



2020 Central District Symposium

Abstract Proceedings

**Organized by UF/IFAS Extension St. Johns County
April 16, 2020**

**Proceedings Edited By:
T. Wilson and H. Fleming**

2020 Central District Symposium ZOOM Agenda

Join the General Session: <https://ufl.zoom.us/j/931635053?pwd=UjE2ZEFwN01jOC9nRmZKOTkvN0tRQT09>

Password - 543737

Organized by UF/IFAS Extension St. Johns County
April 16, 2020

- 9:45 – 10:00** Sign-on
- 10:00 – 10:30** Welcome, Introductions, and Updates – *Tim Wilson and Jim Davis*
Joy Andrews, Assistant County Administrator, St. Johns County
Dr. Tim Momol, District Extension Director, Central District
Dr. Tom Obreza, Senior Associate Dean for Extension
- 10:35 – 10:45** Why Urban Extension – Drs. Brad Burbaugh & Tim Momol
- 10:45 – 10:55** Urban Extension National Initiative (NUEL) & Framework – Brenda Rogers
- 10:55 – 11:10** FL Urban Extension Summit Recap & Next Steps – Linda Seals & Ramona Madhosingh-Hector
- 11:10 – 11:40** Urban Extension Panel Discussion & Audience Q&A – Tim Wilson, Vigi Zabala, Melanie Thomas, Linda Seals, Ramona Madhosingh-Hector
- 11:40 – 12:00** Central District Public Relations Specialist – Tory Moore
- 12:00 – 1:00** Lunch (on your own)
View Virtual Poster Session – <http://blogs.ifas.ufl.edu/extension/2020-uf-ifas-central-district-symposium/>
Abstract and Poster Award winners will be announced on April 22, 2020

Join Breakout by following Zoom Link below – Main Program Adjourn

- 1:00 – 2:30** Breakout Sessions
- Ag – Ignite Session – <https://ufl.zoom.us/j/802923458>
 - Livestock – Tim Wilson – <https://ufl.zoom.us/j/827643368>
 - Crops – Prissy Fletcher – <https://ufl.zoom.us/j/9669169335>
 - Horticulture – Moderated by Terra Freeman – <https://ufl.zoom.us/j/355618413>
 - FCS – Moderated by Sharon Treen, Wendy Lynch and Dr. Michael Gutter
<https://ufl.zoom.us/j/710029145>
 - 4-H – Moderated by Julia Kelly, Geralyn Sachs, and Stacy Ellison
<https://ufl.zoom.us/j/338751902>
 - SG and Natural Resources – Moderated by Dr. Maia McGuire and Dr. Holly Ober
<https://ufl.zoom.us/j/441105942>

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LINK TO ABSTRACTS AND POSTERS

- View Virtual Poster Session – <http://blogs.ifas.ufl.edu/extension/2020-uf-ifas-central-district-symposium/>

2020 CDS ORGANIZING COMMITTEE

- Tim Wilson – County Extension Director, St. Johns County (Committee Chair)
- Jim Davis – County Extension Director, Sumter and Hernando Counties (Zoom Host)
- Lisa Sanderson – Residential Horticulture Agent, Sumter County (Zoom Co-Host)
- Dr. Brad Burbaugh – County Extension Director, Volusia County (Morning Host)
- Prissy Fletcher – Commercial Ag Agent, St. Johns County (Abstract/Poster Chair)
- Terra Freeman – Urban and Commercial Horticulture Agent, St. Johns County
- Joanne Cooper – Family and Consumer Sciences Agent, St. Johns County
- Julia Kelly – 4-H Youth Development Agent, St. Johns County
- Sharon Treen – County Extension Director, Putnam County
- Wendy Lynch – Family and Consumer Science Agent, Putnam County
- Dr. Maia McGuire – Sea Grant Agent, Flagler and St. Johns County
- Dr. Holy Ober – Wildlife Extension Specialist, North Florida Research and Education Center
- Geralyn Sachs – 4-H Regional Specialized Agent, Central District
- Amy Law – Office Manager, St. Johns County
- Harriet Fleming – Administrative Assistant, St. Johns County
- Ben Beach – IT Specialist
- Nikki Wilson – Administrative Specialist II, Central District Director's Office
- Dr. Tim Momol – Central District Extension Director

THANK YOU TO EVERYONE FOR ATTENDING

DEMONSTRATING A BETTER WAY TO COUNT: UTILIZING DRONES FOR MANATEE SYNOPTIC SURVEYS

B.J. Scharf¹ and J.S. Strickland²

¹ Marine Science Agent – UF/IFAS Extension Hernando County; 16110 Aviation Loop Drive, Brooksville, FL

² County Extension Director and Agricultural Agent – UF/IFAS Extension Osceola County; 1921 Kissimmee Valley Ln, Kissimmee, FL

Situation: The Florida Fish and Wildlife Conservation Commission (FWC) uses airplanes to monitor Florida’s manatee population. Unfortunately, this sampling method is costly, limited to altitudes above 500 feet, and has resulted in data gaps along Florida’s Springs Coast. In response, we designed a method utilizing drones to efficiently improve manatee counts at a lower cost and from lower altitudes resulting in clearer images.

Methods: After reviewing FWC’s limited manatee data and conducting visual observations, we programmed a flight path within the Litchi app to fly a Phantom 4 Pro drone over our areas of interest. Three drone flights were conducted after major cold fronts had passed between December 2019 and March 2020 at an altitude of 150-250ft. Video was recorded and reviewed on a computer.

Results: Weather did not meet the threshold established by FWC for aerial surveys to be implemented between December 2019 and March 2020. However, FWC previously conducted 26 aerial surveys between 1995 and January 2019 and an average of 13 manatees were recorded per Hernando survey. When compared to FWC surveys, our average of 45 manatees per drone flight was statistically significant suggesting drones are an effective method for monitoring (t-test, p value of 0.0003). Due to the lower flight altitude, scars used for identification were clearly documented on most manatees observed during drone videos. Additionally, we were able to complete our drone surveys at a total estimated cost of \$350. This is a cost savings of \$2,337.50 when compared to conducting airplane surveys for the same area.

Conclusion: More manatees were counted by using drones and at a lower cost than airplane surveys. While we could not do a direct comparison to 2020 data, the average over a 24-year span was relatively smaller than what we found with drones the following year.

GO SPRINGS & GET WET! EDUCATING THE PUBLIC ABOUT WATER ON THE WATER

A. Marek, UF/IFAS Extension, Marion County, Ocala, FL and Y. Zhuang, UF/IFAS Extension, Central District, Apopka, FL.

Situation: The projected population of Marion County is expected to reach over 411,000 people in 2025. With increasing urban development, Marion County must meet the growing demand for fresh water. To help mitigate the overuse of water for irrigation, an innovative new program was developed to immerse Marion County residents into nature to learn about Florida's water and how to protect it with Florida-Friendly Landscaping. **Methods:** In October and November of 2019, 28 residents partook in the Go Springs & Get Wet program at the Rainbow River in Dunnellon, FL. Participants received presentations on Florida's water resources and an introduction to Florida-Friendly Landscaping before they were led on a guided kayak tour of the Rainbow River. After kayaking, participants filled out program evaluations. **Results:** Over both days, 100% of participants said the information they received was very helpful, and that their understanding of the importance of protecting Florida's water and of FFL had improved. Additionally, as a result of attending the class 69% said they will fertilize wisely, 97% will water efficiently, and 100% said they will share information with others. **Conclusion:** With grant funding provided by the Southwest Florida Water Management District, the Go Springs & Get Wet program proved to be a successful and effective way to educate homeowners about Florida's water and Florida-Friendly Landscaping by immersing them with the very resource that is trying to be protected. Many of the participants expressed that this was not only their first time at a Florida spring, it was also their first time kayaking. Through this program, participants gained greater knowledge about Florida's natural resources and it allowed them the opportunity to formulate their own positive attitudes toward those same resources which research indicates is a critical step toward the adoption of behavior change.

HERBICIDE MIXING MATH FOR NATURAL AREAS

K. Stump, UF/IFAS Extension, Osceola County, Kissimmee, FL

Situation: Land managers rely on herbicide to control invasive species in natural areas.

However, improper application can have unintended environmental impacts and waste time, money, and resources. In addition, there can be legal consequences for not properly following an herbicide label. Herbicide workshops for continuing education units often incorporate equipment calibration but may not review the math needed to properly mix herbicide per label requirements.

The objective of the program was to increase knowledge about herbicide mixing math by 30%.

Methods: An interactive herbicide mixing math session was incorporated into three herbicide workshops in 2019 and 2020 in Lake and Osceola Counties. The sessions began with a presentation of step-by-step guidance through common math problems needed to mix herbicides. The attendees were then challenged to solve the problems individually, in pairs, and in groups to ensure all types of learners had the opportunity to practice. The session provided tips, used color-coded steps, and used repetition to better facilitate learning.

Results: In total, 140 adults attended the workshops. A pre-/post-test was used to measure knowledge gain at two of the three sessions. The respondents (n=86) reported a 33% increase in knowledge about herbicide mixing math.

Conclusion: Through a better understanding of the math required to mix herbicides, professionals are able to better follow label requirements. This in turn protects the environment, reduces waste, and improves personal safety.

RESTORING A 1920'S GOLF COURSE INTO AN ECOLOGICAL PARK: A CASE STUDY OF THE ROLLING HILLS

T. McIntyre, MS, CEP, University of Florida IFAS Extension Seminole County, Sanford, FL, USA and K. McCormick, University of Florida IFAS Extension Seminole County, Sanford, FL, USA

Situation: The Rolling Hills Park project is a Florida Communities Trust (FCT) grant to convert a non-operational golf course to a passive park. Seminole County purchased the 98-acre golf course in August 2018 and maintains the property. The goal of this repurpose project is to apply sound urban ecology design principles to the development of a nature-based recreation park and urban conservation habitat.

Methods: Through partnership funding from UF facilitated by the FFL Agent, three UF students (one undergraduate and two master's) developed a plan for the park in summer of 2019. Project aspects included

- selection of commercially available plant species,
- total site soil testing,
- principles for creating habitat
- coexisting with wildlife
- and a master plan of plant communities and recreation amenities to foster a visually pleasing, urban conservation space.

Results: Under the direction of the FFL Agent and other advisors the students created a Rolling Hills handbook, which outlined the details of their recommendations. At the end of the semester the results were presented to integral county staff, decision makers and UF advisors. The county staff was very excited about their work and has since integrated the plan into their master-site planning and implementation. Later in 2019 it was provided to county consultants and other key players in the project.

Conclusion: The students used the urban ecological model to address both human activities and conservation needs. They did it in a way that was practical and helpful to the county staff, who were grateful and recognized the value of their work at over \$30,000. Additionally, their diligent work will be incorporated into the implementation of the park as the plans are funded annually through the county's capital improvements budget. The FFL Agent will continue to work and collaborate on this project.

CREATIVE COLLABORATION BRINGS MULTIPLE IMPACTS TO CLIENTS

Tiare Silvasy, Virgilia Zabala, John Roberts

UF/IFAS Extension Orange County, 6021 S. Conway Rd. Orlando, FL 32812

Situation: Extension programs that utilize a systems approach by combining horticulture and physical well-being can multiply impacts per client. This is especially critical in areas of high population density with a need for environmentally friendly landscaping practices and healthy dietary choice education. Cross-pollination of extension programs can be challenging with the different interests and needs of each program's target audience. Our target audience included residents who are interested in improving their gardens as well as their diets. The objectives of this program were to increase knowledge of Florida-Friendly Landscaping™ (FFL) practices, nutrition, and gain confidence in preparing a healthy recipe. **Educational Methods:** UF/IFAS Extension Orange County agents joined forces to implement Guided Garden Tours and Tasting using food to bridge the gap between horticulture and human health. In this program, trained Master Gardener Volunteers guide participants through the Exploration Gardens. The tour emphasizes FFL principles, low-maintenance plants, low-volume irrigation, wildlife and vegetable gardens, and includes a plant clinic visit. The tour culminates in the demonstration kitchen where the Family and Consumer Sciences Extension Agent discusses the nutritional value of vegetables grown in the garden and explains the preparation of three dishes prepared using garden produce. Participants sample the dishes and receive an in-house designed recipe card. **Results:** Post-survey results (n=30) show 100% of participants reported increased knowledge of plant identification, 96% increased knowledge about FFL principles and efficient irrigation practices, 96% increased nutrition knowledge related to the vegetables presented in class, and 100% felt they could prepare the recipes at home. **Conclusion:** Innovative approaches can efficiently reach the large population in Orange County to address the concerns of environmental degradation, obesity, and disease. Using food to bridge the gap between disciplines, clients can simultaneously learn to adopt environmentally friendly landscaping practices and incorporate more healthy foods into their diets.

MANAGING NUTRIENTS IN A WILD & SCENIC RIVER BASIN: PROVOKING BEHAVIOR CHANGE IN RESIDENTIAL FERTILIZER USERS

T. McIntyre, MS, CEP, University of Florida IFAS Extension Seminole County, Sanford, FL, USA and Dr. T. Fullerton University of Florida IFAS extension Seminole county, Sanford, FL, USA

Situation: Seminole County (SC) is home to the Wekiva Springs River, a National Wild & Scenic River and an Outstanding Florida Waterbody, and the St. Johns River, which includes the oxbow Lakes Harney, Monroe and Jesup. These waterbodies *are all impaired by nutrients*. These water resources are economically and environmentally tied to the area through recreation, property values, wildlife support and aquifer recharge. Research on the Wekiva Springs Basin shows 26% of all nitrate entering the basin was from urban turfgrass fertilizer.

Methods: September 2018 – May 2019 the Florida-Friendly Landscaping team taught Fertilizer Workshops. Workshops targeted homeowners and HOA's, offered a free bag of fertilizer and educated participants on Best Management Practices (BMP's) for residential landscapes.

Results: Byway of mass media and 27 classes, 17,454 people were educated about fertilizer BMP's; of those, 288 completed reflective post-surveys which revealed 97.2% increased their knowledge on the impacts stormwater (including fertilizer run-off) has 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, 86.1% of 129 participants reported they were currently using BMP's or had recommended BMP's to their landscaper as a result of the fertilizer workshop.

Conclusions: These educational efforts resulted in data that shows significant behavior changes which seeks to reduce local levels of nitrogen and phosphorous, pollutants that lead to harmful algae blooms and impairments. Participants better understand sources of water contamination resulting from fertilizer misuse and have acted to change those behaviors.

FLORIDA MASTER GARDENER VOLUNTEERS' EXPLORATION OF FOOD SYSTEMS IN SOUTHERN ITALY PRODUCES STATEWIDE IMPACT

T. Freeman, UF/IFAS Extension St. Johns County, St. Augustine, FL

W. Wilber, UF/IFAS Extension, Center for Land Use Efficiency, Gainesville, FL

Situation: An important aspect of supporting Florida's agricultural industry is creating awareness and appreciation of food systems among citizens. Studying food systems internationally provides a unique opportunity to learn new information that Extension agents and Master Gardener Volunteers (MGV's) can share with clientele to support UF/IFAS Extension High-Priority Initiative 1 (cultivate citizen awareness of food systems and sustainability of production systems and alternatives). **Objective:** To provide an international food systems educational opportunity for Florida MGV's, where participants increase their knowledge of agritourism, fruit production, and alternative fruit crop selection for Florida. **Methods:** Explore and study food systems in Southern Italy, including agricultural enterprises in pomegranate, lemon, apple, olive and wine production; botanical gardens and other edible landscapes. Other areas of concentration included sustainability, cultural methods, and integrated pest management. **Results:** On-site focus group revealed an increase in knowledge and awareness of sustainable agricultural practices. Of the 31 MGV's who participated in the Food Systems Tour of Southern Italy, 74% (N= 23) responded to a 2 month post-trip survey, revealing an average increase of horticultural knowledge between 68%-88%, depending on the site visit. 100% of the 20 who responded to a 5 month post-trip survey, shared information they learned with others, including other MGV's, community members, friends, family and extension clientele. They reported sharing information about crops, sustainable horticulture practices, agrotourism, Mediterranean diet and food preparation, wine, and alternative crop techniques via workshops, videos, extension publications, PowerPoints, consultations, plant clinics, phone desk, and planting crops studied on tour. 50% of participants reported an increase in their local food purchasing practices. **Conclusion:** MGV's shared their gained knowledge with Floridians throughout the state. Sharing their global experiences with fellow volunteers and clientele can help disseminate information to bring more awareness of food systems, agrotourism, and potential for alternative fruit crop selection in Florida.

LANDSCAPING FOR LIVESTOCK

Maxine Hunter*, Caitlin Bainum*²

1. UF/IFAS Extension Marion County Horticulture Agent

2. UF/IFAS Extension Marion County Livestock Agent

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Marion County, FL is home to the “horse capital of the world” with 350,000 acres of pasture land used for livestock. With that comes yards, fence rows, and other landscaping features that are often accessible to livestock. Lack of knowledge regarding toxic plants to livestock may cause unintentional health consequences to animals and could lead to higher costs associated with health care of those animals. The large number of equine enthusiasts, who place great value on landscaping and horse health are a prime example of the need for extension education. The UF/IFAS Extension Marion County horticulture and livestock agents teamed up to provide an in-depth class training horse owners on various landscape strategies to be both safe for livestock and aesthetic for their properties. Topics also included Florida-Friendly Landscaping principles such as soil testing, proper irrigation, runoff prevention, and correct plant selection. Fifteen property owners attended the workshop and survey results suggest: 100% intend to soil test prior to fertilization, 80% could properly identify the proper plants for their landscaping needs, 80% understood proper practices to reduce runoff, protect beneficial insects, and mulch appropriately. The self-reported approximate value of animals if saved from toxic plants as a result of better management and selection was estimated at \$900,000. A second training will be conducted this spring to include advanced topics such as integrated pest management and fertilizer calculations.

PROGRAMS TRANSFORM WATER USE

L. Sanderson, UF/IFAS Extension, Sumter County, Bushnell, FL

Situation: The water resources in Florida are at risk with a 2019 population estimate of 21.48 million people which is growing by almost 1,000 new residents daily. These new residents can exert pressure on Florida's water resources. In Sumter County, the population growth is primarily in The Villages, a 55+ retirement community with approximately 48,000 homes. Expansion of The Villages is growing exponentially. The 2017 population estimate of The Villages is 125,165 residents, average age around 70. While some residents are native to Florida and understand Florida's fragile resources and how to manage irrigation systems, the majority have moved to Florida from other parts of the United States or the world. The largest amount of water being used is on warm season turf in The Villages. Residents set their irrigation controls to run throughout the year. It is a difficult task to reach new residents of The Villages to teach about Florida's fragile water resources and to practice efficient irrigation.

Methods: Twenty-four new resident workshops ("Florida-Friendly Landscaping™ for New Residents") were held throughout the year at two locations in The Villages monthly. Participants were informed about efficient watering practices such as how much to water, adjusting for seasonal changes, and calibrating their lawn irrigation.

Results: A Qualtrics survey of participants indicated that the number of participants who adjusted irrigation to deliver ½" to ¾" at each irrigation doubled from 19% (n=54) to 38% (n=105), with 44% (n=91) calibrating their irrigation zones. Forty-percent (n=164) noted their water use decreased. Twenty-five percent of participants (n=103) set their systems on manual and water only as needed.

Conclusion: The Florida-Friendly Landscaping™ for New Residents Workshops which reached 806 The Villages residents in 2019 pursues the transformation of water use in the largest population of Sumter County.

ENTOMOLOGY DAY CAMPS USED FOR ECOLOGICAL OUTREACH & SCIENCE CAREER EDUCATION

McCormick, Kaydie, Woodard, Chelsea, McIntyre, Tina, UF/IFAS Extension, Seminole County, 250 W. County Home Road, Sanford, FL

Situation: Many of the integrated pest management (IPM) principles used in the home and garden to encourage beneficial insects and reduce pest species are also ecologically sound practices that increase biodiversity and reduce the overuse of chemical pesticides and fertilizers. In order to increase the diversity of the audience given this messaging, two entomology day camps were held over the summer of 2019 to introduce youth to entomology, biodiversity, jobs centered around insects, and environmental principles. Youth ages 9-12 and 13-18 were the target audiences for the two camps. **Objectives:** Youth participating in the day camps gain knowledge on STEM topics related to entomology, biodiversity, and ecology as well as careers in fields related to entomology. **Educational Methods:** Field trips to local landscapes and natural lands trails were utilized to teach youth about ecosystems and introduce them to biodiversity in the environment. Multimedia presentations and insect collections covered topics on biodiversity, insect ecology, and insect IPM. In the teen camp the participants were required to catch insects the first two days of camp in order to learn pinning techniques and how to identify insects to order. **Results:** Of the youth that participated, 100% (30 of 30) showed increased insect identification skills and changes they can make to increase insect biodiversity in their yards. Teens also learned proper pinning techniques for entomological collections and how to care for live insects. Several successes outside of the objectives were also achieved. Two neurodiverse youth showed increased peer to peer ability during and after their time in the camp, with one parent reporting that their child was also better able to cope with touching insects, plants, and other outdoor things. Another teen participated in order to determine her major area of study in college and decided on Environmental Sciences after participating in camp. **Conclusion:** Offering an entomology day camp opened an opportunity for Seminole County youth to learn about insects and greater ecological concepts. While the youth gained basic knowledge on these concepts, they were also introduced to potential careers in science and learned IPM concepts they can use into adulthood

INCREASING ACCESSIBILITY TO FRESH PRODUCE IN URBAN FOOD DESERTS IN VOLUSIA COUNTY, FLORIDA.

J. Sowards, University of Florida/IFAS Extension, Volusia County, DeLand, Fl.

Situation: Many communities search for ways to increase access to fresh produce as a way to improve overall health outcomes and build a sense of community. The Derbyshire community in Volusia County, (the 32117 zip code of Daytona Beach) has a median household income of \$25,571; 48% below the median income of Florida and large grocery stores are more than one mile away. Spring Hill (DeLand, Fl.) has a poverty rate of 37.4% and a median income of \$21,633 which is below Derbyshire Place. Similarly, no grocery stores within one mile offer fresh produce. As defined by USDA, a food desert is an area “with limited access to supermarkets, supercenters, grocery stores, or other sources of healthy and affordable food may make it harder for some Americans to eat a healthy diet.” **Methods:** UF/IFAS Extension, Volusia County is partnering with both communities to help overcome the lack of access to produce by providing education for creating community gardens. Derbyshire Place offers an ideal situation to reach the community with a variety of programs from cooking to gardening to sewing that provide motivations to visit there. Consequently, residents are more likely to rent a garden plot and raise at least some of their own produce. **Results:** A collaboration among UF/IFAS Extension, leadership at Derbyshire Place and ten community partners, built thirty-six 48-square foot beds and 10 vertical hydroponic towers. Over \$41,000 was raised to complete the garden in 11 months. At Spring Hill, over \$31,000 was raised in cash and in-kind contributions to create thirty-six 32-square foot beds. **Conclusion:** These gardens represent public/private collaborations involving governments, public universities and private donors from throughout Volusia County. Creating urban food systems requires partnerships to build capacity, foster community and economic development; and address food security, nutrition and human health issues in under-served communities.

TO COMPARE SOIL MOISTURE SENSORS USE VS ROUTING WATER SCHEDULE ON SOD FARMS

G. Ricketts, UF/IFAS Extension, Osceola County, Kissimmee, FL.

Objective: To reduce water use by 10% on sod farms

Situation: Sod production increased in Osceola County each year. According to Florida Department of Agriculture and Consumer Services, about 9808 acres of sod irrigated in 2016 and a projection of 11,353 acres will be irrigated in 2020 (<https://fdacs-fsaid.com>). Many are new producers while others increase acreage of production. All these sod producers irrigate and fertilize fields based on schedules without having any idea of the soil moisture level.

Methods: Two soil sensors were installed on a 40-acre field of zoysia grass. Irrigation applications were made based on readings from soil moisture sensors. Routine watering schedule carried out on neighbouring 40-acre plot. Rain gauges were installed to keep track of how much water applied to the field. Gallons of water applied routinely compared to gallons applied based on water sensor readings. Water application recorded every 10 days for 90 days. Two producers meeting conducted to educate and share results.

Results: An inch of water applied on 40-acre plot without sensors every 10 days. An inch of water per acre equals 27, 154 gallons/acre. Therefore, a 40-acre sod plot consume 1,086,172 gallons of water per irrigation event. The 40-acre plot without sensors were irrigated 5 times between April and June. Water consumption during those months was **5,430,860** gallons (5 x 1,086,172 gallons). Plot with soil sensors irrigated 3 times at onset of turf stress. The 40-acre plot with sensors consumed 3 x 1086,172 gallons of water totalling **3,258,516** gallons. There is a 40 % difference (N=**2,172,344**) in gallons of water saved between plots with sensors and those without sensors.

Conclusion: The summer months were rainy, therefore there weren't many opportunities for us to water based on sensors alerts.

IMPROVING FUNCTIONAL FITNESS AND REDUCING RISK OF SARCOPENIA IN OLDER ADULTS.

W. Lynch, UF/IFAS Extension, Putnam County, East Palatka, FL.

Situation: Florida’s 65 and older population is 19.9%¹ and is estimated to reach 32.5% by 2030²; 23.2% of Putnam County³ residents are ages 65 or older. Aging is often associated with a decline in muscle mass (sarcopenia). Declining muscle mass “is one of the most important causes of functional decline and loss of independence in older adults.”⁴ Strength training is “one of the most effective preventive measures to delay the onset of sarcopenia.”⁵ The Physical Activity Guidelines for Americans recommend older adults get two or more days per week of strength training. StrongBodies™ is a strength training program designed for older adults, modeled after the StrongWomen™ program from Tuft’s University. The program objective is to improve muscular strength and flexibility in older adults. **Methods:** Since 2018, StrongBodies™ has been implemented seven times with a total of 59 participants. The eight-week program targets all muscles groups, flexibility and balance and meets at least twice a week for one-hour sessions. Participants’ muscular strength and flexibility were evaluated using weekly strength tracking charts for eight exercises and a pre and post Senior Fitness Test which includes activities measuring functional movements (bending, lifting, reaching, standing and walking). **Results:** 56% (25/45) improved strength in at least five of the eight strength training activities measured; 62% (28/45) improved in at least four, and 76% (34/45) improved in at least three. The pre and post Senior Fitness test was completed by 44 participants. Of these participants, improvements were made in the following tests: Chair stand 66% (27/41), Arm curl 74% (31/42), 6-minute walk test 72% (13/18), Sit and reach 77% (30/39), Back scratch 75% (27/36), 8-ft get up and go (34/41). **Conclusion:** StrongBodies™ is an effective strength training program to reduce risk of sarcopenia and improve functional fitness in older adults.

¹ <https://www.ncbi.nlm.nih.gov/pubmed/24951975>

² <https://acl.gov/sites/default/files/programs/2016-11/Florida%20Epi%20Profile%20Final.pdf>

³ <https://www.census.gov/quickfacts/fact/table/putnamcountyflorida,US/AGE775218>

⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4066461/pdf/nihms588910.pdf>

⁵ <https://www.ncbi.nlm.nih.gov/pubmed/24951975>

IMPROVING CULINARY SKILLS THROUGH THE COOK SMART, EAT SMART PROGRAM. V. Zabala, UF/IFAS Extension Orange County, Orlando, FL.

Situation: In general, foods prepared away from home provide more calories, sodium, and saturated fats than foods prepared at home. The Food & Drug Administration reports that for the average adult, eating one meal away from home each week translates to a two pound weight gain per year. Lack of knowledge and skills in planning, shopping, and preparing healthy meals can lead to increased eating away from home. UF/IFAS Extension Orange County adapted and piloted North Carolina's Cook Smart, Eat Smart curriculum to equip adults with basic cooking skills and nutrition knowledge. **Objective:** Increase participants' knowledge, self-efficacy, and intention of preparing healthy meals at home. **Methods:** The series consisted of four 3-hour sessions. Through lecture, recipe demonstration and hands-on food preparation, participants learned a variety of healthy cooking techniques and skills. These included knife skills, roasting, baking, grilling, and preparing packet meals. Participants worked in groups to prepare recipes that were sampled by all. **Results:** Fifteen individuals completed the series and post survey. 100% of respondents indicated increased knowledge in food preparation skills and cooking techniques not previously used, 100% were somewhat confident or very confident in their ability to prepare healthy meals, and 100% (of n=3 who were not already doing this) intended to prepare more meals at home and use healthy cooking methods more often. **Conclusion:** Equipping individuals with the conceptual nutrition knowledge is only as effective as the participants' ability to put knowledge into practice. Through the Cook Smart, Eat Smart series participants acquire technical expertise and practice, thus increasing knowledge, skills, self-efficacy, and intention to prepare and consume healthier foods at home. This simple behavior change can help participants manage their weight and prevent associated health conditions.

AGING WELL IN FLORIDA, A TRI-COUNTY APPROACH

L. Duncan, UF/ IFAS Extension Sumter County, L. Spence, UF/IFAS Extension Marion County, M. Wilchcombe, UF/IFAS Extension Lake County.

Situation: The population in The Villages Florida continues to grow. Following a series of programs called Sharing Wisdom, the tri-county Family Consumer Sciences team had requests for additional topics to be added. Sharing Wisdom included six, one hour classes on topics related to wellness and aging. Participants expressed interest in having more in-depth information to make decisions related to fall prevention, staying in their homes, organizing their homes and untitled property. Due to the trend towards wanting to “declutter,” a three-hour session was offered on organizing and completing needed documents in the home, selecting untitled property to keep as they downsize and how to properly care for items. When participants were introduced to “A Matter of Balance,” a program on fall prevention, many expressed interest and Agents became trained to conduct the program. **Methods:** Four, three-hour classes were held throughout the area related to organizing and care of property. Over 200 people participated in these classes. One “Matter of Balance” series was started. An additional Sharing Wisdom series (6 classes) was offered. Self-reporting post program surveys were conducted. **Results:** Eighty-five percent of the participants, in all of the programs combined gained new knowledge. In the declutter series, 95% of the participants set written goals to utilize the knowledge gained. Agents continue to collect information regarding the needs of the clientele for future programming and re-evaluate the program. **Conclusion:** Feedback from participants is necessary in designing future programs and evaluating current approaches. Input from participants can help Agents adapt to the needs of the clientele and provide them with information and skills to maintain their independence and live a healthy as they age.

DRONE LICENSING CLASSES YIELD SUCESSFUL CANDIDATES AND FURTHER BUSINESS CREATION

M. Smith, UF/IFAS Extension Sumter, Pasco, Hernando County; BJ Scharf, UF/IFAS Extension Hernando County; KA Taylor, UF/IFAS Extension Sumter County; JS Strickland, UF/IFAS Extension Osceola County

Situation: Anyone operating a drone for commercial purposes must possess an Unmanned Aerial System (UAS) Certificate through the Federal Aviation Administration (FAA). The test that they must pass is called a Part 107 Exam. Our objective was to increase drone prep students' knowledge of Part 107 (drone) subject matter by 80% when measured via pre/posttest. In addition, the passing rate of the UAS certificate would be 80% when measured by a one-month follow-up survey. **Methods:** We designed a two-day course utilizing various instructional methods to teach participants required Part 107 Exam subject matter. Topics included FAA regulations, airspace classification, weather, radio communications, airport operations, aeronautical decision-making, and emergency procedures. **Results:** A total of 20 people completed the UF/IFAS Drone Exam Prep course held in Hernando and Osceola Counties. Pre/posttests showed class participants had a 1.02 fold increase in knowledge (n=20). 100% of course participants who attempted the FAA Part 107 Exam successfully passed and now hold an UAS Certificate (n=16). Follow-up surveys of participants were conducted with 10 responding (50%). Of respondents, 90% felt adequately prepared to take the Part 107 Exam after the UF/IFAS Drone Prep course and 70% believed that the UAS Certificate will aid in a career or financial advancement. **Conclusion:** The FAA stated, "Non-model activities may require almost 350,000 RPs in 5 years, a three-fold increase, providing tremendous opportunities for growth in employment associated with commercial activities of (unmanned aerial systems) UAS". Some participants have furthered their business with the certificate, such as an established photographer that has now entered the lucrative drone photography market. One youth participant started a new drone photography business and has acquired a dedicated client in the Farmers Market. With this program, our programmatically diverse team has attracted an audience that is new to Extension.

RAISING EXTENSION AWARENESS VIA MEET AND GREET OPEN HOUSE

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Situation: Extension is always called the “Best Kept Secret.” The objective of the Meet and Greet Open House was to introduce new members of the community to Extension services and to introduce those familiar with Extension to new programming that they may not be aware of in a non-formal social atmosphere. **Methods:** This event was advertised via local news media, newsletters, and social media. We also promoted the event using flyers distributed at Farm City and other Extension events. The entire faculty and staff were involved with creating interactive displays for clientele. Program areas involved Natural Resources, Sustainable Agriculture/Food Systems, Master Gardener, Horticulture, Florida-Friendly Landscaping™, Family and Consumer Sciences, and 4-H Youth Development. Faculty also utilized several hands-on exhibits.

Results: 19 participants completed a survey. After attending our Meet and Greet Open House, 74% (n=19) stated that this was their first experience with UF/IFAS Extension Sumter County. 74% (n=19) stated that they have used Extension services outside of Florida. 74% (n=19) stated that were not aware of all the Extension programs in the County. 100% (n=19) stated that they will use one or more Extension services. 84% (n=19) stated that they have become aware of three or more Extension services. **Conclusion:** Extension Meet and Greet Open House offers a unique opportunity to reach new clientele and introduce familiar clientele with new programming that they are not familiar with. The event was successful as evidenced by the survey results, positive media coverage, and one State Senator in attendance.

SCIENCE-BASED SOCIAL MEDIA EXPANDS EXTENSION EDUCATION

H. Wooten, UF/IFAS Extension, Orange County, Orlando, FL

Situation: The public is increasingly engaged in social media resulting in shifting information gleaned from authoritative sources to social networks. Extension faces challenges reaching new, diverse audiences, while also supporting existing clientele with science-based information. Science-based social media education provides on-demand education that facilitates knowledge gain resulting in adoption of new practices and behavior change. In addition, using YouTube as a teaching tool caters to visual, auditory, and hearing impaired learners, and transcripts can be generated in over fifty languages which accommodates diverse audiences. **Methods:** Several “Set it and Forget it Hydroponics” workshops and demonstrations were offered in Central Florida starting in 2017. The demand for the classes exceeded the supply, and experienced students expressed a need to revisit the science-based methods learned at traditional, face-to-face, extension programs in order to adopt the practices season after season. An easily searchable YouTube video entitled “Hydroponic Lettuce Hannah Wooten” (<https://www.youtube.com/watch?v=GQey35Tt24I>) was developed in February 2018 in partnership with Seminole Government Television to provide on-demand learning about hydroponics. **Results:** The YouTube video has over 428,000 views with an average view duration of 5 minutes. There has been a 1533% increase in subscribers to the Seminole County Government YouTube page. The video has over 5,800 “likes” and over 350 comments many of which commend the educational quality of the lesson. As a result of the video, individuals locally and internationally contact UF/IFAS Extension for more science-based information about the . Additionally, Extension educators less experienced in the subject of hydroponics rely on the YouTube video to support their own programs, thus extending the reach of expertise. **Conclusion:** Extension engagement in social media delivers science-based information to support clienteles’ adoption of practices beyond the classroom, while also positioning Extension as an accessible authority for gleaned factual information in an on-demand society.

EVALUATION OF COOL-SEASON FORAGES IN NORTHEAST FLORIDA USING DIFFERENT ESTABLISHMENT METHODS – SJC2018

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Situation: Cool-season forages are a useful alternative provide high-nutritive value forage to livestock during the winter months. The establishment phase is key for determining the success of the crop, and productivity is later determined by the fertilization level applied. Our objective was to test different establishment and fertilization strategies for oat and ryegrass pastures in north Florida. **Methods:** A 4-acre area was chosen from a farm in St. Johns county. Soil tests were conducted in late October 2019 to evaluate nutrient needs prior to planting, and pasture was closely grazed to reduce competition from existing sod. Staff from UF/IFAS assisted by calibrating equipment, plot design, soil preparation and planting. On November 18, 2019, a combination of Big Boss ryegrass (20%) and Legend 567 oats (80%) were planted by broadcast over-seeding or no-till drill onto either a non-disturbed, lightly disked or roto-till prepared soil resulting in 3 treatments (Non-disturbed, no-tilled drilled, NDNT; Lightly-disked, broadcasted, LDBC; Roto-tilled, broadcasted, RTBC). All treatments were fertilized at both 51 and 91-days after planting with 16-2-8 at 250 lbs. and 500 lbs. respectively. **Results:** By visual observation, NDNT provided increased forage volume compared to LDBC or RTBC. This is more than likely due to the lack of good seed soil contact and the perennial pasture not becoming dormant.

Conclusion: Cool-season forages are an effective tool for providing nutrition to livestock during the winter months. However, results may vary due to establishment method, seed to soil contact and pasture dormancy. Research funding for this project was provided by the Hastings Agricultural Extension Center, supported by a grant from the St. Johns County Board of County Commissioners. Additional in-kind contributions were made by collaborating partners (Dr. Marcelo Wallau and Clark Bailey) that included the use of land, equipment and labor.

AG AWARENESS: ENGAGING LOCAL CLIENTELE THROUGH INSTAGRAM

E. Fletcher, UF/IFAS Extension, St. Johns County, St. Augustine, FL and Tim Wilson, UF/IFAS Extension, St. Johns County, St. Augustine, FL.

Situation: Once upon a time, St. Johns County, Florida was equally as rural as several of its neighboring counties. Now with urban sprawl, our population has doubled in the past 20 years with over 243,000 people and growing, according to the 2017 United States Census. This change has created a lack of education in the local population with regards to the agriculture being produced literally down the road. The St. Johns County Agricultural Agents created a social media account through Instagram in May of 2019. The objective was to increase the awareness of local agriculture to local residents, while also enlightening our clientele of the daily activities of the extension agents. **Methods:** The agricultural extension agents post on average twice-weekly videos or images to Instagram, while maintaining daily “Story” images of the agents’ activities. Posts are meant to be fun and engaging, while also educational, such as recent diseases identified and pasture management. Tags such as “UFIFAS” and “Agriculture” are often used to gain more reach. **Results:** As of March 2020, we have 190 followers and 103 posts. Our followers are predominantly (85%+) local residents, including farmers and their family members, and local restaurant and small business owners. We have received positive feedback from our Farmer’s Market Manager, local college students and our Putnam-St. Johns Farm Bureau Board. **Conclusion:** Instagram is an easy and convenient method for distributing science-based information, and engaging with your local clientele.

YARD & GARDEN FOOD PRODUCTION FOR BEGINNERS

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

Situation: Florida's climate and pests create a challenge for growing food crops. The target audience are Marion County residents with little or no experience who want to produce food in their yard or garden. **Objective/Purpose:** Participants will gain knowledge about how to provide for essential crop needs and about specific crops that are well-adapted for the North Central Florida region. They will adopt practices which will allow them to easily and sustainably produce their own food with fruits and vegetables. **Methods:** The program has been offered five times and consists of a two hour presentation that is followed by a tour of a demonstration garden. A step-by-step process was detailed about how to select the most productive and well-adapted crops for each participant's situation. Each fruit and vegetable crop was provided with a profile that covered the key crop production information. Locally produced fruit and vegetables were available for taste sampling. Fruit and vegetables featured in the program were available for purchase or free after the program. **Results:** Programs are well attended (n=90). Evaluations indicated that all participants gained knowledge and 72% specifically stated at least one aspect of the program they intended to implement. After the program more than half of program participants purchased or were given at least one plant. **Conclusion:** This program successfully helps participants who have little to no prior knowledge to begin fruit and vegetable production that will provide a reliable source of food. By having plants available immediately after each program it eliminates the barrier of locating the UF-recommended plants & varieties. Due to the high demand and enthusiastic feedback by participants, this program will help grow the local food system.

LONG-TERM EFFECTS OF GIANT SMUTGRASS CONTROL

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Situation: Giant Smutgrass (*Sporobolus jacquemontii*) is a perennial bunch- type grass that produces over 45,000 seeds per plant per year. Weeds in pastures and rangelands cost ranchers and livestock owners in excess of \$180 million annually in Florida. Immature smutgrass is palatable to livestock two to three weeks after mowing or burning, but these control practices tend to stimulate the density and germination of the giant smutgrass plant. Chemical control for smutgrass is a great option for producers and is important to complete during the rainy months and is highly dependent on rainfall.

Methods: The smutgrass control trial was completed to determine the percent control of smutgrass using the herbicide hexazinone. The research trial was completed on a 2.0 hectare complete randomized block design with three replications. The two variables measured a cut and uncut and method of application. The blocks represented a cut wipe method with a 30% solution one direction, uncut wipe 30% solution one direction, cut spray 2.34 L/Ha, uncut spray 2.34 L/Ha, uncut control, and cut control. A visual percent control of plant density was completed by multiple agents before the trials were started. The trial began in August 2018. The visual percent control of plant density was completed by multiple agents at a year and half post treatment. The visual percent control for post treatment was to determine the long-term effects of chemical and mechanical control on smutgrass.

Results: Visual measurements were taken a year and half post herbicide application. The cut wipe method showed the largest percent control with a 55% reduction. Uncut wipe shows the second-best method with 32.5% reduction.

Conclusion: Long-term results indicate that management of the invasive bunch grass is possible with proper chemical and mechanical control methods. Interestingly, the wiper was far more effective than the traditional spray method.

STEM INVESTIGATORS

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Situation: There are approximately 1,600* homeschooled youth who reside in Hernando County, Florida. Florida Statute 1002.41 requires that these youth submit portfolios documenting their educational activities each year. In an effort to provide quality, research-based education for these portfolios, UF faculty from four Extension areas combined their expertise and created the STEM InvestiGATORS program. **Methods:** Events were scheduled to occur on a monthly basis between August 2019 and May 2020. Each agent led at least two educational events that included 20-40 youth per event. Registration links were created through Eventbrite and a fee of \$5.00 was charged to cover insurance and supplies. Various instructional methods were used to teach the subject matter. Topics included coding, biology, anatomy and physiology, financial management, entomology, marine science, environmental science, and ecology. Parents were provided space in a separate room to network during the events. To encourage participation in multiple classes, certificates of completion were offered to youth completing ten hours (5 courses) to use in their homeschool portfolios. Those completing 18 hours (9 courses) were given additional gifts. **Results:** A total of 159 youth have participated in our STEM InvestiGATORS program to date. Pre/post tests showed that participants had an 93% increase in knowledge. Individual follow-up surveys showed that 8% of youth have adopted at least one behavioral change as a result of what they have learned. Lastly, five families have joined 4-H clubs and enrolled in project work. **Conclusion:** The STEM InvestiGATORS program is actively engaging Hernando's homeschooled youth and providing sound content for portfolios.

*Source: Hernando County Home Education Office

‘AROUND THE WORLD’ IN THE KITCHEN.

L. Cash, UF/IFAS Extension, Volusia County, DeLand, FL.

Situation and Objectives: Diversity and inclusion are critical concepts for youth to understand and put in practice ([Tirell-Corbin, 2015](#)). In 4-H, we focus on life skills related to STEM, Healthy Lifestyles, Citizenship and Leadership, and Workforce Preparation ([Myers, 2012](#)).

What better way to promote acceptance and address our mandates than in the kitchen?

Educational Methods: In January 2020, twelve cooking classes were offered: three two-hour sessions every Wednesday, reaching 10-12 youth ages 5-17 per session. Classes ‘visited’ South America, Europe, the Mediterranean, and Asia. Recipes were found online and lesson plans were developed using Serv-Safe® principles and 4-H Common Measures and Essential Elements. **Results:** Youth (n=32) were evaluated by observation (knowledge/skills) for correct use of kitchen tools, proper washing of hands and equipment, and handling and storage of foods; and communicating, problem-solving, and contributing to a common goal. Youth were also assessed using guided discussion. The 4-H’ers inferred that people around the world are very similar (attitude): (1) they bond over food; (2) use the same ingredients to create like meals; and (3) define their cultures by the foods they eat (<https://www.npr.org/2017/02/02/512998465/why-eating-the-same-food-increases-peoples-trust-and-cooperation>). Participants learned the names of the foods they prepared, such as: *pepparkakor*, *ratatouille*, *arepas*, *poori*, and *fassolatha*, and tried foods and spices they had never tasted before. Time was spent on the history and cultural significance of the foods prepared. **Conclusion:** Cooking classes are part of the Volusia County 4-H SPIN (Special Interest) program and are offered throughout the 4-H year. There was overwhelming positive response to this series of lessons and the best of all conclusions, thirty-two youth asking “When are we doing it again?” The larger implication is that youth taught at a young age that diversity and inclusion are valuable will grow up to be more aware and appreciative of other cultures (<https://child.unl.edu/cultural-diversity>).

YOUTH LEARN LIFE SKILLS THROUGH “SHARE THE FUN” STORYTELLING **K. Henry, UF/IFAS Extension Seminole County, Sanford, FL.**

Situation: Communication is important for organizations, employers, and life. In a 2010 study by the National Association of Colleges and Employers, communication skills ranked first among a job candidate’s “must have” skills and qualities. Research shows that young people who learn effective communication are more successful and efficient employees and community members. **Objectives:** The objective of this program was to teach youth, ages eight to 18, communication skills through the performing arts; more specifically, storytelling. **Methods:** Through a partnership with a local university, a Performing Arts Special Interest (SPIN) Club was created. A SPIN club is a group of five or more youth who meet on a flexible schedule to explore a topic of interest. Graduate students, who served as 4-H volunteers, worked with a group of 13 4-H youth (ages five to 18). The 4-H SPIN Club focused on storytelling as a medium to teach communication skills. Throughout the Performing Arts SPIN Club experience, young people learned the importance of explaining the meaning of their stories, engagement with the audience (listener), projection, stage presence, and clear communication, especially when speaking. **Results:** The program was evaluated using a mixed method approach, including observational data using the 4-H Share the Fun Rubric, 4-H project stories, and 4-H volunteer and parent observation. As a result of participating in the 4-H SPIN Club, 46% of youth (n=13) demonstrated increased communication skills and stage presence as evidenced by scores on the 4-H Share the Fun rubric. 80% of the youth participated in the Seminole County 4-H Share the Fun Talent and Variety Show. Many of these youth performed their "stories" on stage. **Conclusion:** Youth who are more comfortable on the stage are better communicators. This skill will be used to better their workplaces, relationships and communities.

IMPACTING LIFE SKILL AND RELATIONSHIP DEVELOPMENT THROUGH MENTORING

J. Sprain, UF/IFAS Extension, Osceola County, Kissimmee, FL.

Situation: More than 2,000 students in Osceola County are homeless, 25% are English Language Learners (Education Foundation, Osceola County), and more than a quarter of school children are on their own after the school day ends (Afterschool Alliance). All of these factors create a challenging environment for young people to develop life skills and prepare for tomorrow's workforce in Osceola County. To combat these problems, an afterschool mentoring program, 4-H Tech Wizards, was implemented at a local Title 1 high school to focus on life-skill development. **Methods:** The 4-H Tech Wizards program is an afterschool mentoring program that pairs trained adult community mentors and local high school mentees in group style mentoring sessions, while implementing hands-on science, technology, engineering, and mathematics-based curriculum. Since 2016, thirty-two adult mentors have been trained to support over 288 youth. **Results:** The results of the annual 4-H Tech Wizards program pre/posttest survey of program mentees, conducted since 2016, shows that 100% of program participants have developed at least one life skill and have built stronger relationships with those around them. 64% of participants increased how well they worked with others (teamwork). 26% of participants increased the frequency in which they can explain that their decision is a good one (critical-thinking). 62% of participants felt more confident sharing their thoughts and feelings with others (communication). 81% of participants indicated that the frequency that they listened well to others and were respectful of others increased (concern for others). In addition, 78% of mentees can work successfully with adults. 81% have a stronger connection with adults and their friends. **Conclusion:** Because of the 4-H Tech Wizards program, over 288 youth have developed life skills and built positive, supportive relationships with peers and adults. These factors help youth to become productive, well-adjusted citizens prepared for the workforce.

THE STORY OF A GOAL IN A 4-H PROJECT REPORT.

J.S. Kelly, UF/IFAS Extension, St. Johns County, St. Augustine, FL.

Situation: In the 2017-2018 4-H year, the St. Johns County 4-H program had more than 20 volunteer organizational leaders. In an end-of-the-year survey given to 60 youth from a variety of clubs, only 63% of youth surveyed reported writing about their project as part of club experience “some” or “often”. Further, the most common reason points were deducted from record book scores was the inability of the project report to tell a consistent story of how the youth worked to achieve the goal they developed at the beginning of the year. **Objective:** Develop a workshop to train volunteer leaders how to teach their members to write goal-focused project reports, subsequently leading to youth writing these goal-focused reports. **Methods:** The leader workshop included a PowerPoint presentation with notes, completed project report forms with recommended dates for completing each section, record book examples demonstrating consistent and inconsistent project reports, project book materials, and a post-workshop evaluation. **Results:** In the post-workshop evaluation, 92% of respondents ($n=12$) named at least one strategy for including goal setting in their club plans, 100% correctly identified why goal-setting is an important life skill and 100% identified a way that writing a goal-driven project report enhances the club experience. In 2017-2018 (the 4-H year before the workshop), the average score for a project report/book, was 89 out of 100 ($n=47$). After the workshop the following year, 2018-2019, the average project report/book score was 92 ($n=31$). **Conclusion:** Youth who learn the importance of setting goals and consistently follow a plan for achieving them are more likely to follow through on their goals in the future.

THE SWEET STORY ABOUT SUGAR.

G. Sachs, UF/IFAS Extension, St. Augustine, St. Johns County, FL.

Situation: Youth raised in urban settings tend to be less connected with agriculture, unfamiliar with where their food comes from, and lack basic nutrition and food preparation knowledge. The Sweet Story About Sugar summer day camp provided a well-rounded engaging experience for youth ages 8-15 to learn about the origins of sugar (beets and cane), Florida's sugarcane industry, the science and benefits of sugar relating to food preparation, and the ill effects of too much sugar.

Education Methods: This two-day summer camp provided 12 hours of hands on learning for nine youth. Activities at this camp centered around comparing sugarcane to sugar beets, processing cane from harvest to syrup, the science of sugar, adverse effects of eating too much sugar, reading food labels, and touring a candy business. Camp supplies were covered by camp registration fees and some equipment was purchased through a grant from the St. Johns County Board of County Commissioners.

Results: As a result of the two-day Sweet Story About Sugar 4-H Camp, end of camp surveys showed:

- 9 of 9 youth learned that sugar comes from both sugarcane and sugar beets.
- 7 of 9 youth identified added sugar information on the food package.
- 8 of 9 youth identified where the majority of Florida's sugarcane is grown on a map.
- 6 of 9 youth identified how sugar is beneficial in food preparation
- 9 of 9 youth could give one or more reasons why sugar should be limited in one's diet.

Conclusion: The experiences and knowledge youth gained from this camp provided an awareness and appreciation of Florida's sugarcane industry, sparked agriculturally related conversations with family members, promoted the use of reading food labels and some youth brought sugarcane home to plant.

LAKE COUNTY 4-H ASSOCIATION TRAINING

D. Meringolo, UF/IFAS Extension, Lake County, Tavares, FL

Situation: Lake County 4-H annually trains 76 organizational leaders to serve over 450 youth through community clubs. In efforts to maintain and increase the quality of programming youth receive through 4-H Community Clubs, it is essential that the Association can provide support for youth programs and volunteer trainings. Associations can make or break the county 4-H program, it is important to explore strategies and solutions to develop a successful and impactful Association. The Lake County 4-H Association training was determined to be a program need by Association members and the 4-H agent; the training was conducted for eight Lake County 4-H Association members. The goal of the training was to understand how our organization carries out the UF/IFAS Extension mission and values, determine and define Association member roles and expectations, and develop a volunteer recruitment strategy.

Education Methods: The first part of the training included a brainstorming session on how well the Lake County 4-H program accomplishes the mission and values of UF/IFAS Extension. The group analyzed the 2013-2023 UF/IFAS Florida Extension Roadmap for priority number 7 to determine the quality of programming offered by the Lake County 4-H agent and volunteers. The group developed a volunteer recruitment strategy, fundraising plan, and a five-year plan to include goals and objectives. Lecture seminars covered determining the roles of Association members, keeping the end goal in mind, conflict resolution, and collaboration.

Outcomes and Impacts: Eight of nine Lake County 4-H Association members attended the training. In the UF/IFAS Extension County 4-H Association Assessment, it was determined that the Lake County 4-H Association is considered effective. While it is deemed an effective Association, Association members decided that three goals and objectives should be created for a five-year plan. The three objectives include an increase in external funding, increasing community awareness of the Lake County 4-H program, and increase membership with the Association and organizational leaders. Volunteers play an integral role in the 4-H program as they participate in a variety of roles. 4-H is dependent upon adult volunteers and it is crucial that they are provided with training. Using the ISOTURES method (Boyd, 1971) resourceful and supportive training can influence future outcomes and activities produced by 4-H volunteers. The Lake County 4-H Association provided members the opportunity to improve leadership and

established clear roles and expectations of Association members. The training has created a comprehensive and dedicated group of volunteers who are able to support Lake County 4-H.

Conclusion: The Lake County 4-H Association Training helped form a more cohesive group of Association members, provided better understanding of membership roles, and helped members identify and meet the missions and values of UF/IFAS Extension and Priority Workgroup 7. Efforts will be made to continue improving the quality of the program with the intent to focus on other topics to include determining program gaps and utilizing the targeting life skills model.