

Urban Horticulturer

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MULCHING

Mulching has many benefits in addition to conserving water. It reduces soil compaction or packing of the soil by rainfall or other factors. It reduces the sprouting of weeds, reduces soil erosion, and reduces soil temperature. And overall, it just makes the garden look better.



What is a good mulch material to use? Pine straw works very well. It can be raked up in the yard and it can be purchased at a local nursery by the bale. Pine bark and other mulches are also available for purchase. Hardwood leaves, such as oak leaves, run through a lawn mower and collected in the bagger, make excellent mulch. Oak leaves can also be chopped up in a trash can with a weed whacker. Inorganic mulches, such as gravel, marble chips and shells can be used, but they have certain disadvantages. They don't decompose so they don't supply nutrients to plants as do organic mulches. To continue to look good, the debris will have to be cleaned from the surface. If the mulch is coarse, the debris settles down into it and is difficult to remove. However, as inorganic mulches do not attract termites, they are a good material to use up close to the walls of the house. All wood mulches attract termites to some degree

even melaleuca and eucalyptus.

What should be mulched? Shaded areas under trees where the grass doesn't grow are natural sites to mulch. Trees and shrubs can be grouped together into one big mulched bed. Trees out in the lawn should have a wide mulch ring around them - approximately one foot radius for each of trunk diameter. Beds of shrubs should be completely mulched. Beds of annual and perennial flowers generally need mulch, but not as deep as trees and shrubs.

How deep should mulch be? The depth depends on the texture and density of the mulch material. Pine straw, being very coarse, can be maintained as deep as four inches around trees and shrubs. However, mulches such as shredded leaves, small leaves (live oak leaves), or grass clippings should not exceed two inches. Fine textured materials can mat together and restrict air and water penetration. Don't place the mulch too close to the plant's stem or trunk. Leave an inch or so for air circulation so that moisture isn't held causing the stem or trunk to rot. Organic mulches decompose over time, so the depth needs to be maintained by adding fresh mulch to the old mulch. It is not necessary to remove old mulch.



TURF

Fertilizer - If you have not applied a complete fertilizer, such as 16-4-8, to your St. Augustine or Bahiagrass lawns since spring, then you should make an application in September. Using a 16-4-8 fertilizer is fine, but you may want to consider a product with the percentage of potassium similar to nitrogen and low phosphorous, such as a 15-5-15. The first number stands for percent nitrogen, the second number stands for phosphorous and the third number stands for potassium. Most Florida soils have adequate phosphorous, but this can only be verified with a soil test. Preliminary research results indicate that the higher potassium applied in the fall will stimulate root growth and make the turf more tolerant to stress such as drought. The 15-5-15, which is available locally, also has 30% water insoluble nitrogen. Other fertilizer products are available similar to 15-5-15 with 30-50% water insoluble nitrogen, so check the label.

If you use a fertilizer product with 30-50 percent water insoluble nitrogen, then apply 1 pound of nitrogen per 1000 square feet. This amount can be determined by dividing the percent nitrogen (15%) into 100 which equals 6.6 pounds applied to 1000 square feet. If the fertilizer has no or very low water insoluble nitrogen, then apply $\frac{1}{2}$ pound nitrogen per 1000 square feet or 3.3 pounds. The additional 3.3 pounds can be applied 30-60 days later.

Insects - Chinch bugs and sod webworms are still attacking St. Augustine lawns. Be watching for these pests and apply recommended pesticides. The biological

insecticide B.t. with the trade names Dipel or Thuricide can be used for control of sod webworm.

Diseases - This is probably not the best time to discuss **Take-All Root Rot** which infests St. Augustinegrass, since it is a summer disease, but it is becoming more and more common and there are no totally effective controls. The development of this disease is favored by heavy liming, use of nitrate containing fertilizers (ammonium nitrate) and micronutrient deficiencies such as manganese. It is usually associated with heavy summer rains. All cultivars of St. Augustine appear to be susceptible.

Take-all root rot and brown patch both cause large dead areas in the lawns and are easily confused. On brown patch damaged turf, leaf sheaths and leaves are rotted, but the roots and stolons are often unharmed. On take-all damaged St. Augustinegrass, the leaves and leaf sheaths are not damaged. The roots are usually dark brown to black in color and often badly rotted. Very few healthy white roots can be observed on infected stolons. Stolons are the runners that grow along the surface of the ground and put out roots at the nodes. Rotted roots are so brittle that they can be easily pulled from the ground. A blackening of the nodes and stolons may also be seen. The identification of this fungus disease generally needs to be done in the laboratory. Turfgrass management, not chemicals, offer the best hope for control. Check with the Extension Office for identification and control recommendations.

As I have mentioned before, these large dead areas that appear in turf, particularly St. Augustine, may be attributed to drought in the spring, chinch bugs in the spring and summer, take-all root rot in the summer and brown rot in the winter. Also, buried items may affect turf growing above. It is important to try to

learn how to identify these problems.

CITRUS

Planting - Citrus can be planted any time of the year, but the fall or spring appears to be the best time. Trees planted in the fall may need to be protected from cold weather.



Spring planted trees will need special care due to lack of rainfall and insects. Remove all grass and weeds from the planting area - approximately 4 by 6 feet. The immediate area where the tree is to be planted needs to be spaded to a depth of 2-3 feet. Dig the hole big enough to easily accommodate the root ball. Keep the budunion (where rootstock and scion or budwood join) several inches above the soil line. Many budwoods are susceptible to Phytophthora fungus rots. Place a hoe or rake handle across the top of the hole which shows exactly where the soil line will be. Place the rootball in the hole and backfill around the rootball to half fill the hole. Press the soil down to remove air pockets and soak with water. Finally, backfill again to the soil line and form a water basin that will hold several gallons of water.

Citrus leaf miner - This is a small moth (wingspan-4mm) which lays its eggs on the undersides of tender new citrus leaves. The eggs quickly hatch and the tiny caterpillar bores into the leaf. The caterpillar then proceeds to make a mine on the inside of the leaf. They can do serious damage to young trees (younger than 4 years). The damage to older trees is of less importance, however the new growth looks terrible. The mining causes the leaf to twist and become distorted, but usually the leaf is still able to supply some nutrients to the tree. The outer leaf surface or epidermis appears to have a silvery film over the mine.

The homeowner has few options for the control of this pest. Horticultural oil applied once per week for 5-6 weeks (do not apply when temperature exceeds 94 degrees F.) to the new flush of growth (or until the new flush hardens off) will help to control this pest. Young citrus trees often have 5 or 6 flushes of new growth per year, so many applications are required. A parasitic wasp was introduced into Florida in 1995 from Australia and in some places is suppressing this pest.

Phytophthora root rot - This disease can be a serious problem, particularly on susceptible rootstock. Symptoms of the disease are the formation of lesions on the trunk just above the budunion (where the scion was grafted onto the rootstock just above the ground). The lesion will first appear as a drop of gum on the surface of the bark. A brown necrotic slippery area will be found under the bark. In some cases, the margin of the infected area will break away and curl back. Lesions can eventually girdle the entire trunk, and the tree will slowly die. This disease can be treated with copper as a paint applied to the lesion or with chemical drenches applied to the soil under the dripline of the tree. The chemical drench is not readily available to the homeowner and is expensive.

VEGETABLE GARDENING

Summer squash - This is really a squash that grows best in the fall or spring in central Florida, not in the summer as the name implies. This is time when fall summer squash should be planted. You should have fruit in about 50 days. Downy and powdery mildew can be problems. Downy mildew first appears on the upper side of the leaf as pale green areas separated by islands of darker green with gray tinged spore masses on the underside. Powdery mildew affects leaves

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and stems as round whitish spots on the undersides of the leaves. The spots increase in size and number, coalesce, and appear on the upper surface as a white powdery growth. Both diseases can be controlled with Daconil fungicide.

Another regular complaint I hear is that fruit appear, but then turn soft and seem to rot. This problem can be related to lack of pollination. Squash have male and female flowers. The male flowers are bell shaped and appear on the squash plant first, followed by the female flowers. The female flower has a squash shaped structure at the base of the petals. Pollen must somehow be carried to the female flower from the male flower. This is usually accomplished by bees or other insects. If the female flower is improperly pollinated, the ovary will start to enlarge then turn soft and rot on the stem.

The above condition may be confused with a disease called wet rot or blossom rot in which the end of the young fruit becomes covered with a whisker-like, white stalked, black headed fruiting bodies of this fungus. The tissue beneath the fungus becomes water soaked and rotted. So, when the fruit don't develop properly, it may be due to this fungus or to poor pollination. Daconil will help control the wet rot fungus.

If you don't have enough bees or other insects for proper pollination, you can attempt to pollinate the female flowers yourself. Carefully insert a camel's hair brush into the male flower and then brush the pollen onto the stigma in the female flower. This seems to work for some people.

Pickleworms attack the fruit and can be a problem. Use a biological insecticide such as Dipel or Thuricide which will not affect pollinating insects.

Vegetable Gardens - Now is the time to plant tomatoes, bush beans, pole beans, lima beans, sweet corn, cucumbers, eggplant, Southern peas, peppers, summer squash, broccoli, cabbage, celery, collards, endive/escarole, kale, leek, lettuce, mustard, onions, English peas, radish, and turnips.

Soil Testing - Test the soil pH in your lawn and garden before adding dolomite. The Master Gardeners conduct soil tests every Thursday afternoon.

Flowers - Plant ageratum, angelonia, begonia, blue daze, cat's whiskers, celosia, celome, coreopsis, coleus, cosmos, mums, gazania, gerbera, gomphrena, heliotrope, impatiens, marigold, melampodium, nicotiana, pentas, periwinkle, salvia, sunflower, sweet alyssum, torenia, verbena, and zinnia.

Fertilize - Fertilize woody, leafy and flowering shrubs with a good balanced fertilizer such as 6-6-6 with micro-nutrients.

Have a good gardening day,

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For homeowner horticultural information
<http://edis.ifas.ufl.edu>

Polk County Cooperative Extension Website
<http://polk.ifas.ufl.edu>