

FACAA Mid-Year Meeting and Professional Development Conference 2024

UF/IFAS Gulf Coast Research and Education Center, Balm FL



April 8, 2024



2024 Mid-year Meeting Committee

Chair- Shawn Steed
Abstract Chair - Nick Simmons
Wael Elwakil
Ashley Stonecipher
Lauren Butler

FACAA Mid-Year Meeting Meeting Agenda

8:00 - Registration /Poster Setup

8:30 – Poster Session - Meet the authors

9:00 - FACAA Business Meeting

11:00 - Posters

11:20 – PIE Focus Meeting – Rachel Stormant

11:30 - Lunch Break/ Networking on site

13:00 – Tech Update – Tech Team

13:30 – Afternoon Session Seminars

15:00 – Break

15:30 – Administrative Update

16:00 – Afternoon Session Con't.

17:00 – Dinner (On-Site Hillsborough County Cattlemen's Steak Dinner)

17:30 – Poster Removal



Professional Development Oral Seminar Sessions

1:30: Connecting Residents to Extension Through the Use of Art Within Gardening (gARTening). Clarissa Chairez, Residential Horticulture Agent/Master Gardener Coordinator, UF/IFAS Extension, Orange County

1:45: Terrapin Bycatch Reduction Device Campaign. Brittany Scharf, Marine Extension Agent, UF/IFAS Extension, Hernando County

2:00: Using Digital Design to Expand Extension Efforts. Alicia Halbritter, Ag & Natural Resource Agent, UF/IFAS Extension, Baker County.

2:15: Enhancing Educational Value: Collaborative Initiatives at the Volusia County Fairgrounds. Ashley Stonecipher, Brittany Council-Morton, Chelsea Woodard, Carolyn Kovacs, and Lisa Hamilton, UF/IFAS Extension, Volusia County.

3:00: Plant This, Not That: Encouraging Florida Friendly Over Invasive. Tina McIntyre, UF/IFAS Extension, Seminole County, M. Pinkerton, UF/IFAS Extension, Seminole County, S. Wilson, UF/IFAS Environmental Horticulture Department.

3:15: Local College Collaboration and Ag Celebration. Hannah Wooten, UF/IFAS Extension Orange County, M. Pinkerton, UF/IFAS Extension Seminole County, and Yarborough, J., UF/IFAS Extension Orange County.

3:30: Connecting Seed Planting with Nutrition for Taylor County. Lisa Strange, UF/IFAS Extension, Taylor County, FL., and L. Wiggins, UF/IFAS Extension, Taylor County, FL.

3:45: Reclaimed Water Irrigation Offers Unrestricted Access, But It Comes with Significant Consequences. Michelle Atkinson, UF/IFAS Extension, Manatee County.

4:00: Feeding the Homeless: Guiding Purpose Driven Gardens with Hands-On Teaching. Calvin Gardener, UF/IFAS Extension, Orange County.

4:15: Training Producers to Reduce Dewormer Resistance in Small Ruminants. Lizzie Whitehead, UF/IFAS Extension, Bradford County, Cassidy Dossin, UF/IFAS Extension, Clay County, Paulette Tomlinson, UF/IFAS Extension, Columbia County, Alicia Halbritter, UF/IFAS Extension, Baker County, Erin Jones, UF/IFAS Extension, Suwannee County, Stephen Jennewein, PhD UF/IFAS Extension, Duval County, Cindy Sanders, PhD, UF/IFAS Extension, Alachua County.



Professional Development Poster Seminar Sessions

Extension Education

BEST MANAGEMENT PRACTICES FOR PROTECTION OF WATER RESOURCES BY THE GREEN INDUSTRIES TO OSCEOLA COUNTY RETURN OF IN-PERSON. Christine Jackson, Commercial Horticulture Extension Agent, UF/IFAS Extension, Ocala County.

LOCAL GOVERNMENT TREE LISTS: DISCREPANCIES IN NURSERY SUPPLY AND CIVIC INTENT. John Roberts, UF/IFAS Extension, Palm Beach County; Deborah Hilbert, Many Trees Consulting LLC; and A. Koeser, UF/IFAS, Gulf Coast Research and Education Center.

CATTLE MANAGEMENT FOR WOMEN. Crista Kirby, UF/IFAS Extension, Manatee County, , Bennett, L. H., UF/IFAS Extension, Pasco County, Butler, L. D., UF/IFAS Extension Okeechobee County, Crawford, S. C., UF/IFAS Extension Hendry County, Larson, C. C., UF/IFAS Extension Okeechobee County, Stice, B.C., UF/IFAS Extension Polk County, Trent, S., UF/IFAS Extension Seminole Tribe, Wiggins, L. F., UF/IFAS Extension Hendry County, Williams, A. UF/IFAS Hillsborough County.

CREATING A FLORIDA-FRIENDLY LANDSCAPING™ DEMONSTRATION GARDEN FOR NEW HOUSING DEVELOPMENTS. C. Nazario-Leary, UF/IFAS Extension Alachua County.

WORKSHOP INCREASES RESIDENT PALM KNOWLEDGE. Lisa Sanderson, UF/IFAS Extension, Sumter County, Lester, B., UF/IFAS Extension, Hernando County, FL, J. Davis, UF/IFAS Extension, Sumter County, E. Schmidt, Harry P. Leu Gardens, C., Gardener, UF/IFAS Extension, Orange County, and J. Daugherty, UF/IFAS Extension, Sumter County.

EXTENSION PROGRAM GROUNDWORK AS A NEWLY HIRED SSA: UTILIZING A NEEDS ASSESSMENT TO BETTER SERVE LIVESTOCK AGENTS. Hannah Baker, UF/IFAS Extension, SSA – Beef and Forage Economics, Range Cattle Research and Education Center.

PASSION FRUIT: AN EMERGING CROP IN FLORIDA. M. Bailey, UF/IFAS Extension, Marion County

IMPACT OF CONTAINER GARDENING PROGRAM ON FOOD SECURITY IN PUTNAM COUNTY, FL. J. Perez, UF/IFAS Extension, Putnam County, Palatka, FL.



Professional Development Poster Seminar Sessions

Extension Education Continued

WE'RE NOT IN NEW ENGLAND ANYMORE: NEW SUMTER COUNTY RESIDENTS LEARN THE VALUE AND BENEFITS OF FLORIDA RANCHING. M. Smith, UF/IFAS Extension, Lake County, Tavares, FL, J. Davis, UF/IFAS Extension, Sumter County, L. Bennett, UF/IFAS Extension Pasco County, A. Jameson, Brite Leaf Citrus Nursery, K. Russell, Sumter County Economic Development, R. Mazak, Mazak Ranch, J. McAlister, Sumter County Cattlemen's Association, D. Maples, Florida Beef Council.

PREPARING 4-H YOUTH TO BE TOMORROW'S LEADERS. A. Norris, UF/IFAS Extension, Hillsborough County.

MANATEE AWARENESS THROUGH EDUCATIONAL STEWARDSHIP. B.J. Scharf, UF/IFAS Extension, Hernando County, T.J. Fridrich, Save the Manatee Club, and T. Masnjak,

CULTIVATING CONNECTIONS THROUGH GREENBELT CLASSIFICATION & FARM RESOURCE SEMINAR Williams, A., UF/IFAS Extension, Hillsborough County.

NATURE-GUIDED WALKS: INVESTIGATING LASTING INFLUENCE ON FLORIDA'S ECOSYSTEMS. J. E. Davis, UF/IFAS Extension Sumter County

PROMOTING BEST MANAGEMENT PRACTICES: MULTIMEDIA EDUCATION FOR PESTICIDE HANDLERS Rodriguez L., UF/IFAS Extension Polk County. Bosques J., UF/IFAS Extension Hardee County. Paolillo A., FDACS Polk County, Pérez L., Biological Operations Manager SES, FDACS Polk County

Applied Research

TRACKING MANGROVE EXPANSION IN COASTAL HERNANDO COUNTY, FLORIDA, USING MACHINE COUNTING. B.J. Scharf, UF/IFAS Extension, Hernando County, and J.S. Strickland, UF/IFAS Extension, Osceola County.

CALCULATING DOGFENNEL CONTROL OF FOUR PASTURE HERBICIDES USING MACHINE COUNTING Joseph S. Strickland, UF/IFAS Extension Osceola County; J. Sullivan, UF/IFAS Extension Osceola County; and JJ. White, Osceola County Soil and Water.

HOT PURSUIT: INVESTIGATING THE THERMAL TOLERANCE OF RANGE-EXPANDING COMMON SNOOK ALONG A LATITUDINAL GRADIENT AND THE DYNAMICS OF A RAPID COLD DROP. B.J. Scharf, UF/IFAS Extension, Hernando County, Q.M. Tuckett, Tropical Aquaculture Laboratory, School of Forest, Fisheries, and Geomatic Sciences UF/IFAS, P.W. Stevens, Fish and Wildlife Research Institute, and J.E. Hill, Tropical Aquaculture Laboratory, School of Forest, Fisheries, and Geomatic Sciences UF/IFAS.



Professional Development Abstracts

Oral

RECLAIMED WATER IRRIGATION OFFERS UNRESTRICTED ACCESS, BUT IT COMES WITH SIGNIFICANT CONSEQUENCES. M. Atkinson, UF/IFAS Extension, Manatee County, Palmetto, FL.

Situation: The escalating demand for reclaimed water in urban areas for irrigation purposes has become a critical issue, exacerbating water quality concerns due to elevated nitrogen and phosphorus levels in runoff. Reclaimed water, touted as a sustainable alternative to potable water for non-potable applications like landscape irrigation, is increasingly utilized to alleviate water scarcity challenges in urban environments. However, the indiscriminate overuse of reclaimed water has led to an increased accumulation of nitrogen and phosphorus in waterbodies presenting significant ecological risks. Since urban phosphorus application is restricted in Manatee County we focus on nitrogen. Methods: The irrigation evaluation program has been in place to inform homeowners of the potential water savings achievable through UF/IFAS recommendations. We now provide estimates on the pounds of nitrogen that can be avoided in runoff by implementing water-saving measures in landscaping. We also determine how much nitrogen fertilizer applications can be reduced based on the level of nitrogen in the irrigation water. In addition to irrigation evaluations, homeowner workshops are underway to disseminate this valuable information. An infographic has been designed to effectively convey this message. Results: Out of the 317 reclaimed water irrigation evaluations performed, findings reveal that 38% (n=120) are surpassing the annual recommended nitrogen rate from their irrigation water. Furthermore, 23% (n=73) could reduce their nitrogen rate by more than half, while 30% (n=94) could cut it by up to one half. Lastly, 4% (n=12) are receiving the recommended nitrogen rate from their irrigation water. Communication of this information resulted in water savings among the reclaimed water users that totaled 1.5 million gallons and 95 pounds of nitrogen savings. Conclusion: Homeowners, armed with information regarding the nitrogen content in their reclaimed irrigation water, are opting to reduce irrigation usage. This change in behavior will reduce the runoff of nutrient pollutants into our waterbodies, thereby positively impacting our ecosystems.



Professional Development Abstracts

Oral

Connecting Residents to Extension Through the Use of Art Within Gardening (gARTening) Clarissa Chairez, UF/IFAS Extension Orange County, Master Gardener Volunteer Coordinator/Residential Horticulture Agent

Situation: While Orange County is the 5th largest county by population, our office is highly underutilized. To extend our reach, a few Master Gardener Volunteers designed “The gARTening Program” that consists of unique garden related art projects to increase class enrollment and office foot traffic. The gARTening Program was designed to connect residents to both our UF/IFAS Extension Services and Horticulture, through the use of art within gardening. Methods: Each month our office hosts a hands-on miniature garden related activity. Classes range from \$5-25 and are hosted on Fridays at 2 pm and 6 pm. Previous classes have consist of: Creating a Kokedama, Designing an Open/Closed Terrarium, Floral Design, Pressed Flower Art, and Creating Hypertufas. Each class begins with an introduction to UF/IFAS Extension and the services we offer. Additionally, each class covers a horticultural topic from Botany, Floriculture, Right Plant/Right Place, Plant Care, and/or the physical and mental health benefits of gardening. Results: Of the students who have attended various gARTening classes, roughly 50% have indicated that it was their first time visiting our office or attending an educational workshop hosted by UF/IFAS. When surveyed the data showed that attendees were attracted to 1) the unique experience, 2) the time of day offered, and 3) the price point under \$25. Attendance varies from young families, adult mother/daughter duos, date night, birthday celebrations, and solo participants. While the program is still in its infancy, residents who have attended gARTening programs have signed up for additional classes, returned to our office to enjoy our garden, became Master Gardener Volunteers, and have reached out to 4-H about volunteer opportunities and student enrollment. Conclusion: By creating unique experiences for our residents, we have increased county awareness of UF/IFAS Extension.



Professional Development Abstracts

Oral

FEEDING THE HOMELESS: GUIDING PURPOSE DRIVEN GARDENS WITH HANDS-ON TEACHING.

C. Gardner, UF/IFAS Extension, Orange County, Orlando, FL

This program addresses the need for sustainable food sources in a local homeless shelter through the development of an on-site vegetable garden. The objective was to create a garden managed by rotating volunteers and shelter residents to provide produce for the shelter kitchen. Using UF/IFAS educational resources, a handbook was created to troubleshoot challenges within the garden such as fertilization, pest management, and planting dates. Hands-on gardening sessions occurred monthly and were used to teach shelter staff members how to use UF/IFAS educational resources in the field and how to create garden plans for each season. Volunteer coordination consulting also played an important role on educating shelter staff on how to conduct groups of volunteers efficiently. The methods of using educational resources, hands-on activities, and volunteer coordination contributed to the significant progress achieved over a 10-month period. The garden yielded approximately 160 lbs. of produce, contributing to 200 shelter meals, while empowering four shelter residents with gardening skills. Additionally, 75 external volunteers were engaged over two seasons, fostering community involvement. This initiative not only addresses immediate food needs but also equips shelter residents with valuable skills for future employment, showcasing the potential for community-driven solutions to socio-economic challenges.



Professional Development Abstracts

Oral

Using Digital Design to Expand Extension Efforts

A. Halbritter, UF/IFAS Extension Baker County, Macclenny, FL.

Extension services are not the only opportunity for our target audiences to receive the education they seek. In a world where most information can easily be found online in various formats, we must produce materials that can be competitive in the education market. Generally, target audiences prefer to utilize materials that are organized, visually pleasing, and effective at communicating the information. Our world is becoming increasingly visual, spending, on average, less than 3 seconds on a piece of material. How do we grab our audience's attention in such a short amount of time? Using programs to create high-quality flyers, presentations, social media posts, and more, can increase Extension's relevance in a world that is drawn to eye-catching, flashy materials. Emphasizing graphic design also helps create more effective layouts, increases interaction with material, and can result in higher program attendance. Many Extension Agents are experts in their respective topics but have not received training in producing high-quality educational materials such as fact sheets or presentations. However, there are many resources and applications that can be utilized to produce high-quality extension materials with little to no digital design experience. Opportunities that encourage skill development help Extension Agents excel in their field and be competitive with other organizations. A bite-sized presentation on digital design can help attendees retain more information and apply it to their daily tasks. As a result of this program Agents will be able to more effectively produce high-quality, organized, visually pleasing, and communicative materials for our target audience



Professional Development Abstracts

Oral

PLANT THIS, NOT THAT: ENCOURAGING FLORIDA FRIENDLY OVER INVASIVE. T. McIntyre, UF/IFAS Extension, Seminole County, Sanford, FL., M. Pinkerton, UF/IFAS Extension, Seminole County, Sanford, FL. S. Wilson, UF/IFAS Environmental Horticulture Department, Gainesville, FL.

Situation: Some invasive plants are listed as “prohibited for sale” on the Florida Department of Agriculture and Consumer Services Noxious Weed List, however many invasive plants are still commercially available. Most invasive plants were introduced by the horticulture industry, yet they pose significant threats including economic losses in agriculture and disruption of native ecosystems. Methods: In 2020, lead author Tina McIntyre started to assemble the team and write. Plant This, Not That: A Guide to Avoiding Invasive Plant Species in Florida is a laminated, ring-bound-flipbook written to provide safe alternatives to commonly sold invasive ornamental plants. Perfect of the resident or professional visiting or running a nursery, this revolutionary resource includes 22 invasive plants that are commonly available for sale along with hundreds of listed and pictured alternative cultivars or Florida-Friendly species. Results: To date, over 1,350 copies have been sold or distributed, bringing in \$14,234 in revenue for UF/IFAS. Concepts from the book have been integrated into classes for landscape professionals, industry nursery owners, master gardeners and the general public. Results show:

367/376 or 97.6% increased their knowledge about the impact invasive species have in Florida

371/373 or 99.4% intend to use the information from the class to choose plants that are not invasive

323/344 or 93.9% of participants felt more confident they could identify invasive plant species

Follow up surveys indicated participants used hand pulling to remove invasives (85% or 51/60), avoided invasives from the book (76% or 45/59) and educated others about invasive species (75% or 44/59). No-

table publicity included 2 The Tampa Bay Times, Brevard Business News, Central Florida Agriculture News, Florida Currents Magazine, 4 LIFE Magazines, Orlando Sentinel, The Invading Sea, Interviews about the book on First Coast Connect (local National Public Radio NPR) and Better Lawns & Gardens Radio.

Conclusion: The book is available for purchase at the UF/IFAS Bookstore and will help protect our natural resources, reduce costs of invasive plant management, and beautify our landscapes.



Professional Development Abstracts

Oral

TERRAPIN BYCATCH REDUCTION DEVICE CAMPAIGN. B.J. Scharf, UF/IFAS Extension, Hernando County, Brooksville, FL, R. O'Connor, UF/IFAS Extension, Escambia County, Cantonment, FL, and H. Abeels, UF/IFAS Extension, Brevard County, Cocoa, FL.

Situation: The accidental drowning of diamondback terrapins in crab traps prompted the Florida Fish and Wildlife Conservation Commission (FWC) to mandate bycatch reduction devices (BRDs) on all recreational crab traps in state waters. Studies highlighted the conservation challenges faced by diamondback terrapins, particularly in the Mid-Atlantic states, where large numbers of terrapins were found drowned in crab traps. While the number of incidents in Florida was comparatively lower, the unique and smaller populations of terrapins in the state raised concerns. **Methods:** In collaboration with the FWC, Extension Agents from Florida Sea Grant took proactive steps to address the new ruling and educate the public about bycatch reduction devices. A comprehensive educational campaign was developed, consisting of a fact sheet, PowerPoint presentation, and a video. Simultaneously, Florida Sea Grant, through UF/IFAS County Extension offices, distributed free BRDs to individuals statewide to ensure compliance with the new regulations. **Results:** A total of 276 people across the state requested free BRDs from Florida Sea Grant, resulting in the distribution of 5,192 devices. Devices outfitted 2,596 recreational blue crab traps. Statewide distribution of 5,192 devices saved stakeholders \$25,909 (if purchased from vendor), meeting legal requirements for 2,596 traps. This proactive measure prevented fines ranging from \$578,908 to \$1,298,000. **Conclusion:** The collaboration between Florida Sea Grant and the FWC successfully addressed conservation concerns related to diamondback terrapins in crab traps. The educational campaign, combined with the distribution of free BRDs, not only facilitated compliance with the new regulations but also contributed to the broader efforts of terrapin conservation in the state. The initiative showcased the effectiveness of partnerships, proactive outreach, and community engagement in promoting responsible environmental practices among recreational blue crab fishers.



Professional Development Abstracts

Oral

CONNECTING SEED PLANTING WITH NUTRITION FOR TAYLOR COUNTY. L. Strange, UF/IFAS Extension, Taylor County, FL., and L. Wiggins, UF/IFAS Extension, Taylor County, FL.

Situation: About 12.9% of Taylor County residents live in poverty. That equates to nearly 2,749 people struggle to provide or eat proper food on the table. Most do not have the information to choose healthier foods nor can afford to buy thus rely on fast foods. To increase the availability of fresh fruits and vegetables, planting your own seeds has multiple benefits. Improves health by having access to fresh produce, saves money on groceries in long run and having a peace of mind knowing where your food is coming from, and the physical activity that gardening requires can provide exercise, and relieve stress. Method: Three Rivers Regional Library System acquired a grant and purchased certified organic vegetable seeds to distribute free to the Counties of Dixie, Gilchrist, Lafayette, and Taylor. Two presentations were delivered to (26) participants in Taylor County. The first presentation showed how to interpret the variety resistant codes, hardiness zone map and planting guide on seed the seed packets, planning, fertilizing, soil testing, and harvesting tips. The UF/IFAS Florida Vegetable Gardening Guide publication was provided to each participant and modeled along with the oral presentation. The second presentation introduced participants to the health benefits of gardening, including the physical, mental, social, environmental, and nutritional benefits. A recipe was shared, that featured foods from the seeds that were distributed. Following the presentations, the participants were allowed (5) free seed packets of their choice and each were given individual samples of a pre-prepared recipe using some of the produce discussed in first presentations. Results: According to surveys, when the participants could see, hear, and engage with a sample taste, it provided a better understanding of the connectiveness by growing their own produce, how to use in preparations and overall health and economic benefits. Conclusion: As a result of the connectiveness, there is a high likelihood the participants will perform a soil test and start a garden from seed.



Professional Development Abstracts

Oral

Enhancing Educational Value: Collaborative Initiatives at the Volusia County Fairgrounds

Ashley Stonecipher*1, Brittany Council-Morton*2, Chelsea Woodard3, Carolyn Kovacs4, and Lisa Hamilton5 UF/IFAS Extension, Volusia County, DeLand, FL.

Situation and Objective: Each year, the Volusia County Fair invites local schools to attend student field trips, typically self-guided and lacking significant educational value. Recognizing this as a collaborative opportunity with the fair board, the UF/IFAS Extension office aimed to enhance these tours in 2023. Our goal was to provide approximately 100 youth with a wide range of educational activities and exhibits during the fair school tours, thereby supporting the fair while also promoting 4-H and other Extension programs. **Methods:** Teachers, students, and parent/guardian chaperones embarked on a guided walking tour of the Volusia County Fairgrounds led by Extension agents. With a focus on education, we explored areas such as the large and small animal livestock barns, horticultural exhibits, and the honey bee display. Through facilitated discussions, reflections, and group activities, we enriched the learning experience. Additionally, 4-H members showcased their expertise in animal care and management by exhibiting their animals, further educating their peers. **Results:** The 2023 fair tour attracted 150 youth and adult volunteers, strengthening our relationship with the Volusia County Fair Board and receiving positive feedback from participants. Looking forward to 2024, we plan to extend the school fair tours over two days and broaden the topics to include a segment on coastal ecosystems, along with highlighting the home skills area. Furthermore, we aim to conduct follow-up assessments with teachers to gauge the interest of 2023 tour attendees in participating in the fair this year. **Conclusion:** The fair tour provided teachers, students, and their parent/guardians with an enriching and interactive educational experience. This collaboration not only reinforced our partnership with the Volusia County Fair but also enhanced our presence within the community.



Professional Development Abstracts

Oral

Training Producers to Reduce Dewormer Resistance in Small Ruminants

Lizzie Whitehead, Cassidy Dossin, Paulette Tomlinson, Alicia Halbritter, Erin Jones, Stephen Jennewein, PhD, Cindy Sanders, PhD; University of Florida, Gainesville, FL.

Resistance to dewormers is a growing issue for all livestock species across the globe, but the problem is exacerbated in grazing animals that are particularly susceptible to parasites, such as small ruminants. The sheep and goat industries are small in the state of Florida. According to the 2022 Census of Agriculture, there are 54,000 goats and 24,300 sheep in the state. 80% of Florida sheep farms have less than 24 animals. These smaller producers may not be as proficient in livestock management techniques as they may be new to the industry, have taken it on as a hobby, or have limited knowledge on the subject. Improper livestock management techniques, like misuse of dewormers, can contribute to issues that have a serious impact on the entire industry. The North Florida Livestock Agents Group created a program to help address these issues through training producers in FAMACHA evaluations to help reduce dewormer resistance in small ruminants. FAMACHA scoring helps to determine what animals may be experiencing symptoms from a parasite infection, particularly the barber pole worm, and therefore will respond to dewormer treatment. Presently, three hands-on programs have been offered by the group, with 66 producers in attendance. Survey results indicated 94% of program participants increased their knowledge on topics such as internal parasites, deworming methods and products, as well as information and utilization of FAMACHA scoring. Additionally, 94% of participants also indicated an intention to change their behavior to include monitoring their herd for internal parasites, deworming according to UF/IFAS recommendations, and utilizing FAMACHA. The trainings offered by UF/IFAS Extension are one of the only methods for producers to become certified in FAMACHA scoring and receive a FAMACHA card to utilize on their operation, therefore this service is paramount to reducing dewormer resistance in the state. Participants indicated a total perceived economic impact of \$34,598 for their operations as a result of this valuable training.



Professional Development Abstracts

Oral

LOCAL COLLEGE COLLABORATION AND AG CELEBRATION

H. Wooten, UF/IFAS Extension Orange County, Orlando, FL, M. Pinkerton, UF/IFAS Extension Seminole County, Sanford, FL, and Yarborough, J., UF/IFAS Extension Orange County, Orlando, FL.

Situation: Despite Florida's rapid urbanization, agriculture remains the second largest industry in the state. While Florida is known for its water, sunshine, and tourism, food and nutrition insecurity in urban communities and a disconnect between people and how food is produced remains. Extension curated farm tours increase urban residents' awareness of agriculture which has ripple effects through the community. **Methods:** In March 2021, a Valencia College professor, Dr. Edie Gaythwaite, attended the UF/IFAS Extension Seminole County Farm Tour which compelled her to create a service-learning class focused on Florida agriculture. In 2022, she partnered with UF/IFAS Extension Orange County, Valencia's locale, to host a semester long agricultural experience which included a 1-hour class about urban agriculture, a day-long farm tour, and an Ag Day at the college campus. UF/IFAS Extension Orange County and Valencia College coordinated monthly for nine-months in advance to develop the programs and split responsibilities. The Agent orchestrated a farm tour featuring a diversity of farmers, Extension Agents, and growing techniques with the goal of connecting topics to current student interests. **Results:** A same-day, post-tour survey was administered to Valencia College students (n=46). Results indicate that 100% (46/46) of students increased knowledge about agriculture in Florida, 98% (45/46) increased appreciation of agriculture in Florida, and 83% (38/46) intend to increase purchasing of Florida grown foods, 76% (35/46) intend to check food labels. Fourteen new students expressed interest in a career or hobby related to agriculture that were not aware or interested prior. A 2024 Ag Day at Valencia is planned and a 4-credit Introduction to Plant Science is offered at a new campus. **Conclusion:** Capturing the ripple effects of Extension farm tours can be challenging, yet impactful. Trainers are good target audience that leads to more positive impacts than training individuals. Forced partnerships can be challenging, while natural partnerships can be rewarding. Good partnerships, like those presented, have a sharing of beneficial resources within and beyond the organizations and there is value in discussing contracts and expectations early. Sometimes revenues may not be generated, but donations, resources, and impacts will endure, potentially for generations.



Professional Development Abstracts

Posters

PASSION FRUIT: AN EMERGING CROP IN FLORIDA.

M. Bailey, UF/IFAS Extension, Marion County, Ocala, FL

Background: From 2020 to 2023 agricultural land prices and production costs increased significantly in Florida and especially so in North Central Florida. Consequently, these economic conditions create substantial challenges for new farms to begin and existing farms to expand. Passion fruit is an emerging crop that can be grown on small acreage in the region, opening new agricultural opportunities. Objective: The combination of sustainable production methods and marketing research can help small farms begin, grow, and become profitable with passion fruit production. Methods: In order for growers to plant passion fruit as new crop on their farms, they must know the marketing potential of passion fruit. Until now, no recent passion fruit marketing research has been conducted by UF/IFAS. A sensory evaluation of passion fruit was conducted to evaluate public perceptions and buying interest. A production guide has been published to support current and prospective growers. Two production meetings have been held from 2022 to 2023 where participants provided needs assessment surveys. Additionally, growers are directly supported with a recurring site visits, diagnostic services, and regular updates to ongoing research. A SARE and SEEDIT grant have supported passion fruit crop development beginning in 2023. Results: Small farms (N=12) in North Central Florida have planted passion fruit or are in the process of planting small acreage. Small farms have harvested passion fruit after one year of planting and some have initially achieved profitability. Sensory evaluations were completed (N=111) and indicated very strong favorability of the flavor and aroma as well as an interest in buying passion fruit products and fruit. Conclusion: Growers that are seeking alternative crops, particularly for small to medium acreage, now have the option of passion fruit. It is an emerging alternative crop that has significant growth potential to generate profitability for Florida and similar growing regions.



Professional Development Abstracts

Posters

EXTENSION PROGRAM GROUNDWORK AS A NEWLY HIRED SSA: UTILIZING A NEEDS ASSESSMENT TO BETTER SERVE LIVESTOCK AGENTS. H. Baker, UF/IFAS Extension, SSA – Beef and Forage Economics, Range Cattle Research and Education Center, Ona, FL.

Situation: As a State Specialized Agent (SSA), the target audience for my program includes both educators (livestock agents) and educatees (cattle producers). The resources developed by the Beef and Forage Economics Extension Program should be beneficial for producers but should also serve livestock agents in improving confidence, knowledge, and expertise in teaching topics concerning beef cattle economics. Knowing what resources agents need to better serve their clientele is essential to the long-term effectiveness and success of the program. Therefore, as the newly hired SSA for the Beef and Forage Economics Extension Program, the first objective was to become aware of the needs of livestock agents in Florida. Methods: A needs assessment was constructed in Qualtrics and sent out to all county livestock agents (55) across the five regions of Florida. Questions addressed what resources were most needed regarding beef cattle and forage management practices and the cattle market. Agents were also asked to provide their preference regarding resource delivery. Results: From the 52% response rate, 72% of respondents mentioned the need for cost analyses of herd management strategies. The need for economic information on pasture management was the second priority (62%). Agents in four out of the five regions asked for monthly cattle market updates. Literature and online tools were the top requested forms of resource delivery (62%) that could be used during one-on-one consultations, the most used form of sharing information with producers (72%). Conclusion: Obtaining answers about what livestock agents need from the Beef and Forage Economics Extension Program allowed prioritization of resource development. Since receiving responses, resources such as a monthly cattle market updates series, a heifer development cost analysis, and an article on cost estimates of planting strips of perennial peanut in Bahiagrass have been developed as a start to building a program that will best serve livestock agents and producers.



Professional Development Abstracts

Posters

Nature-Guided Walks: Investigating Lasting Influence on Florida's Ecosystems. J. E. Davis, UF/IFAS Extension Sumter County, Bushnell, FL.

Situation: In Sumter County, known as one of Florida's rapidly growing areas, the escalating population and urban development puts significant strain on the region's natural resources. This pressure is mirrored in neighboring Hernando County, which also faces challenges due to growth. In response to these issues, Extension initiatives prioritize raising awareness about natural resources and conservation through interpretive nature walks. This proactive approach recognizes the urgent need to educate residents on these invaluable assets amid rapid development. This study investigates the lasting effects of nature-based outings on individuals' connection with Florida's environment. Led by experienced Extension faculty, Master Naturalists, and Florida Foresters, participants ventured into diverse ecosystems, aiming to uncover how these experiences influenced behaviors and attitudes towards nature. The study aimed to determine if participants actively sought more educational resources, adjusted daily routines for outdoor activities, shared newfound wildlife knowledge, or heightened awareness of local flora and fauna, with a target of at least 50% reporting experiencing one of these transformative shifts. **Methods:** Participants engaged in guided nature walks lasting two to three hours across parks and wildlife management areas in Sumter and Hernando Counties. Walks covered one to two miles and began at 10:00 am, with registration through Eventbrite. Qualtrics surveys assessed post-hike behaviors and views towards nature. **Results:** Survey findings revealed significant shifts in participants' interactions with nature. Notably, 86% (n=28) sought more educational materials, 57% (n=28) adjusted daily routines for outdoor activities, and 89% (n=28) shared wildlife knowledge, integrating it into daily life. Additionally, substantial proportions of participants engaged in specific post-hike activities: 82% (n=28) shared information about invasive species, while 61% (n=28) explored new wildlife areas. **Conclusion:** Participants overwhelmingly 96% (n=28) agreed that nature walks had a lasting impact on their connection with nature, emphasizing their efficacy in fostering environmental stewardship and scientific literacy. These findings underscore the importance of nature-guided walks in promoting environmental awareness and conservation efforts.



Professional Development Abstracts

Posters

Best Management Practices for Protection of Water Resources by the Green Industries to Osceola County Return of In-person. Christine Jackson- Commercial Horticulture Extension Agent-1921 Kissimmee Valley Lane, Kissimmee, FL 34744

Situation: When the Covid-19 pandemic hit Florida in late 2019, it forced in-person courses to be taught virtually only. It was quickly altering education practices across all industries including Extension Services. The Best Management Practices for Protection of Water Resources by the Green Industries course (GIBMP) in Osceola County was a course that was impacted. This course is a required certification for landscapers in the county. While the transition back to face-to-face instructional classes has been a challenge. It has been a request of the advisory board to resume in-person learning of this course as well as a few others. But being that COVID has not truly left us, some are still cautious about coming to in-person courses. Delivering online only has also been a transition, and according to research, there are findings that in-person learning has higher engagement, learning, and understanding, while remote learning was less satisfying in these aspects. (Photopoulos et al., 2022). With the changing of positions in Osceola County continuing in-person courses was not on the top of the list.

Methods: I coordinated with our district GIBMP Coordinator, and I was able to attend in-person courses in other counties; and passed the examination to become a certified instructor. Upon certification, I started to offer in-person GIBMP courses in Osceola County after not having them since 2019.

Results: The first class was successful with 17 attendees and a 92% passing rate. 65% agreed that it was a good use of their time and 100% said that the course will apply to their work in the future.

Conclusion: Offering this course in person has made an impact on the participants wanting to take GIBMP certification in person. Resulting in more engagement in the county's commercial horticulture community. Currently, we are offering 4 in-person GIBMP classes a year that are filling up quickly.



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Cattle Management for Women. C. L. Kirby, UF/IFAS Extension, Manatee County, Palmetto, FL, Bennett, L. H., UF/IFAS Extension, Pasco County, Dade City, FL, Butler, L. D., UF/IFAS Extension Okeechobee County, Okeechobee, FL, Crawford, S. C., UF/IFAS Extension Hendry County, LaBelle, FL, Larson, C. C., UF/IFAS Extension Okeechobee County, Okeechobee, FL, Stice, B.C, UF/IFAS Extension Polk County, Bartow, FL, Trent, S., UF/IFAS Extension Seminole Tribe, Brighton, FL, Wiggins, L. F., UF/IFAS Extension Hendry County, LaBelle, FL, Williams, A. UF/IFAS Hillsborough County, Seffner, FL

Situation: Women are taking a greater role in the decision making and management of cattle ranches. However, during traditional Extension livestock programs, it has been noted that female participants tend to wait until the end to ask questions privately, if at all. In response, the South Florida Beef Forage Program agents held a pilot program in 2019 to address the educational and participation gap between women and their male counterparts. The program has been held on an annual basis for the past 4 years and has focused on subjects such as animal handling, beef quality assurance, forages, nutrition, record keeping, reproduction, marketing, mental health, selling meat products, beef cattle management, pen design, and much more. Methods: The program topics are selected from recommendations from course surveys. Class size is limited to allow for hands-on activities and personal interaction with participants. Speakers are traditionally women, with a few exceptions to help participants feel more at ease. During presentations participants are encouraged to interact and participate in activities. Results: Observational evaluation indicated that female participants were more engaged for this program than when participating in traditional programs. The overall knowledge gain for this program is 54% with highest gains found in question-and-answer sessions. The behavior change was 79% with changes in the areas of sampling, weed control, record keeping, calf care and herbicide application. Conclusion: With women's involvement, ranches could increase profitability by having someone in management who understands and is able to implement best management practices and see strategies from a different view. Women traditionally take on roles dealing with the record keeping and financial management of the business. Today, more are in the field working alongside their husbands, brothers and paid workers holding the same role as their male counterpart. This program has assisted in providing these women with the resources and tools needed to be successful.



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CREATING A FLORIDA-FRIENDLY LANDSCAPING™ DEMONSTRATION GARDEN FOR NEW HOUSING DEVELOPMENTS. C. Nazario-Leary, UF/IFAS Extension Alachua County, Newberry, FL

Situation: In 2022, Alachua County saw a 1.0% increase in occupied housing units, now totaling 127,549, indicating ongoing urbanization and housing development. New developments often feature altered soils, lacking organic matter and proper infiltration, posing landscaping challenges. With more residents moving in, demand for green spaces and sustainable practices rises. Moreover, newcomers may be unfamiliar with local growing seasons, increasing the need for gardening guidance. While the County hosts several Florida-Friendly Landscaping (FFL) demonstration gardens, none cater to the unique conditions of new home builds. Approach: The UF/IFAS Extension Alachua County offices moved to a newly constructed building in 2021. Like soils found in new housing developments, the soil around the building had been altered and consisted of course, compacted sand, with a pH of 7.8. The Environmental Horticulture agent and Master Gardener volunteer (MGV) program met to design, plan, and implement an FFL demonstration garden. The objectives for the garden were two-fold; 1) develop the garden around educational themes that align with goals of the Environmental Horticulture Extension program and 2) encourage MGV participation and engagement in the gardens to ensure that the garden will continue to benefit the community and the MGVs into the future. Product: An FFL demonstration garden was established comprised of four garden interconnected sections. Each section was designed, installed, and is maintained by a team of 5-6 MGV volunteers; and utilizes native and FFL plants in designs that address common challenges in new builds, e.g., lack of wind protection, high water run-off from rain spouts, poor drainage, high soil pH, lack of water access, shade from overhangs, and high temperatures from west facing walls. This garden is encouraging adoption of FFL practices in new home divisions and provides visual examples and inspiration for homeowners to apply in their own yards.



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PREPARING 4-H YOUTH TO BE TOMORROW'S LEADERS. A. Norris, UF/IFAS Extension, Hillsborough County, Seffner, FL

Situation: Youth have not had the opportunity to learn and practice communication skills at the county level in a supportive environment since before the pandemic. The life skill of communication can have a positive long-term impact on preparing youth for the work force. Mary Arnold, PH.D. states that youth can “thrive” if there is a plan and implantation of a high-quality youth development context. Methods: One way 4-H develops communication is through county councils. Youth who have a propensity for leadership can develop communication skills and learn leadership roles by holding an office. With the revitalization of the council, the agent can educate the county officers, encourage shared leadership, and peer education. The objectives of this positive youth development were to educate officer roles, provide the opportunity for youth to practice their communication skills, to inspire other youth, and to foster shared leadership. Dr. Arnold stated that challenging growth, holding youth accountable, shared power through collaboration, and exposure to leadership opportunities prepare youth for life beyond high school. Using a supportive train-the-trainer model, a series of learning experiences were designed and presented to educate the council officers regarding the best practices of an effective club officer. The officers then became the presenters at the countywide officer onboarding as an opportunity to practice their communication skills. Participants were given officer books, gained knowledge of expectations, how to conduct 4-H meetings, and how to keep accurate records. Results: The survey results proved 100% of participants gained knowledge of officer roles. It provided the council officers the opportunity to practice effective communication and allowed 36 club officers to gain knowledge of their roles to effectively lead their clubs. The leaders that were present were reminded to foster shared leadership. As a result, three of the six county officers became district officers, and one officer joined the state executive board. 4-H Conclusions: Officers learned the key elements of being a successful officer and then how to share that knowledge with their peers. Evidence was found in the survey that all officers effectively imparted knowledge to all 36 participants during the training for club level officers.



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IMPACT OF CONTAINER GARDENING PROGRAM ON FOOD SECURITY IN PUTNAM COUNTY, FL. J. Perez, UF/IFAS Extension, Putnam County, Palatka, FL.

Situation: Rising costs and limited access to diverse fresh produce exacerbate food insecurity in North Central Florida households. This is compounded by the disappointment of newcomers from other states who face the challenge of growing produce in Florida's sandy soils at the wrong time of year. Methods: With the sponsorship of the Putnam County Soil and Water Conservation Board (PC SWCB), a container vegetable gardening program was developed. The goals of the program were to educate participants on the horticultural information needed to grow vegetables in containers and raised beds successfully. With support from the PC SWCB, each participant was supplied with an EarthBox[®], soil, 1 pound of fertilizer, and a selection of vegetable plants or seeds. The three-hour program covered 'Right Plant, Right Place', proper watering and fertilizing, identifying common diseases and pests, and a demonstration on setting up the EarthBox[®]. Programs were offered in September 2022 and 2023. A follow-up survey was conducted in March 2024 for both years' classes. Results: The survey was sent to 84 participants, with 27 completing it. Respondents reported that before the class, 61% described their skill level as beginner to advanced beginner, and after the program, 70% described their skill level as intermediate to proficient. Another increase was seen in their success rate, with 51% being moderately successful before the class, increasing to 58% being very successful at growing vegetables after the program. 74% stated that they had expanded the number of container vegetable gardens, and 50% expanded by 4 or more. Depending on funds, a third program will be developed for the fall of 2024. Conclusion: This program provided the education required to grow vegetables successfully in a garden. Providing a self-watering pot like an EarthBox[®] increases the chances for success and confidence. It is the confidence gained from success that leads people to expand their gardens and types of vegetables, contributing to a healthier community.



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LOCAL GOVERNMENT TREE LISTS: DISCREPENCIES IN NURSERY SUPPLY AND CIVIC INTENT. J. Roberts, UF/IFAS Extension, Palm Beach County, West Palm Beach, FL, Deborah Hilbert, Many Trees Consulting LLC, St. Petersburg, FL, and A. Koeser, UF/IFAS, Gulf Coast Research and Education Center, Wimauma, FL.

Situation: Municipalities often utilize tree and plant lists to assist property owners select species suitable for local landscapes. Aside from providing property owners with basic guidance with these lists, local governments also balance a broader, landscape-scale perspective toward management goals - so these lists of suitable tree species can also seek to increase community benefits conferred by urban tree canopy, support local biodiversity, and promote underutilized tree species. Methods: Building on previous work that investigated the relationships between nursery growers and local municipalities, tree lists from local governments throughout the state of Florida were surveyed, assessed for breadth of diversity, and aggregated for further analysis. The species comprised on these lists were then compared to their available trade production (i.e., via online nursery directories). We also investigated regional differences within Florida by dividing the state into three geographic zones (i.e., North, Central, and Southern). Results: We found that most nurseries tended to focus their inventory on a limited set of popular species, with often little production directed toward more underutilized or less common species suggested by municipalities. Underutilized species could still often be found, but generally from smaller more specialized vendors at higher prices. The result was a supply and demand mismatch – as local governments often suggested plants that were often very difficult to source. Conclusion: Moving forward, we believe it may be more useful for municipalities to shift their messaging. One strategy is to move toward overplanted/overreliance species lists. Another is to refer local residents and planners to existing, comprehensive resources – like the Florida-Friendly Landscaping™ Plant Guide app or the Guide to Plant Selection and Landscape Design.



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Promoting Best Management Practices: Multimedia Education for Pesticide Handlers.

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Situation: Florida is one of the most regulated states regarding pesticide applications. Agriculture workers needing to purchase and apply Restricted Use Pesticides (RUP) must be licensed by law. To obtain a license an applicator must pass their respective category exam. Tests are based on the Category Certification Standards. Applicators that need a pesticide license that falls under Florida law chapter 487 must pass their General Standards (CORE) Exams, required alongside the category exam of a specific license. Unfortunately, there are not many free and accessible study materials available, especially in Spanish.

Methods: Extension agents collaborated and developed a series of videos (9 Spanish / 9 English) to create a collection of media tools for applicators. This free multimedia study guide series was created to help individuals prepare for the General Standards (CORE) Exam. Each episode is formatted as a conversation combined with visual aids based on the material of all the chapters of the guidebook "Applying Pesticide Correctly." These tools were distributed and promoted to pesticide applicators using blog posts, web links, and announcements at relevant educational events.

Results: Combined, we achieved a total of 1,783 views and 188 hours of watch time for the English videos and 1,608 views and 76 hours of watch time for the Spanish videos. Moreover, viewers reported that these videos helped them achieve better grades on their exams. Spanish speakers reported being more confident taking the exam after watching the videos (n=10).

Conclusion: Through the creation and dissemination of bilingual educational materials, agriculture agents can help farm and landscape workers increase their knowledge of pesticide application as well as environmental and personal safety. UF/IFAS Extension educators have the capacity to provide free accessible pesticide information that benefits applicators not only by achieving a passing grade on their exam but also by helping them perform more efficient applications, improving public health, and environmental safety.



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HOT PURSUIT: INVESTIGATING THE THERMAL TOLERANCE OF RANGE-EXPANDING COMMON SNOOK ALONG A LATITUDINAL GRADIENT AND THE DYNAMICS OF A RAPID COLD DROP. B.J. Scharf, UF/IFAS Extension, Hernando County, Brooksville, FL, Q.M. Tuckett, Tropical Aquaculture Laboratory, School of Forest, Fisheries, and Geomatic Sciences UF/IFAS, Ruskin, FL, P.W. Stevens, Fish and Wildlife Research Institute, St. Petersburg, FL, and J.E. Hill, Tropical Aquaculture Laboratory, School of Forest, Fisheries, and Geomatic Sciences UF/IFAS, Ruskin, FL.

Situation: Thermal tolerance can often determine the survival and distribution of fishes in marine and coastal ecosystems. Thus, we would expect thermal tolerance to track temperature, one of the most important ways climates vary. As climate change drives rising temperatures it leads to poleward expansion in fish populations and ecosystems, enabling species like the common snook (hereafter referred to as snook), *Centropomus undecimalis*, to expand their range into previously cooler regions. However, the thermal tolerance of the poleward expanding snook population along Florida's Gulf of Mexico remains uncertain, particularly in facing cold winter conditions and their tendencies to seek thermal refuge.

Methods: To investigate the thermal tolerance of snook across a latitudinal gradient and their ability to endure rapid temperature drops and prolonged exposure to cold conditions, we conducted chronic lower lethal and critical thermal minimum trials. **Results:** During our chronic lower lethal trials (slower rate of drop), we found a significant latitudinal gradient in thermal tolerance. Furthermore, our critical thermal minimum trial (faster rate of drop) lost equilibrium at temperatures almost 2°C warmer than those in our chronic trial. These results suggest thermal tolerance can track thermal gradients, indicating fish species are responding to climate-driven range expansion. **Conclusion:** Enhancing our understanding of thermal tolerance enables fisheries management to make well-informed decisions when evaluating the species' resilience and resistance to climate change. This extends to both local and regional scales, considering the broader implications for ecosystems, and underscores the importance of thermal refuges in sustaining species amidst a changing climate.



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MANATEE AWARENESS THROUGH EDUCATIONAL STEWARDSHIP. B.J. Scharf, UF/IFAS Extension, Hernando County, Brooksville, FL, T.J. Fridrich, Save the Manatee Club, Longwood, FL, and T. Masnjak, Get Up and Go Kayaking, Weeki Wachee, FL.

Situation: Manatees play a vital role in Florida's ecosystem, serving as gentle marine herbivores and essential indicators of environmental health. However, the increasing issue of tourist harassment along the Weeki Wachee and Mud Rivers poses a significant threat. Unregulated interaction disrupts the manatees' natural behaviors, endangers their well-being, and undermines conservation efforts. Protecting these iconic creatures is essential for maintaining ecological balance and preserving Florida's unique marine heritage, urging the need for responsible tourism practices to ensure the continued survival and welfare of manatees along Hernando's coast. Methods: In response to the escalating issue, the Manatee Awareness Through Educational Stewardship (MATES) program was established. Through this initiative, we led comprehensive workshops aimed at equipping, 14 ecotourism guides with essential skills to effectively communicate and demonstrate safe manatee interactions. The training focused on promoting responsible behaviors during recreational paddle craft activities. Results: Following the completion of their training, these guides, now equipped with expertise, engage in field days to educate tourists, and booked clientele on the best practices for fostering positive and respectful interactions with manatees. During these field days, a total of 512 out of 601 users (85.2%) actively changed their behavior while sharing the river with manatees. Conclusion: These statistics highlight the effectiveness of the educational field days in promoting responsible behavior and fostering a more considerate interaction between users and manatees in the river environment.



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TRACKING MANGROVE EXPANSION IN COASTAL HERNANDO COUNTY, FLORIDA, USING MACHINE COUNTING. B.J. Scharf, UF/IFAS Extension, Hernando County, Brooksville, FL and J.S. Strickland, UF/IFAS Extension, Osceola County, Kissimmee, FL.

Situation: In recent years, Coastal Hernando County has observed a shift from salt marsh to mangrove systems, particularly involving red mangroves (*Rhizophora mangle*) and black mangroves (*Avicennia germinans*). Significant growth of these species over the last 15 years, particularly in the last five, has indicated potential ecological and climatic shifts. This study quantifies the year-to-year spread of mangroves, addressing the need to understand and track coastal habitat transitions. **Methods:** The study area, spanning 27.3 hectares between Bayport and Alfred McKethan Pine Island, was documented using aerial RGB imagery to create an orthomosaic. Machine counting and area coverage analysis were conducted using ImageJ software, with specific color threshold settings to isolate mangroves from other vegetation. This method replaces subjective visual estimations with quantifiable data, advancing ecological monitoring techniques. **Results:** Findings over a 13-month period show a 15.7% increase in the marsh area covered by mangroves. This substantial increase underscores the expansion of mangrove habitat within a relatively short timeframe. **Conclusion:** This study emphasizes the value of machine counting in annual vegetation monitoring. Accurately measuring the mangrove expansion provides insight into the possible warming of coastal areas or variability in weather patterns. It holds implications for environmental conservation efforts, land management policies, and climate change studies, by offering a predictive tool for future ecological assessments and a baseline for environmental change in the region. The study's methodology showcases the potential of technology in enhancing ecological research, providing a replicable model for other regions experiencing similar ecological shifts.



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WORKSHOP INCREASES RESIDENT PALM KNOWLEDGE. L. Sanderson, UF/IFAS Extension, Sumter County, Bushnell, FL, Lester, W., UF/IFAS Extension, Hernando County, Brooksville, FL, J. Davis, UF/IFAS Extension, Sumter County, Bushnell, FL, E. Schmidt, Harry P. Leu Gardens, Orlando, FL, C., Gardener, UF/IFAS Extension, Orange County, Orlando, FL, and J. Daughterty, UF/IFAS Extension, Sumter County, Bushnell, FL.

Situation. Sumter County is located northeast of Tampa, west of Orlando, and encompasses 580 square miles. Sumter County has a rapidly expanding population due to exponential growth of The Villages, a 55+ retirement community of about 160,000 residents according to current information from the Villages Homeowner Advocates. These new residents plant one or more of Florida's iconic palms in their landscapes without understanding the distinctions of ensuring selected palms are hardy in their USDA hardiness zone and are healthy. Palms seen in The Villages often demonstrate significant nutrient deficiency, excessive pruning removing green or discolored leaves/fronds, and fertilizing inappropriately. They are unaware of possible diseases or insect problems that can cause palm problems or death. **Method.** In Fall, 2023, a full-day Palm Education Workshop was held featuring Extension Agents and another speaker who educated 99 participants on specific topics including palm anatomy and morphology, physiological disorders, diseases and lethal bronzing, palms for Central Florida, nutritional deficiencies, and palm fertilization and pruning. **Results.** As a result of pre- and post-tests, responding participants demonstrated a 12% knowledge gain. As a result of the survey, 90% (n=78) indicated that gained new knowledge as a result of the Palm Education Workshop, and 100% of respondents (n=86) indicated that they planned to change practices with their palms based on information received from the Palm Education Workshop. **Conclusion.** While results indicated knowledge gain and intent, a Qualtrics survey to follow up with participants could be sent to assess behavior change with their palms.



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WE'RE NOT IN NEW ENGLAND ANYMORE: NEW SUMTER COUNTY RESIDENTS LEARN THE VALUE AND BENEFITS OF FLORIDA RANCHING. M. Smith, UF/IFAS Extension, Lake County, Tavares, FL, J. Davis, UF/IFAS Extension, Sumter County, Bushnell, FL, L. Bennett, UF/IFAS Extension Pasco County, Dade City, FL, A. Jameson, Brite Leaf Citrus Nursery, Lake Panasoffkee, FL, K. Russell, Sumter County Economic Development, Wildwood, FL, R. Mazak, Mazak Ranch, Bushnell, FL, J. McAlister, Sumter County Cattlemen's Association, Bushnell, FL, D. Maples, Florida Beef Council, Kissimmee, FL.

Situation: The 2022 USDA Census of Agriculture recorded 1,117 farms in Sumter County covering 146,000 acres, a respective 15% and 17% decrease from the 2017 Agricultural Census. During the same period, the human population of Sumter County increased by 16% to 125,298. Most of this growth is due to The Villages, one of the largest and fastest-growing planned retirement cities in the US. An age-restricted retirement community, 99% of The Villages is over the age of 18. Hence, while The Villages represents 63% of Sumter's overall population, it also represents 75% of its eligible voting population. This shift necessitates a sustained strategy of education and awareness, involving not only Extension but county government and non-profit actors as well. Methods: A team comprised of UF/IFAS Extension Agents, Sumter County Economic Development, Sumter County Farm Bureau, the Florida Department of Agriculture and Consumer Services, and the Sumter County Cattlemen's Association created a farm tour at a local ranch targeting residents of The Villages. The program was divided into a lecture portion and a field tour with a lunch catered by a local restaurant utilizing local ingredients. Considering a national discourse that paints livestock agriculture as an environmental negative, the lecture portion focused on the environmental benefits of ranching including native plant preservation, ecosystem services, and soil-building manure byproducts. During the field tour portion, attendees learned the ins and outs of ranching and were treated to an oral history of Florida cowboys and a historical camping display. Results: 39 residents attended the event. When surveyed, 100% (n=37) stated they had gained a better understanding of the agriculture/natural resources in Sumter County. When asked to rate their knowledge of Sumter County agriculture prior to and after the event, respondents showed a 33% (n=37) knowledge gain using a Likert Scale. As a result of the tour, 97% (n=36) planned on attending a future Farm City Farm Tour. Conclusion: The Farm City Farm Tour has shown to be an effective model for increasing agricultural awareness and valuation by Sumter County residents.



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CALCULATING DOGFENNEL CONTROL OF FOUR PASTURE HERBICIDES USING MACHINE COUNTING

J.S. Strickland, UF/IFAS Extension Osceola County, Kissimmee, FL, J. Sullivan, UF/IFAS Extension Osceola County, Kissimmee FL, and JJ. White, Osceola County Soil and Water, Kissimmee, FL

Situation: This study addresses the prevalent issue of Dogfennel (*Eupatorium capillifolium*) in pastures, a weed that significantly reduces forage productivity. Traditionally, herbicide effectiveness has been evaluated through estimates by trained observers, potentially leading to inaccuracies. This research proposes a novel approach using aerial imagery and machine counting software to precisely measure herbicide impact, focusing not on the herbicides' effectiveness but on the methodology's validation. **Methods:** Utilizing six plots, each spanning 0.41 ha, aerial RGB images were captured and analyzed with ImageJ software, employing a specific color threshold to distinguish Dogfennel from Bahiagrass (*Paspalum notatum*). The analysis was facilitated by Pix4D for image processing, demonstrating a marked variation in Dogfennel population and coverage post-treatment with different herbicides. **Results:** The Duracor treated plot saw an increase of 28.9%, whereas Pasturegard, Grazon, Weedmaster, and control measures showed reductions to varying degrees. The findings highlight a significant reduction in Dogfennel presence in treated plots compared to untreated ones, with Weedmaster showing the most substantial decrease. **Conclusion:** This methodological pivot from subjective estimations to precise, machine-counted measurements presents a promising advancement in agricultural weed management. This proof-of-concept study successfully demonstrates the potential of aerial imagery and machine counting as a more accurate alternative for evaluating herbicide efficacy against Dogfennel. Although not designed to assess the herbicides' effectiveness, the research validates the approach's utility, setting the stage for broader application in agricultural practices. By offering a method to accurately quantify treatment impacts, this study contributes significantly to the field of precision agriculture, providing a foundation for future research aimed at enhancing weed management strategies and, ultimately, improving pasture productivity. The implications of this research extend beyond immediate agricultural benefits, suggesting a shift towards more data-driven, precise management practices in agriculture. This method's adoption could lead to more effective use of herbicides, reduced environmental impact, and increased forage yields, addressing the critical gap identified in traditional herbicide evaluation methods.



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CULTIVATING CONNECTIONS THROUGH GREENBELT CLASSIFICATION & FARM RESOURCE SEMINAR .

Williams, A., UF/IFAS Extension, Hillsborough County, Seffner, FL.

Situation: Many farmers, especially new farmers, in Hillsborough County reach out to the Extension office to inquire about the Greenbelt land classification requirements and resources for farmers. The Florida Greenbelt Law affects the tax assessment of land used for agricultural purposes, potentially reducing the annual property taxes, and improving farm profitability. In response to the expressed need, the Greenbelt Classification & Farm Resource Seminar was designed to bring awareness of local available resources and connect farmers with the county's property appraiser office. Objectives: The objectives were to increase participants' knowledge of farm resources and greenbelt requirements; encourage participants to utilize these resources and be prepared to apply for Greenbelt; and increase profitability of the operation. Methods: This program was a collaboration between UF/IFAS Extension and the Hillsborough County Property Appraiser office. The in-person seminar included presentations on farm resources and Greenbelt classification, a Greenbelt panel discussion, an interactive question and answer session, and a packet of educational materials to take home. Results: Thirty-eight participants attended the program. An end of program survey was used to evaluate knowledge gain and intended behavior change. One hundred percent of participants indicated an increase in knowledge from participating in the program with an average increase of 79%, specifically in the areas of awareness of organizations that work with farmers (79%), resources for farmers (79%), and Greenbelt requirements (78%). Seventy percent of participants reported their intention to make a behavior change in at least one of the following areas: contact an organization discussed at the program (50%), inquire about permits or regulations (60%), apply for greenbelt (60%), and contact the property appraiser office (50%). Conclusion: This program connected producers with resources that have enhanced their farm business management. Since the program, participants have reported applying for Greenbelt, utilizing the farm product and service directory, and contacting local organizations for guidance and financial incentives. This collaborative effort has strengthened the relationship between Extension and the property appraiser office. Initially, both parties decided to hold this program annually, however, with the influx of requests to offer this program again, it will now be held semi-annually.