EPAF
Extension Professional Associations of Florida
2019 Professional Improvement & Administrative Conference
Fort Myers, Florida
August 26 – 29, 2019

Presentation of Extension Programs
Thirty-third Annual Proceedings

EPSILON SIGMA PHI- Alpha Delta Chapter
FLORIDA ASSOCIATION OF COUNTY AGRICULTURAL AGENTS FLORIDA ASSOCIATION OF EXTENSION 4-H AGENTS
FLORIDA EXTENSION ASSOCIATION OF FAMILY AND CONSUMER SCIENCES
FLORIDA ASSOCIATION OF NATURAL RESOURCE EXTENSION PROFESSIONALS

Support for publishing the EPAF Proceedings is provided by the Administration of the Florida Cooperative Extension Service
Extension Professional Associations of Florida

*Putting out Best Foot Forward*

Sanibel Harbour Marriott Resort & Spa – Fort Myers, Florida

33<sup>rd</sup> PRESENTATION OF ABSTRACTS

**Oral Abstract Presentations – Session #1:**
Tuesday, August 27, 2019 from 12:45 to 4:30 pm

**Oral Abstract Presentations – Session #2:**
Wednesday, August 28, 2019 from 2:00 to 4:30 pm

**EPAF Abstract Committee**
- Melanie Thomas, UF/IFAS Extension Duval County
- Brad Burbaugh, UF/IFAS Extension Clay County

**Agriculture and Horticulture** Hosted by FLORIDA ASSOCIATION OF COUNTY AGRICULTURE AGENTS - FACAA
*Dennis Mudge*......................................................................................................................... Caloosa Ballroom

**Natural Resources and Outreach** Hosted by FLORIDA ASSOCIATION OF NATURAL RESOURCES EXTENSION PROFESSIONALS - FANREP
*BJ Jarvis and Marnie Ward*...................................................................................................... Everglades B

**Youth Programming** Hosted by FLORIDA ASSOCIATION OF EXTENSION 4-H AGENTS - FAE4-HA
*Crystal McCazzio*.................................................................................................................... Everglades A

**Health and Finance** Hosted by FLORIDA EXTENSION ASSOCIATION OF FAMILY AND CONSUMER SCIENCES - FEAFCS
*Gabriela Murza* ........................................................................................................................ Everglades C

**Leadership and Innovation** Hosted by EPSILON SIGMA PHI - ESP
*Yolande Goode*........................................................................................................................ Island

The EPAF Board offers special thanks to:
- The chairs and members of ESP, FACAA, FAE4-HA, FEAFCS and FANREP abstract committees who have the honorable task of reviewing and selecting the abstracts for this meeting.
- All Extension Faculty who submitted abstracts
- UF/IFAS Administration for their continued support of this EPAF Conference
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Visit the EPAF website at http://epaf.ifas.ufl.edu/ for an online version of this abstract book.
Conference archives
## 2019 EPAF Abstract Schedule

**Tuesday, August 27th from 12:45 – 4:30 pm**

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<td><strong>Eco-Questrians: A Program to Empower Trail Riders in the Fight Against Invasive Species</strong>&lt;br&gt; M. Mann*&lt;br&gt; <strong>Camp Real Life: Building Skills through Hands on Learning</strong>&lt;br&gt; J. Shoup*, J. Lilly, D. Sprague&lt;br&gt; <strong>Incorporating Physical Activity into the Master Gardener Training Program</strong>&lt;br&gt; G. Murza*, E. Pabon*, J. Anderson, A. Vu&lt;br&gt; <strong>Keep Them Engaged: Effective Social Media Content Planning to Drive Engagement</strong>&lt;br&gt; A. Halbritter*</td>
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<td>1:35</td>
<td><strong>Educating to Educate: A Training Series to Increase Outreach and Teaching Skills for Master Gardener Volunteers</strong>&lt;br&gt; W.H. Hobbs*</td>
<td><strong>The Economic Impact of Recreational Scalloping: An Extension, Research, and Management Partnership</strong>&lt;br&gt; B. J. Scharf*, C. Adams, A. W. Hodges, S.P. Geiger&lt;br&gt; <strong>Nitrogen Stewardship Education for Students Living with Harmful Algal Blooms</strong>&lt;br&gt; A. Tyrna*, C. Wyatt-Evens*, P. Williams, K. Clements, R. Penn, A. Ubeda&lt;br&gt; <strong>Matter of Balance for Older Adults</strong>&lt;br&gt; S. Ellis*&lt;br&gt; <strong>Strategic Partnerships for Financial Coaching</strong>&lt;br&gt; S. Taylor*</td>
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<td>2:00</td>
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<td>Master of Gardens: An Intensive International Course for Landscape Professionals in Costa Rica</td>
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Food System Tour of Southern Italy Increases Florida Master Gardener Volunteers Knowledge of Alternative Crops, Agritourism, and Sustainability

T. Freeman* UF/IFAS Extension St. Johns County; W. Wilber* UF/IFAS Extension Center for Landscape Conservation and Ecology.

Objective: To provide an international food system education opportunity for Florida Master Gardener Volunteers (MGV’s), where participants increase their knowledge of agritourism, fruit production, and alternative fruit crop selection for Florida. Methods: Explore food systems in Southern Italy, including agricultural enterprises in olive, pomegranate, lemon, apple and wine production; and touring a world collection of ornamental plants and edible landscapes. Other areas of concentration included sustainability, integrated pest management and cultural methods. Results: On-site focus group found an increase in 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 Qualtrics survey, revealing an average increase of horticultural knowledge between 68%-88%, depending on the site visit. Of the 20 who responded to a 5-month post-trip survey, 100% shared information they learned with others, including other MGV’s, family, friends, community members and extension clientele. They reported sharing information about crops, Mediterranean diet and food preparation, wine, sustainable horticulture practices, agritourism and alternative crop techniques via extension publications, PowerPoints, videos, workshops, consultations, phone desk, plant clinics, and planting crops studied on tour. Among participants, 50% reported an increase in their local food purchasing practices. Conclusion: MGV’s shared their gained knowledge with community members throughout the state. Sharing their global experiences with fellow volunteers and clientele can help disseminate information to bring more awareness of food systems, agritourism, and potential for alternative fruit crop selection in Florida.
Master of Gardens: An Intensive International Course for Landscape Professionals in Costa Rica

D. Leonard*, A. Albertin, UF/IFAS Extension Northwest District; A. Bolques, FAMU Extension; A. Hunsberger, H. Mayer, UF/IFAS Extension Miami-Dade County; J. McConnell, UF/IFAS Extension Bay County; B. Unruh, UF/IFAS Extension WFREC; P. Vergot, UF/IFAS Extension NFREC.

Objectives: Guanacaste Province on Costa Rica’s northwestern coast is home to intensely managed resorts serving the vital tourism industry and fragile native ecosystems requiring sustainable horticultural practices for preservation. To address this dichotomy, Costa Rica’s EARTH University, UF/IFAS Extension and the Reserva Conchal Resort formed a partnership to share Extension’s experience regarding innovative horticulture practices with local landscape professionals charged with maintaining balance between local ecology and tourism interests. Methods: In spring 2019, seven UF/IFAS Extension Faculty with diverse horticultural expertise delivered a 4-week horticulture training program, titled Master of Gardens, containing classroom and field components to 45 primarily Spanish-speaking landscape professionals. The training program was divided into two sections. One met Mondays and Tuesdays and was comprised of 22 landscape/golf course crew members. The second section met Thursdays and Fridays and contained 23 grounds supervisors, independent subcontractors, and landscape architects. Session topics included soils, botany, entomology and integrated pest management. Results: 36 of 45 (80%) course participants completed end of course evaluations with all 36 qualifying information received through the course as excellent and stating they learned new practices that they could use professionally. In addition, 35 (97%) participants indicated a change of at least one horticultural practice to a more sustainable practice based on information provided in the course. Conclusions: Due to this program’s success and the positive collaboration between Extension, EARTH, and Reserva Conchal, the Master of Gardens team plans to offer the program again and hopes to expand to include other area resort grounds crews.

Educating to Educate: A Training Series to Increase Outreach and Teaching Skills for Master Gardener Volunteers

W.H. Hobbs*, UF/IFAS Extension Clay County

Objective: To increase the skill and confidence level of Master Gardener Volunteers in educating the public. Methods: The UF/IFAS Extension Master Gardener Volunteer program in Clay County is robust, with 78 active members educating over 12,000 individuals each year through workshops, plant clinics, and other educational outreach events. However, many Master Gardener Volunteers are hesitant to interact with the public as they feel that they do not have the experience or training to conduct teaching events. To address this need, a 3-part workshop series was developed where a cohort of volunteers were taught how to best answer the publics questions, design course, and create written works. Furthermore, the cohort was required to gain experience in these topics through their volunteer efforts. The class was evaluated through a pre- and post-test survey and through the application of these skills by participants. Results: Through this course, 100% of attendees reported that they gained new knowledge and skills and now feel more confident as a Master Gardener. Also, since March 1, 2019, participants have completed 3 written creative works, taught 11 new workshops, and volunteered 44 hours in educational plant clinics. Conclusion: The initial Master Educator course was highly successful in increasing the knowledge and confidence level of volunteers and the course will be implemented again to gather more data.
Equipping County Florida Cattlewomen’s Associations to Engage in Ag Awareness with the Public

L. Bennett*, UF/IFAS Extension Pasco County

Ag Awareness programs typically focus on the general public as the intended audience. County Florida Cattlewomen Associations are geared toward promotion of the beef industry in Florida. By equipping this group of people with current, science-based information, the potential number of people reached can be greatly multiplied. **Objective:** Provide a series of seminars at Cattlewomen’s meetings on topics that are of concern to the general public concerning beef production. In post-seminar surveys, 60% of participants will indicate they learned new information about beef production; and 50% in follow-up surveys within 6 months of the program will indicate that they shared the information with someone else to educate them about livestock production. **Methods:** Three different educational programs were presented on antibiotic use and growth hormone use in beef production and the importance of animal protein in the human diet. Following the seminars, surveys were performed to evaluate how many participants learned new information. Follow-up surveys will be conducted to evaluate whether information was shared with the public during that time period. **Results:** Participants in all 3 seminars indicated they learned at least one new concept to share with the general public and felt more comfortable about doing so. (6-month post-seminar surveys are currently being conducted) **Conclusions:** Local Cattlewomen’s Associations work together for the cause of Ag Awareness. Providing them with science-based information about beef in our food supply equips them to share more confidently with the public.

Southeast Dairy Stewardship Program

C.C. Larson*, UF/IFAS Regional Dairy Extension Agent; R.C. Chebel, UF College of Veterinary Medicine; M. Dowdy, UGA Agriculture Extension

Animal care on dairy farms has been under scrutiny from the public and processors. Research in this area provides opportunities to improve animal stewardship practices. **Objectives:** To increase knowledge of dairy stewardship practices and adoption of management practices. **Methods:** Presentations, hands-on practice, question and answer, and panel discussion are used to provide stewardship training. Calf-care, milk quality, and lameness are the first 3 topics covered through the Southeast Dairy Stewardship Program. Meetings were held every three months in Georgia and Florida. **Results:** Program evaluations indicated that 62% of producers increased their knowledge of milk quality methods and 36% planned to make changes to improve milk quality. Observations showed that 100% of participants mastered lameness correction techniques and 50% of participants reported that they learned a new skill they planned to use at the farm to prevent or correct lameness. The participants increased their knowledge of calf-care by 65% based on a post reflective survey. 39% of participants planned to implement at least one new calf care method. **Conclusions:** Stewardship can affect the farms financial position as well as their future ability to market and sell milk. From a $300 case of lameness, to $12 million of additional milk that could be produced by healthier, more comfortable cows in south Florida, there is instant reward for dairy producers to follow proper stewardship recommendations. Providing training and documentation of that training also leads to more consumer confidence. Following proper stewardship methods is financially responsible and good for public perception of dairies.
Utilizing State Specialist Expertise to Increase Agent Knowledge and deliver Valuable Information to Clients

J.Cant*, UF/IFAS Extension Duval County; K. Waters*, UF/IFAS Extension Holmes County

Hay supplementation is both an integral and expensive component of traditional annual livestock production in North Florida. Winter supplementation of hay can exceed $300.00 per head. Agents are often asked to advise on topics outside of their expertise and utilizing state specialists to increase understanding and rapport with clients is essential. Objectives: 1) Educate ranchers on the economic benefits of utilizing winter-annual forages, B) Increase rancher understanding of forage growing seasons, and C) Increase agent understanding by collaborating with state specialists. Methods: Collaboration between agent and specialist resulted in a presentation for a field day on a topic that the Agent was not trained in. Through research, document review, and mentoring, the agent effectively delivered a presentation as part of a workshop on winter-annual forages. Results: Seventeen (17) producers representing an estimated 800 head of cattle attended the workshop. Based on evaluations, 78.2% (n=13) indicated an increase in knowledge on cool-season annual forage establishment, management, and utilization, and 82.4% (n=14) indicated adopting cool-season annual forages into their production systems. Attendees also estimated an average annual savings of $120.13 per head by utilizing cool-season annual forages to extend their grazing season. This equates to $96,104 savings per year for the combined cattle represented. Additionally, relationships with five new clients were established by the agent. Conclusion: By decreasing production costs, producers can maintain sustainable cattle production more efficiently in an unstable market and potentially increase their profit. By collaborating with state specialists, agents can increase their knowledge and effectiveness as county agents.

Building Agricultural Awareness within the Suwannee River Valley of North Florida

D. Broughton*, UF/IFAS NFREC – Suwannee Valley; D. Fenneman*, UF/IFAS Extension Madison County; R. Hochmuth, C. Barrett, K. Athearn, B. Glass, B. Carpenter, UF/IFAS NFREC – Suwannee Valley

The Suwannee River Valley (SRV) of North Florida encompasses several counties and is home to over 8,800 farms. Objective: Due to increasing regulatory pressure surrounding agricultural activities taking place within this region, an Agricultural Awareness Extension Program was developed to educate state and community leaders on agricultural environmental stewardship, and economic impact of farm products sold from the region. Methods: Included two educational Lunch and Learns for community decision-makers and one State Legislators Tour. Additionally, a series of educational and promotional videos were created to supplement the program. The Lunch and Learns consisted of guided trolley tours showcasing vegetable demonstration plots, a hands-on you-pick activity, a fresh sample bar of locally grown products, and presentations from various agricultural experts. The State Legislators Tour included a chartered bus tour with demonstrations at a local carrot operation, a feedlot and dairy, and a blueberry farm. Following the tour, the attendees experienced educational presentations on various agricultural topics and issues associated with North Florida agriculture. Results: A total of 102 attended the Agricultural Awareness Extension programs during 2018. Approximately 82% of attendees increased their general awareness of agriculture within the SRV and improved their knowledge of agricultural conservation practices in the region. Also, 73% of the attendees agreed to change their behavior by purchasing more locally grown farm products. Conclusions: Due to the program’s success, the partners involved have agreed to continue collaborating on this effort to increase agricultural awareness in the future.
ONA Youth Field Day

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Youth who are interested in agriculture have limited opportunities to gain hands-on knowledge of the various segments of the industry. Gaining exposure to various parts of the agriculture industry can lead youths to choose college degrees and/or careers in agriculture. **Objectives:** To increase knowledge of agricultural activities and careers. **Methods:** Extension agents, researchers, graduate students and research education center staff join together to provide an educational field day for youth in south and central Florida. Participants rotate through hands on activities, compete in a scavenger hunt, and interact with industry representatives at the trade show. A pre and posttest were given to determine knowledge gain and provide feedback. **Results:** Of the 110 participant that took the evaluations, 96% found the information gained at the event to be useful. Knowledge gained on specific questions ranged from a 5% to 42% increase. Questions evaluated their understanding of technology, physiology, nutrition, management, agriculture careers and natural resources. The survey instrument asked students to rate the presentations as “awesome”, “cool”, or “okay”. The students determined that 54% to 96% of the stations were “awesome” or “cool”. **Conclusions:** The aging population of farmers and ranchers and those in the agriculture industry, require competent replacements. Providing youth with hands-on, pragmatic knowledge and experiences may lead them to consider a career in agriculture. The cooperation of multiple entities provides youth the most exposure to different types of opportunities in production agriculture, agriculture industry careers, and research and education.

Equine Focused Workshops Improve Horse Farm Management Practices in Central Florida

C.Bainum*, UF/IFAS Extension Marion County, B. Justesen*, UF/IFAS Extension Osceola County; M.N.B. Mann*, UF/IFAS Extension Lake County

A recent study of horse owners uncovered a fundamental lack of knowledge regarding good animal husbandry practices (Williams et al., 2018). **Objectives:** This ignorance may cause unintentional mistreatment of animals and leads to higher costs associated with feed and health care. Additionally, mismanagement of horse manure and poor grazing management can contribute to non-point source pollution of fresh water systems, a major area of concern in Florida. The large number of equine enthusiasts in Central Florida presented a prime opportunity for positive intervention by Extension. **Methods:** Livestock Agents piloted a day-long workshop aimed at increasing the adoption of recommended equine management practices amongst horse owners in Central Florida. The Agents used a combination of lecture and hands-on teaching to address topics ranging from manure composting and vaccinations to grazing management and equine nutrition. **Results:** The workshop has been repeated in five counties and a total of 174 horse owners have attended workshops to date. Post program surveys found that 100% of respondents indicated intent to adopt one or more recommended practice changes as a result of their participation. These practice changes included soil testing (47%), implementing grazing management practices (66%), composting manure (48%), feeding forage-based diets (65%), and to discuss vaccine protocols (74%) with their veterinarian. **Conclusion:** Extension workshops that target horse owners can play a role in increasing horse owner knowledge of
recommended management practices. This knowledge gain then leads to the adoption of practices that can result in improved economic and environmental sustainability of horse farms.

**Mediterranean-style Agricultural Production in Southern Spain for use in Florida.**

**K. M. Stauderman*, UF/IFAS Extension Volusia County**

The purpose of the *International Horticultural Production and Cultural Tour of Southern Spain* was to educate UF extension, staff and clientele on the feasibility of adopting Mediterranean-style agricultural production with products that feed Floridians, educate commercial growers in pursuit of profitable alternative sustainable farming and to attain contacts to help with logistics in the high-intensity plasticulture industry. **Methods:** I led a group of UF extension agents, specialists, staff and interested clientele to travel to Spain on a ten day workshop. We met with governmental officials and discussed water conservation strategies and urban acceptance in aesthetics of plasticulture. We had field visits to citrus, vineyards and olive groves, high intensity greenhouse vegetable production along with both small and large packing houses. We ended with a tour of an international plasticulture manufacturer. Following the trip, I communicated through Facebook, a UF Volusia County blog site, grower meetings and client educational programming. **Results:** A one month post survey was sent via email for evaluation of the workshop. 87.6% of the travelers that responded, rated the *grower field visits* ‘very good-excellent.’ All members regarded the quality of the *cultural workshop* portion at ‘excellent-very good.’ 93.8% assessed the *workshop quality* as ‘excellent-very good.’ 93.8% of the travelers were recommending it to others. **Conclusion:** This type of international visiting can be adapted to other regions. After 6 months, a Regional Specialized agent on the tour partnered the plasticulture manufacturer from the tour with a central Florida distributor that will now serve to supply our horticulture industry.

**Farmers in Training: Teaching Agricultural & Nutritional Awareness to Urban Youth**

**A. Lazzari*, E. Shephard*, G. Whitworth*, UF/IFAS Extension Brevard County**

In recent years, Florida 4-H has made a concerted effort to diversify programming to include nontraditional and urban youth audiences. The challenge to recruit nontraditional audiences is one that many Extension programs face. The Brevard County Farmers Market and 4-H have collaborated to create the Farmers in Training (F.I.T.) program, encouraging participation of new audiences in both programs. **Objectives:** 1) Educate youth in the areas of agriculture, health, and nutrition to enable them to make healthier, more informed decisions about the food they eat. 2) Recruit and retain new, nontraditional audiences to Extension programs. **Methods:** Once a month, youth who attend the Farmers Market can participate in a taste test, physical activity, and nutrition or agriculture activity centered on an in-season fruit or vegetable. Those who complete all three activities earn two ‘farmers market bucks’ to spend at the Market on local produce and other goods. **Results:** Since the program began in January 2019, 128 youth have participated, with 15% returning. Farmers in Training has been an effective feeder program into traditional 4-H programs; many families have joined, or shown interest in, community clubs. $3,500 in grant funding has been secured, allowing us to expand the program. In addition, a ‘frequent farmer’ punch card is in
development to incentivize return visits, provide additional enrichment activities, and track youth for evaluations. **Conclusions:** F.I.T. has benefits for both youth and vendors at the Market. More families are supporting local agriculture, and youth are learning and putting healthy habits into practice.


A. Halbritter*, UF/IFAS Extension Baker County

**Objectives:** Content related courses are frequently offered by extension agents, but a business is more than just making the product. Business management and development are key topics for small agricultural producers, extension can serve as a valuable resource to help set up and maintain a business properly. The main objective is to teach producers aspects of record keeping, proper marketing, growth and development planning, and giving them the tools to do so. **Methods:** Using business focused extension programs can allow producers to learn different methods from agents and get testimonials from other program participants. Business development can be taught in a group or one-on-one setting and can be catered for the audience’s primary interests. **Results:** 27 producers have attended business development courses offered by the agent, 75% increased their knowledge on regulations of their industry and 81% increased their knowledge on product marketing techniques. 60% of survey respondents (n=10) indicated they would make a change to their business management techniques as a result of the course which would result in a total of $11,099 in economic impact. **Conclusions:** Often extension programming helps producers grow the product, but not sell the product. According to the USDA 2017 Agriculture Census, 56% of farms had a negative net cash income in 2017. Extension workshops that focus on business management, such as marketing techniques and record keeping can help fill a knowledge gap and support producers. Increasing profits for agricultural producers can drive large economic impacts throughout the State of Florida.

Online and Case-Study Teaching to Help Beginning Farmers Access Land

K. Athearn*, D. Broughton, UF/IFAS Extension, Northeast District; T. Sanchez*, UF/IFAS Extension Alachua County

Accessing land that is affordable and suitable for farming can be a challenge for beginning farmers. **Objectives:** A UF/IFAS Extension course was developed to assist beginning and aspiring farmers to access land for farming. Short-term objectives were to improve the ability of participants to identify and evaluate land access options, evaluate their financial readiness, find available farmland, assess the suitability of a land parcel, prepare to secure land through purchase or lease, and develop a land acquisition plan. **Methods:** To achieve these objectives, a short course was developed and delivered twice in 2018. The course included an online component, a face-to-face workshop, and a farm visit. Case-study and performance-based learning techniques were used. American Farmland Trust and Farm Credit of Florida contributed to course development and delivery. **Results:** Eighteen people attended the June 2018 course in Alachua, and fourteen people attended the November 2018 course in Live Oak. Program evaluation results indicated a high level of overall satisfaction with the course (5.0 in June and 4.8 in November on a 1-5 scale) and achievement of the short-term objectives. Qualitative feedback and instructor observations suggested ways the program could be improved. Follow-up contacts with program participants during 2019 will provide information about their success accessing land. **Conclusions:** This program delivered a new curriculum using novel approaches for
Extension teaching: hybrid (online + face-to-face) delivery and case-study teaching. These methods achieved good results, but with some limitations and lessons learned.

Extension Agent Goes to Jail

H. Wooten*, UF/IFAS Extension Seminole County

Objectives: 90% of class participants in the John E. Polk Correctional Facility Hydroponics Training Program increase knowledge in horticultural practices and earn a Certificate of Completion in Hydroponic Growing after participating in a 5-day intensive academic and hands-on course resulting in reduced recidivism. Methods: UF/IFAS Extension Seminole County and the John E. Polk Correctional Facility engaged in two 3-day pilot hydroponics programs for female inmates in August 2017. After program evaluation, Extension and the correctional facility entered into a revenue enhancing partnership providing 5-day technical trainings in greenhouse hydroponic production of fruits and vegetables with a 26-hour curriculum including classroom and hands-on learning. Results: End of program evaluations (n=39) indicate 100% increased knowledge on hydroponic growing, systems, and IPM, 98% received the Certificate of Completion, 94% would consider a career working with plants. Participant follow up indicates at least one participant has accepted a job as Assistant Grower, and another participant has started her own microgreens business. Here is a video capturing the program impacts https://www.youtube.com/watch?v=XAR6Jr77p7Q. Deputies provide anecdotal evidence of reduced recidivism saying they do not see the women that participate in the hydroponics program return in as great of frequency as other inmates. The facility greenhouse sells $9000 in produce annually to the cafeteria. Conclusion: Partnering with correctional facilities has beneficial teaching, learning, and revenue enhancing opportunities. The next goal is to gather long term data on recidivism, while increasing productivity of the greenhouse.

Supporting Commercial Horticulture Enterprises with Master Gardener Volunteer Programming

M. Hunter*, D. Holmes*; UF/IFAS Extension Marion County

Objectives: Although commercial horticulture enterprise is not the priority of Florida Master Gardeners, the UF/IFAS Extension Marion County Master Gardener Volunteers have many opportunities to support commercial venues in Marion and surrounding counties. One example of this is our annual Master Gardener Spring Festival, 2019 was our 25th anniversary of this festival. The Spring Festival is aimed at bringing awareness to Extension, advertise our programs, provide commercial horticulture industry awareness, and provide a source of Florida Friendly plants to Marion County Residents. In 2018, we redesigned the entire festival layout to accommodate for less than optimal weather, decrease mobility needs, and provide vendors with premium space. Methods: The After the 2018 festival, the Residential Horticulture agent sent an anonymous follow-up survey electronically to all commercial plant vendors to look at economic impact. We also ask each vendor to complete satisfaction surveys at the end of the event, these are collected individually resulting in almost 100% response rate. Results: 2018, 52 vendors responded with a total economic impact of $87,269. The 2019 surveys were sent a few weeks ago, resulting in 28 responses and $35,335 economic impact thus far. We also ask each vendor to complete satisfaction surveys. Conclusions: The UF/IFAS Extension Marion County Master Gardener Spring Festival is an exceptional event that provides an opportunity for Marion County residents from all walks of life to purchase from an exceptional selection of Florida Friendly plants and in turn provides strong support to our commercial horticulture enterprises.
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Eco-Questrians: A Program to Empower Trail Riders in the Fight Against Invasive Species

M. Mann*, UF/IFAS Lake County Extension

Objectives: Invasive plants pose a major threat to Florida’s ecosystem. Early detection of, and rapid response (EDRR) to new invasive species increases the likelihood that an emerging population can be contained and eradicated. Unfortunately, by the time most invasive species become widely known to the public at large their population numbers are such that eradication is difficult and costly. Trail riders, equestrians who frequently ride for pleasure on public lands, can be trained to help in detection efforts. The purpose of this program was to familiarize trail riders in Lake County with ten EDRR species and to train them on how to report detection using the IveGot1 mobile application. Methods: Participants received information about the importance of EDRR and learned to identify ten EDRR species. Each participant received a laminated deck of ID cards that could be attached to their saddle and were given instruction on using the IveGot1 mobile application. Results: A total of 85 “Eco-questrians” have been trained to date. 100% were able to identify the ten EDRR species in post program tests and 60% (n=51) downloaded the IveGot1 application. A six month follow up with participants found that 15 unique sightings of EDRR plants had been reported. Furthermore, participants reported being more aware of invasive species on their own properties and of having taken steps to eradicate them. Conclusions: Training trail riders to identify and report EDRR plants can have a positive impact on the effort to identify and address emerging populations of invasive species.
Stony Coral Tissue Loss Disease Response: Citizen Science Training for the Recreational SCUBA Diving Community

Zangroniz, A.*, Florida Sea Grant Extension Agent, Miami-Dade County, Krueger, S.*, Florida Sea Grant Extension Agent, Monroe County

The Florida Reef Tract has an asset value of $8.5 billion per year and supports 70,400 jobs in South Florida. Unfortunately, an outbreak of stony coral tissue loss disease (SCTLD) has devastated 26 species of reef-building corals since 2014. Since the outbreak is unprecedented in scale and duration, it is vital to increase the underwater monitoring network. **Objectives:** Create an observer training program to engage SCUBA divers to identify SCTLD and perform roving diver surveys to report disease presence/absence and coral recovery. **Methods:** Two Extension agents developed the SCTLD Observer Training, a citizen science program for recreational SCUBA divers to maximize the efficiency of scale for SCTLD outreach and education and create an underwater surveillance network. **Results:** 58 divers have passed the written test with >80%. Post-reflective evaluations indicate an average overall knowledge gain of 42%. Twelve staff from federal, state, and local governments, non-profit organizations, and private citizens have become active trainers. A SCUBA diver trained by the Extension agents reported the spread of SCTLD disease to Key West in January 2019. SCTLD has now spread to the Caribbean and a delegation from US Virgin Islands completed training. **Conclusions:** Citizen science is an efficient and cost-effective means to engage stakeholders, accelerate scientific research, provide hands-on learning, and build social capital. The spatial extent of the SCTLD requires a large observer network within a framework of multi-agency partnerships. By providing the SCTLD Observer Training, two Extension agents are training stakeholders to collect data that will facilitate future management actions.

The Economic Impact of Recreational Scalloping: An Extension, Research, and Management Partnership

B. J. Hall-Scharf* UF/IFAS Extension Hernando County; C. Adams, A.W. Hodges, UF/IFAS Food and Resource Economics Department; S.P. Geiger, Florida Fish and Wildlife Conservation Commission.

**Situation:** The recreational bay scallop (*Argopecten irradians*) fishery represents an important contributor to the suite of marine-related activities on the Gulf coast of Florida. Recreational scallopers generate economic activity through local expenditures for fuel, lodging, supplies and other goods and services. A previous study found that this fishery contributed $1.6 million dollars in annual economic impact to the Citrus County economy (Stevens, et al., 2003). As the Florida Fish and Wildlife Conservation Commission has continued to monitor and support the fishery, recreational scalloping has increased in popularity over the past few years. Unfortunately, data about the economic impact of this fishery and fishery participants is lacking. **Methods:** Public workshops were held prior to the opening of the recreational season where participants were taught scalloping best practices. Additionally, personal interviews were conducted at local boat ramps during the season to collect information about resource users. Ramp data was incorporated into the IMPLAN input-output analysis software and the associated economic impacts were measured. **Results:** A follow-up survey of workshop participants regarding behavior change was conducted. All respondents made at least one behavior change during the season and implemented these changes during 44 scalloping trips. The IMPLAN model found that in-county expenditures generated $1,146,000 in industry output for Hernando County during the 2017 recreational season. Furthermore, nearly 20 jobs were supported. **Conclusions:** Recreational
scalloping in Hernando County is of benefit to the local economy. Education is important to ensure that the stock is sustainably managed and those participating are using best practices.

**Low Impact Development in Your Backyard**

*K. Stump*, UF/IFAS Extension Osceola County

**Objectives:** As opposed to traditional “pipe-and-pond” stormwater management, low impact development (LID) is an approach that seeks to mimic natural processes to reduce stormwater runoff and protect water quality. There are many LID tools that homeowners can implement in their own yards, such as: rain barrels, rain gardens, and permeable pavement. However, many homeowners have not heard of “LID” and thus don’t seek out educational programs that are marketed using the term. The objectives of the program are to increase participants’ knowledge about LID by 30% and for 10% of participants to implement one LID practice. **Methods:** A needs assessment using an advisory group of stakeholders found that while there is a need, the typical homeowner has minimal interest in taking a workshop or course dedicated entirely to the subject. To overcome this, the author taught a series of LID classes inserted within broader seminars and workshops. The program introduced stormwater runoff, nonpoint source pollution, and LID tools. To address the behavior change outcome, the author identified and addressed psychological and social barriers. For instance, misconceptions that LID has poor aesthetics were tackled by showing pictures of case studies. **Results:** 128 participants had a 52% knowledge gain as measured by a written pre-/post-test. A 3-month follow-up survey showed that 14 participants implemented a rain barrel, 1 added a rain garden to their yard, and 1 used permeable pavement. **Conclusions:** Knowledge and awareness about LID can increase its implementation. To maximize impact, a future workshop targeting decision makers is in the planning stages.

**Florida Keys Water Watch Sponge Gardening: Citizen Science Restoration Aquaculture**

*S. Krueger*, UF/IFAS Extension Monroe County

Large-scale sponge die-offs in the nearshore waters of the Florida Keys have led to deficits in water filtration capacity. In addition to affecting water quality, these sponge die-offs have led to a decline in critical habitat for two economically important species: spiny lobster and bonefish. **Objectives:** Create a Sponge Gardening citizen science program to investigate the feasibility of sponge nurseries in residential canals for restoration aquaculture. **Methods:** Under supervision of the Agent, trained volunteers collected sponges adjacent to their residential canals. Sponges were cut into fist-sized pieces and zip-tied to 3 different treatments: modified pinfish traps, aquaculture mesh, and ropes on buoys. These treatments were hung vertically against the homeowner’s seawall. Volunteers were taught to perform routine maintenance and record morbidity and mortality. Agent revisits volunteers at 1-month, 6-month, and 1-year intervals to measure growth and mortality. **Results:** Volunteers and the Agent collected 120 sponges adjacent to 6 homeowner’s canals, and 10 sponge propagules were attached to each treatment type, for a total of 180 sponge propagules. 11 volunteers demonstrated ability to remove fouling organisms and monitor survival. **Conclusion:** Sponge Gardening is a pilot program with sponge propagules attached to 3 treatments on seawalls in residential canals. Preliminary results show promise that these sponges survive and grow on the novel vertical aquaculture treatments. Sponge Gardening could be a viable alternative to the current
nearshore sponge nursery locations. In the future, these sponges will be outplanted to areas identified by resource managers in need of sponge restoration.

Scallop Sitters: Engaging Community Volunteers for Restoring Bay Scallops in North Florida

S. Jackson*, UF/IFAS Extension Bay County; R. Bodrey*, UF/IFAS Extension Gulf County; E. Lovestrand*, UF/IFAS Extension Franklin County

Objectives: Bay scallop (*Argopecten irradians*) populations have experienced declines in North Florida bays that historically supported public fisheries for this marine bivalve species. This 10-year Florida Fish & Wildlife (FWC)-funded project was developed to engage local citizens in scallop restoration efforts for St. Joseph Bay and St. Andrew’s Bay in the mid-Florida Panhandle. Volunteers will learn about scallop biology and habitat requirements while maintaining young scallops in cages, to improve spawning potential through higher survival rates of juveniles. Methods: UF/IFAS Extension/Florida Sea Grant county faculty collaborated with the FWC to engage volunteers in restoration efforts. Training workshops were hosted by Extension faculty and FWC biologists in Bay and Gulf Counties to provide project details and intended outcomes to volunteers. Participants were provided with live, baby scallops, cages, hydrometers (to measure salinity at their site), and data sheets for record keeping. Cages were attached to local docks or anchored near shore. Results: A total of 216 volunteers were trained to implement the project in 2018. High mortality rates of juvenile scallops occurred early as many sites selected by participants experienced low dissolved oxygen and low salinity levels. However, scallop population density for other participants held constant, until being severely impacted by the occurrence of Hurricane Michael. Conclusions: Engaging local communities in this stewardship activity was well-received and valued by the large number of volunteer participants. The 2019 volunteer sign up for continuation of the work has reached over 100 participants to date.

Is You Well Water Well?

Y. Zhuang*, UF/IFAS Extension Marion County

Two-thirds of Marion County’s residents receive their drinking water from private wells. It is well owners’ responsibility to ensure that their water is safe to drink. Management and protection of private well water are under the control of well owners and depend primarily on education rather than regulation. Objectives: Inform well owners of the possibility of contamination of their wells, the causes of and methods for prevention and treatment. Methods: A two-hour seminar is offered every month to educate well owners about potential pollutant sources and what steps can be taken to lessen potential impacts from these sources and improve their understanding of the relationships between practices in or near wells, especially septic systems. A free well test for bacteria is offered after the class, followed by an explanation of the results and well water protection practices. Results: As of April 2019, 116 people attended this class and 90 surveys were collected. All have indicated that the class was very helpful. They all improved their understanding of private well management, septic system maintenance, and importance of protecting Florida’s water. 66 people (73%) committed to pumping their septic systems; 15 of them (23%) already pumped the tanks as a result of attending the class. Conclusions: Training well owners regarding water quality and practices for protecting their wells helps prevent contamination of underlying aquifers and
safeguard the health of landowners and their families. Pumping the sludge from 15 septic tanks eliminates approximately 1000 pounds of nitrogen leaching into groundwater in five years.

Invasive to Native: Engaging Youth with Marine Environments

B.J. Hall-Scharf*, S.E. Taylor* UF/IFAS Extension Hernando County; J.T. Patterson, UF/IFAS School of Forest Resources and Conservation; S.C. Barry, UF/IFAS Extension Nature Coast Biological Station

Objectives: In June 2015, Hernando County updated its Noxious Plant Control ordinance to require lead tree (*Leucaena leucocephala*) and brazilian pepper tree (*Schinus terebinthifolia*) to be removed from all property within the county. These species are invasive to the area and can be detrimental to the growth of native vegetation. Unfortunately, removing these trees exposes coastal areas to erosion and degradation. Native vegetation is needed at these removal sites to restore important ecosystem services such as storm protection, pollution filtration, and habitat for various wildlife species. Methods: UF/IFAS Extension agents and specialist partnered with a local middle school to develop an educational Marsh Grass Program to grow native vegetation for the county’s designated removal sites. Community events, local donations, and grants funded program supplies. Results: Students and volunteers have dedicated 953.5 hours towards program ($21,644.45 value) thus far. Pre- and post-tests indicated students (n=42) gained 135.25% in knowledge of marsh ecology, the importance of natural resources, pollution, and fisheries economics after completing program. By the end of the school year, students successfully propagated 3,000 grass plugs from their original 1,000 plugs. In partnership with County's invasive species removal efforts, students planted a portion of the grasses along 270 linear feet (0.06 acres total area) of a coastal shoreline where Brazilian pepper had been removed. Conclusions: By participating in hands-on-habitat restoration activities, students will understand the value of maintaining a healthy environment and learn the skills needed to properly operate and sustain these nurseries for future classes.

A Tri-County Collaboration: Promoting Sustainability with A “Water In My Backyard” Program

M. Ward*, UF/IFAS Extension Citrus County, G. Mendoza*, UF/IFAS Extension Levy County, O. Zugay*, UF/IFAS Extension Marion County, M. Carden, Navajo Technical University

STEM (Science, Technology, Engineering and Math) 4-H educators use innovation to reinvent traditional water programs; engaging youth in inquiry-based learning. Objectives: Water is a finite resource, while Extension has shared this message widely, young people benefit from participatory, project-based learning models as they learn to lead society in the preservation and protection of our natural resources. Methods: The 4-day camp immersed youth from Citrus, Marion and Levy counties in learning ecosystem connections. Campers experienced coastal freshwater systems, the underground Floridan aquifer and the spring-systems as they “learned by doing” traveling, swimming, canoeing and kayaking. With group-learning strategies, youth practiced skills in critical thinking, problem-solving and wise use of resources. Our program immersed 40 youth (ages 10-16) in exploring Central Florida’s water resources. Campers used a multi-purpose journaling tool to practice the mechanics of data collection, record individual observations and water quality measurements, reflect on what they learned and apply to their everyday life. In collaboration with Extension, local business leaders, conservationists, nature-based educators and government entities engaged young people in water experiences. Results: Quantitative and qualitative growth of science knowledge/literacy were assessed with a variety of tools; including a pre/post survey, a reflective journaling
tool, recording of observations, and group debriefing. Behavioral observations provided evidence that youth; increased science vocabulary, practiced water stewardship, raised questions and identified problems. **Conclusions:** Multi-county programs leverage creative partnerships, develop stakeholder resources, broaden the exposure of youth to water resources, and develop project-based learning tools, with experiential programs youth learn to tackle environmental issues.

**Environmental Stewardship - The Next Generation: Extension’s Role in Tree Campus USA Urban Forestry Partnerships**

**M. Beckford*, UF/IFAS Extension Sarasota County**

**Objectives:** The Arbor Day Foundation’s Tree Campus USA program nationally promotes environmental stewardship on college and university campuses by annually recognizing those which establish and sustain healthy urban and community forests. Some institutions may initially be hesitant to apply for Tree Campus USA recognition especially because one of the program’s five standards “developed to promote healthy trees and student involvement”, is the commitment to formulating and financing a tree care plan. UF/IFAS Extension’s expertise in environmental stewardship and urban forestry education can help local colleges/universities overcome perceived barriers to participating in a program which increases student awareness of the importance of trees for improving quality of life in rapidly urbanizing communities. **Methods:** UF/IFAS Sarasota’s Treejuvenation urban forestry Extension program partnered with New College of Florida (NCF) to apply for Tree Campus USA recognition. Collaborative efforts between the UF/IFAS Extension Sarasota Commercial Horticulture Extension Agent, the Forest Ecology Faculty and Students, as well as Administrative and Facilities Staff of NCF, involved thoroughly reviewing, and working to accomplish the five eligibility standards for receiving Tree Campus USA recognition. **Results:** New College of Florida qualified for its first recognition from the Tree Campus USA program in 2018, becoming the 20th designee in Florida. **Conclusion:** With an estimate of more than 71 post-secondary institutions in Florida, there is a need to continue to promote environmental stewardship and the benefits of urban forests among college students by partnering with institutions to help them overcome perceived barriers to participating in the Tree Campus USA program.

**CIVIC Plastic-Reduction Working Group Sarasota County Extension**

**A.J. Ubeda*, A.Tyrna*, R. Penn*, UF/IFAS Extension Sarasota County**

Plastic pollution is a complex issue that has garnered a need for action but has little clarity on how to go about change. **Objective:** In order to gain clarity, we brought together the plastic aware community (leaders working to expose the plastic water pollution problem) to facilitate the exchange of ideas and enable the creation of a unified vision for moving beyond plastic. **Method:** Using the Community Voices Informed Choices (C.I.V.I.C) framework, we brought together local food and beverage providers, academics, researchers, non-profits, and government to discuss the benefits, challenges and solutions to switching to alternative products. Using the results, we developed a survey for the food and beverage community to gain a broader perspective. A final meeting was held to communicate the shared vision and progress a unified approach to reducing plastic waste. **Results:** The survey of the food and beverage community had 22 respondents representing businesses of various sizes (between 1 and 249 employees). Respondents described the price of alternative products as being the greatest barrier to reducing single-use
plastic. Changing policies to create incentives for local businesses was identified as a top solution. Respondents also identified community recognition in the form of an ocean/environmentally friendly certification program as the best strategy for helping them reduce plastic. **Conclusion:** In conclusion, we achieved our objective and were able to pinpoint commonly identified strategies for moving beyond plastic. We facilitated the exchange of information that helped stakeholders determine the next steps to reduce the use of single-use plastic in our community.

**Dual Purpose Marketing: Developing Marketing Material with Educational Content**

**K. Waters**, UF/IFAS Extension Holmes County

Creating a social media marketing campaign can increase programmatic awareness and clientele participation. Although maintaining relevance in the realm of social media can be time consuming, it is effective for programmatic marketing efforts. **Objectives:** The objectives of this effort were 1) develop an effective model for social media marketing and 2) create social media posts that will market a program, while providing educational content to clientele. **Methods:** In an effort to develop programmatic recognition, while marketing a signature program, a series of educational posts that were branded with marketing material were created. Graphics included science-based information about natural resources in the Florida Panhandle. The graphics were created using a template to promote uniformity and repeated recognition, key factors in social media marketing. **Graphics were scheduled to post at peek page traffic times and were boosted, a paid form of increased broadcasting, to increase reach.** Each post contained a science-based fact, as well as a marketing component to promote the Expo. **Results:** A total of 35 posts were created in 2018 by an UF/IFAS Extension intern to promote the Holmes County Outdoor Expo. Total page views increased following the initiation of graphic posts to 176,777 with 408 event followers. Attendance increased, and program enhancement funds for 2018 were 57% higher than the previous year totaling $13,988. **Conclusions:** Developing a successful marketing strategy is key for a program’s success and including educational content within social media marketing posts is an effective way to create a dual-purpose social media campaign.

**A School Rain Barrel Campaign to Engage Hands-on STEM Education**

**Y. Zhuang**, A. Marek, UF/IFAS Extension Marion County

Rain barrels are an excellent hands-on activity that integrate science, technology, engineering, art, and math (STEAM). Some schools have rain barrels, but they are not in use. **Objectives:** To engage students and teachers into hands-on STEAM education through the School Rain Barrel Campaign. **Methods:** The Rain barrel campaign is integrated with annual science teachers training. Teachers learn how to build rain barrels at the training and then a rain barrel is offered to each school after the training. The county Florida-Friendly Landscaping program provides mini-grants for the top three projects to incentivize participation. It is judged by the design, water use, and monthly progress reports. Lesson plans such as stormwater runoff, thermal energy, system sizing, and design are incorporated into the rain barrel projects. **Results:** Five out of nine middle schools in XXX County participated in the campaign in school year 2018 and five out of eight high schools are participating in school year 2019. More than 20 teachers and 150 students have been actively engaged in this campaign. They use rain barrels as an alternative water source for gardens or aquaponics. All the teachers indicated that the students really enjoyed the projects and working in the gardens; it certainly engaged students into hands-on STEAM activities and applied what they have learned in class into real
world. **Conclusions:** The Rain barrel campaign offers an opportunity to engage students in learning about conserving resources and sustainability in a creative way. It also increases the visibility of green infrastructure in the community.

**Increasing Collection of Outcome Information at Large-Scale Extension Events**

**K.G. McCormick**, UF/IFAS Extension Seminole County

From 2010 to the present Master Gardener Volunteers have held an annual educational gardening event. No information was collected on the participants from 2010 - 2016. **Objectives:** Increase collection of participant demographic information as well as learning outcomes. **Methods:** An Eventbrite registration was created and used in all marketing materials. The registration form included demographic information and asked where they learned of the event. At the Event welcome tables unregistered participants were asked to fill out a survey. Surveys and Eventbrite tickets could be used to obtain free prize tickets for vendor donated prizes. In both methods they could opt-in to a follow-up survey. A follow-up survey utilizing the collected information was sent out to those who opted in. **Results:** Since the last three annual gardening events over 2,000 attendees have completed the initial survey information, 1,400 agreed to a follow-up survey, and 480 completed the follow-up survey. Demographic and marketing information collected in the initial survey allowed for more targeted marketing. The follow-up survey has allowed vendors to bring items within our usual visitors’ price range, highlighted which demonstration gardens and educational presentations were well attended, and provided outcome information collection. 92% (402 of 438) of participants reported knowledge gain from the event, and 69% (200 of 291) reported practice change based on the learning opportunities offered at the event. **Conclusions:** Ease of use and offering an opportunity of prizes for participants can allow for better collection of information and outcomes from large scale events.

**Diversity by Design**

**T. Badurek**, UF/IFAS Extension Pinellas County

This program focuses on increasing diversity in landscapes to create healthy places for future generations. From small urban backyards to large neighborhoods and towns, it’s critical to create and connect diverse spaces. Currently a program aimed at the individual, this program could be expanded to guide larger institutions in making better decisions to increase the diversity of public outdoor spaces in urban and suburban areas. **Objectives:** Objectives of this program include increasing native plant diversity (which increases animal diversity), reducing pesticide use, and planting Florida's native plant palette. Diverse landscapes support more beneficial insects to control pests, thereby reducing pesticide use. Less pesticide use is better for human and animal health. Plant and spatial diversity provides homes for native animals whose habitats are disappearing. Finally, diversity helps make places unique, preserving the sense of place that makes each part of the world special. **Methods:** Classes were held at libraries, garden clubs, Master Gardener programs, and community centers. Classes were about 90 minutes each. One walking tour of a local neighborhood was also part of this program. **Results:** 4 classes and 1 tour were held with 123 participants. Of those surveyed for knowledge gain and practice change, over 90% (n=27) intended to improve landscape practices. **Conclusions:** This program is a successful way to convey the importance of native plants and plant diversity to help native wildlife. The walking neighborhood tour was especially effective as the program attendees could discuss specific real changes they could make in their own landscapes.
# Youth Programming

**Everglades A**

Crystal McCazzio, FAE4-HA Abstract Chair

**Tuesday, August 27 & Wednesday, August 28**

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<td>G. Whitworth, A. Lazzari, &amp; E. Shephard</td>
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<td>R. Pienta</td>
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**Camp Real Life: Building Skills through Hands on Learning**

**J. Shoup**, **J. Lilly, D. Sprague**, UF/IFAS Extension Jefferson County

**Objectives:** 1) Participants will gain life skills they will need to succeed as adults and 2) increase awareness of how much life on their own will cost. **Methods:** Two 6-hour sessions were taught. Each session primarily used hands on, team-based learning activities where participants practiced financial management skills and soft skills such as communication, problem solving, creativity, and interpersonal skills. Activities included handshaking, interview practice, meal planning, a grocery store tour, cook off, sewing, car maintenance, budgeting, and real-life simulation. **Results:** 100% (10/10) increased knowledge related to life skills addressed during Camp Real Life. 80% (8/10) increased confidence when answering interview questions. 70% (7/10) increased ability to plan and cook a meal on a budget. 60% (6/10) increased awareness on cost of living. 78% (7/9) increased vehicle maintenance knowledge. 80% (8/10) increased basic sewing skills. 80% (8/10) increased knowledge about creating a budget. Quotes from campers: “I learned that having a grocery list and a budget was SUPER important. I also learned to manage my money. I learned to write a check and reasons why I should save for retirement.” “This helped me learn basic adulting skills and how my life might look in the future. Although it was absolutely terrifying, I liked the real-life simulator a lot.” **Conclusions:** Hands on activities can help young adults build skills they will need as adults.

**Teaching Critical Life Skills Through a Week-Long Adulting Camp**

**G. Whitworth**, **A. Lazzari**, **E. Shephard**. UF/IFAS Extension Brevard County

Today’s youth often set out on their own unequipped to navigate the adult world. Basic life skills that are needed when youth leave home are often not taught in schools, nor at home. To help better equip youth for adulthood, “Adulting: Are You Ready?”, a week-long day camp was held for youth ages 14 – 19 to introduce them to some of the most important skills needed when they leave home. **Objectives:** 1) Increase youth knowledge in the areas of nutrition, meal planning, food safety, budgeting, banking, credit, interpersonal communication, living on your own, self-care/mindfulness, college and career readiness, and do-it-yourself skills. 2) Equip youth with new skills in these areas that can be used as they begin their journey to adulthood. **Methods:** Several different educational methods and activities were used for the camp, including lectures, games, videos, hands-on activities, field trips, the Living on My Own simulation, and discussion. Mindfulness and self-help activities were incorporated into camp each day to help teach youth the importance of taking
care of both mind and body. **Results:** Fifteen youth participated in the camp and completed a post-survey. Results showed that: 100% felt *somewhat to much more knowledgeable* to all 12 questions asked related to the focus areas, and 100% felt *somewhat to much more prepared* for life after high school. **Conclusions:** Teaching youth basic life skills helps better prepare them to navigate the adult world as they set out on their own. Adulting camp helps teach these skills in a fun learning environment.

**Nitrogen Stewardship Education for Students Living with Harmful Algal Blooms**

**Tyrna*, A., and C. Wyatt-Evens*, P. Williams, K. Clements, R. Penn, and A. Ubeda; UF/IFAS Extension Sarasota County**

As we endured a terrible red tide outbreak on our coast and blue-green algae clogging inland waters, people often asked what they can do to prevent the next algal bloom. Number one on that list is: reduce your nitrogen footprint. A youth education program was created to help students learn why and how to reduce their nitrogen footprint. **Objective:** The objective of the program was to raise awareness of human-created sources of nitrogen and introduce steps to mitigate nitrogen inputs. **Methods:** A three-part lesson on nitrogen cycling targeting middle school students was created. Each lesson included discussion and hands-on activities to foster nitrogen-aware citizens. The lessons taught students about man-made and natural sources of nitrogen, how to read a fertilizer label, recognize the impacts of over-fertilizing, experience how compost is made and its role in fertilizing plants, the cadmium-deduction method for measuring nitrate-nitrogen, and how to observe a balanced aquatic ecosystem. Pre-posttests and observations were used to gauge success. **Results:** Results showed that upon completing the lesson, 62% of the 885 students were able to differentiate human-made forms of nitrogen that have more than doubled the natural amount of nitrogen deposited to the land from naturally occurring sources. Students were also able to connect composting to recycling nitrogen and identify the ability of plants to filter nutrients from water. **Conclusion:** Educating our youth on the impacts of nitrogen pollution to ecosystem health gave students the opportunity to analyze their own nitrogen footprint and offer suggestions to mitigate the effects.

**4-H Level Books: Highlighting Life Skill Development**

**C.K. Poliseno*, B. Yancy* UF/IFAS Extension Hillsborough County**

**Objectives:** The objective of creating and establishing a new 4-H Level Book was to provide a targeted life skill development strategy to youth participating in 4-H projects. The newly designed books were also meant to improve the ability to track and demonstrate life skill development, in both short-term observation and long-term behavior change. **Methods:** The authors created a “Life Skills Worksheet,” which asked participants to identify life skills they wanted to intentionally practice and develop, and how they would do so, over the course of their 4-H year. The worksheet was modified to be age appropriate for each 4-H “level,” (Junior 8-10 years old, Intermediate 11-13 years, Senior 14-18 years) by asking for one life skill from Juniors, two from Intermediates, and three from Seniors. Cloverbuds (5-7 years) were not included. The prompt for the end-of-year “4-H Story,” was also modified to ask participants how they developed these life skills over the course of their 4-H year. **Results:** Out of 156 submitted 4-H record books, 62 completed the new “Level Book” (approx. 40%). Based on 4-H agent and volunteer observation and analysis, the 62 participants who completed the worksheet demonstrated greater life skill development through a higher-
level ability to reflect on and apply the life skills practiced through their 4-H projects. **Conclusions:** After one year of implementation and a 40% participation rate, we can conclude that the improved and targeted “Life Skills Worksheet” Level Book format is effective in assisting youth in consciously developing life skills through 4-H participation.

Stop Motion Animation

**K. Popa**, UF/IFAS Extension Charlotte County

**Objectives:** This program was used to increase youth knowledge and skills related to science, technology, engineering, art and math (STEAM). In addition, youth will gain skills in communication both verbal and non-verbal. **Methods:** A 2 day Stop Motion animation course was used to engage youth in all aspects of STEM. Youth discovered the science behind stop-motion animation as they worked with lighting and the movement of props. They worked with different technology as they used cameras, computers and smart phones to record their videos, they engineered their own set, props and characters. Youth were able to use their art skills to decorate and create props as well as developing their storytelling skills. Finally, they used their math skills to determine how many shots or frames they needed to complete a film the length they wanted. **Results:** Youth participating in this course, gained the knowledge and skills needed to complete their own stop-motion animation video by the end of the course. They were engaged in all aspects of STEAM and were asking to continue working on stop-motion animation through a new 4-H club. **Conclusion:** Not only were students engaged in STEAM, they are now engaged in 4-H through a newly created 4-H club. Youth have come to the club with homemade stop motion animation movies and are excited about coming up with their own plot and characters for movies they hope to present at the 4-H Film Festival next year!

Increasing Knowledge, Awareness and Participation through Americans with Disabilities Act (ADA) Training and Youth Recruitment.

**N. Guay**, UF/IFAS Extension Palm Beach County

**Objectives:** To increase participation of youth with disabilities in Palm Beach County 4-H Clubs through recruitment and training. The National Survey of Children with Special Health Care Needs identified nearly 1 in 5 children ages 12-17 as having special healthcare needs and the American Community Survey estimates that more than 1.3 million young people ages 16-20 have a disability. It is important that youth with disabilities have the same opportunity to participate in 4-H in order to obtain the life skills and empowerment to enable them to become successful adults. **Methods:** 1.5-hour lecture style ADA training with pre- and post-evaluation administered and 0.5 hour facilitated discussion on recruitment of youth with disabilities into new and existing clubs. **Results:** Results from the training (n=22) showed an increase in knowledge of ADA rules (86%), an increased understanding on communicating with youth and parents on disability needs (96%), an increased understanding of reasonable accommodation (86%), increase in awareness of resources to support accommodating youth with disabilities (91%), and an increase in inclusion and diversity best practices (100%). **Conclusions:** Participants increased their knowledge, awareness, and ability to include and recruit youth with disabilities and youth with disability participation increased from 3 youth to 19 youth, including a STEM club designed solely for youth on the autism spectrum.
Try a Day of Camp: Introducing Military Youth to Residential Camping

A. Schortinghouse*, UF/IFAS Extension Escambia County; Wilken, T.*, UF/IFAS Extension Okaloosa County; J. Johnson*, B. Estevez*, UF/IFAS Extension Escambia County

Okaloosa and Escambia Counties are home to four different military 4-H youth programs, consisting of 574 active military youth. To bridge the gap between military youth programs and 4-H programs beyond the club level, “Try a Day of Camp” was organized to engage military youth in an interactive day camp. **Objectives:** 1) Introduce and increase military youth participation in the residential camping program. 2) Increase military 4-H youth participation beyond the club level. **Methods:** Youth were split into groups rotating through workshop segments including camp games, marine science, expressive arts, and outdoor adventures. Partnerships with the Florida Fish and Wildlife Control and local Extension agents were established to facilitate these workshops. Participants were encouraged to socialize with youth from different programs to promote relationship building, with the intention of connecting military youth by shared experiences. To familiarize youth with the residential camping experience, this program is held at 4-H Camp Timpoochee to incorporate a sense of comfort and belonging. **Results:** In 2018, 55 youth participated in the “Try a Day of Camp” program. From 2017 to 2018, there was a 31% increase in military 4-H youth participation in residential camp increasing 18 to 35 youth. There was an 88% increase of participation beyond the club level improving from 40 to 334 youth. **Conclusions:** By creating an environment for military youth to experience residential camp activities and interact with 4-H faculty while surrounded by familiar staff from the military program, youth were more likely to participate in future 4-H programming.

Career Exploration Through 4-H Veterinary Science Camp

C.L. Woodard*, J.K. Yarborough, UF/IFAS Extension Seminole County; S.T. Michael, UF/IFAS Extension Central District; A.M. House, UF College of Veterinary Medicine, Gainesville

**Objectives:** According to the U.S. Bureau of Labor and Statistics employment in Science, Technology, Engineering, and Mathematics careers is projected to grow to more than 9 million between 2012 and 2022 with Veterinarians having an occupational growth rate of 19%; that’s 12% higher than the average projected growth rate for jobs. The Seminole County 4-H Veterinary Science Camp was designed to meet the needs of urban and suburban youth interested in Veterinary Medicine. Objectives of the camp focused on increasing awareness of careers in Agriscience, STEM, and Veterinary Medicine. **Methods:** Each day focused on a different specialty in Veterinary Medicine; Exotics, Equine, Livestock, and Small Animals. Youth spoke with professionals from Animal Services, private practices, Yarborough Ranch, FDACS, and the local zoo. Youth completed learning labs including fecal floats, x-rays, suturing, injections, and vitals. Finally, participants spent the day touring UF’s Animal Hospitals, and spoke with veterinary students and the college’s recruitment specialist. **Results:** 100% of participants strongly agreed that they had increased their knowledge of careers in the Animal Industry, Agriculture, Veterinary Science and STEM. 92% reported intending to enroll in STEM related courses in school. Participants reported an increased interest in large animal surgery, wildlife medicine, equine medicine, radiology, shelter medicine, and agriculture. **Conclusion:** This program provided youth with a unique opportunity to gain insight into career options and practice hands on skills needed in the veterinary profession. This camp will assist youth in deciding about their future high school classes, college selection, and career choices.
Stewardship of County and State 4-H Shooting Sports Assets

A. Lazzari*, G. Koerner. UF/IFAS Extension Brevard County

4-H staff, county extension offices, and camps who conduct programs in 4-H shooting sports and sport fishing programs often acquire tens-of-thousands of dollars’ worth of assets for instruction. Maintenance and secure storage of this equipment is critical because of the safety and security repercussions of simple oversight or neglect. UF/IFAS Extension Brevard County 4-H has developed a low-cost, low maintenance approach to the management of firearms and related equipment. **Objectives:** 1) Increase compliance with national BMPs and the Florida 4-H Shooting Sports State Plan and Guidelines for safe storage, maintenance and checkout of equipment. 2) Equip Extension professionals and volunteers with low-cost, effective tools to avoid the risks of missing or damaged equipment. **Methods:** Using no-cost, cloud-based software that meets current industry standards for asset management, and low-cost label identification tools, a system was developed to easily and effectively track assets, their value, maintenance and location. **Results:** Anecdotal data collected as a result of telephone surveys, trainings and discussion indicate that issues with storage, tracking, and maintenance of 4-H shooting sports equipment is common in county Extension offices. Many county programs have in excess of $10,000 worth of assets. Storage of firearms at the home of a county extension staff member or volunteer can put the organization at a greater risk of liability. **Conclusions:** Assisting volunteers, working with county and state leadership, and training fellow Extension faculty and staff on this low-cost program will increase our effectiveness and lower our risks, to maintain this valuable program.

Unleash the Fountain of Youth at Spa Camp

A. Tharpe*, L. Wiggins, UF/IFAS Extension Taylor County

**Objectives:** The 4-H Spa Day Camp was designed to educate youth about different spa related experiences, their purpose, as well as increase their knowledge, skills and awareness in the areas of science, fitness and healthy living. **Methods:** The 4-H Agent planned the day camp for youth, ages 8-13, to teach a bit about chemistry and measurements, but also to get them thinking about relaxation early on so they have a better chance at becoming balanced adults. The Agent recruited local spa and salon owners and an esthetician to volunteer during the camp. Lessons/activities included: nail care, skin care, hair care, importance of sunscreen, yoga, stretching, preparing spa cuisine, and getting to make their very own spa concoctions. **Results:** During the past six summers, 180 youth participated in the four-day camp, along with 8 teen volunteers and 12 adult volunteers. 100% of the youth stated that they did not realize science was used to make skin and nail care items that they use every day such as scented lotions, lip gloss, and body scrubs. 95% of the youth stated that the camp helped them learn how to better care for their skin and learned how to protect it from the sun. 100% of the youth stated they better understand the importance of nail care. **Conclusions:** 100% of the youth reported that they would like to participate in this day camp again. This camp is one that will keep youth coming back for year after year to learn more about the spa experience!
Supporting Military Youth with Action Research

A. Toelle*, UF/IFAS Extension Duval County; P. Davis*, UF/IFAS Extension Bay County, S. Toelle, UF/IFAS Extension Duval County

Objectives: To support Military 4-H youth programs through staff training, based on action research. Methods: The 4-H military youth partnership utilizes an action research model to develop best practices to support 4-H programs. Action research is a research methodology that expects to use the results to take informed action (Lewin, 1946). Action research is cyclical and is constantly seeking to improve practice (Elliot, 1991). The 4-H military partnership utilizes action research to ascertain teaching methodologies that best support military youth in on-base programs. Through this action research approach, in-person workshops were identified as a best practice in supporting 4-H military youth. Workshops were developed to cover the basics of 4-H, curriculum, and running a 4-H club. Results: 100% of participants surveyed (n=62) reported being able to assist youth in finding their spark and how to facilitate learning experientially. 85% (n=62) of participants reported understanding how to teach life skills. Further, the 2019 action research iteration determined a new teaching methodology could be used to train staff: The Zoom meeting. Conclusions: The action research method is useful in defining practice for supporting 4-H. Action research can be used in county programs to enhance, improve, or advance current practices. The efficacy of Zoom technology will be evaluated this next year to determine if it is an effective strategy supporting 4-H programs.

Wakulla Wonderful: Celebrating County History with 4-H

R. Pienta*, UF/IFAS Extension Wakulla County

Wakulla County 4-H needs to expand awareness while increasing youth, volunteer, and overall community involvement. The Wakulla Wonderful program was created to engage the community in an event focused on history and civic engagement. Objective: Youth engaged in this project learned about the history of Wakulla County, gained experience in public speaking, learned how to promote an event, and had the opportunity to fundraise for their club programs. Methods: Staff and volunteers used hands-on, experiential learning strategies to engage youth in planning a one-day community event to celebrate the 176-year anniversary of the county’s founding. Planning and preparation for the event included creating a sponsored t-shirt to fundraise and market the program. Youth completed presentations on local television and spoke to the Board of County Commissioners to request a “Wakulla Wonderful Week” proclamation. Youth engaged the Clerk of Court, local school jazz ensembles, the Wakulla County Chamber of Commerce, and the Wakulla County Historical Society to provide entertainment and history tours for the county “birthday” celebration. Results: Close to 150 community members – including all 5 county commissioners - participated in the event. Youth raised $900 for 4-H programs. 5/5 community partners surveyed found the event to be a success and agreed to be part of an annual event partnership. Conclusions: Wakulla Wonderful raised community awareness of and engagement in Wakulla 4-H. Youth gained experience in planning an event from start to finish that included design, fundraising, and public speaking.
Expanding Global Perspectives through Exchange Programs

S. Michael*, UF/IFAS Extension Central District; J. Sprain*, UF/IFAS Extension Osceola County

The ability to interact with others from the other side of the globe can be done by the push of a button and a computer. However, even with this ability, the tolerance and openness of other cultures is not always present. 4-H has the opportunity to open this tolerance and openness through global citizenship programs such as the State’s 4-H Exchange Program. **Objectives:** Annually, 75% of families and individuals report an increase in their ability to appreciate and accept differences. 90% of families and individuals report an increase in their understanding of different cultures. 65% of families and participants report more personal or family openness. **Methods:** Florida 4-H offers two opportunities during the summer related to Global Citizenship Education. 4-Her’s have the option to host an exchange student from another country or travel to another country for their own exchange student experience. **Results:** Florida 4-H is in its 4th year of partnering with States’ 4-H Exchange International to offer exchange opportunities. To date Florida 4-H families have hosted over 50 exchange students and 7 Florida 4-H’ers have traveled abroad. Many of the families reported that their family gained a new understanding of cultures and their kids are now more accepting of others. **Impacts/Conclusion:** Many studies have shown that importance and meaningful impacts of international exchange programs. Boyd et al. (2001) found that youth who participated in exchange programs become more sensitive to other cultures, more aware of global events, and more involved in community activities than prior to their participation.

Stuart Youth Improve Their Community – One Cat at a Time

N. Parkell*, UF/IFAS Extension Martin County

**Objectives:** Employing the “Targeting Life Skills” Model (Hendricks, 1998) is critical to structuring every 4-H youth development program. Experiences are presented as a way for extension professionals to teach real world skills, such as: community service and volunteering, responsible citizenship, contribution to group effort, and problem solving. Youth at the 10th Street Community Center in East Stuart were awarded a Community Pride grant to solve one of their neighborhood’s most pressing issues: overabundance of feral cats. **Methods:** Upon completing a needs assessment at the Community Center, the “Community Pride SPIN Club” elected to conduct a “T-N-V-R” project: Trap, Neuter, Vaccinate and Release. In partnership with the Humane Society and the Martin County Sheriff’s Animal Control, youth strategized resources needed, locations to target, and methods to execute their service-learning project. **Results:** After a six-week implementation of T-N-V-R in the East Stuart community, the youth group succeeded in selecting sites of feral cat population, initiating daily feeding and trapping, facilitating transport of animals, and returning the treated animals to their home territory. The colony’s T-N-V-R program cats no longer contribute to the reproductive cycle while maintaining boundaries and stabilizing the nuisance population. **Conclusions:** Community development and problem solving are not solely in the realm of adult responsibility. Youth, when offered structured and guided experience, can become agents of positive social change. 4-H Community Pride offers a framework to develop tomorrow’s community leaders today.
Sowing Seeds Reaping Rewards: A 4-H/FCS Collaboration

R. Pienta*; S. Kennedy*, UF/IFAS Extension Wakulla County

The Wakulla 4-H and Wakulla FCS programs partnered to develop a curriculum that would engage youth in learning skills across multiple content areas. Sowing Seeds, Reaping Rewards is a combined 4-H/FCS program designed to teach youth how to build and market a cottage food business using produce they grow, harvest, cook, and preserve themselves. **Objective:** Youth engaged in this project learned how to plan, plant, maintain and harvest a crop. Participating youth learned how to prepare and preserve the harvested crop. Youth also learned how to market their final product. **Methods:** Agents promoted the project and held an informational meeting. Six meetings were planned to achieve the project objectives. Youth and agents decided to focus on herbs. Herbs were grown in the Extension garden. Youth tested recipes and researched herb blends. Youth learned how to use a dehydrator and to safely package herb blends. Youth had an opportunity to present their marketing pitch and sell their blends to a local civic group. **Results:** Seven youth initially expressed interest/attended the first project meeting. One youth completed the project. The youth learned how to grow, preserve, and process herbs for use in cooking. The youth learned how to prepare a marketing pitch. The youth learned how to label and package a food product for sale. **Conclusions:** The holistic approach of this project from planning and growing to packaging and marketing provided youth with a comprehensive look at the process involved in starting a cottage food business in Florida.
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<td>Introductions &amp; Protocol</td>
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<td>12:45 – 1:05 pm</td>
<td>G. Murza &amp; E. Pabon</td>
<td>Incorporating Physical Activity into the Master Gardener Training Program</td>
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<td>1:10 -1:30 pm</td>
<td>B. Marty-Jimenez</td>
<td>Think Nutrition During Hurricane Season</td>
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<tr>
<td>1:35 – 1:55 pm</td>
<td>S. Ellis</td>
<td>Matter of Balance for Older Adults</td>
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<td>2:00 – 2:20 pm</td>
<td>K. Allen, J. Corbus, &amp; L. Hamilton</td>
<td>Avoiding Pesky Neighbors: Integrating IPM into First Time Homebuyers Classes</td>
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<td>2:25 – 2:45 pm</td>
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<td>2:50 – 3:10 pm</td>
<td>A. Hinkle &amp; D.C. Lee</td>
<td>Raising Healthy Grandparents, Raising Healthy Grandchildren</td>
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<td>3:15 – 3:35 pm</td>
<td>S. Bresin</td>
<td>Extension Partners with Local Hospital’s Food is Medicine Program</td>
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<td>3:40 – 4:00 pm</td>
<td>J. Corbus</td>
<td>5~30 Meals – Healthy Meals in a Snap</td>
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<td>4:05 – 4:25 pm</td>
<td>A. Nikolai</td>
<td>Out of the Box Uses for Vegetable: Reframing the Old to Draw Interest and Improve Health</td>
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<th>Wednesday, 8/28</th>
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<td>2:00 2:20 pm</td>
<td>D. Devries-Navarro</td>
<td>Improving Fruit and Vegetable Intake through the EFNEP</td>
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<tr>
<td>2:25 – 2:45 pm</td>
<td>N.D. Pinson, A. Yasalonis, &amp; J. Diaz</td>
<td>Measuring and Reporting Personal Wellness Benefits of Extension Volunteer Programs</td>
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<tr>
<td>2:50 – 3:10 pm</td>
<td>G. Mendoza Perez</td>
<td>Summer BreakSpot: Nutritious, No-Cost Meals for Campers</td>
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Incorporating Physical Activity into the Master Gardener Training Program

G. Murza*, E. Pabon*, UF/IFAS Extension Osceola County; J. Anderson, A. Vu, UF/IFAS Extension Orange County

Objectives: To become a Master Gardener (MG) volunteer in Osceola and Orange Counties, participants are required to attend a 13-week training in the Fall. The training consists of lectures, field trips, and hands-on activities. Participants sit for long periods of time during lectures and have asked for opportunities to be active throughout the day. Therefore, the MG coordinators reached out to the FCS Agents to develop and provide exercise sessions during the training program. The objectives are: 1) 50% will report learning exercises that help minimize pain and discomfort, 2) 50% will report feeling more awake and engaged in the training, and 3) 50% will report incorporating water and stretch breaks while gardening. Methods: Six sessions each were held in Orange and Osceola Counties, 15 minutes per session. Exercises focused on muscle groups related to gardening or gardening activities. Agents provided alternative movements for those who were not able to perform the particular exercise. A retrospective pre/post questionnaire was given at the end of the training program. Results: Of the 40 participants, 31 completed the questionnaire. 81% reported learning exercises to help minimize pain and discomfort (pre: 48%), 71% reported feeling more awake and engaged in the training (pre: 39%), and 65% reported taking more stretch and water breaks while gardening (pre: 26%). Conclusion: Including exercises into the program equipped participants with the knowledge, skills, and confidence to adopt and continue these strategies. With such a positive response, exercise will become a permanent addition to these county’s MG training program.

Think Nutrition During Hurricane Season

B. Marty-Jimenez, UF/IFAS Extension Broward County

Objectives: Participants will increase their nutrition, food safety, disaster preparedness knowledge and skills. An increase in participant knowledge about ways to prepare for an impending storm, thinking about nutrition and meal planning when purchasing supplies and then actually eating healthier during and after a storm is beneficial to the Florida population. Methods: The class titled, “Think Nutrition During Hurricane Season”, was taught to 543 individuals (13 sessions) in 2018. MyPlate nutrition concepts, suggested items to purchase, and basic food and home safety were taught. Many people purchase only snack foods that are placed in their hurricane kits, which are often eaten prior to an impending storm. This class used
integrative, engaging methods, including lecture, exhibit, display and discussion among participants. **Results:** A post survey was used to evaluate knowledge gain and intent to change behavior. 86% (468 of 543) of participants increased knowledge about the benefits of following MyPlate guidelines, how to prepare for a disaster, and food/home safety. 84% (455 of 543) of participants plan to “think nutrition” and make at least one change related to how they shop for, prepare for, or plan disaster-time meals in order to ready themselves for a storm. **Conclusions:** This class helps people prepare in advance and eat healthier during a storm. Planning helps decrease stress, manage resources and save money when items are purchased in advance. If you fail to plan, you plan to fail.

**Matter of Balance for Older Adults**

**S. Ellis**, UF/IFAS Extension Citrus County

Older adults are not as physically active due to a variety of factors including fear of falling and other mobility concerns. However, by making slight adaptations to their home and adopting healthy lifestyle behaviors such as exercising daily, one can reduce their fear of falling and improve their health. **Objectives:** The program provides participants with knowledge and tools to evaluate their surroundings and reduce their risk of falling. Participants in the program: 1) Learn how to be proactive and assertive to reduce their fall risk, 2) Understand what changes can be made to reduce their risk, 3) Learn why physical activity is important, 4) Learn and practice easy exercises increasing their activity level. **Methods:** The program consists of 8 two-hour classes which include presentations, videos, learning discussions, learning exercises, and physical exercises. Participants are provided workbooks that include handouts, homework, and physical exercises to practice at home. **Results:** Since February of 2018 7 classes have been offered. Fifty-nine (59) individuals attended the 8-week program and completed the follow-up evaluation. Forty-three (73%) indicated the program reduced their fear of falling. Forty-three (73%) made changes in their home to reduce their fall risk. Forty-nine (83%) increased their physical activity level by doing the exercises learned in class at home. **Conclusions:** Statistics show that among older adults, falls are the leading cause of injury and death from injury (CDC.gov). This program helps older adults learn how to evaluate and manage their fall risk and adopt healthy behaviors keeping them independent longer.

**Avoiding Pesky Neighbors: Integrating IPM into First-Time Homebuyers Classes**

**K. Allen**, UF/IFAS Extension Suwannee County; **B. Bolles**, UF/IFAS Extension Escambia County; **J. Corbus**, UF/IFAS Extension Washington and Holmes Counties; **S. Ellis**, UF/IFAS Extension Citrus County; **L. Hamilton**, UF/IFAS Extension Volusia County; **B. Hughes**, UF/IFAS Extension Seminole County; **D. Lee**, UF/IFAS Extension Escambia County; **K. McCormick**, UF/IFAS Extension Seminole County; **F. Oi**, UF Entomology and Nematology; **J. Shoup**, UF/IFAS Extension Jefferson County; **K. Stauderman**, UF/IFAS Extension Volusia County; **K. Stofer**, UF Agricultural Education and Communication

Structural pests impact everyone, regardless of socio-economics or demographics. Direct marketing Integrated Pest Management (IPM) to homeowners makes sense, as they are the first line of defense in preventing pests in their homes. **Objectives:** Participants will learn how to apply the principles of IPM (exclusion, maintenance, and sanitation) to prevent household pests. **Methods:** Through a USDA-NIFA Crop Protection and Pest Management Extension Implementation Project grant, Horticulture and FCS Agents in eight counties partnered with State Specialists to develop a set of PowerPoint presentations and
supporting materials to educate attendees of housing and homebuyer education classes on IPM principles. Each Agent received a pest inspection kit to illustrate key presentation points. **Results:** An end-of-class survey measuring knowledge and attitudes toward IPM before and after training has been administered in four counties. The addition of the IPM module to the homebuyer classes has been well-received by participants. Before the class, 21% contacted Extension for help with pests in the home, 32% felt they knew what IPM was, and 13% knew what questions to ask pest professionals. After the class, 92% intended to contact Extension, 93.3% knew what IPM was, and 84% knew what to ask their pest professionals. Follow-up phone surveys are forthcoming. **Conclusions:** Thus far, the program has been successful in educating first-time homebuyers on IPM. The goal is to share with other states who also may have homebuyer classes and to make Agents more knowledgeable about IPM when responding to phone calls or samples brought to the Extension office.

**Raising Healthy Grandparents, Raising Healthy Grandchildren**

A. Hinkle*, D.C. Lee*, UF/IFAS Extension Escambia County

In 2018, Escambia County citizens’ health ranked 49 of 67 Florida counties, the poverty rate was 16.4%, and the number of grandparents raising grandchildren increased. Many of these grandparents relied on assistance programs to provide for their families. They lacked knowledge to use their limited resources wisely to make healthy meals and stretch resources to meet their needs for food, medication, housing, transportation, and supporting family. **Objectives:** Grandparents who are caretakers of their grandchildren will: develop skills and increase knowledge and positive nutrition and financial health behaviors. They will use resources wisely to stretch their limited budgets, provide supplemental income, and provide the healthiest foods possible for their families. **Methods:** FCS agents offered a variety of health and wellness programs. They partnered with the Council on Aging, senior support groups, UF/IFAS Extension HCE (Home and Community Education) volunteers, apartment communities, community centers, and other senior-based groups. Programs offered included *Keeping the Pressure Down*, diabetes education, entrepreneurship/financial literacy classes, and EFNEP (Expanded Food and Nutrition Education Program) classes. **Results:** Collected evaluation data indicated the 794 grandparents who completed the Raising Healthy Grandparents, Raising Healthy Grandchildren programs used resources more efficiently, provided healthier family mealtime options, and added additional income to their limited budgets. **Conclusions:** Helping grandparents become healthier allowed them the opportunity to model healthier behaviors, which in turn created healthier environments for the grandchildren in their care. Because of the prevalence of grandparents raising grandchildren, the program can be easily adapted for use in multiple Extension programs throughout the state.

**Extension Partners with Local Hospital’s *Food is Medicine* Program**

S. Bresin*, UF/IFAS Extension Pasco County

**Objectives:** The free produce vouchers from the hospital’s *Food is Medicine* program boosts Extension program attendance and help participants increase their produce consumption, as emphasized in Extension lessons. **Methods:** Advent Health in Zephyrhills has a wellness center with classrooms. They asked Pasco County Extension to teach two series-based programs: the 8-week program *Keeping the Pressure Down* (KTPD) and the 9-week program *Take Control to Reduce Your Cancer Risks* (TCTRYCR). They
handled marketing and registration, did free health screenings to all participants on the first day and last
day of the series, and most importantly, distributed the produce vouchers to all participants at the end of
each lesson—almost $100 worth of free produce by the series’ completion. The vouchers were through a
local produce vendor that the hospital partnered with. The weekly vouchers encouraged produce
consumption and kept attendance numbers up. **Results:** At the end of the KTPD program, 50% (n=18) of
participants increased their produce intake to eight servings a day to decrease blood pressure, and three
months after, 38% (n=13) continued to increase fruit and vegetable consumption. At the end of the
TCTRYCR program, 33% (n=9) increased their produce intake. 18 participants completed the KTPD program
after starting with 19, and 9 people finished the TCTRYCR program after starting with 16. **Conclusions:**
When healthy lifestyle lessons are taught in combination with free money towards fruits and vegetables,
participants are likely to apply what they learn and maintain attendance.

**5~30 Meals – Healthy Meals in a Snap**

J. Corbus*, UF/IFAS Extension Washington and Holmes Counties

Many resort to fast-food when meal preparation time is limited; this can have an adverse effect on their
health and food budget. **Objectives:** Participants will learn how to prepare healthy meals in
approximately 30 minutes using five ingredients to save time and money as measured by
surveys. **Methods:** Five 2.5-hour classes were held during 2017-2019; Agent demonstrated two meals per
class—a main course, two side dishes, and dessert. Each meal item used five ingredients and was prepared
concurrently with the other meal items in approximately 30 minutes. Nutrition, food preparation, and food
safety guidelines were incorporated into each presentation. Participants sampled each meal and received
a recipe set. **Results:** A total of 87 persons attended the five classes; 85 persons completed an end-of-class
survey, with 59 (69%) listing at least one concept learned in class and 78 (92%) planning to prepare at least
one of the recipes distributed in the class. As a result of the class, participants intended to do the
following: Make healthier food choices (20); Read food labels to make healthy food choices (15); Reduce
sodium intake (14); Prepare and eat more meals at home (19). A follow-up survey was administered three
to nine months after class completion; five responses were received. Since attending the class, three
persons have prepared one or more of the recipes distributed; four persons have saved time and/or
money by using the recipes. **Conclusions:** Equipping persons with healthy, easy-to-prepare meal options
potentially saves them time and money and improves their health.

**Out of the Box Uses for Vegetables: Reframing the Old to Draw Interest and Improve Health**

A. Nikolai*, UF/IFAS Extension Polk County

**Objectives:** Objectives are to increase participant knowledge about new ways to use and prepare
vegetables, increase the amount and variety of vegetables participants consume, and reduce the amount
of vegetables participants throw away. **Methods:** A class titled “Out of the Box Uses for Vegetables” was
created to put a different spin on eating vegetables. The class taught people recommended servings per
day, health benefits of vegetables, basic cooking methods that work for most vegetables, and how to save
money and reduce food waste by making simple and fun additions or substitutions to foods using
vegetables. This class used integrative methods, including brainstorming and discussion among
participants, and food demonstrations, such as carrot dogs, were done to showcase a unique use of
vegetables. **Results:** A retrospective pre-post survey was used to evaluate knowledge gain and intent to change behavior. Three classes were held in 2018 reaching 40 people. As a result of the class, 94% of participants (n=34) said they have new ideas for using vegetables, 97% were extremely or somewhat likely to increase the amount of vegetables they eat, 97% were extremely or somewhat likely to increase the variety, and 83% were less likely to throw away vegetables. **Conclusions:** This class has drawn interest from class sites and shows promise in helping people eat more vegetables and over time lead to improved health and lower health care costs. Secondarily, this class can help reduce food waste thereby creating a more sustainable food system with less impact on our environment.

**Improving Fruit and Vegetable Intake through the EFNEP**

**J. Walsh**, James Madison University; **D. Devries-Navarro**, UF/IFAS Extension Palm Beach County; **N. Owens Duffy**, UF/IFAS State Specialized Agent; **K. Shelnutt**, State Nutrition Program Leader

**Objective:** To assess the difference in vegetable and fruit (V/F) intake among participants of traditional EFNEP (TRAD) series-based education versus an enhanced program (Nutrition Driven) complemented by interactive recipe demonstrations with take-home foods. **Methods:** A non-randomized, pre-post comparison study was conducted over 8-weeks at eight community sites in Palm Beach County, Florida. Fifty-one limited-resource adults (≥18 years) responsible for preparing household meals (n=26 intervention; n=25 comparison) completed the study. Most were female (85%) and about half were Hispanic. V/F intake frequency, cups consumed, and variety were assessed pre- and post-programming using four self-report items and the NCI V/F Screener. Descriptive statistics were conducted. To assess differences between groups, Independent-samples t tests and Repeated-Samples Friedman’s Two-Way Analysis of Variance by Ranks tests were conducted with pair-wise comparison using Bonferroni correction. **Results:** Frequency of dark-green, orange-colored and other vegetables (e.g., mushrooms, onions) and fruit increased significantly more from pre- to post- for NutritionDriven versus TRAD participants while no differences were noted for fruit juice and beans. At post-assessment, all NutritionDriven participants reported at least 2 cups for total daily V/F versus 50% of TRAD and there was 73% greater variety of vegetables between NutritionDriven and TRAD participants. **Conclusion:** Using formal partnerships to engage families with limited resources in enhanced nutrition education with interactive recipe demonstrations and take-home foods, may support increased V/F intake frequency and variety.

**Measuring and Reporting Personal Wellness Benefits of Extension Volunteer Programs**

**N.D. Pinson**, UF/IFAS Extension Hillsborough County; **A. Yasalonis**, UF/IFAS Extension Polk County; **J. Diaz**, UF/IFAS Gulf Coast Research and Education Center

**Situation:** Volunteers play a critical role in Extension education program areas including 4-H, “Master” programs such as Master Gardener Volunteer, Master Money Mentor, and Master Naturalist, advisory committees, and others. **Objectives:** To determine if personal wellness benefits and other impacts are provided through volunteer work, Extension Agents partnered with one program evaluation specialist to develop survey instruments. **Methods:** We used a mixed-method survey approach to collect qualitative and quantitative data from volunteers to measure the impacts of volunteerism. We emailed surveys to 210 Master Gardener volunteers and asked them to rate their level of agreement regarding the impacts
realized as a result of volunteerism on a Likert-type scale. Open-ended questions allowed for descriptions of impact. **Results:** Overall, 167 volunteers across Hillsborough and Polk counties completed the survey, providing an 80% response rate. Hillsborough volunteers reported that volunteering improves their mental health (91%), increases self-esteem (88%), helps them stay physically active (84%), and reduces stress level (67%). Polk volunteers indicated improved mental health (61%), volunteering helped them recover from a loss or disappointment (28%), and the program provided high-quality social relationships (69%).

**Conclusions:** Studies show formal volunteering correlates with well-being, “and the more frequently a person volunteers, the greater is the increase in the probability that such person will report being healthy and happy” (Borgonovi, 2008). Survey tools and online resources will be shared with participants. Results may be used by faculty and volunteer coordinators to report personal wellness benefits to stakeholders, improve volunteer programs, and understand retention.

**Summer BreakSpot: Nutritious, No-Cost Meals for Campers**

**G. Mendoza Perez*, K. Brault, UF/IFAS Extension Levy County**

**Objectives:** Like other rural counties in the state of Florida, many students in Levy County live in households with low to very low incomes and they rely on the meals provided at school for their main food source. So, what do they do when school is out for the summer? Levy County 4-H sought to remedy this through partnering with the Summer BreakSpot program to provide children nutritious meals during summer day camps. **Methods:** Levy County 4-H partnered with a local site sponsor, Bronson Elementary, to provide meals for breakfast and lunch to each camper that attended for the week, Monday through Thursday. The site sponsor had the responsibility of purchasing, preparing, and coordinating delivery of the meals while Levy County 4-H picked up and served meals according to the program requirements. **Results:** Through the Summer BreakSpot program, children attending our summer day camp programs were ensured nutritious, wholesome breakfast and lunch meals. A total of 227 campers were served 1,816 meals during June and July of 2018. Several of the campers receiving these meals reside in areas identified by the USDA as food deserts, so the program’s ability to reach them was even more important. **Conclusion:** By offering meals through the Summer BreakSpot program, Levy County 4-H has been given the ability to continue to provide nutritious breakfast and lunch meals as part of the summer day camp program which serves families with school-aged children in the community.

**From Pasture to Plate 4-H Day Camp**

**B.Yancy*, F. Rivera-Melendez*, UF/IFAS Extension Hillsborough County; J. Bosques, UF/IFAS Extension Hardee County; S. Ghosh* UF/IFAS Extension Polk County; L. Bennett, UF/IFAS Extension Pasco County; C. Poliseno*, M. Hange, A. Grooms, UF/IFAS Extension Hillsborough County; J. Zayas*, UF/IFAS Extension Hardee County**

**Objectives:** 1. Generate interest in the beef cattle project among youth ages 11-18. 2. Educate attendees on various aspects of beef cattle industry including animal grazing, soil testing, digestive anatomy, and body condition score. 3. Educate attendees on the tailgate grilling curriculum. **Materials and Methods:** 4-H relies heavily on the experiential learning model benefitting youth participants irrespective of their varied learning styles. This workshop employed multiple delivery methods like interactive games, multi-media presentations, team building activities, skill-a-thon and demonstrations to
disseminate information. It was a collaborative effort with seven extension educators representing four counties. The day camp was evaluated using pre/posttest to document knowledge gain and to evaluate the effectiveness of the day camp. **Results:** A total of 13 youth and 2 adults attended the day camp of which 8 completed the pre/post test and evaluation. 88% (n=8) reported knowledge gain in grazing behavior of beef cattle, soil testing technique, digestive anatomy of beef, body condition score, beef cuts and healthy beef recipes. 75% (n=8) reported knowledge gain in food, fire safety for grilling outdoors. 100% (n=8) of the respondents reported demonstrations, as a method of program delivery, best suited their learning style. **Conclusion:** This day camp provided a comprehensive knowledge on safely preparing animal protein in an outdoor setting and the beef production system. It aimed at developing life skills such as wise use of resources, healthy lifestyle choice, personal safety, critical thinking, leadership and decision making, to create awareness and appreciation of our food systems and environments.

### Creating Behavior Change through Interactive On-line Series

**W. Lynch**, UF/IFAS Extension Putnam County; **J. England**, UF/IFAS Extension Seminole County; **W. Dahl**, UF/IFAS Food Science & Human Nutrition Department

Seventy-five million Americans have high blood pressure and 46% do not have it under control (CDC, 2018). Adopting positive health behaviors are essential to reducing risk or managing high blood pressure. **Objectives:** Participants will increase knowledge and self-efficacy of lifestyle changes that will effectively manage blood pressure and identify and sustain at least one behavior change to manage blood pressure. **Methods:** A team consisting of two county agents and a state specialist organized the five-part Essentials of Blood Pressure Management webinar series. This evidence-based series was visually engaging and encouraged participant interaction. Each session included a post-program survey to measure knowledge gain and self-efficacy. **Results:** The series reached 518 participants (193 unduplicated). Post program results included: Increased knowledge of monitoring blood pressure accurately (83%; 64 of 77), the physical activity needed to improve or maintain overall health (90%; 52 of 58), improved stress management (93%; 54 of 58), and what nutrients improve blood pressure (97%; 58 of 60). Six-month, follow-up surveys were sent to unduplicated participants (28% response rate). Of respondents, 24% (13 of 55) decreased blood pressure. Actions included: 59% (32 of 54) made changes in their food selection to eat healthier, 67% (37 of 55) increased fruit and vegetable consumption, 49% (27 of 55) reduced consumption of sodium, 53% (29 of 55) increased physical activity, and 51% (28 of 55) took steps to reduce stress. **Conclusion:** An online hypertension series can increase knowledge, improve self-efficacy, and support positive lifestyle changes to prevent or manage hypertension.

### Columbia County TailGATORS: Taking the Florida Tailgate Competition to a New Level


**Situation:** The Florida 4-H Tailgate Contest was introduced in 2016 to teach the art and science of grilling in an outdoor setting. Agents at UF/IFAS Extension Columbia County took the contest to a new level by creating a series of classes on grilling. Columbia TailGATORS was designed to prepare youth for local and district contests through hands-on participation. **Objectives:** The classes were designed to solidify the farm to table agriculture connection, teach outdoor cooking experiences, improve youth nutritional knowledge and cooking skills, and promote knowledge about safe handling of meats and their proper temperatures to produce safe and delicious meals. **Methods:** Target audience was 4-H members ages 8-18. Participants
were required to attend 4 classes prior to participating in the local and/or district contests. Classes included: (1) safety of grilling, food, and fire; (2) agriculture awareness, meat selection, and flavoring with vegetables; (3) seasonings, herbs, and recipe development, and (4) grilling practice. Parents/Guardians were encouraged to attend with youth to help in applying these skills at home. **Results:** Student evaluations indicated participants increased their knowledge about meat selection, proper food safety, grill safety, fire safety, and recipe/seasoning development. 100% of youth are now cooking at home and ready to compete. Adults reported learning new methods of proper food preparation with an unexpected bonus of enhancing their youth/adult partnerships when cooking at home. **Conclusions:** Youth involved in the TailGATORS series are better prepared to excel in grilling contests and are able to cook foods safely at home.
## Leadership and Innovation
### Island
Yolanda Goode, ESP Abstract Chair
Tuesday, August 27 & Wednesday, August 28

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<td>Yolanda Goode</td>
<td>Introductions &amp; Protocol</td>
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<td>12:45 – 1:05 pm</td>
<td>A. Halbritter</td>
<td>Keep Them Engaged: Effective Social Media Content Planning to Drive Engagement</td>
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<td>1:10 – 1:30 pm</td>
<td>N. Parks &amp; L. Hamilton</td>
<td>Alternative Methods of Evaluation: Digital Surveys in the Classroom</td>
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<td>1:35 – 1:55 pm</td>
<td>S. Taylor</td>
<td>Strategic Partnerships for Financial Coaching</td>
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<td>2:00 – 2:20 pm</td>
<td>K. Waters &amp; J. Cant</td>
<td>Using Live Social Media Videos to increase the Reach of Your Extension Programming</td>
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<td>2:25 – 2:45 pm</td>
<td>A. Stewart</td>
<td>Building Partnerships to Establish a Presence in Your Community</td>
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<td>Y. Goodiel</td>
<td>Treasure Coast Agriculture and Commercial Horticulture Needs Assessment</td>
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<td>3:15 – 3:35 pm</td>
<td>L.G. Tiu</td>
<td>Developing Social Media infographics for Florida Sea Grant Aquaculture</td>
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<td>N. Samuel</td>
<td>Sharing Lessons on Collaboration in Rural Advisory Services on a Global Platform</td>
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<td>4:05 – 4:25 pm</td>
<td>L.A. Albrecht</td>
<td>Using Certificates and No-to-Low Cost Incentives to Build Bigger Audiences and Impacts: Three Case Studies</td>
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<td>2:00 – 2:20 pm</td>
<td>L.H. Byron &amp; K. Clements</td>
<td>Linking UP with Libraries: Evolving Beyond Conference Rooms to True Partnerships</td>
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<td>2:25 – 2:45 pm</td>
<td>B. Snodgrass</td>
<td>Bay to Bae Brings New Faces and Funds to Extension</td>
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<td>2:50 – 3:10 pm</td>
<td>L. Hurner</td>
<td>What, You Think I Need a Leadership Coach?</td>
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<td>3:15 – 3:35 pm</td>
<td>C. Alberts, K. Rotindo, &amp; E. Skvarch</td>
<td>Advisory Ambassadors</td>
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<td>3:40 – 4:00 pm</td>
<td>E.A. Felter</td>
<td>Digging Deeper: Using Focus Groups as an Industry Needs Assessment</td>
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<td>4:05 – 4:25 pm</td>
<td>A. Betancourt</td>
<td>Tools for Building and Managing Partnerships in your County</td>
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*On-site room changes of presentation locations may occur. Look for posted announcements of any changes.

**Keep Them Engaged: Effective Social Media Content Planning to Drive Engagement.**

**A. Halbritter*, UF/IFAS Extension Baker County**

**Objectives:** Social media is a key part of today’s society and can be utilized to reach new clientele or be an effective continuous educational tool. Agents who are not tech savvy or who have constraints on time can utilize the outlined methods to run successful pages. **Methods:** Consistent, high quality posts drive engagement of followers and increases the amount of views each post gets, allowing educational content to reach more clientele. With changing algorithms on social media, it is important that pages post consistently, post varied content, and have follower engagement in order for posts to be seen, shared, and to gain popularity. Agents rarely have time to create content on a daily basis, but content planning strategies and pre-scheduling posts can allow agents to create a months’ worth of content in just a few hours. **Results:** Utilizing techniques like creating high quality posts, encouraging engagement, sharing strategically, and scheduling posts, the North Florida Livestock Agents Group Facebook page has seen significant impacts. The UF NFLAG page has seen a 20% increase in followers (Jan. 1- 354 followers, Apr. 22- 424 followers) since utilizing the above techniques. Since January 1st, 29,279 people have seen educational posts on the page, with one post getting 89 shares. Page views have increased by 75% and engagement nearly 500% percent. **Conclusions:** Social media can be an effective tool to maintain engagement with extension clientele, provide timely information, and easily market upcoming programs. Our clientele are using this service every day, we should be too.

**Alternative Methods of Evaluation: Digital Surveys in the Classroom.**

**N. Parks*, UF/IFAS Extension Duval County; L. Hamilton*, UF/IFAS Extension Volusia County**

Completing pre-post surveys during a program can be a challenge for Extension Agents. Incomplete data as well as time constraints for aggregating and analyzing data can limit successful evaluation. Implementing digital evaluation in the classroom improves program evaluation. **Objectives:** Increase the efficiency and accuracy of collecting pre-post evaluation. Provide real-time feedback for the participants and agents. Develop a comprehensive evaluation process for periodic follow up to document behavior change. **Methods:** Two agents used Qualtrics pre-post evaluation for financial and homebuyer programs. The agents created an electronic environment for participants to access evaluations via their mobile devices. Participants were provided with a URL or link to the survey. Surveys in the financial class received
real-time scoring. Surveys in the homebuyer class collected HUD-required demographic data and subject-matter knowledge gain was analyzed after the class. Participants were required to complete surveys before receiving certificates of completion. **Results:** To date, 248 individuals from the financial programs and 59 participants in homebuyer programs completed electronic pre/post surveys. Of the 307 participants, 89% completed pre-post surveys via mobile devices. **Conclusion:** Both agents found that digital pre-post surveys significantly reduced the amount of time required to collect, aggregate, and analyze the data. Using Qualtrics, participants and agents were able to see real-time evidence of knowledge gained from the program. Scoring the post-test in the classroom is an effective tool for reinforcing learning. Overall response rates for pre and post surveys improved.

**Strategic Partnerships for Financial Coaching**

*S. Taylor*, UF/IFAS Extension Hernando County

**Objectives:** FCS provides financial literacy education to county residents. Strategic partnerships with community organizations were developed to identify and educate those residents needing this education. FCS, United Way, religious organizations, financial institutions, and other support organizations wanted to get basic financial tools and programming to residents seeking assistance. Through targeted financial literacy programs, 50% of participants will learn to track their savings/spending, 25% of participants will identify the positive aspects of a good spending plan and begin steps to plug spending leaks, as evidenced by increased emergency savings available, and participants no longer living paycheck to paycheck. **Educational Methods:** The Money Calendar is the foundation to help clients learn how to track their expenses and develop a budget. Every session, they must bring their calendar and show they have been tracking their spending and prove there is a true need for assistance, not just a “spending or priority” problem. Second chance bank accounts are available to residents to help re-establish their financial status and break the buy here pay here cycle. **Results:** These partnerships have resulted in over 7000 residents attending programs since 2009, 63% of which have started tracking expenses (~ 4400). Of those tracking, 53% established a planned savings program, 23% have improved their financial situation enough to use mainstream financial institutions, and 13% realize how expensive eating out is compared to preparing and eating at home. **Conclusions:** Through partnerships and customized educational models, FCS is a valuable resource for agencies to meet resident’s needs.

**Using Live Social Media Videos to increase the Reach of Your Extension Programming**

*K. Waters*, UF/IFAS Holmes County Extension; *J. Cant*, UF/IFAS Duval County Extension

Developing effective communications channels to reach clientele is critical for an agent’s success. Social Media has introduced tools which have allowed agents to increase their reach through live video interaction. Facebook LIVE videos have six times as many interactions as traditional videos and have 3 times the watch length. This gives agents a powerful and unique opportunity to reach producers through Facebook LIVE videos. **Objectives:** The objectives of using Facebook LIVE to educate producers were 1) to use live social media videos as a platform to educate producers on current/relevant topics, 2) use videos as a nontraditional platform to reach producers who would not typically be exposed to Extension programming, and 3) develop a model for agents to use that is effective at increasing the reach of their programming in an efficient manner. **Method:** Ten Facebook LIVE videos, on various topics, were recorded
live, in the field while the agents were performing field visits. These videos were recorded on an established Facebook page and then shared to groups with corresponding interests to increase reach. **Results:** These videos resulted in a total reach of 103,380 with 41,707 clients viewing the videos. These videos were shared 181 times and resulted in 10,624 engagements. **Conclusion:** Facebook LIVE is an effective tool that allows agents to increase their reach to clientele and should be implemented into all social media programming to remain as a relevant platform in today’s society.

**Building Partnerships to Establish a Presence in Your Community**

A. Stewart*, UF/IFAS Extension Highlands County

**Objectives:** Highlands County 4-H has been seeking ways to increase participation in the local 4-H program. This created a need to introduce new programs and activities that would appeal to our non-traditional 4-H members and also to engage outside youth from the community in 4-H experiences. **Methods:** Rather than having to create a new community event and worry about who would staff the event, manage the marketing, funding, and risk management, we targeted an existing community festival that was lacking a youth educational component. We partnered up with the Sebring Community Redevelopment Agency, NASCAR’s Sebring International Raceway, and IMSA to provide youth programming in the form of a 4-H Pinewood Derby competition for the annual Twelve-Hour Fan Festival. This free, one day event provided youth with the opportunity to learn about physics and engineering from real race car drivers and a 4-H faculty member while designing and constructing their own pinewood derby car to race. **Results:** A total of 44 youth participated in the event ranging in age from 8-18 years old. 52% of the youth participants were not registered 4-H members. 98% of participants reported that it was their first time competing in an activity of this nature and 87% reported that they would like to participate in similar 4-H activities and 99% of these youth returned to participate in a second 4-H activity. **Conclusion:** Our program was so well received that we have secured a permanent presence and will continue to spearhead youth programs at the festival.

**Treasure Coast Agriculture and Commercial Horticulture Needs Assessment**

Y. Goodiel*, UF/IFAS Extension Martin County; E. Skvarch, UF/IFAS Extension St. Lucie County; C. Kelly-Begazo, UF/IFAS Extension Indian River County

**Objectives:** Assess the needs and demographics of agricultural and commercial horticulture clientele across the Treasure Coast quickly and efficiently through completion of a needs assessment online survey. **Methods:** Agricultural and Commercial Horticulture Extension Agents across the Treasure Coast (Martin, St. Lucie, and Indian River Counties), with input from Advisory Council members, created a needs assessment and demographic survey in Qualtrics and obtained IRB approval. Respondents were asked to provide data on their workforce demographics, preferred training dates/times/locations, and programs needed. They were also asked whether or not they had enrolled or been certified in Best Management Practices (BMPs). In 2018, Agents distributed the survey link to clientele and industry organizations. **Results:** A total of 78 respondents, representing a range of occupations (farmer, nursery grower, public employee, commercial landscaper, etc.), completed the survey. Approximately one-third expressed a need for programs in Spanish, as their reported demographics were 55% and 40% Hispanic in agricultural and commercial horticultural operations, respectively. Trainings for required licensing were
requested, though many also sought training in water conservation, local fertilizer ordinances, business, and other topics. Almost one-third were not yet certified or enrolled in BMPs for many reasons, including a lack of knowledge/ability to implement BMPs. Treasure Coast Agents developed a 2019 regional program schedule to begin addressing needs identified. **Conclusions:** Online needs assessments allow for input from a wide variety of stakeholders quickly and efficiently, helping Agents and Advisory Councils to target specific demographics, meet information needs, and address obstacles to BMP adoption.

**Developing Social Media infographics for Florida Sea Grant Aquaculture**

L. G. Tiu*, UF/IFAS Extension Walton County

Aquaculture is Florida's most diverse agribusiness, excelling in shellfish, marine, restoration and ornamental aquaculture. Aquaculture outreach is conducted through a network of Florida Sea Grant Extension Agents and Specialists who provide the information needed to help Florida’s citizens and visitors better appreciate and understand the industry that provides a wide range of cultured, aquatic products for local, regional, and national markets. **Objectives:** Specialists developed a series of nine infographics representing the various sectors of aquaculture in Florida to be shared over social media channels during October 2018, National Seafood Month. **Methods:** Several steps were involved in creating the infographics: identify the goal/intent, develop smart objectives, determine focus and content of the infographics, develop graphics and combine content, publish infographics on social media and website and monitor, and finally, evaluating the project. **Results:** Impact was measured using a variety of metrics readily available to developers. Seven Facebook posts reached 27,015 with 2122 engagements. Twitter tweets received 16,986 impressions, and Instagram had 4,207 impressions with 192 likes. Each post linked to the landing page, which incurred 552 page views during the month. **Conclusions:** This campaign reached over 50,000 people in one month with nearly 3000 documented engagements. Successful social media campaigns require careful thought and planning, and active participation and collaboration among team members with varying expertise. Fortunately, they tend to be inexpensive, requiring only an investment in time. Their value lies in their flexibility and ability to quickly increase awareness of your programs and engage followers.

**Sharing Lessons on Collaboration in Rural Advisory Services on a Global Platform**

N. Samuel*, UF/IFAS Extension Sumter County

Collaborative partnerships amongst government, nongovernmental organizations (NGOs), individuals, or industry groups allow for extension and rural advisory services (RAS) to share or tap resources to address common goals and create greater impact. **Objectives:** The objectives of the meeting in relation to RAS were: (i) smart technologies (ii) innovative financing; and (iii) convergence through collaboration and coordination. **Methods:** A total of 152 Extension and RAS Providers representing the various networks, local and international NGOs, and funding partners gathered in Jeonju, South Korea, October 22 – 25, 2018 for the annual meeting of the Global Forum for Rural Advisory Services (GFRAS). The theme of the event was “Addressing Challenges and Seizing Opportunities: Developing Effective Partnerships in RAS”. Agent participated side event that provided input on proposed guidelines to assess pluralistic extension systems; presented her experiences of collaborating on multi-agency projects; shared and learned what other extension networks are doing to strengthen Extension and RAS in their respective regions; and provided
input on GFRAS activities for the upcoming year. **Results:** The state of collaboration in RAS, best practices, and actions needed were mapped onto the Ecocycle model. Networks determined plan of action for 2019. Also, an overall goal for GFRAS through the regional networks to promote the utilization of the New Extensionist Learning Kit course materials for self-directed, study groups, or college course. **Conclusions:** Strategies utilized, and lessons learned on collaborative partnerships are somewhat similar. Collaborative partnerships should be encouraged amongst stakeholders within the agricultural value chain at local, national, regional, and international levels.

**Using Certificates and No- to Low- Cost Incentives to Build Bigger Audiences and Impacts: Three Case Studies**

L.A. Albrecht*, UF/IFAS Extension Palm Beach County

Behavior change often requires reaching clients through multi-week programs. Certificates and other low-to no-cost incentives can help increase audience buy-in and create greater impacts. **Objectives:** 1) to build larger audiences by using certificates and incentives; and 2) to generate greater impacts through increased attendance. **Methods:** The Professional Landscape Management (PLM), Save Money on Your Landscape (SMOYL) and Sustainable Gardening (SG) programs are each multi-week programs lasting six- to three-weeks in duration. Total hours for each class: 240 for PLM, 210 for SMOYL, and 150 for SG. Methods include integrative, reinforcement and experiential field trips and demonstrations at Mounts Botanical Garden. Incentives include certificates of completion, contests and low-cost behavior change prompts such as magnets. **Results:** Over the past four years, 117 professionals earned certificates of completion in the six-week PLM program. Irrigation savings from certificate holders in last two programs alone = over 17 million gallons of water a year. The majority of participants also adopted other best management practices. In all, 92 people earned SMOYL certificates in the three-week program during the last three years, adopting new landscaping practices that include saving 25.7 million gallons of water/year. This year, the agent created a new certificate program in Sustainable Gardening. Results will be available at EPAF. **Conclusions:** agents in every county (and most likely, every IFAS department) can increase workshop participation and generate larger impacts by using certificates and cost-effective incentives to attract audiences to multi-week classes.

**Linking Up with Libraries: Evolving Beyond Conference Rooms to True Partnerships**

L.H. Byron*, K. Clements* UF/IFAS Extension Sarasota County

**Objectives:** Through innovative partnerships with county libraries, Sarasota County Extension aims to reach new and diverse audiences with impactful programs. **Methods:** While most Extension offices use their libraries’ conference rooms as venues for classes, in Sarasota County that partnership has expanded into a two-way collaboration benefiting both entities. The libraries are sites for Master Gardener plant clinics and demonstration gardens. Family Sustainability Kits and Do-It-Yourself home audit kits developed by Extension are available to check out. Libraries also host a monthly Extension “Making a Difference” poster series. Library and Extension staff regularly meet to integrate Extension content into summer reading programs, youth engagement strategies, and more. Librarians provide book recommendations for programs and for a regular column in an Extension monthly eNewsletter. **Results:** Together, the two departments are better serving county residents with enhanced programs and broadened audiences. The
Libraries’ staff have made sustainability goals their own, receiving an award for their leadership on the topic. The partnership continues to evolve, with the Explore Your World backpack program due to launch in 2019, which will include environmental education classes and a family-friendly kit at every library with activities and equipment to explore the outside world. **Conclusions:** Libraries and Extension have shared goals of community engagement and education. By collaborating creatively, programs increase attendance, reach those unfamiliar with Extension and result in clear community impacts. These programs are replicable in other counties with little to no cost.

**Bay to Bae Brings New Faces and Funds to Extension**

**C. Snodgrass**, UF/IFAS Extension Manatee County

New and unique revenue sources are becoming increasingly important to support Extension programming. Extension Agents statewide are working to build relationships and find creative opportunities to support their programs. In 2018, UF/IFAS Extension Manatee County was presented with such an opportunity through a program called Bay to Bae, a competition among Tampa Bay professionals to host fundraisers for their favorite non-profit organizations. **Objective:** To gain new community partnerships, educate new audiences and gain an additional source of revenue for program support. **Methods:** UF/IFAS Extension Manatee County worked closely with Bay to Bae contestant Jamie Kanter (a UF alumna and Manatee County native) to develop, market, and host three unique fundraising events. Events included a corn hole tournament with silent auctions, a Gator football watch party in collaboration with the Manatee County Gator Club, and a yoga and brunch event. Each event included an educational segment from Extension. In addition, a vacation package was auctioned and added to the fundraising total at the formal finale event. **Results:** From July-Sept. 2018, a total of $9,663.00 was raised to support Extension programs with an additional $12,480 in in-kind contributions. New audiences were reached, and partnerships were formed. **Conclusion:** Bay to Bae presented a unique opportunity to “think outside the box” to bring a new source of revenue, new partnerships and new clientele groups to support Extension. Plans to collaborate on future fundraising events are in the works.

**What, You Think I Need a Leadership Coach?**

**L. Hurner**, UF/IFAS Extension Highlands County

**Objectives:** To equip Highlands County department directors with additional leadership skills and improve their management abilities. To help the department directors balance work and life. **Methods:** County Extension Director worked with a local leadership/life coach that the county administrator hired to work with his management team. The County Extension Director (CED) is a member of this team of 12. The CED met with the life coach on 6 occasions and implemented new skills and concepts discussed during these sessions. The success of this coaching was evaluated by the leadership/life coach meeting with the faculty and staff in the office (three faculty, two support staff) without the CED, halfway through the coaching period and at the end. **Results:** Halfway through the coaching sessions 100% of the office indicated that the CED was trying new skills in her leadership role. Seventy-five % said they liked the new skills and felt that in some areas communication was clearer after the coaching started. At the end of the coaching sessions 100% of the office indicated that the CED seemed more focused on the office as a whole and was communicating more about her expectations for each faculty and staff member and checking in more
Conclusion: County Extension Director was very pleased with the personal growth that occurred. The office is more cohesive, more effective and communication is at an all-time high. These improvements will help the office as a whole better serve Highlands County.

Advisory Ambassadors

C. Alberts*, K. Rotindo*, K. Gioeli, E. Skvarch*, R. Borger, UF/IFAS Extension St. Lucie

Objectives: UF/IFAS Extension St. Lucie County faculty innovated changes to their Advisory Council beginning in 2017. These changes were designed to teach members how they can actively advocate on behalf of the UF/IFAS Extension and increase their community engagement through a guided methodology. Methods: An advisory council needs assessment was conducted that indicated a lack of understanding regarding the role of an advisory council member and the tools available to them to support Extension in St. Lucie County. With input from UF/IFAS Communications, agents created toolkits containing information about Extension’s role and value to the community, promotional products such as logo items to encourage brand recognition, and a flash drive loaded with a promotional presentation and video they can use when engaging with other community organizations. They were encouraged to blog, speak, and write letters to the editor describing Extension’s role addressing the needs of the community. Additionally, staff initiated a promotional activity point reward system so Advisory members could report their efforts and work toward an Outstanding Advisory Ambassador recognition. Results: By February 2019, eight advisory council members completed Advisory Ambassadors training and received their toolkits. Three advisory members have submitted letters to the editor of the local newspaper, spoken about Extension at a Rotary meeting, and conducted other activities. Conclusions: Advisory council members expressed satisfaction that their needs have been adequately addressed through this program. They are eager to increase their community engagement to promote Extension’s efforts in the community using the training and tools provided.

Digging Deeper: Using Focus Groups as an Industry Needs Assessment

C.R. Warwick, UF/IFAS Extension Mid-Florida Research and Education Center; E.A. Felter*, UF/IFAS Extension Orange County

Objectives: As the horticultural industry prepares for an oncoming generational shift with the retirement of “Baby Boomers,” understanding the needs of young industry professionals will be critical to agents hoping to develop relevant, valuable resources. Researchers at the Mid-Florida Research and Education Center conducted focus groups as a form of needs assessment with 35 individuals involved in horticultural production and food systems. Methods: Needs assessments refers to a broad range of processes Extension can use to determine priorities, make improvements, and understand clientele. Focus groups are a natural fit as a needs assessment tool, since focus groups allow researchers to gain a much greater depth of understanding than traditional quantitative methods. Results: Initial focus groups at the Mid-Florida Research and Education Center yielded insights into young industry professionals’ perceptions of Extension and university-sponsored research. During the focus groups, participants were asked specific questions about when, why and how they use UF resources when searching for information about the horticulture industry. For example, when discussing Extension one urban food producer said, “You realize that these are just people [Extension faculty] that care about the same stuff we do and want to
Conclusions: Utilizing focus groups as a needs assessment to understand young industry professionals’ perceptions of Extension as well as research and communication needs has been proven as effective. When Extension faculty are developing curriculum for new generations of industry professionals, conducting a focus group to drive content development is a path to relatable, valuable programming.

Tools for Building and Managing Partnerships in your County

A. Betancourt*, UF/IFAS Extension Monroe County; J. Gellermann, UF/IFAS Extension Pinellas County

Objectives: The program is designed to assist Extension faculty who desire to develop and enhance their leadership skills. The module is equivalent to approximately three hours of instruction including activities, additional materials and an assessment. The module is delivered completely through online instruction, meaning that participants can complete the module according to their own time schedules. The module is designed to advance county-level administration in the Extension system. Methods: County Extension directors will lead a discussion and review tools that will help CED’s and agents to grow and manage partnerships in their county. Alicia and J.P. developed this module in response to a planned certificate in county leadership request from IFAS Communications, but it is available as a stand-alone module. Topics covered include: Build and foster positive relationships with county administration, interact with key leaders and clientele, Recognize and resolve conflict, follow county and state emergence management operations, Network and partner with organizations and agencies, Explain Extension as a part of the Land-Grant University and Manage volunteers. Results: Participants will have an overview of the module. This important aspect of Extension work is critical for both new and seasoned agents and this training provides the tools for a comprehensive approach to build and manage partnerships. Conclusions: Building partnerships includes formal opportunities, such as implementing a plan of action and taking advantage of informal activities. Developing support for Extension occurs gradually over a long period of time. It is not something that is accomplished in one conversation or one activity!

2019 EPAF Poster Presentation Abstracts

POSTER SESSION – PALM GARDENS FOYER

Tuesday, August 27
12:15 p.m. - 12:45 p.m.

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On-Farm Research Develops Novel Method for Characterizing the Impact of Equine Manure Management Practices on Water Quality

C. Bainum*, UF/IFAS Extension Marion County; M. Mann*, UF/IFAS Extension Lake County; C. Wickens*, A. Francisco, UF Dept of Animal Sciences; M. Clark, UF Dept of Soil and Water Science

Eutrophication of waterways from nitrogen and phosphorus inputs result in impairments to Florida’s water resources. Mitigating nutrient loading to ground and surface waters through proper management of horse manure and stall waste can help protect water quality. One way to mitigate nutrient loading is through effective composting of waste material. Unfortunately, research characterizing the relationship between on-farm equine manure management practices, specifically composting versus stockpiling of stall waste, and water quality is limited. **Objective:** The objective of the current study was to develop methodologies for in-situ characterization of the nutrient profile of ground and surface water runoff from stockpiled equine waste compared to waste that has been effectively composted. **Methods:** Researchers partnered with three equine facilities to install collection equipment at their manure handling sites. A collaboration between State Specialists and County faculty enabled two workshops to be conducted for local farm owners to facilitate practice change for manure storage. **Results:** Through the innovative use of lysimeters and water runoff collection trenches, researchers were able to develop a cost-effective, easily deployable, and readily adaptable method for characterizing on-farm nutrient losses in leachate and surface runoff from manure storage sites. **Conclusion:** The methods employed in this study will facilitate data collection in the field that will help guide Best Management Practices for both producers and decision makers. By quantifying the impact that different manure management practices have on freshwater systems, Extension agents will be better able to make science-based recommendations for proper manure handling.

Equine Focused Workshops Improve Horse Farm Management Practices in Central Florida

C. Bainum*, UF/IFAS Extension Marion County; B. Justesen*, UF/IFAS Extension Osceola County; M.N.B. Mann*, UF/IFAS Extension Lake County

A recent study of horse owners uncovered a fundamental lack of knowledge regarding good animal husbandry practices (Williams et al., 2018). **Objectives:** This ignorance may cause unintentional mistreatment of animals and leads to higher costs associated with feed and health care. Additionally, mismanagement of horse manure and poor grazing management can contribute to non-point source pollution of freshwater systems, a major area of concern in Florida. The large number of equine enthusiasts in Central Florida presented a prime opportunity for positive intervention by Extension. **Methods:** Livestock Agents piloted a day-long workshop aimed at increasing the adoption of recommended equine management practices amongst horse owners in Central Florida. The Agents used a combination of lecture and hands-on teaching to address topics ranging from manure composting and vaccinations to grazing management and equine nutrition. **Results:** The workshop has been repeated in five counties and a total of 174 horse owners
have attended workshops to date. Post program surveys found that 100% of respondents indicated intent to adopt one or more recommended practice changes as a result of their participation. These practice changes included soil testing (47%), implementing grazing management practices (66%), composting manure (48%), feeding forage-based diets (65%), and to discuss vaccine protocols (74%) with their veterinarian. **Conclusion:**

Extension workshops that target horse owners can play a role in increasing horse owner knowledge of recommended management practices. This knowledge gain then leads to the adoption of practices that can result in improved economic and environmental sustainability of horse farms.

**Global Citizenship Through International Exchanges**

_G. Bender*, UF/IFAS Extension Retired; S. Michael, UF/IFAS Extension Seminole County; J. Sprain, UF/IFAS Extension Osceola County_

**Background:** Florida 4-H has partnered since 2015 with States’ 4-H International Exchange Program. This marks their 48th year with 23 states providing hosting opportunities to nearly 700 in their cities and towns. About 80 young 4-H’ers will travel overseas to have a once-in-a-life-time experience to learn more about “my world.” **Objective/Purpose:** To increase awareness about other cultures around the world through a family hosting program. Exchange Programs are one vehicle through which connections with others can be made. **Method:** Sharing of the National Evaluation and Program Impact annual report. The focus is on Impact on Host Families, and What Host Siblings Learned and the Impact of Hosting. Descriptions of the variety of programs available for hosting or travel experiences will also be shared with handouts. Snacks from Japan will be available to taste. **Conclusion:** As a result of presentations, workshops, poster sessions, use of social medium, email blasts to 4-H families the program is increasing in county involvement. In our 4th year 2019 we hosted 15 youth for the summer program, 4 academic year students from Japan, Estonia and Tajikistan, and sent one 4-Her’s to Japan for 8 weeks and 2 4-H’ers for the summer hosting and one 4-H’er to Costa Rica. The program is managed by Shane Michael, Extension Staff with one 4-H agent coordinating the summer inbound program. Volunteers are used to coordinate the Outbound and Academic Year Program as well as serve as local coordinators. We are now active in three exchange programs compared to our summer only exchange. Increasing awareness of this opportunity for our 4-H and Extension community will only help bring “Peace Through Understanding.”

**Empowering Master Gardeners to Build their Own Gardening Floating Beds**

_L. Bravo, UF/IFAS Extension Broward County; J. Qiu*, UF/FLREC Broward County; G. Sandoya, UF/EREC Palm Beach County_

**Background:** Broward County Urban Horticulture agent joined forces with four UF/IFAS Extension state agents and 2 UF faculty specialists to conduct the first Broward County Hydroponic Solutions for Urban Food production in July 2018. Broward County does not have an agricultural program but is collaborating with state agents and UF faculty to offer new program opportunities to Broward County Master Gardeners and residents. The first workshop had great attendance with 40 people in Broward County of which 13 were Master Gardeners (MGs). The attendees were evaluated in a pre and post survey indicating a 4.9 out of 5 levels of satisfaction. This preliminary data indicated that there is an emerging interest to implement hydroponic operations in this program. **Objective/Purpose:** This multi-discipline approach brings together the expertise of each agent: Agriculture and Horticulture in an urban setting to increase the awareness on
environmental benefits of urban farming and hydroponics. In doing this Broward County Extension can offer more programs, reach a different audience and provide higher quality hands-on learning experiences. This collaboration also allows for agents to share and learn about each other’s programs and ultimately improve the livelihoods of urban residents, especially low-income communities through MGs. **Method:** Because of the first workshop; in May 2019, Broward County Master Gardener program launched the first hydroponic workshop to 23 Master Gardeners with a focus on water use efficiency. MGs were trained in urban agriculture aspects, water use efficiency and identify suitable cultivars for hydroponics. **Conclusion:** From 23 Master Gardeners, 19 were satisfied from workshop and results. Master Gardeners were evaluated in a pre and post survey indicating their hydroponic knowledge increased from 35% to 85%. Participants learned to build their own hydroponic floating bed system together to test hydroponically grown Florida lettuce as an alternative crop for local food production. Broward county extension agents and faculty will continue this program and expand the hydroponic Broward County program to other program areas in need such as 4-H.

**Responding to Needs of Florida Cattlemen Through Educational Infographics**

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**Background:** As the population increases to over 22 million in Florida and public perception of agriculture changes, agriculture producers are meeting never-ending challenges. Over the years Florida landscape has changed to accommodate the numerous residents in the coastal areas. Some of these changes have led to environmental impacts and misperceptions about the role agriculture has played. That public issue combined with the lingering animal rights pressure has created a conflict between agriculturalist and consumers. **Objective/Purpose:** The purpose of this task force was to create simple, easy to use graphics as a tool for cattlemen to educate policy makers and consumers. With the ultimate goal of helping connecting consumers with Florida ranching agriculture and turn misinformation and misperceptions into a healthy and productive conversation about agricultural progress in food production and land management. **Method:** Through a collaborative effort of multiple UF/IFAS livestock agents and the Florida Cattlemen’s Association a series of infographics were designed that highlight positive impacts ranching makes to the environment, how it influences the economy, how ranchers utilize best management practices and how they play a part in a safe food supply. These infographics have been distributed amongst national policy influencers, state policy makers, consumers and ranchers, and on many avenues of social media. **Conclusion:** Through this effort consumers and policy makers gain a better understanding of the progressive food systems, an appreciation for the efforts made by producers, and a clarification of misinformation about the health of our food supply. These infographics foster supportive policy regarding research, national and statewide conservation funding, and ranching advocacy.
Coastal Fisheries Extension Enhancement Through Dynamic Information Documents

E.V. Camp*, UF Fisheries and Aquatic Sciences; H. Abeels, Florida Sea Grant Brevard County; A. Collins, Florida Sea Grant Manatee, Sarasota, and Hillsborough Counties; E. Staugler, Florida Sea Grant Charlotte County

Background: A growing challenge facing Extension professionals is that stakeholders often want up-to-date, spatially explicit, and data-based information that is not always easy to provide. This is particularly true for fisheries, where stakeholders like recreational anglers, for-hire fishing guides, or fishing-related tourism industries may want the most current information about fishing in their county. For example, local tourist development councils seeking to augment fishing-based tourism could benefit from understanding where fishers come from and what they fish for when they visit a county. This type of information is freely available in federally maintained databases, but accessing it requires specialized computer programming and analyses skills that may preclude many Extension agents from providing this information to their stakeholders.

Objective/purpose: The objective of our work was to develop a rapid, automated, approach for transforming available data on angler travel into ready-to-use, county-specific reports that Extension agents could provide to tourist development councils to ultimately augment local economic impact. Method: We developed a computer program to automate the data querying, analyses, and even report-writing to create, in minutes, detailed reports suitable for presentation to local tourist development councils. Conclusion: This program has resulted in the creation of angler travel dynamic information documents created for most coastal counties in Florida that have been provided to county Extension agents. This has directly resulted in substantial increases (~70%) in the creative works that agents have provided to local tourist development councils. Further, the program can be expanded to provide documents to Extension professionals in nearly any U.S. coastal state and can be broadened topically to create different documents describing, for example aquaculture, commercial fisheries, or environmental data.

Using winter-annual forages to increase the sustainability of small-scale beef cattle ranchers

J. Cant*, UF/IFAS Extension Duval County; A. Halbritter, UF/IFAS Extension Baker County; D. Nistler, L. Harlow, UF/IFAS Extension Union County; A. Tomlinson, UF/IFAS Extension Columbia County, C. Cooper, UF/IFAS Extension Citrus County, and M. Wallou, UF/IFAS Agronomy.

Background: Hay supplementation is both an integral and expensive component of traditional annual livestock production in North Central Florida. In cattle alone, winter supplementation of hay for production females can exceed $300.00 per head. The incorporation of cool-season annual forages into the grazing system can decrease annual cattle costs by up to $170.00 per head by decreasing the quantity of supplements needed, such as hay, molasses, or protein tubs, because of an extended grazing season. However, most cattle producers in Suwannee County are small scale ranches, and owning planting equipment is not economically feasible. Purpose: The purpose of this presentation was to a) Educate producers on aligning cattle and forage production cycles to decrease winter supplementation costs and b) Demonstrate to producers the decrease in annual cattle costs by utilizing cool-season annual forages in the management system. Method: The extension program was targeted at small-scale ranchers and farmers and clients new to owning and/or managing cattle. Participants spent the morning in a classroom setting learning about weed management in cool-season annual forages, cultivar selection, grazing management, and the economics of utilizing cool-season annual forages. After lunch, participants were taken to the demonstration plots to witness differences in cultivar options, the benefits of mixing varieties, and planting equipment.
Conclusion: Seventeen (17) producers representing an estimated 800 head of cattle attended the workshop. Based on evaluations, 78.2% (n=13) indicated an increase in knowledge on cool-season annual forage establishment, management, and utilization and 82.4% (n=14) indicated incorporating cool-season annual forages into their production systems. Attendees also estimated an average annual savings of $120.13 per head by utilizing cool-season annual forages to extend their grazing season. This equates to $96,104 savings per year for the combined cattle represented. By decreasing production costs, producers can maintain sustainable cattle production more efficiently in an unstable market.

Developing a Model for Efficient Digital Communication and Education in Extension

J. Cant*, UF/IFAS Extension Duval County; K. Waters, UF/IFAS Extension Holmes County

Digital marketing and communication is the digital transfer of data or information, and currently is evolving into a primary means of communication for all industries. To be successful in Extension it is essential that new agents build rapport with clients, establish working relationships with specialists, and increase their knowledge base in areas that may lay outside of their comfort zones or educational background. In addition, our clientele are evolving and rely heavily on technology for information. Using social media and electronic communication is critical. In order to be relevant on these platforms, it is recommended to maintain a weekly presence, at minimum. However, this can be extremely time consuming for agents. With weed identification and control being a common inquiry for many agriculture agents, presenting a unique opportunity to develop a model for weekly posts. **Objectives:** The objectives were to 1) use “Weed of the Week” as a platform to develop weekly factsheets to educate producers on weed identification and control, and 2) develop an effective and efficient model to create and post weekly educational content that is reviewed by state specialists. **Methods:** Two county agents and one state specialist worked to develop a graphic template. This template was then used to create factsheets that were uniform in content and design to create program recognition and relevancy with clientele. Factsheets would be developed in groups of 6 weekly posts, then reviewed by the state specialist, prior to being posted and shared electronically via social media posts, blogs, and electronic newsletters. **Results:** Over a 6-month period, 27 factsheets were developed and published on a weekly basis. This resulted in over 7,500 views of content, 54 blog or electronic newsletter publications, and 24 social media posts. **Conclusion:** Using a graphic template to create weekly factsheets that are reviewed by state specialists for electronic publications and posts is an effective and very efficient way to tackle the challenge of weekly social media and electronic presents.

It Takes a Community: Florida-Friendly Landscape Tours for Promoting HOA and Homeowner Behavior Change

T. Clem*, UF/IFAS Extension Alachua County

**Background:** The Florida-Friendly Landscaping™ (FFL) program requires behavior change among homeowners and Homeowner Associations (HOA) to achieve water quality and quantity goals set-forth by the program. Environmental behavior adoption requires participants to overcome barriers, including landscape perceptions. The Florida-Friendly landscapes are commonly perceived as “messy,” making it difficult for HOAs and homeowners to adopt principles of the FFL program. **Objective/Purpose:** A collaborative effort between UF/IFAS Alachua County’s Environmental and Community Horticulture Agent, Alachua County Master Gardener Volunteers, and Alachua County’s Environmental Protection Department
with their partner Town of Tioga, hosted an FFL Tour in October of 2018. The tour’s primary objective was to help homeowners and HOA managers overcome negative perceptions about Florida-Friendly landscapes and adopt principles in their community of homes. **Method:** The collaborators and a prominent Alachua County HOA, Town of Tioga, hosted a FFL Tour to display homes with silver and gold FFL recognitions. Participants started at the HOA’s clubhouse to learn about the FFL program, followed by a self-guided tour. Master Gardener Volunteers were stationed at each home on the tour to answer questions and discuss the FFL principles implemented in the landscape. **Conclusion:** 182 participants attended the FFL Tour. 93% of post-surveys (n=68) indicated homeowners intended to adopt FFL fertilizer best management practices, 41% (n=16) indicated they would make changes to their irrigation practices. A follow-up survey has been sent to attendees to record any behavior change and perception changes. In result of the tour, two Alachua County HOAs begun adopting FFL principles into their codes and covenants.

**Learning in Florida’s Environment (LIFE): A Model for Science-based Environmental Education on Public Conservation Lands**

**K. Clements***, UF/IFAS Extension Sarasota County; **P. Williams***, **A. Ubeda***, **S. Davis***, UF/IFAS Extension Sarasota County; **J. Dehart**, Sarasota County School System; **S. Cummings**, **R. Hochmuth**, **K. Wojcicki**, Florida Conservation Corps AmeriCorps; **A. Sasloe**, **A. Kurowski**, FL DEP, Oscar Scherer State Park

**Background:** Learning in Florida’s Environment (LIFE) is a model for science-based environmental education on public conservation lands originally developed by the Florida Department of Environment Protection (DEP). The LIFE program began in 2004, in Apalachicola, as a partnership between the DEP and Franklin County Schools. In Sarasota, the LIFE program is unique. It is a multi-agency collaborative effort between UF/IFAS Extension Sarasota County; Oscar Scherer (OSSP) and Myakka River State Parks (MRSP); Friends of Florida State Parks; FLCC AmeriCorps; Sarasota Schools science teachers; and EdExploreSRQ. LIFE in Sarasota County brings students out to public conservation lands for science-based environmental education, and reinforces existing curriculum and Florida standards through hands-on, field labs facilitated by educators, scientists, and land/resource managers. **Objectives/Purpose:** The objectives of the LIFE Program include supporting science curriculum and standardized test success by reviewing 3rd-5th grade standards prior to FSA science testing. The LIFE program also provides participants an opportunity to act as wildlife biologists, ornithologists, marine scientists, and horticulturalists; with the goal of increasing accessibility to science and scientific careers. The Sarasota LIFE program seeks to increase scientific knowledge and skills and promote environmental stewardship. **Methods:** UF/IFAS Extension faculty coordinated curriculum development and delivery, logistics, field site selection, staff/volunteer trainings, and program promotion. In 2018-19, 311 students participated in multiple field experiences highlighting three different ecosystems throughout the year. Each experience included an in-class preparatory presentation and skills practice; followed by three standards-based, STEM field labs at Sarasota County public conservation lands. Pre-post survey data was collected in the field from students and program was evaluated by participating teachers and volunteers. **Conclusions:** In 2017-18, pre-post survey data indicated 44.4% knowledge gain (Coastal, n=176). 100% of teachers (n=12) positively responded that labs met benchmarks and expectations, and improved student engagement and enthusiasm. 70% and 64.5%, respectively, of Title 1 students had never visited MRSP (n=128) or OSSP (n=129). LIFE in Sarasota County successfully educated participants on the importance of local ecosystems, conservation, management challenges, and science-based careers. (2018-19 data is currently being analyzed and will be displayed on poster).
Water Birds Workshop

T. Davis*, UF/IFAS Extension Highlands County; R. Boughton*, Rangeland Scientist/Wildlife at Range Cattle Research and Education Center

Background: Highlands County has a large population of local water birds and migratory birds that pass through during the winter months. Many of our clientele enjoy bird watching during this exciting time of the year. I have had many requests by the local population to host birding programs to enhance their skills and to continue learning about the variety of birds seen in our area. Objective/Purpose: To enhance the quality of life through education of natural resources and local bird populations. 1) The attendees will increase their understanding of bird species and habitats by 10% as measured by evaluation surveys. 2) 20% of participants will be able to apply bird watching skills and natural resources education to increase their quality of daily life. Methods: The learners spent the morning with a lecture, topics covering species of birds, hydrology, and open discussion. The afternoon learning took place on a field trip to Lake Josephine for bird watching, interactive learning, discussion, and application of skills taught. Conclusions: Reviewing the objectives and results from this workshop, the participants achieved 12% knowledge gained from the goal of 10% and exceeded the goal of 20% increase quality of life with 87.5%. This program received such positive feedback it will be a yearly program for my clientele. Based upon the potential increase in participation, that will indicate an actual long-term impact on increasing quality of life.

Building 4-H youth skills through a unique blacksmithing summer day camp

L. Harlow*, UF/IFAS Extension Clay County

Background: Industry and trade skills are in high demand in the workforce and with continued emphasis on targeting life skills in 4-H, youth are of encouraged to gain subject matter knowledge, using science, technology, engineering, arts, mathematics (STEAM) concepts. There has been a renewed interest in several trade crafts including blacksmithing and weaponsmithing as evident by the success of TV shows such as Forged In Fire and Iron and Fire. Objective/Purpose: To provide a unique approach to improve youth knowledge in science and engineering concepts and increase youth understanding of trade skills, utilizing blacksmithing skills. Method: The Agriculture and Natural Resources Extension agent partnered with the Northeast Chapter of Florida Artesian Blacksmith Associations (FABA) to develop and perform a 4-H/youth one-day summer camp aimed at introducing basic blacksmithing skills, including safety around the forge, using hammer skills to shape hot metal, and techniques for designing basic tools. Utilizing his own blacksmithing skills, the agent and two other FABA instructors taught 8 youth how to use critical thinking skills to use hammers to create s-hooks and decorative wall hangers to take home. Conclusion: In a post-program survey, 100% of youth (n=8) indicated that they increased their knowledge of blacksmithing, 88% of youth (n=7) indicated that they were more confidence of their skills with tools by the end of the summer camp and 100% of youth (n=8) indicated that if given the chance they would like to continue to blacksmith again. By providing a unique and different avenue for STEAM concepts, youth were extremely excited to learn various life skills and science and engineering concepts.

L. Hickey*, UF/IFAS Extension Manatee County; F. Rivera*, UF/IFAS Extension Hillsborough County; J. Ryals, UF/IFAS Extension Collier County; S. Bostick, UF/IFAS Extension Sarasota County; M.E. Henry, UF/IFAS Extension Polk County; J. Bosques-Mendez, UF/IFAS Extension Hardee County

Background: The first years in a new extension agent position can significantly impact agents’ attitudes, behaviors, and practices for the future. Job–related skills must be developed early for career success (Bailey, 2005). Extension experiences a new crop of faculty regularly and research has shown they often struggle to balance time demands with program clientele while simultaneously conducting scholarly groundwork required to meet permanent status and promotion standards. Imbalances can result in numerous challenges such as stress, burnout, and turnover (Place, 2010; Ensle, 2005). This struggle is particularly acute in new or revamped program areas which lack clear scope or shifting reporting metrics. Replacing agents could cost over $30,000 per agent (Benge, et. al, 2011; Chandler, 2005). Objective/Purpose: Provide tools for new agent guidance and encouragement in establishing programs and expectations of progress towards permanent status. Create a team to provide support and institutional knowledge new agents need to succeed. Methods: A network of seasoned agents will coach and support; share cooperative programming, needs assessment formats and evaluations and routinely communicate achievable steps towards promotion. By utilizing a team approach, mentorship is thorough and varied. New agents will increase their subject-area knowledge (small farms) and develop stronger programs quicker; they will utilize collaborative materials and trainings to format future programs, and positively progress their scholarly work for permanent status and promotion. Conclusions: The best management practices approach to team mentorship can improve the quality of work, reduce frustration, turnover and encourage entry-stage agents on their path to permanent status.

EmpowerU: Advocacy Training Program

M. Hunter*, UF/IFAS Extension Marion County; S. Johnson, UF/IFAS Extension; R. O’Connor, UF/IFAS Extension Escambia County; D. Albrecht, UF/IFAS Fisheries and Aquatic Sciences

Background: The EmpowerU project is a collaboration among eight states, led by the University of Minnesota Extension, to train volunteers in the skills they need to influence decision-makers about natural resource issues. Traditionally, Extension emphasizes education not advocacy. However, in today’s high-speed environment people often go to shortened versions of technical papers and social media for education leaving a gap between science research and popular news. According to Pew Research Center for Journalism and Media, two-thirds (67%) of Americans report that they get at least some of their news on social media sites. With this gap it is often hard for individuals to decipher what is needed to support their stance on important environmental issues. The EmpowerU course was developed by University of Minnesota Extension and piloted at the University of Florida Institute of Food and Agricultural Sciences with support from University of Minnesota Extension grant funding. Objective: Participants gained an understanding of government roles and who to contact to pursue projects involving contentious issues and to encourage local change. Students learned skills in influence, power, persuasion, framing, questioning and listening through interactions with decision makers, and where to find reputable information. Participants can continue their projects after the course to apply what they learned to confidently share information with decision makers, give input on policies and plans, and be an active voice in the community. Much of the information gained throughout this course is theory-based, focusing on civic engagement and is therefore applicable to many
topics such as resource management for issues like invasive species. **Method:** This course was taught as a flipped classroom. It included 8-10 hours of online learning followed by an 8 hour in-person workshop to practice engagement skills. The program guides participants through the step-by-step creation of individualized engagement plans and is applicable to any issue of interest. **Conclusions:** This course was offered for the first time in spring of 2019 and was well received. Registration was limited to 48 (two sets of 24 participants); 24 of which completed the course including the in-person trainings. Many of those that only completed the online training still benefitted from knowledge gained. Currently this program is a pilot program and is still under the auspices of University of Minnesota Extension.

**Growing Agricultural Awareness and Stem Careers**

**J.S. Kelly**, and **G. Sachs**, UF/IFAS Extension, St. Johns County

**Background:** As more and more youth are being raised in an urban setting, they are less connected to agriculture and less knowledgeable of agriculture and related careers. At the same time, there is also a nation-wide shortage of students pursuing higher education in sciences, engineering, technology and math, particularly in agriculture. An annual report released the STEM (Science, Technology, Engineering, and Mathematics) Food and Ag Council states there is a shortage of agricultural professionals and a need for new professionals trained in STEM fields. The need for agriculture education, appreciation and awareness for youth is vital as we work to inspire youth to pursue careers in agriculture which are needed to meet the food and clothing demands of our growing population. **Objective/Purpose:** The 4-H Raising Cane Project aims to promote agriculture awareness, provide hands-on STEM experiences, encourages youth to explore agriculture careers and fosters the development of life skills needed to become responsible and productive citizens. **Method:** UF/IFAS Extension 4-H and Commercial Agriculture Agents from St. Johns County partnered with the UF/IFAS Hastings Agricultural Research Center and community stakeholders to provide experiential, hands-on learning opportunities in crop production. Youth participated in sugarcane planting and harvesting field days, and sugarcane project books. In addition to gaining knowledge and skills, youth were exposed to a variety of STEM careers and entrepreneurial opportunities as they marketed and sold sugarcane. **Conclusions:** End of project evaluations in 2018 for sugarcane showed an increase in knowledge and interest in science and related careers. In the Sugarcane Project post survey of youth (n=**), 100% were able to name a sugarcane related profession; 47% reported that they were interested in an agricultural related career; and over 70% learned about several components of sugarcane development and sugar production.

**Youth Develop an Appreciation for Florida’s Natural Resources by Learning Wilderness Survival Skills**

**K.A. Korus**, **A. Morgan**, UF/IFAS Extension Alachua County

**Objective:** The wilderness survival day camp was developed to help educate youth in Alachua County and surrounding areas about the wonderfully diverse natural resources available in Florida that can be utilized in a survival situation. **Methods:** The students learn essential skills like administering first aid, knot tying, signaling for help, finding food and water in the wild, building a survival structure and alternative methods for starting a fire (magnesium flint striker, magnifying glass, steel wool and battery). All of the activities at this camp are hands on. It is held at Poe Springs Park where there are multiple environments to have the students practice survival skills. Knowledge gain was evaluated by pre/posttests as well as by evaluating the
camper’s ability to perform the survival tasks assigned to them. **Results:** 100% of 22 camp attendees increased their knowledge of wilderness survival principles and practices while 70% were successful in starting a fire with the flint striker. **Conclusions:** The effectiveness of this type of training has been recently displayed in the case of two young girls who survived in the wilderness in California because of survival techniques they learned by attending a similar 4-H day camp (Dorsey, D. and Carrillo S., ABC7News.com). Furthermore, a blog the agent published about the day camp seized the attention of a producer from the Discovery Channel. The agent was asked to be the local expert for the Emmy Award winning television show, “Naked & Afraid” that was filmed in Florida. Each episode of the show has an average U.S. viewership of 1.45 million people. The agent educated the cast and crew about how to identify wild edible plants and other plants that could be utilized for wilderness survival in a cypress swamp in Florida. This program has been offered for two years and is very popular. Maximum attendance has been reached each year. Parents of youth attendees have said that they are grateful to have this unique camp opportunity for their children.

**Florida-Friendly Landscaping™ Growing in Marion County with Public Demonstration Gardens**

A. Marek*, UF/IFAS Extension Marion County

**Background:** The Florida-Friendly Landscaping (FFL) program educates homeowners and green industry professionals about lawn best management practices to conserve water and protect water quality. FFL agents and Master Gardener volunteers have been active in Marion County since about 2001 providing educational programs and yard evaluations to thousands of residents. Prior to 2017, there were 20 FFL certified private landscapes in the county but only 3 certified public landscapes. **Objective/Purpose:** To increase awareness of FFL in Marion County and the potential impacts, there was a need to expand the number of FFL demonstration gardens available to the public. Equally important was the greater awareness and perceived value of the FFL program to County Commissioners and other community stakeholders when the FFL program became more visible. **Method:** The FFL agent first initiated conversations with City of Ocala employees about renovating the landscaping at the City of Ocala water treatment plant to become a certified Florida-Friendly Landscaping demonstration garden. The water treatment plant receives hundreds of visitors from the public and private sectors annually. After about a year of planning, planting, and installation of hardscapes and FFL signage, the demonstration garden was complete. Through networking and collaboration with county employees, FFL demonstration gardens were then installed at two public Marion County facilities in addition to the new Florida-Friendly landscape at the Marion County Extension Service office that had potentially 98,000 people walk by it in one year. There is now a total of 7 public FFL demonstration gardens in Marion County with at least one more projected to be installed at a common area of a large 55+ community later this year. **Conclusion:** Research has shown that the use of demonstration gardens in Extension is an effective teaching tool, provides meaningful volunteer opportunities, and facilitates the development of community partnerships (Glen et al., 2014). Through newly cultivated city and county partnerships, the Marion County FFL program now has greater public exposure and improved access for persons to learn about the FFL principles through these public demonstration gardens.
Collaboration to Better Manage New and Emerging Landscape Pests in the Tri-County Area

H. Mayer*, UF/IFAS Extension Miami Dade County; M. Orfanedes, UF/IFAS Extension Broward County; L. Albrecht and B. Schall, UF/IFAS Extension Palm Beach County

Background: Because of their humid subtropical climate plus the influx of millions of travelers and cargo through the seaport and airport, the tri-county area (Miami-Dade, Broward and Palm Beach) have the optimum conditions for introducing invasive and potentially destructive pests. Early detection and accurate identification are key components of a successful integrated pest management program. Examples of recent new pest introductions include Lethal Bronzing on native and non-native palms in 2016, Lethal Viral Necrosis (LVN) on St. Augustine grass in 2013, Laurel Wilt (LW) on avocados and other Lauracea species in 2011 and the Asian Subterranean “turbo” termite in 2015. Objectives: At least 1,500 pest control operators, commercial landscape professionals, governmental ground maintenance employees and HOA residents will participate in workshops in English and/or Spanish to learn how to effectively identify and manage new invasive pest problems in the tri-county area. Based on a post-reflective questionnaire, 70% or respondents will increase their knowledge of recommended best management practices and 60% will plan to adopt at least one of those best practices. Metrics will be measured using pre/post-tests, a post-reflective questionnaire and six-month follow-up surveys. Methods: To accomplish the objectives, staff from the tri-county area collaborated on numerous workshops with hand-on activities, site visits and office visits. Newsletter articles and social media also were used to give clientele the most up-to-date information. Results: 3,371 people participated in one or more workshops in English and/or Spanish related to invasive pest problems. A post-reflective questionnaire indicated that 81% of surveyed participants increased their knowledge and 62% intended to make at least one practice change. Respondents to the follow-up survey indicated an 84% average adoption rate. Conclusions: The success of these programs is benefitting the tri-county area by creating a greater awareness of the invasive pest problems and how best to manage them. Such collaborative efforts can promote Extension’s impact across the state.

Ethics: Not Just for the Livestock Kids

N.A. Moores*, UF/IFAS Extension Hernando County, and K. Taylor*, UF/IFAS Extension Sumter County

Background: The Florida State Fair requires all youth showing livestock in their events to have an Ethics Certification number indicating they took the mandatory ethics workshop. Nancy Moores and Kalan Taylor are certified instructors and offer workshops each year in Hernando and Sumter Counties. The course is a great opportunity to teach ethics on a larger scale and include more than just how you treat an animal. Objective/Purpose: The first objective is for all participants of the mandatory, state endorsed ethics training to become certified to show at the Florida State Fair. Second, at least 75% of all participants will demonstrate an improved understanding of animal rights vs animal welfare and the ethical treatment of animals. Third, at least 30% of the participants will change at least one behavior related to the care and treatment of their animals. The overall purpose of the program is to encourage youth to think about the potential consequences of each action before taking it. Method: Each year, at least three workshops are scheduled (two in Sumter, one in Hernando) for up to 100 participants each. During the three-hour workshop, PowerPoints, videos, hands-on activities, and demonstrations are used to teach animal husbandry, welfare vs rights, ethical decision making, and dealing with the public regarding controversial issues. Each agent teaches ⅓ of the program while the other maintains crowd behavior, hands out small prizes to those voluntarily participating, and supervising the general area. Conclusions: According to the
Florida State Fair Agribusiness Office, 100% (n=687) of those participating received their ethics certification number good for three years of showing. On-site evaluations, pre/post-testing, and observation indicate that approximately 83% of participants could demonstrate a better understanding of the ethical treatment of animals, and at least 30% were planning to make changes in some of their personal projects.

**Economic and Environmental Benefits of Plasticulture for Cabbage Production**

W. Mussoline*, UF/IFAS Extension Flagler/Putnam Counties; B. Wells, UF/IFAS Extension Brevard County; G. England, UF/IFAS Extension Hastings; L. Zotarelli, UF Horticulture Sciences Department

**Background:** According to the latest USDA Agriculture Census in 2017, a total of 9,156 acres of cabbage were harvested in Florida. Approximately 50% of cabbage production is from the Tri-County Agriculture area (TCAA) which includes St. Johns, Putnam and Flagler Counties. According to the 2018 State Agriculture Overview, average cabbage yields were 360 cwt/acre resulting in an overall production value of $63 million in Florida. **Objectives:** Plasticulture was incorporated into cabbage production to promote environmentally and economically sustainable practices within the cabbage industry. **Methods:** The trial involved two simultaneous plantings using both conventional and advanced plasticulture methods. Conventional beds consisted of 40” rows and 8.5” interrow spacing, which resulted in a planting density of 18,450 plants/A. Advanced methods provided for a higher density planting population of 29,870 plants/A on plastic beds, which consisted of 4 drills on a 48” width bed top with 14” interrow spacing on the two inner drills and 10” spacing in the two outer drills. Fertilizer applications were consistent (NPK = 200:50:200), except for an additional 30lbs of calcium nitrate on the conventional planting. **Results/Conclusions:** Marketable yields were 267 cwt/A from the conventional planting (2 passes over a 22-day harvest season) and 521 cwt/A from the advanced planting (3 passes over a 32-day harvest season). The third pass only resulted in 16% of the total harvest and thus could be eliminated if labor and equipment costs were too high relative to the seasonal cabbage market price. However, the market price was favorable during the 2018/2019 cabbage season and the third harvest was beneficial for our growers. The plastic provided protection from excessive moisture as rainfall totals were above average; therefore, the cabbage in plastic maintained its integrity longer than the conventional plot and was not visibly influenced by disease. The additional cost for advanced production (i.e. plastic, drip tape, additional plants) was $1,101/A. But because of the increased harvest yield, profits increased from $8,010/A on the conventional plot to $14,529/A on the advanced plot. As a result, a commercial cabbage grower agreed to conduct a 10-acre, on-farm plasticulture trial during the upcoming growing season.

**Entomophagy: Food for the Future**

B. Newman*, S. Hayes*, Florida A&M University Extension

**Background:** Entomophagy is defined as the human consumption of bugs as a food. Our population is growing rapidly, and our planet is facing significant problems because of this. Our current food production cannot increase at the rate our growing population will demand. We simply do not have enough land available to feed our growing population. Food security is a major problem for many people worldwide already. Food insecurity, in many cases, can lead to famine, disease and war. These, and many other, problems will only increase with the inevitable larger population. **Objective/Purpose:** This project combines Food Science and Entomology to introduce 4-Hers to insects as a sustainable food source. It aims
to initiate an understanding of the relationships multiple disciplines in agriculture have to one another and to the world around us. In doing so students are able to experience entomophagy and start thinking of solutions to combat future food insecurity. **Method:** This program engages students through hands-on experiential learning activities. The activities challenge students to expand knowledge of entomophagy. Some activities include creating products with an insect as the main ingredient, others task students with overcoming unwarranted cultural fears of eating insects. **Conclusion:** This project opens the minds of youth and encourages creativity, critical thinking. This project also helps students to find global solutions to issues such as food insecurity due to population growth.

**Out of the Box Uses for Vegetables: Reframing the Old to Draw Interest and Improve Health**

A. Nikolai, UF/IFAS Extension Polk County

**Background:** In Polk County less than one out of five adults consume the recommended three or more servings of vegetables per day. In addition, the top four causes of death are lifestyle-related chronic diseases, and 69.6% are overweight or obese, which is higher than the state average. Increasing vegetables, which have fiber and nutrients, can help prevent diseases and manage weight; however, getting people interested in improving their nutrition can be challenging. **Objectives:** Objectives are to increase participant knowledge about new ways to use and prepare vegetables, increase the amount and variety of vegetables participants consume, and reduce the amount of vegetables participants throw away. **Method:** A class titled, “Out of the Box Uses for Vegetables” was created to put a different spin on eating vegetables. The class taught people recommended servings per day, health benefits of vegetables, basic cooking methods that work for most vegetables, and how to save money and reduce food waste by making simple and fun additions or substitutions to foods using vegetables. This class used integrative methods, including brainstorming and discussion among participants, and food demonstrations, such as carrot dogs, were done to showcase a unique use of vegetables. **Conclusions:** A retrospective pre-post survey was used to evaluate knowledge gain and intent to change behavior. Three classes were held in 2018 reaching 40 people. As a result of the class, 94% of participants (n=34) said they have new ideas for using vegetables, 97% (n=39) were extremely or somewhat likely to increase the amount of vegetables they eat, 97% (n=39) were extremely or somewhat likely to increase the variety, and 83% (n=33) were less likely to throw away vegetables. This class shows tremendous promise in helping people eat more vegetables and over time lead to improved health and lower health care costs. It also can help reduce food waste, creating a more sustainable food system with less impact on our environment. Money savings is another potential outcome that could be measured. This class has drawn interest because of its uniqueness and has potential to reach the county’s culturally and geographically diverse residents to affect change.

**STEAMing Ahead with Stop Motion Animation**

K. Popa*, UF/IFAS Extension Charlotte County

**Situation:** How do we get youth interested in and educate them on topics related to STEAM (Science, Technology, Engineering, Art & Math)? Youth ages 11-18 are very difficult to engage in 4-H, especially if the topic does not apply to their everyday life or interests. This program was used to address the objective: **Annually, 70% of participating Charlotte County youth will increase their knowledge and skills related to science, technology, engineering, art and math (STEAM) as a result of various 4-H activities as measured by**
Methods: By planning and conducting a 2-day Stop Motion Animation course, youth became engaged in all aspects of STEAM. Youth discovered the science behind stop-motion animation as they worked with lighting and the movement of props. They worked with different technology as they used cameras, computers and smart phones to record their videos, they engineered their own set, props and characters. Youth were able to use their art skills to decorate and create props as well as developing their storytelling skills. Finally, they used their math skills to determine how many shots or frames they needed to complete a film the length they wanted. Results: Youth participating in this course, gained the knowledge and skills needed to complete their own stop-motion animation video by the end of the course. They were engaged in all aspects of STEAM and were asking to continue working on stop-motion animation through a new 4-H club. Conclusions: Not only were students engaged in STEAM, they are now engaged in 4-H through a newly created 4-H club. Youth have come to the club with homemade stop motion animation movies and are excited about coming up with their own plot and characters for movies they hope to present at the 4-H Film Festival next year!

Try a Day of Camp: Introducing Military Youth to Residential Camping

A. Schortinghouse, B. Estevez, J. Johnson, UF/IFAS Extension Escambia County; T. Wilken, UF/IFAS Okaloosa County

Background: Okaloosa and Escambia Counties are home to four different military youth programs, consisting of 574 active military youth. To bridge the gap between military youth programs and 4-H programs beyond the club level, “Try a Day of Camp” was organized to engage military youth in an interactive day camp. Objectives: 1) To introduce and increase military youth participation in the residential camping program. 2) Increase military youth participation beyond the club level. Methods: Youth were split into four groups rotating through four workshop segments including: Camp games, marine science, expressive arts, and outdoor adventures at the closest residential camp, Camp Timpochee. Partnerships with the Florida Fish and Wildlife Control and local extension agents were established to facilitate these workshops. Participants were encouraged to socialize with youth from different programs to encourage relationship building, with the intention of connecting military youth by shared experiences. To familiarize youth with the residential camping experience, this program is held at Camp Timpochee to incorporate a sense of comfort and belonging. Results: In 2018 and 2019, 127 youth participated in the “Try a Day of Camp” program. From 2017 to 2018, military youth participation in residential camp increased from 18 to 35 youth, and participation beyond the club level improved from 40 to 334 youth. Conclusions: By creating an environment for military youth to experience residential camp activities and interact with the 4-H faculty and staff surrounded by familiar staff and friends from the military program, youth are more likely to participate in future programming.

Field to Fork: Building Ag Awareness and Life Skills in Youth

J. Shoup*, D. Sprague* and J. Lilly, UF/IFAS Extension Jefferson County

Background: As farmland continues to decrease and cities grow, consumers are further removed from agriculture and where food comes from. Younger consumers are more likely to eat out or purchase prepared foods and less likely to cook at home. Many youth lack an understanding of our food system, as well as the life skills they need to purchase and prepare food. Gardening, cooking at home, and purchasing local foods
instead of eating out are ways to not only help address rising obesity in our county, but also support local agriculture. **Objective/Purpose:** 1) To increase youth awareness of agriculture production 2) Build life skills for growing, preparing, cooking, and grilling their own food. 3) Youth will begin gardening, cooking, and grilling at home. **Method:** The camp was a weeklong from 8am – 4pm each day for ages 11 -14. The program used multiple delivery methods such as hands-on demonstrations, PowerPoint presentations, interactive games, and team building activities. Through partnerships with local businesses, campers were able to tour a local blueberry farm, hog farm, meat processor, farm to table restaurant, and grocery store. Hands on activities included cooking, knife skills, grilling, gardening, meal planning, shopping, and a work experience in a local restaurant. The day camp was evaluated using a pre and posttest and survey to document knowledge gain. **Results:** 11 attended. 100% (11/11) increased their knowledge as assessed by a 6-question test. As assessed by a post survey: 91% were more aware of agriculture and the food chain supply. 100% were more interested in-home gardening. 72% were more interested in a career in agriculture. 91% were more interested in cooking at home. 90% planned to cook more at home. 90% felt confident they could grill their own food. 82% planned to plant a garden at home. There will be a follow up phone survey. **Conclusion:** A day camp with hands on experiences is an effective way to engage youth, increase agriculture awareness, and build life skills.

**Escambia County Beef Cattle & Forage Bootcamp Provides Practical Education to Livestock Producers in Northwest Florida**

N. Simmons*, UF/IFAS Extension Escambia County

**Background:** The Escambia County Beef Cattle & Forage Bootcamp is an annual multi county, multi-state collaboration among Extension agents, specialist, graduate students and livestock producers. **Objective/Purpose:** Annually, program objectives target reaching approximately thirty individuals to deliver educational programming to beef cattle producers in Northwest Florida. The objectives of the program were to: 1. Increase knowledge of Beef Quality Assurance best management practices within the beef industry, 2. Demonstrate multiple varieties of winter forages to be implemented into beef cattle grazing systems in Northwest Florida, 3. Demonstrate beef cattle pregnancy detection through different technologies 4. Educate producers on beef cattle carcass evaluation for quality. **Method:** Thirty-nine individual forage demonstration plots were planted from October to December highlighting growth potential of winter forages and wildlife forage blends. Forage analysis was collected and presented to the clientele. Industry professionals collaborated to deliver hands-on programs demonstrating various production practices to increase profitability, marketability and best management practices. Topics provided by speakers included bovine reproduction management, carcass quality analysis, livestock identification and beef quality assurance. A total of ninety-two individuals attended over two years. University publications were utilized to provide supplemental resources for attendees. A ten-question survey was distributed to clientele to record impact and satisfaction of the program. **Conclusion:** Evaluation results include the following: 90% (38/42) planned to implement changes based on information, especially in winter grazing supplementation and forage varieties. 88% (37/42) stated that they felt the program was valuable at or above the required attendance fee, and 71% (29/42) of attendees reported that they plan to make a management change based on the information provided in the program. Attendees reporting to make a management change based on the information provided estimate an average costs savings of $200 per operation. Future programs are being planned to include topics suggested through the evaluations. All returned surveys reflected that respondents were very satisfied with the program.
4-H Soccer for Success: A Sport Based 4-H Youth Development Experience

L. Valencia*, UF/IFAS Extension Osceola County

**Background:** While every community wants the best for their kids, not all communities have the resources to make that happen. According to the Afterschool Alliance, some of the challenges facing our community include: *Childhood Obesity* (71% of youth do not get the recommended amount of activity), *Juvenile Delinquency* (children are unsupervised between the hours of 3-6 pm), *Dilapidated Spaces* (youth who lived in underserved areas are more than four times as likely to lack recreational facilities). Osceola 4-H helps bring resources to these communities where there is often a lack of viable affordable after-school programs, organized sporting opportunities, adequate playing spaces to play and guidance from mentors and role models. **Objective:** Address the health and youth development barriers by leveraging the game of soccer to offer structured physical activity, nutrition education, access to safe places to play, and provide trained coach-mentors to help children in our undeserved communities. **Methods:** 4-H Soccer for Success is an after-school program offered at no cost to participants. The program is led by trained coach-mentors by the 4-H Agent. The program runs for 10-12 weeks, 2-3 days per week, 75-90 minutes per day. A 4-H string bag, a soccer jersey, a ball and shin guards are provided to each participant. **Results:** As a result, in our first season we engage 88% (n=51) youth in 4-H sports youth development programs, 94% (n=51) youth adopt behaviors in healthy lifestyles and 100% had a safe place to play. The program is delivered through a holistic approach, addressing the barriers that impact physical, nutritional and psychological elements of children in underserved communities. **Conclusion:** We use the transformative power of Fútbol Soccer to create positive, lasting social change. We ensure that youth living in underserved communities have access to soccer programming that delivers positive health and youth development outcomes. 4-H Soccer for Success teaches soccer skills and incorporates mentorship and health and wellness to create a fun and safe environment where 4-H youth can thrive.

Tobacco Production Programming in the Suwannee River Valley of North Florida

C. Vann*, UF/IFAS Extension Lafayette County; K. Wynn*, UF/IFAS Extension Hamilton County; D. Broughton*, UF/IFAS Extension Regional Specialized Agent-Agronomic Crops; J. Moore, State Tobacco Extension Agronomist, UGA; M. Vann, State Tobacco Extension Specialist and Assistant Professor, NCSU

**Background:** Since the 1920’s, the Suwannee River Valley of North Florida has been known for producing premium quality tobacco. Over the years a Tobacco Extension Program has evolved which assists local producers with current production practices, governmental regulations, and industry demands. **Objective/Purpose:** To (1) increase knowledge of improved cultural and production techniques and (2) encourage producers to incorporate new tobacco cultivars and pesticide spray programs. **Method:** The Tobacco Extension Program consisting of an annual tobacco production meeting, an on-farm trial, and the Georgia-Florida Tobacco Tour provided tobacco producers the opportunity to gain knowledge of the most current and researched production methods. The success of this Extension program was due to the long-term culmination of traditional classroom Extension trainings with on-farm demonstrations, field consultations, and small group learning experiences. **Conclusion:** For the past three years, approximately fifty tobacco producers, farm managers and stakeholders from North Florida and South Georgia have attended the annual tobacco production events consistently. Each year, program evaluations demonstrated that producers increased their knowledge after attending meetings. Exit evaluations showed 87% of the attendees (n= 26 of 30) evaluated at annual tobacco production meetings showed an increase in knowledge.
of disease management and best management practices. At the conclusion of the Georgia Florida Tobacco Tour, 94% (n = 61 of 65) of attendees who completed exit evaluations reported an increase in knowledge of cultivar selection. Adopting recommended cultivars have increased yield while reducing the amount of required pesticide applications. This has generated an additional $50.00 per acre in saved production cost and increased yields resulting in $55,000 in the Suwannee River Valley. It was observed that producers attending the tour were more likely to interact with presenters when compared to the traditional classroom meetings. By executing the objectives through program activities, the Extension team was able to contribute to the sustainability of tobacco in the region. Producers have been eager to provide personal feedback on the impact the programs have had on their operations and engage with the Extension team regularly when faced with production problems.

Utilizing Ensiled Culled Potatoes and Bahiagrass Hay as a Winter-Feeding Option for Beef Cattle

T. Wilson*, UF/IFAS Extension St. Johns County; M. Hersom, UF/IFAS Animal Science Department; W. Mussoline, UF/IFAS Extension Flagler and Putnam Counties; C. Prevatt, UF/IFAS Extension – Beef Cattle and Forage Economist

Background: The Tri County Agricultural Area (TCAA; St. Johns, Putnam and Flagler Counties) located in Northeast Florida produces approximately 14,000 acres of spring harvested potatoes. Large amounts of cull potatoes are discarded and like many other culled vegetables, are fed to cattle at harvest.

Objective/Purpose: Building on pilot data collected in 2017, a field demonstration was conducted that involved ensiling low-quality bahiagrass hay and spring harvested cull potatoes to develop a feed resource that could potentially be used to meet the nutritional requirements of cattle during the winter months.

Method: In May 2018, twenty-three thousand pounds of silage was prepared using a mixture of 70% potato and 30% low quality bahiagrass hay to determine if a value-added product could be developed. Hay and potato samples were tested independently of each other to determine the nutritional value of each feedstuff used at ensiling. Results, on DM basis, for bahiagrass hay was 6.5% CP and 49% TDN and cull potatoes was 11.5% CP and 82% TDN prior to ensiling. Silage samples were taken in September 2018 (120-days after ensiling) and tested for nutrient composition and mycotoxins. Some mycotoxins were detected but were well below acceptable thresholds. The finished potato silage feed tested 8.55% CP and 53.75% TDN.

Compared to hay alone, the silage resulted in an increase of 2.05% in CP and an 4.75% increase in TDN. In March 2019, 10 feeder steers were weighed (600 lb. avg.) and placed in a dry-lot to be fed a combination of approximately 40 lbs. of potato silage and 5 lbs. of dried distillers grain/hd/day for approximately 24-days. Cattle gained 1.435 lbs./hd/day for the feeding period. An economic analysis was conducted, and it was determined the cost of gain for this feedstuff, using industry standards, was $1.46/lb. Compared to other feedstuffs, cost of gain would need to be between $0.50 to $0.70/lb. to be competitive. Conclusion: Although this feedstuff does not meet all the nutritional needs for cattle during the winter months and its cost of gain is higher than other by-products, it does provide an improvement compared to bahiagrass hay when fed alone.
Stony Coral Tissue Loss Disease Response: Citizen Science Training for the Recreational SCUBA Diving Community

A. Zangroniz*, UF/IFAS Extension Miami-Dade County and S. Krueger, UF/IFAS Extension Monroe County

Background: The Florida Reef Tract has an asset value of $8.5 billion per year and supports 70,400 jobs in South Florida. Unfortunately, an outbreak of stony coral tissue loss disease (SCTLD) has devastated 26 species of reef-building corals since 2014. Since the outbreak is unprecedented in scale and duration, it is vital to increase the underwater monitoring network. Objective/Purpose: Create an observer training program to engage SCUBA divers to identify SCTLD and perform roving diver surveys to monitor and report disease presence/absence and coral recovery. Methods: Two Extension agents developed the SCTLD Observer Training, a citizen science program for recreational SCUBA divers to maximize the efficiency of scale for SCTLD outreach and education and create an underwater surveillance network. Results: 73 divers have passed the written test with >80%. Post-reflective evaluations indicate an average overall knowledge gain of 42%. Twelve staff from federal, state, and local governments, non-profit organizations, and private citizens have become active trainers. In January 2019, a SCUBA diver trained by the Extension agents submitted the first report of SCTLD off Key West, FL. Resource managers later confirmed that this report verified that SCTLD had crossed the border into the Key West region of the Florida Reef Tract. SCTLD has now spread to the Caribbean and a delegation from US Virgin Islands has completed training. Conclusions: Citizen science is an efficient and cost-effective means to engage stakeholders, accelerate scientific research, provide hands-on learning, and build social capital. The spatial extent of the SCTLD outbreak requires a large observer network within a framework of multi-agency partnerships. By providing the SCTLD Observer Training, the two Extension agents are training stakeholders to collect data that will facilitate future management actions.
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