Participants in the 2019 International Coastal Cleanup say “no” to marine debris. The group removed 246 pounds of debris during this event. The Florida Sea Grant Extension program and Biscayne National Park partnered to host this cleanup and data collection effort.

Photo: Biscayne National Park

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Dear Friends of Extension,

Another year has passed in an alarming blur. We are about to wrap 2019, and embark on the third decade of this century. I remember at the end of 1999, we were all preparing for the impending Y2K event, prepping supplies as though prepping for a hurricane. In fact, my father “might” have a five-pound bag of white rice still on standby!

Thankfully, we have come quite a long way in 20 years. We are better prepared to face all sorts of events, from facing natural disasters to maintaining a healthy home landscape, to making informed decisions about our choices of food, managing our time, and getting children and residents more engaged in their local communities. We here at Extension are prepped to assist with all of these tasks and more—just pick your favorite subject and dive in! In addition to in-person trainings, seminars, workshops, and classes, we publish blogs, longer technical documents, videos and social media content. We also communicate in English, Spanish, and Haitian Creole.

When you’re in the neighborhood, please stop in and get your questions answered! If your livelihood centers around commercial vegetable production, knock on the door of Dr. Qingren Wang (qrwang@ufl.edu), ornamental plants, give Vanessa Campoverde a “hello” (evcampoverde@ufl.edu), or learn more about how to make your home landscape Florida-friendly by speaking with Laura Vasquez and her team (lavasquez@ufl.edu). You’ll find everything that you could want to learn, and more at Extension!

Faithfully yours,

Ana Zangroniz, Florida Sea Grant Extension Agent
Adel Peña is the new Urban Horticulture Program Specialist for UF/IFAS Extension Miami–Dade County. She started with us in June serving residents and partnering with Adrian Hunsberger to work with the Master Gardeners. Adel previously worked for FDACS as a nursery inspector, was Assistant Curator for the FIU Wertheim Conservatory and Greenhouse, taught environmental science and ecology of South Florida at FIU as a TA and an adjunct instructor. She also worked as a museum tech at Everglades National Park. Her experience with horticulture makes us feel very lucky to have her. She has a B.S. in Biology, an M.S degree in Environmental Studies, and a Certificate in Museum Studies. A few of her specialties are pine rocklands and knowledge of South Florida’s native plants and ecosystems. Adel, thanks so much for joining our team!
Looking to plant more tropical fruit? Papaya’s got a lot going for it:
- Short juvenile phase means fruits are ready about one year after planting
- Simple growth habit requires no pruning or trellising
- Fruit can be channeled into diverse markets, including green/vegetable, fresh dessert, processing, or even industrial/pharmaceutical as a source of the enzyme papain
- Rich in carotenoids and an excellent source of vitamin C
- Strong demand, the U.S. is the number one importer of papaya, with a 50% increase from 2008 to 2018

So why don’t we see more locally grown papayas here in South Florida? How can we unlock the potential of this tropical all-star?

Growing papayas is not a new idea. By the early 1900s, naturalized papayas were already thriving in hammocks and along canals throughout southern Florida—though their flavor was notoriously awful. In hopes of establishing a domestic industry, the USDA brought more than 100 papaya accessions from around the globe to Florida. Promising lines gave rise to new cultivars including ‘Blue-Stem’, ‘Blue Solo’, and ‘Betty’. These were well-suited to South Florida’s climate, and featured improved eating quality—supposedly lacking “that papaya flavor”, a muskiness characteristic of the feral fruits.

By 1928, the industry was expanding rapidly. Proceedings of the Florida State Horticultural Society estimated that papaya growers were grossing just shy of one million dollars per year, roughly equivalent to 15 million dollars in today’s currency. Sadly, growth was curtailed by the spread of viral diseases throughout Miami–Dade in the late 1930s to mid-1940s. Little could be done to mitigate the losses. There were no effective chemical treatments and no virus–resistant varieties available.

To this day, the ubiquitous threat of the papaya ringspot virus (PRSV) is a major limitation on papaya production in our region. However, thanks to researchers at UF/TREC, this may not be the case for much longer! PRSV–resistant papayas have been developed and are undergoing final evaluation before being released to the public. These new varieties are the result of a decades–long project led by UF’s Dr. Mike Davis (plant pathologist emeritus), and Dr. Jonathan Crane (tropical fruit specialist). With any luck, they’ll keep papaya growers in the black—and may even catalyze expanding acreage.
With the key hurdle of PRSV susceptibility nearly overcome, what else can be done to support a local papaya industry? We (your friendly, neighborhood plant scientists at TREC) are turning next to fruit quality. UF’s first PRSV-resistant papaya varieties will bear large, oblong fruits, suitable for use either to be eaten green, like a vegetable, or ripe and sweet like a typical fruit. The USDA’s agricultural marketing service (USDA-AMS) categorizes these fruits as ‘Maradol’ or ‘Tainung’ types. Less common are the small, pear-shaped types known as ‘Solo’ papayas. Originally bred in Hawaii, solo papayas are known for their convenient, “personal” sizing and their excellent flavor—able to convert a subset of papaya haters into fans. Solos also feature a higher price tag. From 2015–2018, solo papayas sold for an average of $1.36 per lb retail—a 44% premium over Maradol or Tainung types ($0.94/lb).

In Dr. Alan Chambers’ Tropical Fruit Breeding and Genetics lab at TREC, our next target is a solo-type variety for South Florida. Future cultivars should combine PRSV resistance, solo-type fruit quality, and strong agronomic performance under local growing conditions. As an early step towards this goal, we planted several solo-type papayas at the research center in Homestead for evaluation. Promising accessions were identified based on yields, low bearing height, and excellent flavor. These plants are now being hybridized with PRSV-resistant lines as part of our breeding program. Hopefully, these efforts will ultimately lead to more and better options for papaya growers in Miami–Dade County. Interested in learning more about our work in papaya and other tropical fruits? Visit our website at: www.tropicalfruitbreeding.com.
Family Nutrition Program Food Systems Focus
The UF/IFAS Extension Family Nutrition Program (FNP) provides free research and evidence–based nutrition education curriculums to SNAP–eligible communities in 40 counties across Florida. FNP Food Systems Specialists work with communities and partner organizations on initiatives that make healthy food and physical activity choices easier and more accessible.

Examples of food systems initiatives include supporting garden programs and local procurement initiatives such as Farm to School activities, farmers markets, mobile markets, produce stands, and community supported agriculture (CSAs) with participation in SNAP and FAB payment programs, to name a few. As we enter a new planting season and school year, here are some FNP Food Systems highlights of planting season and fall activities last year in Miami–Dade County.

Gardens
School and community gardens can enhance nutrition education curriculums, and have been demonstrated to increase not only understanding of nutrition knowledge regarding fruits and vegetables, but also improve overall willingness to taste vegetables and taste ratings of vegetables, supporting development of healthy eating habits—such as preferences for and consumption of fruits and vegetables. Community gardens also have been found to save money in food costs for community gardeners during the growing season.

Over the past year, in various communities, schools, and early childhood education sites, FNP Food Systems Specialist, Solina Rulfs, supported garden leaders (‘Garden Champions’) and gardeners with installing and planting raised bed gardens. On planting days, gardeners were introduced to plants they would grow, smelling culinary herbs, learning names and what different fruit, vegetable, and herb seedlings look like, and ways these plants can be used in different kinds of dishes when cooking. Rulfs talked with gardeners about what plants need to grow and how they will care for their garden, before showing them how to transplant seedlings into their raised beds. Gardeners took turns digging homes for the seedlings, placing plants in the ground and covering their roots with soil.

Garden Champions were charged with coordinating a maintenance schedule, ensuring gardens were watered, weeded, and tended on a regular basis, and encouraged to engage their communities with curriculum connections, or to lead other gardening activities. At the end of the growing season at several FNP supported garden sites, Rulfs coordinated with Garden Champions and FNP Program Assistants to provide a garden harvest event alongside a nutrition education lesson including a recipe incorporating
some ingredients that had been grown in the garden.

Florida Crunch

October is National Farm to School month, and FNP supports partners across the state with celebrating through participation in Florida Crunch events. On the day of the Florida Crunch Event, samples of one kind of locally grown fruit or vegetable are tasted by groups of students in a classroom, cafeteria, or other setting, at the same time. Before everyone bites into their sample, tasting etiquette and the nutrition and health benefits of eating fruits and vegetables is discussed, as well the importance of Florida Agriculture. Sometimes a local farmer or chef participates and speaks at the event. The intent of the event is to increase awareness of the importance of supporting local agriculture and to begin building relationships between schools and local growers through purchasing the fruits or vegetables which will be sampled from the local growers if possible. The hope is that over time, fresh fruit and vegetable purchases from local growers for cafeteria will happen not only for Florida Crunch events in October, but on a more frequent and regular basis.

October 30th, 2018, Rulfs and former State Food Systems Specialist, Jeannie Necessary, supported the Education Fund’s Food Forest for Schools Program Manager, Debi La Belle, and gardeners, Judina Amazan and Lisa Warren, with leading a Florida Crunch event in the cafeteria of WJ Bryan Elementary School. Rulfs spoke about the importance of local agriculture, and how students all across the country celebrate National Farm to School month throughout October. This Florida Crunch event featured food grown and harvested from the school’s own large Edible Food Forest garden, including leaves of cranberry hibiscus, okinawa spinach, longevity spinach, and katuk, made into a delicious salad by Debi La Belle.

Students were provided salad samples alongside their cafeteria lunch, and Rulfs and Necessary assisted with distributing salad samples followed by stickers provided by Florida Department of Food and Agriculture congratulating students for tasting their salad samples. Many students said they ‘loved’ the salad, that it ‘tasted amazing’ and asked for more ‘leaves’. One student drew a picture of salad leaves and wrote that he loved it! The school principal, Mrs. Maytin, expressed she was very happy to have this event take place at WJ Bryan Elementary School.

This year, Rulfs will support FNP and partners with several Florida Crunch Events during the month of October. For more information regarding Florida Crunch Events, you can download a Florida Crunch Event Toolkit here. You can also contact an FNP Food Systems Specialist, serving your County. Rulfs looks forward to supporting more communities and growers in Miami–Dade County who are interested with initiatives to increase local procurement opportunities.
This Garden Belongs to All of Us!

*Enrique Nodal, 3rd Grade Teacher, Santa Clara Elementary School*

*This article was written by third grade teacher Mr. Enrique Nodal to thank 4–H program assistant, Ms. Debie Lee, for her wonderful work helping to create a school garden at Santa Clara Elementary.*

Thanks to Ms. Debie Lee’s guidance and the University of Florida 4–H’s generosity, the creation of our school garden has been an enlightening experience for all who contributed. Ms. Lee explained early on that our garden would not only teach us about its flora and fauna but would also expose us to the culture of shared responsibility and pride that is an integral part of the gardening experience. Our garden has flourished since its inception and continues to thrive with the help of the dedicated students and teachers who tend to its care.

On any given Tuesday, a parade of knee-high pre-kindergarteners carefully navigate the paths between plants. With a hodgepodge of watering devices in tow, they carefully squirt leaves, douse flowers, and soak the soil around the stems of plants. Throughout the day, other students from different grade levels come to look and learn about the foliage and creatures that inhabit the terrain.

On Wednesdays, it’s the older students who anxiously await Ms. Lee’s arrival. She brings with her a collection of gardening paraphernalia; rubber gloves, shovels of assorted sizes, different types of rakes, and potted plants to put into the ground. The students gather around, excitedly listening as she calls out assignments, desperately hoping to be selected. Ready to plunge their hands and knees into the earth and experience the magic of the garden.

The children aren’t the only ones drawn in by the charm of the garden. The adults have also made it their own; taking turns watering, picking up left behind litter, and even relocating caterpillars to more insect friendly areas of the patch. Our math coach purchased a hose and nozzle. Our art teacher painted signs for the students to label and wedge into the ground to let others know what it is that grows in our garden.

This enchanted space that Ms. Lee and the University of Florida 4–H organization helped us create is quickly becoming a place of wonder where students, teachers, and visitors can go to observe, learn, and marvel at the majesty and mysteries of nature. This garden belongs to all of us!
What is UF/IFAS Extension?

The **UF/IFAS Extension Service** is the liaison between research conducted at the University of Florida, other institutions of higher learning, other universities, and stakeholders in Miami-Dade County. Our clientele includes growers (agricultural and horticultural), homeowners, youth, people interested in family issues or food and nutrition, and marine industries.

**UF/IFAS Extension Miami–Dade County** receives direct funding from the University of Florida's Institute of Food and Agricultural Sciences (IFAS) and Miami–Dade County's Parks, Recreation and Open Spaces Department.

The **United States Department of Agriculture (USDA)** is the third partner in this cooperative agreement. The Miami–Dade County offices are part of a nationwide system of information, outreach, and education offered by county governments and land–grant educational institutions in each state.

**Get Social With Us!**

Follow us on our various social media outlets:

- Like our FB Page: **UF IFAS Extension Miami–Dade County**
- Check out our various informative videos on our YouTube channel: **UF/IFAS Extension Miami–Dade**
- Tweet with our agents and programs on Twitter: @sflhort @MiamiUCU @miamidade4h @evcampoverde

This newsletter is edited by Jeff Wasielewski and Ana Zangroniz. If you have any questions or concerns, please contact us at sflhort@ufl.edu or azangroniz@ufl.edu.
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