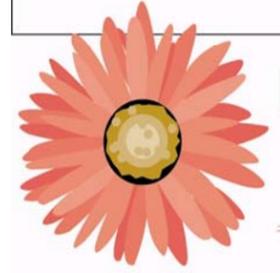
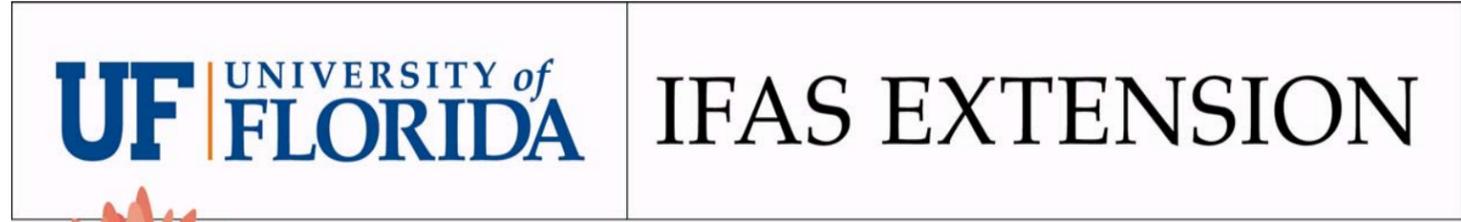


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Highlights in Horticulture

Baker County

Dear Extension Friends,

June 2009

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June is typically the month when it starts to get hot and gardeners should begin to take it a little easier outside. Remember to wear sunscreen, drink plenty of water, and take frequent breaks when working in the yard. One great way to take a break from the yard is to join us for a gardening class. Many of our classes are offered free and we even take suggestions for class topics. Be sure to check our website periodically so you don't miss anything!

Best Regards,

Alicia
 Alicia R. Lamborn
 Horticulture Extension Agent
 Baker County Extension Service

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).

Upcoming Programs and Events: June

June 23rd — **Palm Production Seminar** 8:30 am to 12:30 pm at the Hamilton County Extension Office. Topics will cover best management practices for palm production, basic palm nutrition and fertilization, palm diseases in production systems and surviving the economic storm. Program is free but seating is limited - RSVP by June 19th by calling 386-792-1276 or 386-362-1725 x105 or for more information.



June 29th to July 2nd — **Junior Master Gardener Summer Camp** Youth, ages 8 to 18, are invited to join the Baker County Extension office and Baker County Master Gardeners for a week long gardening day camp. Each day will have a different gardening theme (see below) and attendees will participate in hands-on activities while learning about a variety of topics such as plant biology, fruits, vegetables, insects, wildlife, alternative gardening and more! The cost of the camp is \$50 per child and will run from 9 am to 3 pm each day. You may download registration forms at our website or pick up a registration packet from our office. Deadline to register is Friday, June 12th but attendance is limited so sign up today! Please call 904-259-3520 with any questions.

Junior Master Gardener Summer Camp Agenda:

- Monday, June 29th Learning our ABP's (Annuals, Biennials, Perennials) and Fruits and Veggies
- Tuesday, June 30th Trees, Trees, Trees
- Wednesday, July 1st Getting Our Hands Dirty
- Thursday, July 2nd Insects & Wildlife



Identifying Nutrient Deficiencies in Palms

This is a good time of the year to be on the look-out for nutrient deficiencies in palms. Since most palm nutrient deficiencies are easily diagnosed by symptoms alone, this article will serve as a guide to help you help your palms in time of need.

IF YOU SEE SYMPTOMS ON THE OLDER LEAVES (LOWER CANOPY), IT COULD BE:

Nitrogen (N) deficiency usually starts as a uniform light green coloration that progresses to yellow, and can eventually spread from the older leaves to the newer leaves if not treated. **Potassium (K)** symptoms include translucent yellow to orange or necrotic (dead) spotting, and eventually have dead leaflet tips and/or margins. In some species there is no spotting, only dead tips and margins which may be curled or frizzled in appearance. **Magnesium (Mg)** deficiency symptoms (pictured below) appear as broad yellow bands along the edges of the entire leaf, or in some fan palms, around each leaflet. In all cases, the central portion of the leaf or leaflet remains distinctly green. Potassium deficiency differs from Mg deficiency in that with K deficiency there is a gradual transition from green at the base of an old leaf through yellow or orange discoloration in the middle, and finally to leaflet tip necrosis at the end of the leaf. Magnesium deficiency never causes leaflet tip necrosis. Canary Island Date Palms are commonly seen having Mg deficiency.



IF YOU SEE SYMPTOMS ON THE NEWER LEAVES (UPPER CANOPY), IT COULD BE:

Iron (Fe) deficiency (more common in container-grown palms) has symptoms of chlorotic, yellow leaves. Newly emerging iron deficient leaves are either uniformly yellow-green to nearly white, or may have slightly greener veins. **Manganese (Mn)** deficiency symptoms may appear similar to Fe deficiency except that necrotic streaking will be present on leaflets of new leaves. If not treated, symptoms worsen towards the bases of new leaves which become completely necrotic and curled (bottom left).



This deficiency is extremely common in sago palms (actually a cycad) and has the nickname "frizzle top".

Palms' nutritional requirements are different from those of other landscape plants. Established palms should be fertilized with a 4-1-6-2 (N-P-K-Mg) ratio fertilizer (for example, a fertilizer marked "8-2-12-4 Mg") with equal amounts of N, K, and Mg in controlled-release form. Any fertilizer applied should also contain 1-2 % iron and manganese, plus trace amounts of zinc, copper, and boron, to prevent deadly micro-nutrient deficiencies.

For Extension Programs offered around the state, see the IFAS Extension Web Calendar at <http://calendar.ifas.ufl.edu/calendar/index.htm>.

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The Edible Garden – Dealing with Pests



CORN EARWORMS

Corn earworms are a common corn pest that can cause serious damage unless timely control measures are implemented. Sweetcorn is a favorite host of the corn earworm and the silking stage is when it is most susceptible to attack. In north Florida, these creatures can show up anytime between May and August, depending on the weather. Crops that are planted early often escape these warm weather caterpillars, but once infestations become established recommended insecticides are needed.

Single eggs are deposited on leaves and corn silk, hatching in about three to four days. Young earworms can begin feeding on outer portions of leaves before moving into the whorl to feed on young, developing leaves. In some cases, the growing point of the plant is completely consumed and the tassel is severely damaged before it emerges from the whorl. If the ears have already produced silk, the larvae will follow the silk down where they feed on the tip of the ear.

Mature larvae leave the feeding site and drop to the ground, where they burrow into the soil, pupate, and later emerge as an adult moth. It is important to eliminate the larvae being pushed from the whorl by the emerging tassel so they do not damage the emerging ear shoots and are not allowed to pupate within the field. Earworms completing development at tassel push can emerge as adults to lay eggs on the crop during the period of active silk growth.

Weekly monitoring for young larvae on leaves and in whorls should be performed until tassels appear and twice weekly during the ear stage to detect and control populations before they cause severe damage. Signs of damage include visible holes in the leaves and wet, brown or tan frass (waste droppings) deposited by the larvae.

Control can be achieved by dusting or spraying with the bacterium *Bacillus thuringiensis* (Bt). Look for product names such as Dipel®, Javelin®, Thuricide®, Worm Attack®, Caterpillar Killer®, Bactospeine®, and SOK-Bt®. (Bt can be used to control many common leaf-feeding caterpillars, including "worms" that attack vegetables and ornamental plants, bagworms and tent caterpillars on trees and shrubs.) Host plant resistance may one day be a reality, but until then we must all control these pests the old fashioned way.



***The use of trade names is solely for the purpose of providing specific information. It is not a guarantee of warranty of the products names and does not signify they are approved to the exclusion of others of suitable comparison.

POWDERY MILDEW

Powdery mildew is a serious disease of beans, southern peas, okra, squash, cucumbers, melons, and pumpkins. It is easy to identify this fungus, having white talcum-like spots containing spores that are first seen on older, lower leaves and sometimes stems of plants. These small, round, whitish spots can enlarge rapidly and become evident on the upper surface of older leaves (young leaves are almost immune). Spores are easily blown by wind to nearby plants but can also be transferred by insects and gardeners.

The fungus affects the foliage, reducing size, number and quality of fruit (fruit infection is rare) and ultimately kills the plant if not treated with a fungicide. It can also predispose plants to other diseases.

Powdery mildew fungi can reproduce under relatively dry conditions, although the severity of the disease is enhanced when humidity increases, especially during periods of heavy dew.

To manage and control this disease, plant varieties that are tolerant or resistant to powdery mildew (if available), grow plants in a sunny location, space plants for good air circulation (reduce plant density to have 18 to 24 inches between plants if possible), and remove and destroy old infected plants before planting new ones.

In addition to these cultural practices, economic control can be achieved with chemicals. Fungicides containing neem oil (Bonide®, Concern®, Fertilome®), potassium bicarbonate (Garden-ville®), chlorothalonil (Daconil®, Bonide®, Fertilome®, Hi-Yield®, Ortho®, and others), and copper (Bonide®, Concern®, Gordon's®, Hi-Yield®, and others) are effective.

DOWNY MILDEW

Unlike powdery mildew, downy mildew can not reproduce under dry conditions, preferring cloudy, overcast skies, high humidity, foggy mornings, and temperatures between 60 and 80°F. This disease does not occur as frequently in Florida as powdery mildew, and although they are both fungal diseases with similar names, they are easy to tell apart.

Symptoms include yellow angular lesions that eventually turn into dead, brown tissue which will fall out, creating a hole in the leaf. The undersides of the leaves may also look dirty, due to the brown/gray/purple colored fungal spores that accumulate.

Fungicides should be applied at the first sign of downy mildew (the longer you wait, the harder it is to control). Products containing neem oil, chlorothalonil, and copper (as mentioned above) are effective, as well as products containing maneb (Gordon's®, Hi-Yield®), mancozeb (Bonide®, Southern Ag®) and phosphorous acid (Monterey®).



Lawns & Gardens

Lawns:

- If your lawn isn't as green as you would like during the summer months, apply an iron source such as iron sulfate or chelated iron instead of a nitrogen fertilizer to green the lawn without increasing growth.
- Don't get behind on your mowing. Allowing the grass to get overgrown and then giving it a severe cutting can be very stressful to your lawn. In any case, never remove more than one third of the leaf blade at any one time.
- Mow at the highest recommended mowing height for your grass species. St. Augustine-grass and Bahiagrass should be mowed at 3 to 4 inches and Centipedegrass at 1.5 to 2 inches.
- Grass clippings act as a natural fertilizer when left on the ground, returning nutrients that can be used by the turf for new growth. If piles of grass form on the ground (caused by infrequent mowing) then raking and removing the grass is acceptable to reduce thatch and disease problems. Just be sure to recycle the clippings on site by using them as mulch or adding them to the compost pile.
- If you find that the weeds are starting to take over the lawn, try hand-pulling before you spray. When you remove weeds by hand and pull up the roots, you can be sure that the weed will not return, unlike some sprays that only knock the weed back but do not kill the root, allowing them to reappear later in the season.
- If an herbicide is necessary for control, be sure to follow all label instructions, applying it at the proper time. Weeds not treated before seed-head formation are harder to control.
- Broadleaf weeds in turf have traditionally been controlled using 2,4-D, MCPA, MCPP (mecoprop), and dicamba, although few broadleaf weeds are controlled with just one of these materials. Therefore, these materials are commonly found in three-way herbicide mixtures such as Trimec®, Ortho's Weed-B-Gon®, and Spectracide Weed Stop®. These products are safe to use on most turf grasses, but for satisfactory control, repeat applications spaced 10 to 14 days apart are usually necessary.
- Control of grassy weeds in Centipedegrass can be achieved with sethoxydim, an herbicide sold under the trade name Vantage®. Atrazine can provide good control of young grassy weeds and many young broadleaf weeds in Centipedegrass and St. Augustinegrass. However, you should avoid using atrazine products any time temperatures may exceed 85°F.



Gardens:

- Replace declining winter annuals with new annuals and perennials that can take the heat and drought while providing a nice long display of color. Angelonia, Beach Sunflower, Blackberry Lily, Gaura, Pentas, Plumbago, Porterweed, Society Garlic, and Zinnias to name a few.
- If your azaleas, camellias, and gardenias need down-sizing, be sure to prune them as soon as possible since they are now beginning to form next season's flower buds. The longer you wait, the more you will see a reduction in flowering come spring. Otherwise, just trim out dead and declining portions and then cut back shoots that are out of control.
- Keep up with the weed pulling so that your landscape plants are not competing for nutrients (and weeds are not allowed to reseed). If an herbicide is necessary, try cutting out the bottom of a plastic gallon container (such as a milk jug) as well as a small hole at the top. This can be used as a protective cover to spot-treat weeds without harming surrounding plants.
- If you decide to get out and do some pruning this month in preparation of hurricane season, only remove dead, diseased, and/or hazardous limbs. Removing large quantities of foliage (greater than 10%) can be stressful on growing trees and should be held off until the dormant season (January is usually best).
- No matter what you are pruning, remember to give your equipment a good cleaning to make sure you aren't transferring diseases from one plant to another. Allow pruners to sit in a mild bleach solution after use. If you are pruning a diseased plant, disinfect between each cut. You can use an extra pair while the other is soaking.



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