Dear Extension Friends,

It certainly has been a wet summer so far in Baker County. We are definitely thankful for the rain and the absence of wildfires. Please note that in this issue we have an overview of our 4-H Camp Cherry Lake experience, information about microgreens, poultry diseases to look out for and a notice about our upcoming open house. We hope that you’ll come by and see us. As always, if we can help you in any way, please do not hesitate to contact us.

Sincerely,

Michael A. Davis  
County Extension Director / Ag Agent  
Baker County Extension Service

Contact Information—Baker County Extension Service

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Hours: M—F 8:30am to 5:00pm (Closed Noon to 1:00pm for Lunch)

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Position Vacant  
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4-H Agent

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Microgreens: Tiny greens add big nutrients to meals!

They may be tiny, but studies indicate that microgreens contain up to 40 times higher levels of vital nutrients than their mature counterparts!

Sometimes called "vegetable confetti," microgreens are immature versions of vegetables, herbs and other plants that are used to enhance the color, texture, or flavor of salads, garnish a wide variety of main dishes or add an extra kick of nutrients to juicing recipes. In fact, research has shown that microgreens contain 4 to 40 times more nutrients than their mature counterparts!

So what’s the difference between sprouts, microgreens and baby greens? While all are harvested and consumed in an immature state, sprouts are the youngest and smallest with typically the entire plant (root, seed, and shoot) being consumed, depending on the species. [Sprouts also have additional regulations concerning their production due to their relatively high risk of microbial contamination compared to other greens.] Microgreens are slightly larger and older, usually 2 inches tall, and are harvested at the first true leaf stage anywhere from 1-3 weeks after germination. Only the seed leaves and first true leaves attached to the stem are consumed (no seeds or roots). Baby greens are the oldest and largest, usually 3-4 inches tall, and look more like miniature versions of mature plants.

Due to the relatively high cost of commercial production and the short shelf-life of the product, the commercial market for microgreens is targeted toward restaurant chefs and upscale grocery stores where prices can range from $30 to $50 per pound. However, you can grow your own at home for much less and growing small quantities is relatively easy. Many crops have been selected for use as microgreens, including broccoli, cabbage, kohlrabi, cress, radish, mustard, basil, beets, kale, celery and many more. Many seed companies are very knowledgeable about the crops and varieties to grow, offering organic seed and marketing specialty mixes such as sweet, mild, colorful, or spicy. Starting with a specialty mix might be the way to figure out what kinds you prefer, or you can experiment using seed you already have. The key is knowing the perfect stage for harvest, since this can vary greatly from crop to crop. When seeding a mixture of crops in a single planting flat, select crops that have a similar growth rate so the entire flat can be harvested at once. Another option is to seed the various crops individually and mix them after harvest.

Microgreens can be grown using a commercially available fiber-like mat system which is placed in the bottom of a plastic tray, or by partially filling a open tray, cell tray, or similar container with 1-2 inches of germinating media. Many mixes have been used successfully with peat, vermiculite, perlite, coconut fiber, and others. You should mist the media with water, sprinkle the seeds on evenly, mist the seeds and media again, and place the tray in bright, indirect light where it won’t receive rain or be bothered by animals. To care for your microgreens, mist the seeds twice a day during the germination stage, stitching to sub-irrigation to avoid excess moisture in the plant canopy after germination. Microgreens are ready for harvest when the first true leaves emerge (after the seed leaves), usually at about 2 inches tall. Harvesting with scissors is typically the most practical. Microgreens should be washed immediately after harvesting and cooled for storage. Plastic clamshell packages tend to work well for storage.

Want to try growing your own? Join us for a demonstration and get your microgreen starter kit ($5) during the Extension Open House & 4-H Kickoff on Saturday, September 14th from 9-11am in the Ag Center parking lot. Pre-orders recommended to ensure materials; walk-ins also welcome. For more information call 904-259-3520.
UF | IFAS
Baker County Extension Open House & 4-H Kick-Off
Saturday, September 14th
9:00 am–11:00 am
Baker County Agricultural Center
1025 W. Macclenny Ave (Hwy) 90 in Macclenny

“See What Extension Can Do For You!”

4-H will have the following:
- Face Painting
- Fire Truck With Sparky the Fire Dog
- Fun & Games
- Join a club

Agriculture
- Poultry Q & A
- Videos on pond water testing and soil sampling
- Browse our selection of researched-based publications

Horticulture
- Learn about the Horticulture & Master Gardener Programs
- Sign up for our free gardening newsletter
- Participate in the Growing Microgreens workshop (see pages 2 & 5)
- Get free advice and information from Master Gardener Volunteers
- Vegetable and Ornamental plants available for purchase; pre-order daffodil bulbs
- Fall Vegetable Seed Giveaway (while supplies last)
August 2013

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Upcoming Programs are marked with a Program Area Symbol. Please match these symbols with the list on the following page for more information about the program.

- 4-H
- Horticulture
- Family & Consumer Sciences
- Agriculture
**Upcoming Programs & Events**

Programs will be held at the Baker County Extension Office (Agricultural Center) unless otherwise noted.

Aug. 2—4  **2013 Florida Small Farms and Alternative Enterprises Conference**, Osceola Heritage Park, 1875 Silver Spur Lane, Kissimmee, FL 34744. Details, pricing and registration can be found online at http://conference.ifas.ufl.edu/smallfarms/location.html.

Aug. 16—17  **South Florida Bee College**, Ft. Lauderdale Research and Education Center, Davie, FL For additional information please see http://smallfarms.ifas.ufl.edu/calendar/2013_0816_SFBC.esp.pdf and to register, please visit http://southfloridabeecollege.eventbrite.com/

Aug. 20  **Food Safety Plan Workshop “Building Your Own Farm’s Food Safety Manual**, Suwannee Valley Agricultural Extension Center. For additional information and to register, please contact Sarah White at 386-362-1725, ext. 102 or email sewhite@ufl.edu.

Aug. 24  **FAMU 13th Annual Grape Harvest Festival**, Tallahassee, FL. For additional information, please call 850-599-3996

Sep. 14  **Growing Microgreens**, 9:00 am to 11:00 am, at the Baker County Extension Office Open House & 4-H Kickoff. Learn the basics of growing and eating microgreens. Plant a take home tray of mixed microgreens of your choice, or take home a microgreen starter kit, complete with instructions. Cost: $5 per kit. Classes start every half hour. Pre-orders recommended to ensure materials; walk-ins also welcome. To read about microgreens, see page 2. For program information, call 904-259-3520.

Sep. 21  **Fall 2013 Beginning Beekeeping Shortcourse**, UF/IFAS Clay County Extension Office, 2463 SR 16, Green Cove Springs, FL. For additional information contact 904-584-6355 or 904-269-6355

Sep. 24  **Invasive Exotic Species and Control Workshop**, UF/IFAS Clay County Extension Office, 2463 SR 16, Green Cove Springs, FL. The program will cover the common and troublesome invasive and exotic plants and animals in this region and cover strategies to control them. Registration is $10.00 per person. For additional details or to register, please visit http://fsp-workshop092413.eventbrite.com/

Sep. 27—Oct. 5  **Baker County Fair**

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**4-H Club Meetings & Events:**

**Livestock Club**— Thursday, August 22nd, Classroom—6:00pm

**Cloverleaf Cloggers**—Weekly meetings on Tuesdays at Fancy Footwork at 7:00pm

**Cooking Club**— Contact Ms. Shaina after the new 4-H year begins.

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**More Upcoming 4-H Events:**

July 30—Aug 02 – Congress, UF, Gainesville
Aug 6—9 – Exploring FL & Beyond Day Camp B
August 15 – Awards Banquet, Auditorium, 6:30pm
Aug 21 – School Starts Back!!
September 01 – Start of new 4-H Year
September 14 – 4-H Kick-Off, 9-11am, Extension Office
October 21—Adult and Parent Meeting, 6pm, Extension Office
Fun in the Sun:
This month’s edition will be coming from Ms. Regina, the Baker County 4-H intern.

5, 4, 3, 2, 1, Blast Off! This year’s campers were out of this world as they enjoyed the space theme at Camp Cherry Lake! There were several activities that made camp amazing, such as outdoor cooking, singing, kayaking, dancing, swimming, and much more. Campers were able to created their own spaceship and even help save Ms. Shaina from the alien abduction. Everyone had an amazing time, here’s a few snapshots to see what we did!

I had such a great time at Camp Cherry Lake and here at the Baker County Extensions office. As an intern, I was able to understand the career of a 4-H Agent as I helped Ms. Shaina with embryology, day camps, and planning events. Even though my internship here has ended, I have learned so much and I’m grateful for this experience. Farewell, I hope to see you at the Baker County Fair!

Top Left: Andrea and others shooting air rifles. Top Right: The ending to the Creative Dramatics presentation. Bottom Left: Mr. Mike as Macklemore for the special guest singer at the dance. Bottom Right: Flag Retirement Ceremony.

Did You Know: Camp Cherry Lake has been a 4-H camp since 1937?!
Backyard Poultry Diseases & Treatments

Backyard poultry are a good way to have ‘homegrown’ meat and eggs, but there are certain diseases that owners should be on the lookout for in their poultry flocks. Most of these diseases are not transferrable to humans, but they can have a detrimental effect on the productivity of your birds. If you have questions about your backyard poultry flock, please do not hesitate to contact the County Extension Office for assistance.

Bumblefoot—Bumblefoot is a localized infection of *Staphylococcus aureus* bacteria in the foot. It is typically caused by a puncture wound to the foot. This infection is characterized by lameness and swelling of the foot pads. Treatment with antibiotics such as penicillin, erythromycin and novobiocin will eliminate the bacteria.

**Avian Pox**—This disease is commonly referred to as fowl pox. There are three types of virus that can cause disease in chickens. Visible lesions can be either dry and wart-like on the skin or they can be wet and found in the mouth and respiratory tract. One or both types of lesions can appear. The disease will usually run its course through an animal within 3 to 5 weeks after appearance of symptoms. Young birds with this disease will show a slowness of growth, while laying hens will have a drop in egg production. There is no treatment for birds with the infection; however, birds can be vaccinated after hatch.

**Infectious Coryza**—This disease is caused by a bacterium, *Hemophilus paragallinarum*. The bacterium does not survive long outside a host, so bird-to-bird transmission is the most common way that the disease is spread. This is an acute respiratory infection that causes nasal discharge, sneezing, depression and swelling of the face and wattles. Mortality can be as high as 50% and the disease usually runs its course in 2 to 3 months. Antibiotics and sulfa drugs can be used to treat this disease, although sulfa drugs should not be administered to laying flocks. Vaccinations for this disease are available.

**Coccidiosis**—This disease is caused by a protozoa and there are nine species that can infect chickens. Coccidiosis primarily affects young birds, but older birds can become infected. The disease is spread primarily via feces and litter. The protozoa causes lesions in the intestinal tract that result in depression, diarrhea, weakness and decreased food and water consumption. Advanced cases of coccidiosis can cause high mortality. There are many drugs that are effective against this disease and are commonly referred to as coccidiostats. Many starter feeds have a coccidiostat in the feed. Using these types of starter feeds along with good husbandry will help to prevent the disease.

**External Parasites (Lice & Mites)**—External parasites cause general unthriftiness in birds and can lead to open sores which can lead to other bacterial or viral infections. If you suspect that your birds have lice and/or mites, there are many commercial insecticides that can be used, mainly in spray or dust form.

**Vitamin Deficiencies**—There are many vitamin deficiencies that chickens are susceptible to. To combat these, make sure to use a well balanced ration. If you range your birds, remember that birds can only get about 15% of their daily nutritional needs met from range (insects, grass, etc.). Also remember to not unbalance a good ration by overfeeding scratch or table scraps.
Extension programs are open to all people regardless of race, color, age, sex, handicap, or national origin. In accordance with the Americans with Disabilities Act, any person needing a special accommodation to participate in any activity, should contact the Baker County Cooperative Extension Service at 1025 West Macclenny Avenue, Macclenny, FL 32063 or telephone (904) 259-3520 no later than five (5) days prior to the event. Hearing impaired persons can access the foregoing telephone by contacting the Florida Relay Service at 1-800-955-8770 (voice) or 1-800-955-8771 (TDD).

Camp Cherry Lake 2013—Baker, Madison and Nassau Counties. It was a BLAST!!!