

Urban Horticulturer

April 2002

(Please note the new telephone number for Polk County Extension (863) 519-8677)

TURF

Building drought tolerance - A drought conditioned lawn can withstand more stress than a lawn that is not conditioned. A properly prepared lawn will have a deep and extensive root system that is better able to seek out water.



Irrigation is an important factor in developing a drought tolerant lawn. Ideally, only water your lawn

when it starts to show stress. The stress will show up as folded leaves in the late afternoon, you will see spots that turn bluish-gray, and footprints will remain in the grass long after being made. At this time apply 3/4 inch of irrigation water. Three quarters of an inch of water will sufficiently wet the turf root zone. Any more than that will just carry nutrients out of the root zone. You will not need to water again until the symptoms reappear. This watering technique will encourage the turf roots to grow deeper in search of water.

I find very few people who know how much water their irrigation system is putting out per hour. It is really important to check your system to make sure it is operating correctly and use coffee cans or some other type of straight sided can to measure the output. Spread coffee cans over your lawn, run the system for 15 minutes, measure the water in the container and multiply by 4 and that is the flow rate per hour. In addition, check your system when it is running to make sure it is

covering the whole area and not missing spots. Sometimes sprinkler heads are broken and whole areas are being missed because of the loss in pressure.

Proper mowing height is also important for building a drought tolerant lawn. Cut the turf at the highest mower setting. This will increase the grass leaf area, allowing for more photosynthesis. The higher the mowing height the deeper and more extensive the root system will be. More water will be lost from the higher turf, but this is out weighed by the deeper root system. Keep the blades sharp, because a leaf cut by a sharp blade will heal over more quickly than a leaf cut by a dull blade, because the leaf is just torn off.

Fertilization practices can also affect drought tolerance. All of the good done by proper irrigation and mowing practices can be negated by over fertilization with nitrogen. Excessive nitrogen fertilization causes an increase in leaf growth and a decrease in root growth. Just enough nitrogen should be applied to obtain a small but continuous amount of growth. We are beginning to find out that potassium is an important nutrient for building strong roots and thick cell walls. University research is beginning to show that it is preferable to use a fertilizer with equal amounts of nitrogen and potassium such as a 15-5-15 (nitrogen-phosphorous-potassium) rather than the conventional 16-4-8. It is best to use a fertilizer which has 30-50% slow release nitrogen. A basic fertility program for St. Augustine would be to apply 6.5 pounds of 15-5-15 per 1000 square feet in March and

September and an application of iron in June. The iron will green the lawn and encourage root growth while not promoting excessive leaf growth.

Diseases, insects and weeds are often a problem in turfgrass. A healthy, vigorously growing turfgrass is the best defense against diseases, weeds and insects. However, you do need to watch for chinch bugs, sod webworms, “take-all” root rot and brown patch in St. Augustinegrass and mole crickets in bahiagrass. Mole crickets can be flushed out of the turf with a soap solution drench (1 1/2 ounces detergent per 2 gallons of water) and chinch bugs can be floated out with a similar soap solution using the coffee can technique. Check with the Extension Service for the latest recommended control measures.

Drought tolerance varies with **turfgrass species**. Bermudagrass, zoysiagrass, bahiagrass, seashore paspalum and centipedegrass have the best drought tolerance of the southern turfgrasses, followed by St. Augustinegrass and carpetgrass. Bermudagrass, zoysiagrass, bahiagrass and seashore paspalum will generally survive drought conditions, because they have rhizomes (below ground stems) that are protected from drying out by the soil. St. Augustinegrass and centipedegrass do not have below ground rhizomes so therefore are much more sensitive to permanent damage from drought conditions.

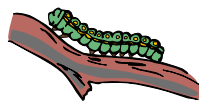
So what is really the **best grass** to choose for drought tolerance. This is complicated by pest problems on the various turfgrasses. Bermudagrass and zoysiagrass tend to have problems with nematodes. Bahiagrass is susceptible to mole crickets, but mole crickets are easier to control than nematodes. If a person can accept an open growth habit and not over-manage the turf, then bahiagrass is the best choice. Bahiagrass is adapted to a

wide range of soils and can survive with minimum management. Seashore paspalum, which is related to bahiagrass, has good tolerance to drought, salinity, insects and diseases and provides an attractive, high quality turfgrass. We are still learning about seashore paspalum, but so far the results are good. As with other turfgrasses, it too has its advantages and disadvantages.

The Master Gardeners of Polk County are currently establishing a small demonstration plot of turfgrasses at the Extension Office. Seashore paspalum was the first turfgrass to be planted and is currently becoming established. We eventually will have several cultivars for you to look at.

OAK TREE CATERPILLARS

There are a number of caterpillars that attack our oak trees in central Florida. One of the common ones is the forest tent caterpillar. The larvae have a dark gray to brownish-black background body color, highlighted by broad, pale-blue lines and thin, broken yellow lines extending along each side. The larvae are also somewhat hairy, whitish in color and when mature are 2-2.5 inches long. They are called tent caterpillars, but they do not actually construct tents. Eggs are laid in masses of 100-350 and hatch shortly after leaf emergence in the early spring. The larvae spin silken mats on the trunks and large branches where they congregate to molt or rest from feeding. You have probably seen these larvae hanging from silk strands, grouped in webs, or crawling up tree trunks, walls, on sidewalks, or driveways.



You will also see the tussock moth caterpillars. This caterpillar has long tufts of black hair on each end of the body, and has four white tufts of hair on its back. Another

common caterpillar on oaks is a type of looper. As their name implies, they loop their body up in the air as they walk.

Most caterpillars themselves are relatively harmless to people in that they do not sting or bite. But some people may have an allergic reaction when handling them. In addition, there are at least two caterpillars that are venomous, the puss caterpillar and saddleback caterpillar, which at times have been found on oak trees, but usually not in great numbers. The puss caterpillar is totally covered with hair and hardly looks like a caterpillar. The saddleback caterpillar has saddle images on its back and is easy to distinguish.

You can often see the pellets of caterpillar frass on surfaces under the trees. They also will congregate on other plant material under host trees, and can cause damage to these plants. They pupate in loosely spun silken cocoons-often on the eaves or soffits of your house. The cocoons can be very difficult to remove.

Trees most often attacked are various species of oak and gums, but they will attack other trees such as basswood, cherry and plum. Under heavy infestations they have been observed feeding on all sorts of woody ornamentals including citrus, pine, loquat, azalea, and roses. Populations fluctuate on a more or less regular basis. They reach outbreak proportions every 6-16 years and may be heavy for several years in a row. Seldom are trees killed during an outbreak, however repeated defoliation can lead to dieback and reduced growth. If the trees are otherwise healthy, the common host tree will usually re-leaf within a few weeks, following the springtime defoliation. The caterpillars are generally just a nuisance that you have to put up with for a few weeks. If the infestation is severe, the trees can be sprayed with Thuricide or Dipel which should

give some control.

ANNUALS

One of the best parts of working in a spring garden is planting flowering annuals. An annual is a plant that completes its life cycle in one growing season. Many plants that are considered annuals in the north may survive for several years in Florida. Perennials are plants that live for at least 3 years under local conditions.

Annuals have a variety of bright colors and can be used in many landscape situations. The bright colors make an excellent focal point whether planted in the ground or in hanging baskets from trees or eaves.

When planting annual beds there are several designs which can be followed. In a border design, plants are displayed against a backdrop. The backdrop could be a wall, a fence or a border of shrubs. Leave space between the back of the bed and the backdrop to allow access for weeding, mulching, watering, etc. Stagger plants, keeping shorter ones in the front and taller ones toward the back.



Another design is a corner bed which is triangular in shape and usually has curved front sides. As with a border design, tall plants should be in the back and smaller plants in the front. Corner beds are especially attractive if they are terraced. Using garden timber, stones or railroad ties, you can create a bed where low growing plants can be used at different levels.

The third common bed is an island bed which can be round, square, rectangular or kidney shaped. Because island beds are viewed from

all directions, tall plants should be placed in the middle, medium plants on all sides and dwarf plants along the edges.

MISC GARDENING FOR APRIL

Citrus - Citrus scab which is a fungus can become a problem in March and April particularly on grapefruit, Temple oranges, lemons, Minneola tangelos, Murcott and Page oranges. Apply copper a few weeks after petal fall and again in 3 weeks. Watch all citrus for scales and aphids and control with horticultural oils and soap sprays.

Flower garden plantings - African daisy, ageratum, aster, balsam, begonia, blue daze, browallia, cat's whiskers, celosia, calliopsis, cleome, coleus, coreopsis, cosmos, crossandra, dahlberg daisy, dusty miller, exacum, gaillardia, gazania, hollyhock, impatiens, Joseph's coat, lisianthus, lobelia, Marguerite daisy, marigolds, ornamental pepper, pentas, phlox, moss rose, Rudbeckia, salvia, sweet William, Thunbergia, torenia, verbena, periwinkle and zinnia.

I have had good luck with Joseph's coat which will grow in sun or part shade, however it is cold sensitive. You can plant cuttings directly into soil. Dahlberg daisies require little care and reseed themselves well each year.

Vegetables to be planted -

You can still plant, calabaza, cantaloupe, cassava, chayote, cherry tomatoes, cucumber, dasheen eggplant, Jerusalem artichoke, jicama, lima beans, malabar, spinach, malanga, New Zealand spinach, okra, pepper, roselle, Seminole pumpkin, snap beans, squash, Southern pea, sweet potato, tamarillo, yam, and yard long beans.



Mites - Dry, relatively warm weather is a time when mite populations can explode. These are tiny spider like arachnids (with 8 legs) which suck plant juices and they spread very fast. If not controlled the plant foliage turns yellow and declines. They attach many plants including tomatoes, peppers, roses, salvia, verbena, marigolds, pothos, Dieffenbachia, pittosporum and camellias to name a few. Control with soaps and oils.

Have a good gardening day,

David Shibles
Environmental Horticulturist
Polk County Cooperative Extension
(863) 519-8677 (**NEW NUMBER**)



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

For turf information:
<http://turf.ufl.edu>

For general horticultural information
<http://hort.ifas.ufl.edu>