So much has been going on the last few months that it is hard to know where to start and what to focus on in this newsletter. Staying healthy during the COVID-19 pandemic? Wear a mask or do not? Protests, social justice, and equality awareness? The start of hurricane season? Lack of tolerance and political discord? Economics and the supply chain affecting our farmers? It is hard to wrap my head around it and make sense of it all. One thing that is constant and trustworthy is the information that we generate out of the extension office. We utilize researched-based information and logic models to assist our clientele find solutions to their questions and challenges. Even with our doors closed to walk-in traffic our agents and staff have been busy answering emails and phone calls, creating educational videos, distributing face masks and information on how to protect against COVID-19, giving webinars on Best Management Practices, pesticide training via Zoom, virtual site visits via video phone apps, developing on-line summer camps, helping homeowners with their turf and landscaping issues, pesticide license testing and attending more virtual meetings than I can count. But through it all our extension office is here to help you understand the science behind an issue, challenge, or problem so that you can make a more informed decision. This is a trying and stressful time for everyone --- be patient and kind to one another, think before you react, and care for others in your community by wearing a mask. We are resilient and we will get through this together.

Christine

Hurricane Season Predicted to Be More Active than Normal

According to forecasters with NOAA’s Climate Prediction Center, we should expect an above-normal Atlantic hurricane season for 2020. The Atlantic hurricane season runs from June 1 through November 30 with August and September being the most active months. The outlook predicts a 60% chance of an above-normal season with a likely range of 13 to 19 named storms (winds of 39 mph or higher), of which 6 to 10 could become hurricanes (winds of 74 mph or higher), including 3 to 6 major hurricanes (category 3, 4 or 5; with winds of 111 mph or higher).

What is driving the stronger than normal season? The combination of several climate factors such as trend toward La Niña and without an El Niño present to suppress hurricane activity. Warmer-than-average sea surface temperatures in the tropical Atlantic Ocean and Caribbean Sea, coupled with reduced vertical wind shear, and an enhanced West African monsoon all increase the likelihood for an above-normal Atlantic hurricane season.

Most important during a hurricane is your family’s safety and well-being. To find resources and tips about hurricane preparation, please see the article on page 13 entitled *How to Prepare for a Disaster on a TIGHT Budget*.
Here in south central Florida, we are in the hot and humid weather of early summer. July has arrived and pastures are growing faster than they can be grazed or mowed. There should be plenty of forage right now and animals should be fat and sassy. If they are not, then there are a few things that you need to consider in order to get your pastures back into shape before the fall. Less than optimum forage production now will lead to more problems into the fall and winter making you more dependent on expensive supplementation such as hay or concentrated feed.

The presence of weeds reduces your pasture’s ability to produce forage. Weeds are undesirable plants that are not readily utilized by livestock, and in some cases, can be toxic. If these undesirable plants become established in your pasture, they can displace desirable forage species, decreasing your acres of grazable forage. We commonly only think of weeds as broadleaf species like Tropical Soda Apple, but some of the most problematic weeds we encounter in Florida are weedy grasses, like smutgrass. Broadleaf or grass, anything that is taking up water and nutrients in your pasture that your livestock do not utilize is lessening your overall ability to produce forage. Weeds place added pressure on the remaining desirable forage and it is important to take steps to identify weeds and begin a control program.

Once you have taken care of those pesky weeds, utilize a fertility program that is based on a soil test to help maximize forage production. Florida’s improved forage species are bred to be highly productive. Expecting a forage to be highly productive without adequate fertility is just setting yourself up for failure and disappointment. There may be some level of performance, but the true potential will not be realized in the pasture or in the animal. Fertilizing once a year is not sufficient to maximize forage potential either. Nutrients, like nitrogen and potassium, do not remain available to the grass indefinitely. Some nutrients are taken up by plant roots, then grazed and converted into animal tissue or waste; while other nutrients are washed down through sandy soils by frequent rains until they are too deep to be accessed by plant roots. Either way, nutrients need to be replenished throughout the growing season to maintain a productive pasture. It is never too late to have a soil fertility test done where the soil is analyzed for pH and available nutrients. Having this information is key to knowing liming and fertilizer needs. The Indian River County Extension office can test your soil for pH.

Grazing management is another key concept that is important to monitor and control when expecting the best out of your pastures. Implementing grazing strategies that allow your pastures to rest for 14-21 days between grazing periods will enable your grass to take full advantage of its rapid growth potential. Not to mention the improvement you will see in forage utilization. If you are not currently incorporating any form of rotational grazing, making the switch can be a little daunting, but the long-term benefits will be well worth the initial effort. While rotational grazing can help improve forage availability, it cannot make up for an excessive stocking rate. As the number of animal units increases, at some point their nutritional demand will exceed what the forage can produce, regardless of management strategies. If you have addressed all of the previously mentioned issues and your forage supply is still low, it is highly likely that you have too many cows and you will need to remove animals to decrease the pressure on pasture. Overgrazing and overstocking lead to substantial future problems that are not easily, nor inexpensively, solved.

For more information try reading:
Weed Management in Pastures and Rangeland [http://edis.ifas.ufl.edu/wg006](http://edis.ifas.ufl.edu/wg006)
Fertilizing and Liming Forage Crops [http://edis.ifas.ufl.edu/ag179](http://edis.ifas.ufl.edu/ag179)
Nutrient Testing Form for Bahiagrass Pasture [https://edis.ifas.ufl.edu/pdffiles/SS/SS59700.pdf](https://edis.ifas.ufl.edu/pdffiles/SS/SS59700.pdf)
**Local Farmer Focus** by Christine Kelly-B.

Page Wilkerson has an easy, affable way about him that makes you want to talk with him for hours. His ready smile is infectious, but he can easily switch to a more serious mode when talking about his farm *Cityside*. *Cityside Farm* specializes in microgreens, wheatgrass and edible flowers and has successfully sold produce locally, throughout Florida and in Georgia. Microgreens are tender young plants, usually 2” tall and harvested at 7-10 days. Microgreens are usually eaten in a salad and they provide vivid colors, intense flavors and are highly nutritious. So how did a retired law enforcement officer become an organic microgreens farmer? Well, it is in his blood really, and he is returning to his roots in an innovative way. Page spent his childhood summers on a 300-acre farm in Georgia owned by his grandparents, milking cows, riding horses, and helping plant peanuts and cotton. In many ways, it was idyllic for a young boy and it left him with a life-long love of agriculture.

Page retired from law enforcement after 20+ years and decided that he wanted to have a farm of his own but one that would fit his current lifestyle and one where he did not have to have a large piece of land. The story began more than thirteen years ago, when Page’s wife Sandra challenged him to become a vegetarian for six months. This experience sparked his passion for creating his own version of a healthy lifestyle. Page has researched and studied a vast array of natural approaches to health and wellbeing, organic and biodynamic farming and the secret life of plants and their best growing conditions. He began to take classes on small-scale farming at the UF IFAS Research and Education Center in Live Oak and was introduced to microgreens. I first met Page on a site visit to his backyard where he was growing lettuce, kale and other leafy greens in grow bags and was selling his produce at different venues locally. Farming is not easy—-it can be dirty, back-breaking work with low profit margins. Urban farming has just as many challenges and pitfalls as traditional farming, if not more when you are organic and not using any pesticides or GMO’s (genetically modified organisms). There were many years of trials and tribulations for *Cityside Farm*, but persistence seems to have paid off. Page set up a hydroponic grow system in his garage for organic microgreens (arugula, basil, broccoli, cilantro, cress, kale, pea, amaranth, radish, sunflower) and wheatgrass and within a few years he was selling his USDA-certified organic products up and down the east coast of Florida and Georgia in major grocery chains, including Lucky’s Market. Selling to corporate stores might seem to be a farmer’s dream but it comes with its own set of headaches and in 2018 Page wanted to rethink his sales strategy and decided to re-focus his energies on marketing closer to home.

In 2019, *Cityside Farm* started putting it products into a refrigerated display case at the old Mélange building located at 7950 US1 in north Vero Beach. These converted log cabins are now the home of the *Alma Community Life Center*. The store is open 11am-5pm and Page has a Meet-n-Greet on Saturdays from 11am-2pm with samples and demonstrations using organic microgreens and wheatgrass. Purchasing products on-line is easy on the farm’s website (home delivery is available) [https://www.citysidefarm.com/](https://www.citysidefarm.com/) or on the Farmers’ Market Drop Off website [https://verobeach.farmersmarketdropoff.com/collections/cityside-farm](https://verobeach.farmersmarketdropoff.com/collections/cityside-farm). For more information about *Cityside Farm* contact Page Wilkerson at (772) 633-2957 or pwilkers@citysidefarm.com.

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**Pesticide Exams at Indian River County Extension**

Pesticide exams are administered at the Indian River County Extension Office with strict social distancing rules in place. Exams are given every Thursday in two shifts: 12:30-2:30pm and 3:00- 5:00pm, until further notice. There are no paper tests, computers only. Computers and testing accessories are sanitized between test takers per CDC guidelines. Masks must be worn which cover nose and mouth with no holes or gaps. Hand sanitizer is available. Social distancing guidelines will be strictly followed, limiting the number of people admitted for testing. Appy for your license and exam at FDACS [https://aesecomm.freshfromflorida.com/default.aspx](https://aesecomm.freshfromflorida.com/default.aspx). After applying for the license, schedule your exam at [https://pesticideexam.ifas.ufl.edu/](https://pesticideexam.ifas.ufl.edu/). If you have any questions, contact Christine Kelly-B.
UF/IFAS Will Be Hosting a Webinar Series Geared Toward the Agriculture Industry

A new webinar series focused on professional development for agriculture and natural resources professionals during a global pandemic is set to take place this summer. Megan Stein, agricultural education and communication lecturer at the University of Florida’s Institute of Food and Agricultural Sciences, will lead the series. “Our industry groups in agriculture and natural resources have adapted to a lot of change recently,” Stein said. “We are hoping to connect meaningful content about organizational change, resiliency and digital business meetings to help these groups continue to move forward.”

The following topics will be presented:

**July 9. Panel on Rural Mental Health.** Through this webinar panel, participants will gain a better understanding of rural mental health disparities, strategies to recognize a person in crisis and resources to address mental health concerns.

**July 16. Tolerating Ambiguity: Being Comfortable being Uncomfortable.** This webinar will focus on how to lead despite ambiguity and leveraging personal attributes to increase effectiveness.

**July 23. Navigating Generational Differences.** This final session will help participants identify methods to better work with others between generations. Additionally, the session will explain some ways in which the pandemic has brought understanding in bridging the gap between generations’ preferred working styles.

“These topics were selected because they are important for ANR industry professionals, but are sometimes avoided in conversation,” Stein said. “We want our industry to feel more comfortable working in digital spaces, while acknowledging mental health disparites, and work with others to lead their organization into the ‘new normal.’”

All webinars will be delivered at no cost to participants using Zoom, a video conferencing software. Interested individuals should register online [https://ufl.qualtrics.com/jfe/form/SV_4UWYvjpxzDB2bFH](https://ufl.qualtrics.com/jfe/form/SV_4UWYvjpxzDB2bFH) to receive the login information. For more information regarding this webinar series, contact Megan Stein at mstein17@ufl.edu.
When Should You Water Your Plants by Nickie Munroe

Maintaining a garden can be an incredibly rewarding project. Nurturing our seeds and watching life take shape day after day can bestow upon us a sense of accomplishment that few other tasks can match. We often get caught up in the excitement of digging into the fresh soil to plant new and interesting varieties of our favorite flowers and vegetables, and often that excitement can make us forget some of the most important needs for our garden to be successful. Number one being the age-old question of “When should I water my plants?” It is a question that is underestimated in the gardening world and it will make the difference between a successful garden and an unsuccessful one.

Gardening is an old tradition amongst us, and many of us stick to old methods to determine the basic needs of our gardens. The “dip my finger in the soil to determine moisture” method being one of them. This would seem like a common-sense approach, but it will only give you a VERY general idea of the moisture in the top layer of soil, and only in that small sample area. This is a problem because some plants have long and extensive root systems that access water at a much greater depth. You could take a deeper sample using a soil probe which would certainly give you a better idea than your trusty ol’ finger. Not only will a soil probe reveal moisture from a greater depth, but it will also give you a better idea of what your soil looks like down below your visual interpretation (Figure 1). This is especially useful in old garden beds where the lower layers are leached of nutrients. With a simple push and pull of a soil probe you can paint a bigger picture of your gardens soil profile.

For established plants be watchful of common signs of dehydrated or over-saturated plants. Your garden is not going to start speaking to you any time soon (as useful as that would be sometimes) but your plants will communicate their needs in other ways. Wilting is a common sign of dehydration and easy to spot; look for leaves starting to curl and gently feel the leaves for dryness (Figure 2). You can also look for browning leaves or other signs of discoloration. If you spot any of these symptoms, it is a good indication that your plant needs a drink. Just water enough to soak the top layer of soil, and you should NEVER water the leaves or plant directly. You want the water to get to the roots as fast as possible through the soil and pickup nutrients along the way.

So how do you know when they plant has been overwatered? Darkened, crumbling (but not dry) leaves, almost like wet tissue paper, is a tell-tale sign that a plants’ cells are drowning in water. As the cell walls expand the plant body will lose its’ rigidity and structure. You might notice a fruit-bearing plant sagging, or flowers bent downwards, your plant-pal is bloated and sluggish! If you notice any of these symptoms simply back off on watering until you see the plant regain some of its’ stature and leaves start looking healthier. Overwatering your lawn can also lead to more weed problems as shown in Figure 3 below. This dollar weed in the grass is a sure sign of too much water.

By reading certain signs you will have a much better understanding of when to water your plants. But when should you not water them? Before, during or after a rainstorm is a no-brainer, depending on how much rain falls. You should never water your garden during the hottest time of the day either. This is because of the water you will lose to evaporation when it is hot out but also because water droplets on leaves and stems are like mini magnifying glasses that can intensify the sun’s light and damage the plant. Just another reason to always water the soil around the plants base rather than the plant itself. The best time to take out the hose or watering can is the early morning or early evening. This gives your soil lots of time to soak up the water without having to battle with the sun.

For information on watering your lawn and garden check out this UF/IFAS Extension article: https://edis.ifas.ufl.edu/pdffiles/LH/LH02500.pdf
Summer Gardening Opportunities in Florida by Nickie Munroe and Christine Kelly-B.

Yes, you read that right, SUMMER gardening in Florida. Your answer will probably be “It is too hot to do any gardening in Florida in the summer!” Truthfully, it IS too hot to do a lot of traditional gardening during the dog days of summer but, like any other plant-adoring person, I cannot deny myself the pleasure of doing some sort of gardening. Therefore, I invite you to join me in some alternative gardening in the shade and containers.

Shade gardens are usually established in areas that receive less than 4 hours of sunlight daily, and with some filtered light throughout the day. Many colorful plants, such as ferns, native woodland plants, and plants that are usually houseplants up north, are suitable for a shade garden in Florida. Do your research and make sure that they are suitable for our Florida heat though. Begonias, bromeliads, caladiums, coleus, hostas and impatiens are just a few plants that do well in the shade and heat. When planting under or near a tree, be mindful of their large and extensive root system which will be difficult to penetrate. Select plants that have shallower root systems, and plant by seeds or small seedlings instead of fully grown plants. If you are looking for color, go for the lighter hues of foliage and flowers so they will be seen in the shade.

Container gardening is another great choice for the hotter months of the year. Container gardens allow you to exercise the same design elements that you would on a full landscape on a smaller scale. A container may be kept indoors or outdoors. Select your container for size, color, and shape; anything can be a container if holds enough soil and allow for proper drainage. If you are going to put multiple plants in the same pot, select ones that have the same soil, light, and watering requirements. Start with small plants so the plants can grow up together and have a cohesive look. Consider the mature size of each plant before placing them in a container so they are not overcrowded when mature. Heat-tolerant vincas, coleus, salvas and celosias are all great choices for containers or large pots. Herbs can also be a delightful addition to any container garden and bay laurel, ginger, Mexican tarragon, and rosemary are great for the hot summer months. A grouping of containers with a unifying element is also very eye catching and pleasing. Use pedestals, castors, and other implements for ease of use and access to your potted plants.

Shade and container plants still require the proper amount of water to develop robust plants. Mature plants will need more water than younger ones and the watering schedule will have to be adjusted accordingly as they grow and as the weather changes. Soil should be moist but not soggy and needs to be allowed to dry out before watering again. Healthy plants are more pest and disease resistant and will give you many months of enjoyment throughout the summer. You want to be able to admire the view in your garden with nice cold tumblers of lemonade instead of constantly tending sick plants.

For more information on shade and/or container gardening, please contact the Indian River County Master Gardeners by visiting our office at 1800 27th Street, Vero Beach, FL 32960, calling (772) 266-4330 or emailing ircmg1@gmail.com. For more information on shade and container gardening:

Florida Gardening Calendar http://solutionsforyourlife.ufl.edu/lawn_and_garden/calendar/
BEE BUZZ and Pollinator Points by Violet Krochmalny

How to optimize your garden planning for pollinator popularity

Homeowners interested in having a more pollinator friendly landscape can optimize the chance of their yard successfully attracting new and returning pollinators. Diversity in planting, bloom succession, appropriate habitats and understanding how pollinators search for food and other resources are utilized by effective gardeners.

Studies show (mostly with bees and hummingbirds) that insects and birds rely on visual cues to search out new resources and return to those already discovered. First, the shortest route between multiple plants is determined and then the foraging path is retraced in set routines (trap lining). This “visual memory” can be disrupted if plants are relocated or removed. Studies show that this memorized route not only improves efficiency for busy bees and other pollinators, but also increases chances of cross-pollination for greater genetic diversity in crops and native vegetation.

Designing your garden for catching the eye of and then keeping pollinators in the area can be as easy as planting color blocks of the same plant to first attract and then having a succession of blooming periods to ensure consistent nectar and pollen. Bloom succession can be plotted out using the charts found in ENH 68 Gardening with Perennials in Florida: http://edis.ifas.ufl.edu/mg035. More information on Florida-Friendly Landscaping can be found at: http://fyn.ifas.ufl.edu/homeowners/publications.htm.

Along with food sources, providing nesting sites, nesting materials and water sources result in a well-rounded habitat. Some native bees will nest in the ground or in soft wood/stem cavities. They utilize pollen and nectar for food, but many also need nesting sites and materials. Butterflies may briefly visit a yard that has a supply of nectar sources, but many species can be enticed to stay in the area by also providing the larval food source (host plant) for the young caterpillars. Some plants can feed a variety of butterfly larvae while others are host specific. Some tips to help a variety of pollinators to flourish in your garden:

- Use blocks of at least 5-10 small nectar plants in the same color to help visual attraction
- Use diverse sizes and shapes of plants, layering both vertically and horizontally with adequate spacing for access by a variety of pollinators
- Plan for a succession of bloom periods for year-round nectar and pollen
- Leave some open spaces for ground nesting insects
- For leaf cutting bees’ nest lining materials, use plants with thin non-fibrous leaves such as azalea, bougainvillea, maple, roses, black-eyed Susan vine (Thunbergia alata), Virginia creeper vine and even flower petals
- Avoid planting along busy roads, which may lead to pollution issues and vehicle-insect collisions
- Avoid excessive changes in plant types and placements which disrupts “visual memory”

More information on plants and trees that attract hummingbirds can be found at: http://edis.ifas.ufl.edu/topic_hummingbird_plants. If attracting butterflies is more your interest, try Butterfly Gardening in Florida http://edis.ifas.ufl.edu/uw057 and a list of books available through the UF/IFAS Extension bookstore can be found at: http://ifasbooks.ifas.ufl.edu/c-132-pollinators-native-plants.aspx
My passion fruit vine does not make any fruit. Why? by Dr. Amir Rezazadeh

I have been asked this question a couple of times during the last month. Clientele say their vines are very healthy and produce a lot of flowers, but do not seem to set any fruit. I know this can be very frustrating and there can be good reasons why no fruit is produced.

The flowers of passion fruit are self-fertile due to the flower morphology being structured so that the anthers are located below the stigmas instead of above them. Additionally, plants can be either self-compatible or self-incompatible depending on their variety. The purple passionfruit is mostly self-incompatible; however, some selected varieties and hybrids may show signs of partial self-incompatibility and should not be planted in large blocks of a single variety. On the other hand, the yellow passionfruit (*Passiflora edulis* Sims f. *flavicarpa* Degener) is almost entirely self-incompatible and requires cross-pollination with another cultivar to set seeds and fruit. In addition, the amount of pollen deposited on the stigma during pollination determines the number of seeds set and size of the fruit. A passionfruit can develop as many as 350 seeds and unless there are at least 100 ovules developing into seeds, the fruit will likely to be hollow, light in weight and have little juice.

The pollen is also heavy and sticky, making wind pollination ineffective, thus pollen transfer must occur via pollinating insects or manual hand pollination when populations of pollinating insects are insufficient. Honeybees and carpenter bees (*Xylocopa sonorina*) are the primary pollinators of passionfruit; when abundant, the carpenter bee is a more efficient pollinator due to its foraging behavior and larger size. To assure the presence of carpenter bees, it is wise to have decaying logs among the vines to provide nesting places.

The goal of hand pollination is to collect and transfer pollen from the anther to the stigma. You can use a dainty paint brush to collect the pollen from the anther and spread it on the stigmas. There are suggestions out there to do this technique using a Q-tip, but I find the cottony texture sticks and holds on to more of the pollen than it deposits onto the stigma. You also can simply pluck off one of the anthers – or as I like to call them – “pollen pads”. Then rub it on all the stigma parts to deposit pollen. Depending on how much pollen the anther pad has to offer, you should be able to pollinate all three stigma bulbs on that flower – and likely have leftovers to spread to other passion flowers as well!

For more information, please read this UF IFAS Electronic Database Information System (EDIS) article about passionfruit [https://edis.ifas.ufl.edu/fp456](https://edis.ifas.ufl.edu/fp456).
Learn About Summer Bugs! by Yvonne Florian and Christine Kelly-B.

Summertime is here and most of us like to look at the flowers blooming, the bees buzzing, and the butterflies flitting about. What better way to increase your knowledge this summer than by learning the names of the insects around your yard. Insects make up 2/3 of the 1.5 million cataloged species\(^1\) on Earth. The study of insects is entomology. Many of today’s scientists got their scientific start by studying insects when they were kids.

Taxonomy is the science of classifying living things—grouping them together with others of similar characteristics. Here are the 7 most common classifications of insects: Coleoptera (beetles), Lepidoptera (butterflies & moths), Hymenoptera (ants, bees, and wasps), Diptera (flies, gnats, mosquitoes), Orthoptera (grasshoppers & crickets), Hemiptera (“true bugs”, cicadas, aphids), and Odonata (dragonflies & damselflies).

What makes a bug an insect? 3 pair of legs (6), an exoskeleton, usually have wings at some life stage, antennae, 3 body segments: head, thorax, abdomen and complete or incomplete metamorphosis.

How many legs does a spider have? Do you think a spider an insect? Spiders have 4 pairs of legs, or eight legs all together and so spiders are not classified as insects. Spiders belong to a group called Arachnida.

Can you find, catch, and draw an insect from each of the above classifications? To get a good look at faster moving insects you may have to sneak up on them quietly. BE VERY CAREFUL WITH THE HYMENOPTERA, THEY CAN STING!!! Collecting and observing insects can be a great way to pass the time and to learn about the biological world around you. What you will need to collect insects: A bug net, a clean plastic jar with lid (such as a peanut butter jar), a magnifying glass and an insect field guide identification book. Be sure to dress appropriately for catching insects outside. Wear closed-toed shoes so you don’t get stung or poked while you are concentrating on an insect. Wear a hat and mosquito repellent (unless you are trying to catch a Diptera) and don’t forget sunscreen if you are not wearing long sleeves and pants. Catch insects as gently as you can and careful put them into the jar so you can observe them closely. If you are going to observe your insects immediately, and only for a few minutes, the jar’s lid does not have to have holes in it. But if you are going to keep the insects contained for a longer time then the lid should have some small air holes. Be careful that you do not take any insects which are endangered, such as the Atala butterfly or the Malachite butterfly.

Every classified species on earth is given at least 2 Latin names and probably many common names. Latin names are very specific. Latin is a dead language—no country speaks Latin anymore—so it does not change. This Latin 2-name system of taxonomy is called Binomial Nomenclature. Can you identify the insects you have found by their common and scientific name? If you learn to identify the insects in your collection, you may also want to learn to pin-mount them for a display of insects of your own property or neighborhood. Pinning of insects is a very specific process with rules that need to be followed. NEVER pin a live insect. What you will need to pin your insects: Specimen pins (bioquip.com), waxed paper strips (for Lepidoptera), pinning foam, or a large, flat piece of recycled Styrofoam, softening jar (if your bugs get dried out), tweezers & probe, labels- one for your name, date, place; one for taxonomic name, fine-point marker for labeling. Ask your parents if they can help you watch Christopher Johnstone’s instructional YouTube video on “How to Pin Insects” https://www.youtube.com/watch?v=Vc0BaGLMiBk.

If you happen to make an insect display, you may want to enter that project into the Indian River County Firefighters’ Fair next year! For more information about insects and bug collecting go to:

4-H Florida Bug Club website: http://entnemdept.ufl.edu/bug_club/index.shtml
Insect Collecting 101 for 4-H: https://ipm.ifas.ufl.edu/pdfs/insect_collecting_101_for_MGs_and_4H.pdf

\(^1\) Words that are highlighted in black are vocabulary words and can be looked up by children in a dictionary to find their meaning.
IRC 4-H First Virtual County Events 2020 by Darren Cole

4-H events and activities are designed to add hands-on education to 4-H programing—providing physical, mental, social and emotional growth opportunities. These events give members the opportunity for a positive and meaningful experience and align with 4-H project areas of science, healthy living, citizenship, and leadership. 4-H events also provide members opportunities to share what they have learned in their 4-H project year to fellow members and promotes mastery through learning opportunities beyond the 4-H club and county level. They include Competitive and Non-Competitive events that balance the cooperative learning activities in an informal educational program. 4-H competitive events are usually hosted at the county, district, state, and national levels with a live panel of judges. 4-H County Events are annual competitions in the areas of public speaking, demonstrations, illustrated talks, Share the Fun (talent), photography, and graphic design. Blue ribbon winners will have the opportunity to attend District events.

Unfortunately, due to Covid-19, youth members in the Indian River County 4-H program who work so hard on their various presentations, demonstrations, illustrative and demonstrative talks and musical acts were not able to perform in front of a live audience and a panel of judges. Instead participants prepared a Face Book or YouTube video and participated in the first virtual IRC 4-H County Events! This was truly a learning experience for the youth and IRC 4-H Program. We would like to thank all the youth members that participated in this event and their parents and club leaders who made this possible. We would also like to congratulate the following 4-H members who won blue ribbons in the following categories:

**Illustrative/Demonstrative Talk** - Emma Rosselle
**Graphic design** - Abby Smith
**Healthy Living** - Allie Smith
**Share The Fun** - Amelia McKenzie
**Crafts** - Charlotte McKenzie
Lauren Frampton
**Horse** - Maddie and Abby Acker
Bella Baum

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My Embryology Experience thru a 4-H Restructured Event by Yvonne Florian

Our 4-H embryo development display came to live at my house in March and it has been a learning experience ever since. This project was meant to be a 4-H demonstration for the 2020 Indian River County Firefighters’ Fair. But due to COVID-19 preventive measures the Fair board decided to close all public midway exhibits and rides. Thus, the chicks, just one to three days old, came home with me.

**What is Embryology?** Embryology is the study of pre-born life. Our display at the fair was to use live chicks, incubated and hatched right there in the indoor fair exhibit hall. The chicks were then to be enrolled in our 4-H “Rent-A-Chick” program, which geared toward “wanna-be” chicken owners who are unsure if they want to commit to adopting birds full-time. For a small fee, renters get to take home chicks, feed, feed dispenser, water tank, and a small “chicken house” brooder box. This is so they can experience caring for their chicks to see if they might want to keep chickens permanently.

**The Incubation Period** Three dozen fertilized eggs had been generously donated by local poultry enthusiast, Dan Elrod in mid-February. The incubator was set up and eighteen eggs were installed in the IRC Extension office. Other eggs were to be started at intervals so fair attendees could see hatching in progress as well as cute, fluffy chicks. There is always excitement about incubating eggs in the office and I had not witnessed the process since I was a small child. I was curious about how it was done, how long it takes, all those details to which I paid little attention as a child. By showing and explaining each phase, Darren Cole, our 4-H agent got me past the scary prospect of incubating & hatching eggs. And those little peeps are just so CUTE. But they don’t stay little for long. I had wanted to renew my own aged backyard flock and had already volunteered to adopt a few of the new chicks.
What your extension office has been busy doing lately

Count the Cost  This was my first flock replacement and it had not cost us anything- YET. Have you ever done those math story problems? Here is one for you. The two older birds gave us an egg each about once a week until they got used to our place. The new pullets laid no eggs for over EIGHT MONTHS! A 50 lb. bag of feed cost $15 and lasted two weeks. Here is where the math story problem comes in. How much did those first four eggs cost? $15 for FOUR eggs. So, a dozen would cost us $45! Depending upon the laying ability of your chickens, backyard egg production might not necessarily save you money, but raising your own chickens is fun, educational and the eggs taste great! If you want to have friendly birds for your children, you must handle them every day from the day they hatch. They each will have their own personality and a pecking order will quickly be established. What do chickens need? Chickens are relatively easy-care animals, but they do need a bit more than just food, water, and shelter to keep them happy and healthy. They will need to be protected from predators and adverse weather conditions or you will lose them quickly to one demise or the other. Cage structures will need to be secure and protect them from too much sun or rain. To learn more about raising chickens, the University of Florida’s EDIS (Electronic Data Information Source) has a great publication titled, Raising Backyard Chickens for Eggs https://edis.ifas.ufl.edu/an239. Our Agriculture Agent, Christine Kelly-Begazo, offers an annual class on backyard chickens and can also answer your poultry questions.

UF/IFAS Extension Indian River County Outreach Summary during COVID-19
March 20th-May 30th, 2020

Webinars attended by agents 64
Educational webinars given by agents 13 Group Participants 225
Communication Materials Developed (newspaper articles, blogs, radio, Facebook posts, newsletters etc.) 52
Social Media Posts 55 People Reached 21,137

Pesticide license tests administered and proctored 17
Virtual Farm Site Visits using FaceTime 8
Virtual Meetings 56

“...my parakeets were in the tree to my livelihood and they were waiting. None of the extension offices in South Florida were offering this course except FFC. I will always be grateful for the fact that during the COVID-19 crisis they were able to help me out so I could keep my job.”
-Joe S.

Our MG Help Desk and Plant Clinics are currently closed to walk-in traffic due to COVID-19. Please email your problems and questions to ircmg1@gmail.com or call (772) 226-4330 ext 1 and leave a message. Someone will get back to you soon! Thank you for your understanding. Samples for diagnosis can be dropped off in the baskets located in front of the extension office above the tax collector’s office in Vero Beach.
Family and Consumer Science News

Hurricanes and Pandemics - They Come When They Want!

by Yvonne Florian and Christine Kelly-B.

Sourcing cheap supplies, healthy food, & extra money in a time of compounding crises.

We have recently seen what can happen in a time of crisis and panic -- no toilet paper, eggs and some empty grocery store shelves. Now with hurricane season is upon us too, how can we prepare an adequate hurricane pantry and keep our household going on a tight budget and limited necessities? If you can squeeze just $5 a week out of your budget, you can start preparing. Here in Florida, it is never too early, and it is still not too late, to be properly prepared for any disaster, especially, hurricanes.

Make your prep-plan NOW. Write down what you will need, how to store things, what you will need to do before, during and after a storm. Think about the people you care for on a regular basis. Do you have small children, elderly relatives or neighbors, a working man, a diabetic, medically necessary prescriptions, someone on oxygen, or someone wheelchair bound? All these will be factors which make your preparations different from your neighbor’s preparations. How will you get and store water? Will you need to be sure all oxygen tanks are full and charge the dispenser for use without electricity? Will you need to keep insulin cool for an extended time? Will you need to keep children at home and occupied with no schools open? Does anyone in your household use prescription medications? These are important things to consider when planning appropriately.

Ways to find the extra bucks in the budget. There are a few simple things you can do to find extra money for hurricane preparation. I skip the nail salon and hairdresser and make coffee at home instead of stopping for a $5 latte. Prepare lunch or snacks each time you leave the house, so you will not be tempted to spend money eating out. Think about all the things you do every day that cost extra and think, “Could I survive without this?” We even turned off the cable TV (NO Dish either) --- that alone saved us quite a bit each month. From time to time we will have a yard-sale to get extra cash selling things we no longer use. We also saved some of our “stimulus check” to stock up on a few hurricane supplies.

During these strange times, many more of us are visiting food pantries or grocery share programs, such as United Against Poverty (UP™) or food banks to get necessary items. When planning your shopping list, stop at these places first if you are on a limited income. Keep your eye on the expiration dates! Not all, but many items donated to a food pantry are getting near their expiration date. You do not want to add outdated canned goods to a stored pantry. Then fill in the gaps in your list of needed supplies from the grocery store, taking advance of BOGO sales. I really try to stick to my list as this is not the time for impulse buying and spending extra money. I will tell myself, “Nope, we are on a mission for hurricane supplies, not frivolous things that are not a necessity.”

I will often use a Sharpie marker and write the expiration date boldly on the top of my canned items as they go into the pantry so I can EASILY see it at-a-glance. Keep your pantry rotated, place newer dated items in the back and use the ones which are getting closer to their “use by” or “sell by” date. Do NOT buy dented cans for long-term pantry storage you do not want to add a case of food poisoning to your hurricane/pandemic emergency. Do not forget the manual can opener and matches!

By purchasing a few items at a time and putting them away, you can get ready. Think about the dried and canned foods your family will eat. Buy single-serving size or smaller cans when available this will limit leftovers and save on refrigeration. How many cans of beans, tuna, spaghetti, or fruit do you normally go through in a week. Multiply that by the number of weeks you may be without electricity after a storm.

Do not spend money buying water. Ideally, you want to have one gallon of water a day, for every person in your house. If there are 2 of you, that equals six gallons for three days. Start by saving one-gallon jugs or even 2-liter (half gallon) bottles from soda, juice, or previous water purchases. Do not save milk jugs for storing water. Milk leaves a film of casein on anything it touches and must be thoroughly scrubbed off or it will spoil. Clean jugs and lids at home with a mild bleach-water solution. If you have city water or a municipal water source, you can just fill your jugs at home right before the emergency and keep them in a cool place out of direct sunlight for up to six months. If no city water, take your clean jugs and pocket change to the grocery store. There are usually water vending machines in or just
outside every major grocery store in Indian River County. These machines contain a Reverse Osmosis water filter and UV light treatment giving you purified water which will store well. You can fill your clean jugs with purified municipal water for around thirty-five cents a gallon. Most of these machines will also fill a 5-gallon jug if you have those and can carry them. The Water Club—there is one water treatment company in Vero Beach which has a reverse-osmosis/UV light purified water dispenser in their office/store for public use. You pay less than $6 a month for all the water you can carry in your own clean jugs. For more on storing water for emergencies, check out the University of Florida’s EDIS publication “Preparing and Storing an Emergency Safe Drinking Water Supply” publication https://edis.ifas.ufl.edu/ss439 and Penn State Extension’s “How to Store Water for Drinking or Cooking” publication, https://extension.psu.edu/how-to-store-water-for-drinking-or-cooking

General Tips when Shopping for an Emergency Food Pantry:

- NEVER shop hungry or in a panic. Eat first, make a list of what you NEED, then go. Order on-line. You are much more likely to get needed items and brands by ordering them ahead or for curbside pick-up. Dollar stores will also sell their items ordered by the case.
- ONLY BUY food you will eat - no sardines if your household will not eat them.
- Water - One gallon per person per day. More for cooking. See below for cheap “bottled” water.
- Set up a text network with friends, family, or co-workers. Alert each other when stores get needed and desired items.
- Limit junk food - these are empty calories & you are going to need your energy. Try some new fresh fruit, let each child pick their own favorite fruit.
- First Aid Kit - start with band-aids and anti-bacterial ointment, work from there. These can be found very inexpensively at dollar stores, including a plastic container to put it all in.
- Get your plywood NOW! If you live in a single-family home and the landlord is NOT going to board up, get plywood while there is no emergency and the screws you will need to install them. Watch for sales at hardware stores to catch the best prices.

For more information and helpful hints:
Safe Handling of Food and Water in a Hurricane or Related Disaster https://edis.ifas.ufl.edu/fs131.
Hurricane Preparedness: Meal and Menu Planning http://blogs.ifas.ufl.edu/browardco/2020/06/01/hurricane-preparedness-meal-and-menu-planning/
The Importance of Handwashing During COVID-19 and Every Day! by Martha Maddox

Did you know keeping your hands clean is one of the most important steps you can take to avoid getting sick and spreading germs to others? It is also the easiest and cheapest way too. Hands are of the most common ways that a virus spreads from one person to the next. Germs and viruses can be spread by not washing your hands properly with soap and clean running water. Respiratory viruses like coronavirus disease (COVID-19) spread when mucus or droplets containing the virus get into your body through your eyes, nose, or throat. This can happen when droplets land on your hands and then you touch your face transporting those germs close to your mouth, eyes, and nose. During this global pandemic of COVID-19 individuals are realizing the importance of washing their hands properly along with other steps to help us stay safe.

Prevent the Spread of COVID-19 or Any Virus by Incorporating the Following:

- Clean your hands often
- Practice social distancing
- Cover coughs and sneezes
- Know how the virus spreads
- Wear a mask when you are around others
- Avoid touching your face (mouth, nose, eyes)
- Clean and disinfect frequently touched surfaces daily
- Avoid close contact with others especially those who are sick or infected with the virus
- Avoiding shaking hands, hugging, or kissing people, and do not share food, utensils, cups, or towels

Stop and Think!

Take time to wash your hands to prevent illnesses and spread of infection to others!
In consideration for everyone’s health and safety due to COVID-19, most in-person trainings and activities are being transferred to virtual and online mediums. Refer to our website for up-to-date information.

**July**
- 2nd, 9th, 16th, 23rd, 30th Pesticide License testing. Contact Christine Kelly for more info.
- 3rd, 4th of July Observed Holiday
- **14th** Applying Hexazinone with Fertilizer for Smutgrass Control. Dr. Brent Sellers is a Professor and the Center Director at the UF/IFAS Range Cattle Research and Education Center in Ona where he specializes in pasture and rangeland weed management. Register for the webinar at [https://register.gotowebinar.com/register/1077906627720941323](https://register.gotowebinar.com/register/1077906627720941323).
- 29th Florida Turf Grass Association CEU Roundup. Great virtual opportunity to earn some CEU’s for pesticide licenses. Contact Christine Kelly for more info.

**August**
- 6th, 13th, 20th, 27th Pesticide License testing. Contact Christine Kelly for more info.

**September**
- 1st, 4-H New Year enrollment starts. Contact 4-H Agent Darren Cole for more information.
- 3rd, 10th, 17th, 24th Pesticide License testing. Contact Christine Kelly for more info.
- 7th Labor Day Holiday

**What is Coming Up Next?**

**Cool Apps, Interesting Websites and New Factsheets**

**Agriculture:**
- UF Weather Alert Website for Farms [https://fawn.ifas.ufl.edu/](https://fawn.ifas.ufl.edu/)
- UF IFAS Range Cattle REC Newsletter and other important info on cattle, pasture, weeds, etc in South Florida [https://rcrec-ona.ifas.ufl.edu/](https://rcrec-ona.ifas.ufl.edu/)
- Visit the UF-IFAS Citrus Website: [https://citrusresearch.ifas.ufl.edu/](https://citrusresearch.ifas.ufl.edu/) Sign-up for the newsletter at the top right corner.
- Preparing for and Recovering from Hurricane and Tropical Storm Damage to Tropical Fruit Groves in Florida [https://edis.ifas.ufl.edu/hs287](https://edis.ifas.ufl.edu/hs287)
- The Pollination Network gathers the growers with bee-needs and the best available beekeepers all in one accessible place. Connecting beekeepers and growers has never been simpler — one of the top apps for farmers and beekeepers alike. **Download:** [https://www.pollinationnetwork.com/](https://www.pollinationnetwork.com/)
- Farmers and ranchers can receive notifications from their USDA Farm Service Agency. Producers will receive text messages regarding program deadlines, reporting requirements, events and updates. Text “Florida” to FSANOW (372-669) for alerts from the state office, and “FLIndianRiver” to FSANOW for messages from a county office.
- Florida Automated Weather Network [www.fawn.ifas.ufl.edu](http://www.fawn.ifas.ufl.edu)

**Green Industry Professionals:**
- Pesticide Licensing [http://sfyl.ifas.ufl.edu/hillsborough/professional-horticulture/licensing](http://sfyl.ifas.ufl.edu/hillsborough/professional-horticulture/licensing)

**Homeowners:**
- Interested in edible gardening, backyard chickens, snake friends or foes? [https://gardeningsolutions.ifas.ufl.edu/get-growing/](https://gardeningsolutions.ifas.ufl.edu/get-growing/)
- Preparation for and Recovery from Hurricanes and Windstorms for Tropical Fruit Trees in the South Florida Home Landscape [https://edis.ifas.ufl.edu/hs322](https://edis.ifas.ufl.edu/hs322)
- **New app for your smart phone** that helps you regulate your automatic sprinklers per current weather conditions, read about it at [https://edis.ifas.ufl.edu/ae499](https://edis.ifas.ufl.edu/ae499). Download from app store **Smart Irrigation-Turf**.
- Florida Gardening Calendar gives gardeners a monthly guide for care and planting of landscapes and gardens, allows for selections between North, Central and South Florida [http://solutionsforyourlife.ufl.edu/lawn_and_garden/calendar/](http://solutionsforyourlife.ufl.edu/lawn_and_garden/calendar/)
Indian River County Extension Agents and Staff

“Who Ya Gonna Call?”

The Indian River County Extension agents are here for you! Extension agents are your direct link to science-based research straight from the University of Florida. For more information on Extension, or topics ranging from chickens to chinch bugs, send them an email or give them a call. Walk-ins welcome as well!

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ckellybe@ufl.edu

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Directions to IRC Extension

From U.S. 1 (coming from the north)
Heading on U.S. 1 south, turn right (west) at the light at 26th Street, follow to 19th Ave. and turn right (north) at entrance of IRC Administration complex. Turn right (East) at stop sign in parking area and continue through the roundabout. Building B is on the left just past the roundabout.

From U.S. 1 (coming from the south)
Heading on U.S. 1 north, turn left (west) at the light at 26th Street. Follow to 19th Ave. and turn right (north) at entrance of IRC Administration complex, continue with first instructions to Bldg. B.

From Interstate 95
Take Exit #147 onto Route 60 eastbound (20th Street) to Vero Beach. In approximately 6 miles turn left (north) at the light at 27th Ave. Turn right (east) at the next stop sign at Atlantic Blvd., follow to 19th Ave. and turn left (north) at the entrance of IRC Administration complex, continue with first instructions to Bldg. B.

All programs and related activities sponsored for, or assisted by, the Institute of Food and Agricultural Sciences are open to all persons without discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions, or affiliations. Florida Cooperative Extension Service/Institute of Food and Agricultural Sciences/University of Florida/Dr. Nick Place, Dean and Director for Extension.