiling, 2 windows and a door.

21. **Fishing and Conservation with Okeechobee 4-H**

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Background: In lieu of an expressed interest for a fishing club, a summer fishing camp was implemented instead. Several 4-H youth shared a desire to learn more about fishing, participate in fishing events and increase their knowledge of the fishing industry and being the northern border of the second largest freshwater lake, Okeechobee 4-H birthed its first fishing camp. **Objectives**: The Okeechobee 4-H Fishing and Conservation Summer Camp was a summer program that allowed youth participants the opportunity to learn about freshwater and saltwater fish, conservation of the lake, the importance of preserved saltwater shorelines and the many facets of the fishing industry. **Methods**: Through grant funding with Children Services of Okeechobee County, Okeechobee 4-H was able to create this learning environment for youth participants. 4-H also partnered with the Sea Grant agent in Martin County to provide one afternoon of living shoreline experiences that taught youth the importance of preserving our shoreline habitats. Other days were filled with hands-on learning stations, fishing trips to freshwater and saltwater bodies of water, and a culminating skill-a-thon on the final day of camp. **Results:** 15 youth, 2 teen counselors and 2 adult counselors participated in this weeklong day camping experience. 15 youth caught their own fish, watched deck mates clean them and then participated in a fish fry lunch by eating their own catch. 13 youth participated in a culminating skill-a-thon activity with average scores ranging from 62% to 85% mastery. **Conclusions:** Listening to youth's requests and interests in adding new programming allowed us to create a new program that became a very successful partnership between those

involved in providing meaningful, learning experiences to all the participants. This program could be easily replicated.

22. **4-H Tech Changemakers Bridging the Digital Divide**

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Background: There are currently over 24 million people in the U.S. with limited or no internet access. There are even more people who lack the skills needed to take full advantage of online resources. The combination of inadequate internet access and limited digital skills has created a digital divide, impacting future opportunities for young people and adults. Objectives: Train 4-H Tech Changemakers to teach adults in their communities the skills they need to use online resources, become more attractive employees, and boost their entrepreneurial skills more efficiently. The goal was to teach at least 1500 adults in the community. Methods: Teens participated in a training program to learn their roles as tech changemakers. In addition to the initial training program teens were taught skills throughout the course of their Tech Changemaker commitment. Teens then hosted workshops and participated in community events to teach adults in their communities. Result: The teens involved felt a sense of belonging, felt they improved their public speaking skills, and felt more confident. Adult participants were pleasantly surprised at how knowledgeable and professional teens were when conducting workshops. Most adults who attended a workshop said they would like to learn more from the teens. Most adults said they learned a skill they did not know or improved on a skill they already had. Conclusions: Each Tech Changemakers had a different technological skill they were most excited about learning and sharing. We hosted over 50 workshops and teens learned new skills in digital design, financial technology, engineering, job readiness, as well as photography and videography. There are numerous opportunities for teens showcase what they know and help their communities.

23. **Expanding 4-H STEM Opportunities through Agent Collaborations**

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Background: 4-H offers a wide variety of programming areas. However, agents can often be limited in their ability to provide effective education in all available project areas to meet the needs of their communities. Collaboration allows agents to expand their program reach to underserved audiences, while utilizing innovative teaching methods to implement diverse opportunities for youth. **Objectives:** The goal of this collaboration is threefold: 1) promote team contributions within our institution, profession, and community; 2) provide a support system between agents who are branching out into new 4-H project areas, and 3) providing new 4-H STEM opportunities that motivate diverse youth to be involved in quality, experiential science-related learning experiences. **Methods:** Polk and Pasco County 4-H agents collaborated with other UF/IFAS Extension agents by co-teaching and sharing strategies to provide STEM opportunities through innovative education methods including workshops, camps and seminars for underserved audiences and youth outside of 4-H, to spark an interest and enhance their knowledge in the field of STEM. Additionally, the agents were able to contribute to their profession by presenting these innovative youth opportunities to peers at national and

international conferences as well as promote 4-H at an international level. **Results:** Eighty-three youth participated in STEM activities related to environmental sciences, robotics, program coding and engineering through collaborative summer day camping programs. Of those 83 youth, 87% had not previously participated in 4-H programming, and 14% enrolled in 4-H the following year. Further, we presented at national and international conferences, we reached 145 4-H professionals, researchers, and educators representing over 26 states and 12 countries. **Conclusions:** Through these collaborative efforts the agents were able to build a sense of comradery amongst each other while eliminating programmatic barriers by utilizing the expertise of their peers. This led to more diverse 4-H STEM opportunities available for underserved audiences.

24. **Food Safety Considerations in Food Preservation and Meal Preparation**

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Background: Citizens ask questions about handling foods safely & expressed an interest in learning about food safety, food preservation and food preparation. This may be due to increased interest in gardening, budgeting food dollars, food shortages, pandemic health implications, purchasing locally grown produce, desire to eat healthier, and/or because individuals are spending more time at home. **Objectives**: At least seventy-five percent (75%) of 100 participants will report knowledge gain of at least one food safety or food preparation/food preservation best practice. At least sixty percent (60%) of 100 participants will adopt at least one food safety, food preparation or food preservation best practice. **Methods**: This innovative FCS program was conducted through Broward & Hillsborough Counties, which offered the creative four-part series, "Food Safety Considerations in Food Preservation and Meal Preparation" via virtual webinars and workshops. Curricula and current research-based recommendations and resources from the UGA-National Center for Home Food Preservation were used. A follow-up survey was conducted to evaluate knowledge gain & adoption of behavior. **Results**: 2021- 2 workshops; 67 participants; 2020- 2 workshops, 74 participants. 100% (111 of 111) of responding participants indicated knowledge gain in areas such as food safety basics, use of approved recipes, & food preservation/preparation principles. Goal of 75% met. 72% (90 of 126) of responding participants indicated making change(s) in behavior such as: following manufacturer recommendations, & practicing food safety principles. Goal of 60% met. **Conclusion**: These agents responded to county needs and educated across geographic barriers. This educational programming has resulted in the implementation of evidence-based curriculum and increased knowledge on food safety, and the prevention of foodborne illness. Cooking at home and engaging in food preservation activities can save time, money, and resources by decreasing food waste and can help to provide a healthier and nutritious food intake for individuals and families.

25. **UF/IFAS Extension Master Money Mentor Volunteer Program: Volunteering Through the Pandemic: An Unexpected Success Story**

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Background: Due the circumstances surrounding Covid-19, in-person homebuyer education programming was hindered, therefore we had to pivot to online classes via Zoom. To help facilitate these online classes, we have engaged Florida Master Money Mentors to help provide financial education during UF/IFAS programs such as the First Time Homebuyer Education classes. **Objectives:** The Florida Master Money Mentor (FMMM) program is a coordinated referral network designed to match mentors trained in increasing financial knowledge and promoting positive financial practices with people needing these skills. UF/IFAS Extension Agents worked together to train volunteers from across the state to help teach the virtual homebuyer education classes. **Methods:** Volunteer mentors receive approximately 20 hours of intensive training in basic money management, strategies for dealing with financial problems, credit and debt management, savings, mentoring techniques, and connecting to community resources. Following the training, each volunteer provides financial mentoring for at least 50 hours within one year of completion of training. **Results:** In 2019-20, three Extension agents developed and delivered an online version of the FMMM training. University of Florida IFAS Extension began providing the infrastructure for the program in February 2010 thanks to a gift from Bank of America. Since then, over 600 mentors have been trained in 40 counties in Florida. **Conclusion:** **T**he Florida Master Money Mentor (FMMM) program is a coordinated referral network of volunteers who provide basic personal finance coaching. The program continues to expand to areas where it's needed the most, including rural areas and city centers hit hardest by high unemployment and a high incidence of home foreclosures.

26. **DEI Inside and Out: A Comprehensive Approach to Diversity Initiatives at the County Level**

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Background: Diversity, Equity and Inclusion (DEI) have been a priority of Extension statewide in recent years. This important focus has been applied in different ways in each district and county, but there is much to learn from each other, as we all work toward continuous improvement. **Objectives**: Sarasota County's DEI approach is a full-team initiative with goals for both internal and external improvements. Specific objectives included increasing staff knowledge and changing individual behaviors, as well as changing who we were reaching with our Extension programs. **Methods**: Multiple trainings have been implemented on implicit bias, autism, ADA compliance, and more. An inventory of other over 45 other trainings was also developed. Data was analyzed on the demographics of past educational contacts, as well as community demographics and specific locations serving diverse populations and an interactive map was developed. An in depth needs assessment was conducted to better understand how Extension could serve non-profits and their diverse clients. An inventory of 75 local organizations, a prioritization exercise, in-depth conversations with 10, and an open house have dramatically grown partnerships. Not wanting to wait to see tangible results, the team also took steps to diversify audiences immediately, shifting focus for programming to serving low-income and diverse populations, through partnerships with non-profits who have existing relationships with these community members. **Results:**

Intentional targeting of programs resulted in an immediate change in who we serve. Our audiences are more diverse, lower income, and often new to Extension. Our staff are far more knowledgeable on the issue and eager to learn more. **Conclusions**: The comprehensive and staff-led approach to DEI in Sarasota County has been incredibly successful just in its first two years. It has balanced the need for internal trainings with the desire to see immediate progress in relationships with and services to diverse populations.

27. **Trying New Foods for the First Time: A Novel FCS Approach to Promote Health and Food Access**

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Background: Several fruits and herbs that are highly adapted to the Marion County climate come in season during the springtime. Yet, some are unknown to most of the county population because they are not sold in supermarkets or farmers' markets due to their short shelf life. This is the case for loquats and mulberries. Other unknown foods are passion fruit, African blue basil, yaupon holly, and lemongrass. Consuming fruits and herbs are part of a healthful diet. Fruits are associated with a reduced risk of developing chronic diseases (Aune et al., 2017), and herbs can substitute excess sugars, fats, and salt in the diet. **Objectives:** Participants will 1) learn how to grow these plants 2) Increase familiarity of lesser-known foods through taste tests 3) increase knowledge about fruit and herb preservation methods, and 4) increase fruit and herb consumption. **Methods:** The genesis of this novel programmatic approach involved the partnership of four extension agents from different program areas. Participants first toured the edible landscape at the 4-H Farm, where these foods are grown. Food preservation training, along with nutritional benefits, culinary uses, and taste tests were offered subsequently. **Results:** All participants (*n*= 30) reported gained knowledge on how to grow these plants, and all participants increased familiarity with the foods by tasting mulberries, loquats, passion fruit juice, and selected herbs for the first time. 25/25 (100%) respondents reported increasing their knowledge of how to preserve these short shelf-life fruits and herbs; and 22/22 (100%) respondents intend to increase their fruit and herb consumption. **Conclusion:** This program facilitates food access by teaching participants how to grow low maintenance edible plants. Proper food preservation techniques enable yearlong access to these foods, thus increasing fruit and herbs consumption. The results lead to a health promoting diet and reduced risk of developing chronic diseases.

28. **Adding More Movement with Workout Wednesdays**

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Background: The Physical Activity Guidelines for Americans recommends getting 150 minutes of physical activity each week, or as much time as one can to reduce a sedentary lifestyle. Last summer, the agent virtually offered the first-ever exercise class to county employees, titled Workout Wednesdays. **Objectives:** The objectives were to introduce at least 60% of the surveyed participants to new ways to increase physical activity during the workday. **Methods:**

The agent partnered with a county library where one of the employees has a fitness background. The library also had the space and IT equipment to live stream the sessions. The planned 30-minute fitness routines were set to upbeat music during lunchtime on a weekly basis for four sessions. It incorporated both stretching and cardio. Additionally, to stress health equity, exercises were offered at two different levels: the agent demonstrated the exercises while sitting (geared towards beginners with modified movements), while the other instructor stood. An interactive/conversational aspect was included at the end, asking those who had a tracking device or smart watch to share how many calories they burned or what their average heart rate was if they felt comfortable sharing. **Results:** 14 people joined the Workout Wednesdays sessions, and 8 responded to the post survey. 100% of respondents said they discovered new ways to increase exercise minutes while at work, and 62% said the program gave them the motivation they needed to get more exercise throughout the weeks. **Conclusions:** While there are plenty of apps, walking programs, and online videos about exercise, this was different in that this was live and gave people a chance to "see" their fellow coworkers and let them speak live to other participants and the instructors. Additionally, the private YouTube link for participants has had several dozen views and counting.

29. **Fostering Synergies for Growing Extension**

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Background: In our urban county, there is a disconnect between research, science, and the public. Annual Broward County stakeholder surveys revealed the need for additional training on the connection between research and Extension. **Objective:** Annually, the UF/IFAS Extension County Overall Advisory Committee members will increase knowledge of Extension's educational programs by 40% and are trained to communicate about Extension, as measured by pre- post-reflective surveys. **Method**: This disconnect led us to educate our active Broward County Stakeholders about the collective force of research and Extension in Broward County. By thinking multi-disciplinary. This multi-disciplinary approach brings together UF statewide and county extension faculty to educate Broward County stakeholders with research-based multi-disciplinary programs supporting UF/IFAS statewide and Broward County projects. I collaborated with eight UF/IFAS Extension agents and five UF Faculties whose expertise is in food-water-energy nexus, urban sustainability, and sustainable urban plant production.
Results: By educating on our collaborative programs, our active stakeholders increased their understanding of Research-Extension and multi-disciplinary programs by 44%, positioning them to advocate and market the value of Extension and research to the community. Since 2020, our stakeholders have supported Extension's new social media platforms and virtual programming. They shared the agent's collective 71 client-centered success stories created since 2020 and contributed to a total social media reach during COVID19 of 133,598 people supporting our brand awareness and strengthening Extension's program reaches. **Conclusion:** By working together in synergy and integration, we are forging partnerships, cultivating leaders, and creating multi-disciplinary programs to demonstrate a successful bridge between the university and the urban population.

30. **Engaging Learners During a Pandemic: Nutrition & Personal Finance Kahoot Challenges**
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Background: On April 1, 2020, a statewide stay-at-home order was issued by the governor of Florida due to the world-wide Covid-19 pandemic. Residents entered a time of uncertainty that was unprecedented in modern times. Extension faculty were tasked by county and state governments to continue educational efforts. Family & Consumers Sciences (FCS) faculty in Putnam and Hillsborough Counties partnered to provide statewide education using game-based software and web conferencing tools. **Objectives**: Provide nutrition and personal finance education in a light-hearted manner during the initial phases of a world-wide pandemic. **Methods:** FCS faculty developed game-like quizzes using Kahoot software. The quizzes featured key nutrition and personal finance concepts. The online gaming platform allows participants to play live quiz games and see results in real-time. Graphics and music are added to enhance the learning experience. At the end of the game, the top three participants are recognized on a virtual podium. The UF/IFAS bookstore partnered by mailing IFAS products to the game winners. (Stay-at-home orders and purchasing policies precluded direct methods of awarding prizes.) Prizes were exercise bands, journals, and travel cups meant to foster positive, health, nutrition, and personal finance practices. Participants were invited to upcoming UF/IFAS virtual events. Challenges were promoted via social media and held live on April 29 and May 20, 2020. **Results:** Forty-five participants were presented with nutrition and personal finance facts in a fun, engaging atmosphere. **Conclusions**: Technology and cross-county collaboration provided an online, engaging FCS program to teach nutrition and finance topics. The online technology facilitated engagement with the community and provided an opportunity to promote online programs offered during the pandemic.

31. **Florida VIP (Vaccinate, Immunize, Protect) for Healthy Communities**
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Background: Immunization plays a critical role in preventive healthcare, as vaccines have proven effective for preventing and in some cases eradicating infectious diseases. Despite the life-saving nature of vaccines, adult immunization rates in the United States (U.S.) remain below immunization goals for many diseases. Florida has one of the lowest influenza vaccination

coverage in the U.S. Moreover, the coronavirus pandemic demonstrated disparities in vaccine uptake among rural and minority residents throughout the state of Florida. A collaborative program between UF/IFAS Extension and Florida A&M Extension was developed to address low vaccination coverage among Floridians. **Objectives:** The Florida VIP program provides the opportunity to demonstrate the collective impact of a collaborative health extension initiative administered by Florida's land grant institutions. The tailored immunization education intervention was designed to: 1) improve community and individual attitudes related to the importance of influenza, shingles, and COVID-19 vaccines for health and disease prevention and 2) increase accessibility to influenza, shingles, and COVID-19 vaccines among socially and medically vulnerable racial/ethnic minority residents in six rural Florida counties. **Methods:** Florida VIP utilized a community-based, participatory approach to develop, implement, and test a multilevel immunization education campaign. This involved providing targeted immunization communication and educational material to the priority population and collaborating with the UF Clinical and Translational Sciences Institute (CTSI) to promote vaccine uptake by hosting mobile health clinics in communities. **Results:** The FL VIP team will discuss the intervention development process, implementation strategies, and review preliminary evaluation findings. **Conclusions:** FL VIP for Healthy Communities is a novel program with some early successes demonstrating the potential for scaling in the most vulnerable counties throughout the state of Florida.

32. **South Florida Beef Forages Program: Collaboration and Support for the Livestock Community**

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Background: Cattle owners and managers in Florida are faced with numerous challenges in beef reproduction, forage selection, pasture maintenance, and every day management practices. There is a gap in the process of educating and sharing new findings and research-based curriculum to these owners and managers to assist in all aspects of cattle production and sustainability. The South Florida Beef Forage Program is a group of Extension agents who collaborate and plan programs throughout South Florida to assist these producers. **Objectives**: The SFBFP plans and carries out 10 different programs throughout the state to address diverse needs of cattle owners, managers and workers. Each program is focused on specific aspects of the cattle ranching business, such as Reproduction School, Forage Management, Herd Health, Ranching Foundations, Winter Supplementation, and Nutrition for Beef Females. **Methods:** Every December, the SFBFP has a major meeting to set up committees for each of their programs. Each committee meets regularly to determine the appropriate dates, topics, and other aspects of that program. The whole SFBFP meet monthly to discuss the programs and activities and ensure all programs are sufficient. **Results**: Each program has specific documented results, which range from 60%-80% of the participants increasing in knowledge and understanding of management

practices and 70%-90% exhibiting behavior changes. The programs vary from 20-70 participants, depending on the activities. Each program exhibits positive impacts on ranching knowledge and practices. **Conclusions**: The South Florida Beef Forages Program has proven to be an extremely effective and valuable tool in supporting and educating the members of the Florida livestock industry. Through collaboration and program progression, the SFBFP will continue to assist ranchers in improving management decisions to advance their farms, and therefore, the industry as a whole.

33. **Successful Collaborations Between Agents and Specialists for the Adoption of Precision Irrigation Tools**

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Background: Despite the benefits of innovative technologies and tools for on-farm nutrient and water management, there are challenges related to the adoption and management of these tools. Soil moisture sensors for example provide significant reductions in water and nutrient use. The management of the data and sensor troubleshooting, however, could be troublesome. **Objective:** As part of a USDA-funded research/extension collaboration between specialists, agents, and sweetcorn producers in central and south Florida, our team is developing easy-to-use smart irrigation apps based on root zone soil moisture (RZSM) using on-farm trials at commercial fields. **Methods:** A training system with positive feedback loops has been created. Specialists provide hands-on trainings directly in commercial fields on sensor installation and troubleshooting. Agents train producers on the use of these sensors and provide technical assistance. Producers test the tools and provide feedback to agents and specialists to improve the smart irrigation approaches initiated by specialists. This feedback loop process uses system output as input. A strong emphasis on the feedback from producers and agents enables the specialists to develop useful apps that can be rapidly managed by producers with little to no prior training. **Results** Three producers are currently engaged in this feedback process. Two agents are providing technical assistance on sensor installation, sensor data management, and sensor maintenance. The importance of having agents providing the same-day rapid solutions to day-to-day water management issues has been beneficial to producers. **Conclusion** This positive feedback training interaction has increased both agents' and producers' interest in adopting and promoting soil moisture sensors for water and nutrient conservation. Our team was able to create new partnerships with producers for the incorporation of precision irrigation solutions in the field.

34. **Using Communication Toolkits to Expand Extension Efforts Related to Agricultural Health and Safety Topics**

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Background: The Cooperative Extension Health and Well-Being Framework calls on Extension professionals to be more engaged in topics directly at the intersection of agriculture and health, including community health, zoonotic diseases, and nutrition (Burton et al., 2021). Extension professionals are instrumental in developing and delivering effective messages related to agricultural safety and health to the diverse communities that work in agriculture, fishing, and forestry. In addition, Extension professionals are often considered 'information first responders' in times of crisis and disaster as they have established, trusted relationships with community members and stakeholders. **Objectives:** Objectives included developing resources for Extension professionals to utilize when discussing health and well-being issues with community members and stakeholders; working collaboratively with healthcare professionals and researchers to develop outreach tools that can be used by Extension professionals for communication efforts surrounding issues related to health and well-being; and providing Extension professionals with research-based communication messages to use related to health and well-being. **Methods:** To address this individualized communication approach, the Southeastern Coastal Center for Agricultural Health and Safety (SCCAHS) hosted qualitative focus groups with Extension professionals to determine what support was needed to improve self-efficacy when communicating about health and safety. **Results:** As a result of these findings, SCCAHS developed a communication toolkit related to the COVID-19 vaccine. SCCAHS worked collaboratively with health care professionals and researchers with UF Health to determine research-based messages and information. The toolkit, which received nearly 2,000 views to date, included tools often used by Extension professionals, including social media content, infographics, and guest blog text. **Conclusions:** Extension's role during the COVID-19 pandemic exemplifies the need of Extension in addressing public health issues. As Extension is a trusted source in communities, equipping them with communication messages and outreach tools is critical for them to meet the needs within their communities.

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