

Extension Connection

In this Issue

<u>Topic</u>	<u>Page</u>
Save Water in the Landscape	2
Plants in Space?	3-4
Forage Testing	5-6
Easy Summer Dinners	7
4-H: Family Mealtime	8
Gardening Seminar Schedule	9-10
Classes/Seminars	11
Gardening Tips	12-13

"UF IFAS Extension Citrus County"



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Extension Notes

BJ Jarvis, Extension Director

We are open...Sort of

This has truly been an unusual year! We appreciate the many citizens who have joined us in migrating to virtual problem-solving. Submitting questions by email and phone, and attending seminars by Zoom have been our main modes of communication for the last few months. Rather than throwing our doors wide open, we are proceeding slowly and now welcome a limited number of visitors in person. Join us with your favorite mask. If you need a specific expert, call ahead for an appointment. We look forward to seeing you!



Sincerely, BJ



UF/IFAS Extension

Solutions for Your Life

URBAN HORTICULTURE

Summertime Solutions to Save Water in the Landscape

BJ Jarvis, Director and Horticulture Agent



Water conservation need not be a death sentence for the landscape. In fact, we tend to significantly overuse water outdoors.

Here are 5 simple tips to cultivate a beautiful landscape without wasting water.

Fertilizers require water and energy to process by the plant. Most trees and shrubs do not need extra fertilization. Focus on lawn instead.

Plant placement is always critical. If a plant is positioned where conditions are not favorable, the plant gets stressed, often requiring extra water. For example, azaleas prefer a shady spot. But if planted in full sun, they will perform poorly, attracting harmful pests, further challenging them. Not sure what conditions your new plant prefers? Contact Extension experts for guidance.

Lawns mowed improperly become stressed and need extra water. Sharpening mower blades after about 20 hours of mower use is optimal. Dull blades shred grass leaves,



opening them up for disease entry, and turning them a dull brown. In addition, these jagged tips release larger amounts of water than a nice clean cut.

Let's face it; our soils are practically inert with sand that has little **water-holding power**. Augment planting holes with organic matter. Already planted? Top dress existing plants with up to a 1/2" of composted, or good organic matter each season. Interestingly, recent research has shown that if we top-dress lawns with up to a 1/4" of organic matter seasonally, lawns will perform better as well.

Finally, assure a 2-3 inch layer of **mulch**. More is not better. Mulch maintains a cooler soil



temperature when it is hot. Choose a non-rock, non-cypress mulch. Anything once-living that was chipped or shredded works. You can rake pine needles around plants, but purchased chips or pieces of pine, melaleuca, eucalyptus and others work well. Even free utility mulch from the landfill works well.

Follow these simple tasks, and stop by or call for additional information at 352-527-5700.

Florida-Friendly Landscaping™

Florida-Friendly Roadmap



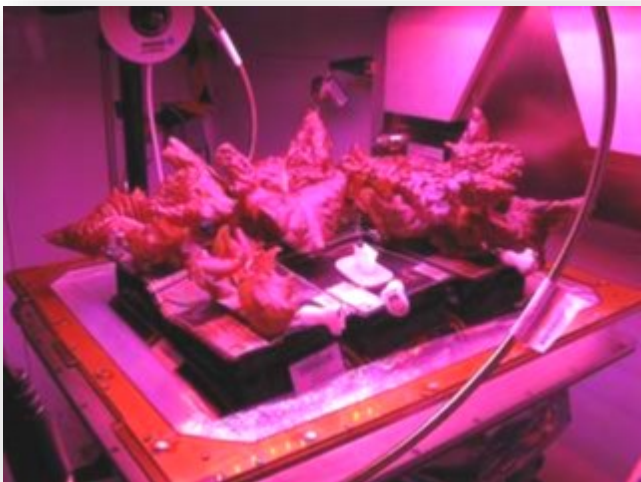
Space Soil is on My List

Steven Davis, FFL Program Coordinator



How do your plants grow in micro-gravity? Not sure? SpaceX gardeners may soon get the chance to explore this question. Gardeners are always seeking ways to advance their knowledge, visit new garden spaces and search for better ways to grow plants. If traveling is your passion, I have a great idea.

VEGGIE (Vegetable Production System) is a low-power greenhouse ultimately enabling the production of nutritious fresh vegetables for consumption by astronauts in deep space. Sounds like a great place to explore if you like vegetables.



Orbital Technologies partnered with Kennedy Space Center to create a plant growth system known as Veggie, now used on the International Space Station. The system employs LEDs, which are highly efficient and long-lasting and radiate hardly any heat.

Credits: *Orbital Technologies/NASA*

Could plants be grown in space? Would plants grow wildly? Would roots grow up or down? Would dirt float around in zero gravity?

Many things puzzled scientists and engineers early on. NASA's partnership with industry helped develop the technology needed to grow plants in very thin air. Initial tests proved that roots did not require gravity to grow down into the soil as was previously thought. Seeds were placed appropriately on taped wicks required to harvest water from the atmosphere and wick down to the seed for germination. **Space soil** is packaged in a pillow so it would not be displaced in zero gravity, the wick is inserted and under appropriate controlled conditions, a seed would germinate and grow into a plant. Red romaine lettuce was the first plant grown on the International Space Station, (ISS), was frozen and sent back to Kennedy Space Station for testing prior to astronauts eating their first astro-salad in space.

In 2018, the **APH** (Advanced Plant Habitat) was deployed, consisting of red, blue and ultraviolet LED lights needed for photosynthesis, porous clay substrate, including slow release fertilizers (space soil) enabling the delivery nutrients, water and oxygen to the establishing roots. Advanced features including cameras and nearly 200 sensors in constant contact with ground teams at the Kennedy Space Center (KSC) make astro-gardening easy. This system is autonomous and makes necessary environmental alterations on its own, freeing astronauts of the daily grind we know exists when managing productive vegetable gardens. Proving successful, this technology will enable plants to be grown from seed to seed, the cycle of botanical life.

(Continued on page 4)

Florida-Friendly Landscaping™

Florida-Friendly Roadmap



(continued from page 3) GARDENING IN SPACE

Many things developed in space have returned to Earth and are now found in the terrestrial market, big box stores and internet space. Ethylene scrubbers were developed to reduce accelerated ripening of fruits and vegetables, slowing their decay. Additional product development led to **Airocide** scrubbers which destroy other organic compounds including: airborne bacteria, molds, fungi, viruses and odors. This technology is now deployed for use in food processing and distribution plants, supermarkets, restaurants and florist shops. Airocide, is also used in hospitals, doctors offices, laboratories and schools to clean air and maintain healthier conditions in closed environments.

Other developed technologies allow the manufactured environments to 'text' astro-gardeners when plants need water, by measuring the thickness of the leaves and automatically delivering moisture the plant requires, saving unnecessary irrigation and minimizing potential disease.



A leaf sensor developed to increase the efficiency of farming on long-duration space missions is now used by farmers to conserve water use by only irrigating when crops need it.

Credit: AGRHOUSE Brands Ltd./NASA

Aerogarden, a household garden appliance was also developed, where soils, substrate or sunlight are not even required. Growing plants in thin air? Huh, who da' thunk it. I am interested in the space soil. After gardening in Florida's sandy soils this idea seems out of this world. I'm in. Hope you join me.

Check out these links for more information:

<https://www.youtube.com/watch?v=CN5PA3Mq-SE>

<https://www.txstate-epdc.net/growing-plants-in-space/>

https://www.youtube.com/watch?v=YFdww9yrxD0&feature=emb_rel_end

<https://www.nasa.gov/feature/space-farming-yields-a-crop-of-benefits-for-earth>

Is All Hay Created Equal?

Clay Cooper, Agriculture/Natural Resources Agent



For many producers, this time of year is considered hay season. The days are long, the weather is warmer and our perennial warm season forages are flourishing. Forage production is at its peak during the summer months allowing for producers to put up excess forage as dry hay and feed it out during the winter months when forage availability is limited. In doing so, we are better able to match forage availability with animal needs throughout the year.

Dry hay can help fill the void of dormant pastures but how do we know if it is meeting the nutritional needs of grazing livestock. When hay is purchased, it does not come with a nutritional label like other feed sources that we are familiar with. So how do we know how much to feed and if additional supplementation is needed?

The short answer is we don't, unless a forage test has been conducted. A forage test provides useful information about the nutritive value of the hay being fed. This information can be used to adjust the amount and composition of nutritional supplements offered to livestock to meet their nutritional needs.

When forage is sampled it is often evaluated on a handful of parameters which are outlined below:

1. **Dry matter:**

DM refers to the portion of the forage after the water has been excluded and all nutritive values are reported on a dry matter basis. Dry matter concentrations are important for conserved forages because this measure indicated how the conservation process may impact the nutritive value. For instance, dry matter concentrations for hay should be between 85-92%. If the dry matter content is below 85% the hay can mold due to the excess moisture and negatively impact the overall quality.

(Continued on page 6)

(continued from page 5) FORAGE TESTING

2. Crude protein:

CP is the nitrogen and amino acids present in feeds. An estimate of forage total crude protein is obtained by multiplying total nitrogen concentrations by a constant of 6.25.

3. Total digestible nutrients:

TDN represents the energy concentrations in the forage which is calculated based off of the total fiber, starch, sugars, protein and fat content in the forage. Energy is the nutrient required the most by cattle and usually accounts for the largest proportion of the feed costs.

4. Neutral detergent fiber:

NDF represents the components of the plant cell wall which are more or less degradable, depending on the stage of maturity and degree of lignification in the forage. In general as NDF increases, forage intake is reduced.

5. Acid detergent fiber:

The ADF component of forage is determined when either the NDF residue or an intact forage sample is processed in a detergent solution primarily containing sulfuric acid. The remaining fiber residue, mostly cellulose and lignin, makes up ADF. In general, as ADF increases, forage digestibility is reduced.

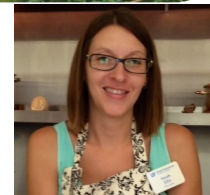
For more information related to forage quality or for forage testing please contact experts at Citrus County Extension.





Easy Summer Dinners

Sarah Ellis, Family and Consumer Sciences Extension Agent



During the summer I often struggle to find the motivation to cook dinner for my family. I personally love a yummy salad in the summer, but since my sons won't eat much salad, I must look to other options including using the grill and my electric pressure cooker. Here are some ideas for easy summer dinners.

Salads: there are so many ways to make delicious and healthy salads in the summer. The key to a healthy salad is watching what you put into it and using dressing sparingly.

Tossed salad – choose dark leafy greens such



as romaine and spinach for your base. Add some bright vegetables such as carrots or bell peppers. You can also add some fruit, and lean

protein such as turkey.

Strawberry and spinach salad – baby spinach with fresh sliced strawberries served with poppy seed dressing. This healthy and delicious salad is a house favorite!

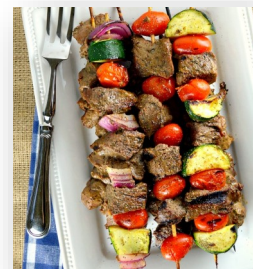
Couscous salad – couscous is a healthy and low-fat grain that cooks quickly. You can add some feta or goat cheese, olives, cucumbers, raw and roasted tomatoes, and a dash of herbs.

Pasta salad – this easy to make salad is versatile as you can use an assortment of colorful vegetables to create a healthy and delicious palette. Be sure to use a strong pasta shape such as bow tie or penne, so the pasta doesn't get mushy.

Grill: just about any type of meat or seafood can be cooked on the grill. But there are lots of veggies that are delicious on the grill too!

Meat, poultry, and seafood – marinate or season and cook, turning the food over at least once for even cooking. Cook through but avoid charring. Use a food thermometer to check for doneness. Chicken should be cooked to a minimum internal temperature of 165°F. Cook ground meats to a minimum internal temperature of 160°F. Cook steaks, chops, fish and shellfish, and roasts of beef, pork, or lamb, to a minimum internal temperature of 145°F.

Kabobs – this versatile grill staple is easy to make. For the meat lovers, use marinated chicken, beef, or pork cut into 1" cubes and put on skewers. Grill, turning occasionally, to minimum internal temperatures listed above. For the vegetarian, use whole cherry tomatoes and zucchini, squash, and bell peppers cut into 1" pieces and put on skewers and grill to desired doneness for a delicious summer dinner. Meat and veggies can also be placed on a single skewer.



Grilled vegetables – vegetables such as corn on the cob, Portobello mushrooms, zucchini, onions, and broccoli are great on the grill. Slice vegetables into large pieces or keep whole, brush with olive oil, and grill on a clean grill until cooked to desired doneness.

Foil packet meals – there are a variety of different dinners you can cook in a foil packet on the grill including steak with garlic and potatoes and Cajun shrimp with corn. This type of meal can also be cooked on an open campfire.



Growing Family Mealtime

Dr. Marnie Ward, 4-H Agent



How does that old saying go? The family that eats together.....

Growing demands on free time and an increasing list of extracurricular activities combine to challenge modern families when it comes to family mealtime. While a sit-down meal with knife and fork were the hallmarks of family meals just a generation ago, the 21st century mealtime has evolved.

With increasing numbers of parents and caregivers working outside of the home, and a growing list of extracurricular activities for kids (football, track, science clubs, 4-H, etc.), time is at a premium. Balancing work life with parenting often means scheduling time to stay connected. A good place to start is mealtime.

Need some help reconnecting with mealtime? Here are some ideas for your family to try:

- Plan with your family
- Attach a menu board to the fridge and have family members vote on dinner options
- Set a menu for the week and make a shopping list of required items
- Share responsibilities for meal preparation with children, assigning age-appropriate tasks
- Make it a "Technology Free Zone" - no phones, computers or social media



Family Breakfast - Make the most of early morning risers:

- Have family members select a task and prepare the night before
- Keep it FUN
- Include family favorites on the menu
- Ideas - monster faced pancakes, overnight oats, and yogurt parfaits

Dinner on the Go - Take dinner out:

- Make family meals an adventure
- Be flexible - make family the focus
- Set a theme - hot dogs/beans at softball practice, hoagie sandwiches at the soccer game, lettuce wraps in the garden before a club meeting



There is only one rule for family mealtime; have it with your family!

★ Until further notice, these will be virtual seminars.

Gardening Seminars

Contact Steven Davis at 527-5708 to pre-register for these free classes or go to:

<https://ccufflprogram.eventbrite.com>

“Managing Pests Wisely”

Tuesday Jul 7
2:00 - 4:00 pm

“Right Plant, Right Place”

Thursday Jul 16
6:00 to 8:00 pm

“Create a Florida- Friendly Landscape”

Tuesday Jul 21
2:00 - 4:00 pm

“Optimizing Irrigation Systems”

Tuesday Aug 4
2:00 - 4:00 pm

“Irrigation 101”

Wednesday Aug 5
1:00 - 4:00 pm

“9 Florida-Friendly Principles”

Tuesday Aug 18
2:00 - 3:30 pm

Florida-Friendly Landscaping™ PROGRAM



“Turfgrass Management”

Tuesday Sep 8
2:00 - 4:00 pm

“Florida-Friendly Fertilizing”

Tuesday Sep 22
2:00 - 4:00 pm

Stay tuned -
because of
COVID, there
will be
distancing.

This may
become a
preorder
sale.

SAVE THE DATE

UF | IFAS Extension
UNIVERSITY of FLORIDA



4th ANNUAL PLANT SALE

Saturday October 17, 2020

8:30am - 12:30pm

Citrus County Extension
3650 W Sovereign Path, Lecanto
352-527-5700



Service animals only please!

UF/IFAS Extension
SolutionsForYourLife.com

UF UNIVERSITY of FLORIDA
IFAS Extension

AUGUST & SEPTEMBER

UF | IFAS Extension
UNIVERSITY of FLORIDA



citrus
LIBRARIES

★ Extension Master Gardener library programs will be virtual. ★

Monthly seminars explore timely garden topics.

They last approximately 1 hour, are **free** and **pre-registration is required**.

Check back here or our Facebook page for registration links.

<https://sfyl.ifas.ufl.edu/citrus/who-we-are/>

Like us on
Facebook

August 20th - 2:00pm: Helpful, Harmless, Harmful Insects

September 17th - 2:00pm: Themed Gardens

Bring plant problems and questions for expert advice to the Extension office.

**Trained Master Gardener Volunteers are available most days between
8am - 5pm. Schedules can vary, so please call ahead (352-527-5700).**

Additionally, challenges (pictures are helpful) can be emailed to:

MasterG2@citrusbocc.com



Are you concerned about falling?

August 12, 19, 26 and September 2, 9, 16, 23, 30

★ Due to COVID-19, classes are limited to 8 participants. Please pre-register to reserve a spot - 352 527 5700

Many older adults have concerns about falling and restrict their activities. Join UF/IFAS Extension Citrus County for **A MATTER OF BALANCE**. This award-winning program is designed to manage falls and increase activity levels.

Two “in-person” sessions to choose from - morning or afternoon
 10:00 am - 12:00 pm
 or
 1:00 pm - 3:00 pm



Looking to purchase a home? Join us for First Time Homebuyer's Class

When: Thursday's 6:00 - 8:00 pm September 3 - 24

Where: Dependent upon COVID-19, this class may be held virtually or at UF/IFAS Extension Citrus County, 3650 W Sovereign Path, Lecanto

What: First Time Homebuyer's class offered by UF/IFAS Extension Citrus County. Participants who attend the entire 4-week program will receive a Certificate of Completion that is required for first time homebuyer assistance programs.

The class is HUD approved and encompasses the entire home buying process including preparing your credit and finances, shopping for a home, home inspection, fair housing, financing, and closing. Class size may be limited and pre-registration is required. Child care is not provided.

For more information or to register, call Sarah or Stephanie at 352-527-5700

Register online at: www.2020FirstTimeHomebuyers.eventbrite.com



Summer Gardening Calendar

Summer is a tough time for plants. Start by selecting the right plant for the season and location, then give them a little TLC.

Watering: To keep color thriving, and to establish all new plants, a sufficient supply of water is needed until the rainy season provides a steady supply. Even then, plants under trees and locations receiving spotty showers may not receive sufficient water. Use a rain gauge and check regularly. Turn irrigation systems to MANUAL or OFF and operate manually during the summer rainy season. Assure there is a functioning rain shutoff device to conserve water, save money and help retard disease development. Typical devices, usually plastic, become brittle after only a couple years in the intense Florida sun. If not functioning properly, replace.



Irrigation systems: Assure that irrigation heads for turf and those for landscape plantings are on different zones. Turf-grass is the highest water needs plant, while most common trees and shrubs usually tolerate what Mother Nature provides. If there is enough for ornamentals but not the turf, these zones can be run separately. This saves money and the environment.



Palms: Summer is a good time for palm planting. Support large palms with braces for 6–8 months after planting. Nails should not be driven directly in to a palm trunk. Only older fronds that are completely brown should be removed. Hurricane-pruning is quite detrimental to palm health. **DON'T** do it.

Azaleas: Flower buds for next year form soon after this year's flowering has finished. Prune no later than mid-July to protect next spring's bloom.

Vegetables and herbs:



- While a few heat tolerant vegetables can be grown now (southern beans/peas, okra, eggplant), another approach is to solarize garden soil during the summer for fall planting. It takes 4–6 weeks to significantly reduce weeds, disease, and nematodes, so start now.
- As the summer progresses, herbs that prefer slightly cooler temps can be started. Cilantro, dill, and tarragon are among those that prefer fall and winter temperatures.
- Late in August and into September, start the next crop of warm season vegetables. These include peppers, tomato, green beans, squash and cucumbers. For more vegetable gardening choices, check out Vegetable Gardening Guide: <https://edis.ifas.ufl.edu/pdffiles/VH/VH02100.pdf>

Monitor for pests on ornamental plants: Inspect for caterpillars on trees and shrubs. Large trees typically withstand caterpillar feeding but young plantings may need some assistance. If damage is extensive, choose a targeted, rather than broad-spectrum, approach.

Lawns: If the lawn needs fertilizer, the end of September is the last appropriate timing. Choose a fertilizer with no or no more than 2% phosphorus (the middle number on a fertilizer bag) unless a soil test indicates a need for it.

When in doubt, contact or visit the Extension office for problem identification and advice - 352-527-5700

