the Hedgelines

LMP Landscape Maintenance Professionals, Inc.℠

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In this Issue:

Weathering Water Restrictions

The drought is here, and this may create unfavorable growing conditions for plant material and turf grass. Irrigation systems will be working at maximum capacity. That being said, plants can sometimes sustain one day a week of watering with a well-designed and maintained system, but they struggle to thrive without rainfall, which may not be enough in some scenarios.

Growth Reduction

All plants need water to live. During a drought, a plant's first response is to close its leaf stomata to reduce transpiration. When this happens, the plant absorbs less carbon dioxide, and photosynthesis slows. This entire process reduces growth.

Expect some dieback and growth reduction during a drought. However, established plants with healthy, deep root systems will survive a dry spell. If you see growth reduction in them, don't stress. Once the plant receives water through natural rainfall (or watering), it will continue growing.

Increase in Pests & Weeds

A lack of water is a stressor for plants, making them more prone to insect pests and diseases. Common insects that are attracted to drought-stressed plants include borers and bark beetles. Other plant-sucking insects that benefit from dry conditions include aphids, beetles, caterpillars, mites, and sawflies. Several weeds thrive in dry soil conditions, such as Goosegrass, Plantain, Black Medic, and Florida pusley.

Poor Soil Structure

One benefit to gardening in sand is the ease with which it can be worked. But these qualities are also drawbacks. The surface of dry sand tends to repel water. Repeated soakings will eventually penetrate, but with no organic matter to hold the water, it quickly flushes through the sand, taking any soluble nutrients that might be present. Beneficial fungi and bacteria that break down organic matter and inhibit harmful organisms, such as plant-parasitic nematodes, don't work as effectively in sand. There are many ways to improve sandy soil's structure and water-holding capacity that will lead to healthier plants. Because soil is a living entity, improving it is an ongoing process.

One of the most important things you could do is to build organic matter and structure in soil. Soil structure affects the drought tolerance of your plants.

Soil with helpful organic matter helps water infiltrate better. Organic matter soaks water up and stores it in a state that plants can use later.

Modified **– Phase I Water Shortage Order**
1X per Week

Citrus	Pasco
Hernando	Pinellas
Hillsborough	Sarasota

Phase I Water Shortage Order
2X per Week

Charlotte	Hardee
DeSoto	Manatee
Polk	

Saving Your Landscape from the Effects of Drought

The University of Florida IFAS suggests the following:

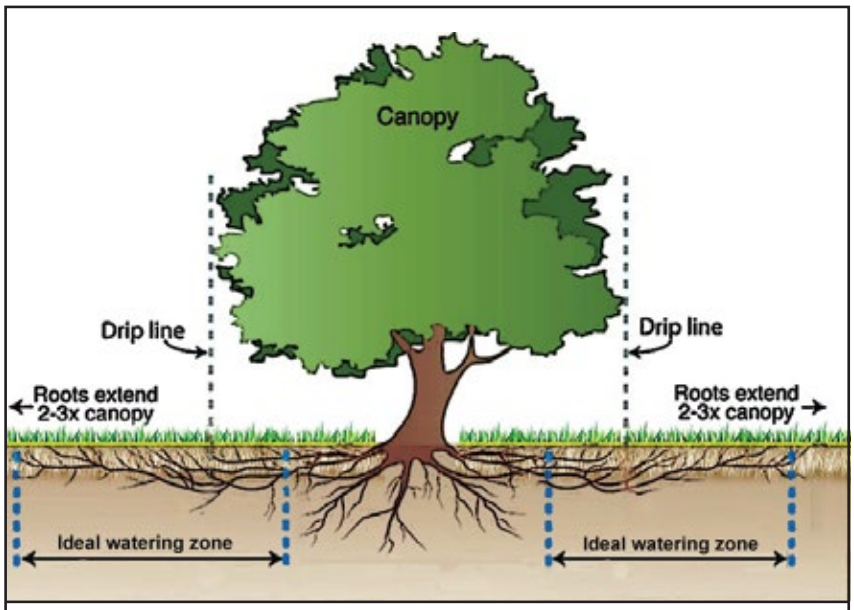
Irrigation Priorities

Proper irrigation will be critical over the next four months as temperatures rise. March is the last month of milder temperatures. April, May, and June will bring us consistent temperatures in the 80s and 90s.

Consider the plants that serve a legitimate purpose as a landscape element by providing shade, privacy or curb appeal. Then look at outlying plants that don't have as much importance, these may be allowed to stress more, even to the point of going into summer dormancy. But don't overlook if they are not native.

Trees have feeder roots that can grow up to twice the distance of the height of the tree. Most of the feeder roots also lie within the top 12 inches of soil. Avoid watering at the base of the trunk, since the absorbing roots are farther out.

Don't forget about evergreens too. These type of plants don't exhibit symptoms of drought stress as quickly as a deciduous plant. The delayed response can give you security now, but could result in irreversible damage later on. Many times we see drought stress appear over a year later, even after a wet period.



A tree is a thirty-year investment. Turf can be replaced in a year.

Deep Watering

Deep watering improves drought resistance by promoting deeper, more extensive root systems. The watering depth should be 6 to 12 inches for turf and bedding plants and 12 inches for perennials, shrubs, and trees.

System Maintenance

Examine the irrigation system for leaks.

Soil type and the application rate of the sprinkler system determine how quickly run-off will occur. If water is applied faster than it can seep into the soil, it will run off the lawn and be lost.

Make the most of designated watering times and ensure that each zone receives the right amount of water for the plant type in that area.

Turf Mowing

Mowing grass higher in the summer, especially during a drought, is an extremely important practice. Grasses produce deeper roots when they are allowed to grow to taller heights, enabling them to access water that is deeper in the soil profile. Taller grass is also better at shading the soil surface, keeping it cooler and helping to conserve soil moisture.

Skip Fertilizing

Applying excess nitrogen fertilizer during a drought can sometimes do more harm than good. Grass will often respond to nitrogen fertilization by putting on lots of new green growth, which can be of detriment to the plant. New growth is tender and less drought-resistant than mature grass blades. Instead, wait to fertilize until early fall when nutrients can be taken up efficiently and promote healthy growth.

Suspend Herbicide Treatment

During a drought, grass is already stressed, and the added strain of herbicide applications can actually end up giving weeds a competitive advantage. Many herbicide labels instruct that products should not be used above a certain temperature or during periods of drought. Another issue is that weeds do not take up herbicides as effectively during drought conditions, thus limiting the efficacy of the application.

Proactive Prevention: The Foundation of Weed Control

Mowing

Mow a lawn shorter than recommended may cause scalping and induce stress making it less able to compete with crabgrass and other weed species.

The two most important aspects of mowing are proper mowing height and proper mowing frequency.

Maximum Irrigation Efficiency

Irrigate deeply, but infrequently.

Irrigate early in the morning. Water loss from evaporation is minimal, distribution is usually good because of good water pressure and limited wind, and the risk of disease development is reduced.

Avoid runoff by matching water application rates to soil infiltration rates.

Use less water in shaded areas than in open sun.

Remove thatch in spring if it is more than 0.5 inch thick.

Fertilization

Proper fertilization is an important component in producing vigorous, dense growth in turf.

Low fertility, especially low nitrogen, is one of the factors that allows weeds to invade turf.

Thatch Removal and Aeration

Removing thatch increases the turfgrass vigor, reduces scalping by the mower, and gives a more uniform appearance to the turfgrass.

Thatch can reduce the effectiveness of preemergence herbicides by either (1) binding with the herbicides and making them ineffective or (2) increasing degradation of the herbicides as a result of the increased activity of microorganisms living in the thatch.

Thatch removal should be done before preemergence herbicides are applied; otherwise the herbicide will be removed or its activity will be decreased.

Herbicides

Understanding herbicides requires understanding the importance of weed control. They form the foundation of modern weed management and control for commercial applications.

The best herbicide option will depend on: 1) the weed species that you are targeting; 2) the use site; 3) the cost and amount of product; and 4) the preferred application method (granular, spray concentrate, ready-to-use, etc.)

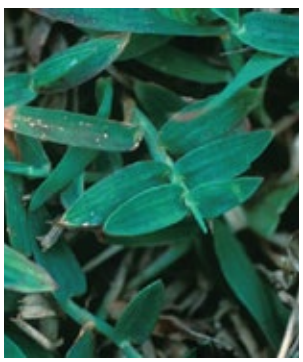
continued, A Closer Look at Common Grassy Weeds

Crabgrass | *Digitaria ischaemum*

Crabgrass is the ultimate unwanted guest for your lawn. Along with dollar weed and Florida pusley, crabgrass is the scourge of South Florida homeowners and businesses struggling to maintain their lawns. The tenacious weed is a formidable opponent, but crabgrass can be defeated with the right approach and a little patience.

University of Florida states, "In south Florida we have about five species of crabgrass. Some are perennial and some are annual. The seeds seem to germinate year-round! One estimate says that each crabgrass plant can produce over 700 tillers and over 200,000 seeds. This makes crabgrass the cockroach of the weed domain!"

Blanket Crabgrass



India Crabgrass

Smooth Crabgrass

Southern Crabgrass

Tropical Crabgrass

Understanding and Managing the Weed Seed Bank

"One year of seed gives seven years of weeds."

A silent antagonist lurks beneath the soil's surface, patiently biding its time. This formidable foe is the weed seed bank, a clandestine reservoir of potential weeds that lies dormant until favorable conditions arise for germination and growth.

Understanding the basics of the seed bank is crucial to manage and control weed infestations effectively.

The weed seed bank refers to accumulating viable weed seeds in the soil at any time. Since most weeds deposit their seeds back into the soil, seed numbers in the soil increase rapidly from year to year if the weeds are not managed. Despite many weed seeds being either unviable, eaten by animals or insects, or decomposing within several months after they are deposited, hundreds of millions of viable weed seeds per acre can still be present and are waiting to germinate.

The impact of a robust weed seed bank on a garden and a landscape cannot be underestimated. Weeds compete with desired plants for water, nutrients, sunlight, and space resources. This competition can lead to a reduction in soil fertility.

The single dandelion produces over 20,000 seedheads that are highly effective at spreading through a landscape.

With a thinning mulch layer weed seeds are provided the sunlight needed to begin growing.

below: Mature dallisgrass.

A Closer Look at Common Grassy Weeds

Goosegrass | *Eleusine indica (L.) Gaertn.*

Goosegrass is a summer annual found throughout Florida's gardens, lawns, roadsides, and open fields. Plants form low-growing matted, grass-like clumps that fan out from a central point. Goosegrass grows well in compact, wet soils and competes successfully with warm and cool season turf grasses. It's vigorous growth and abundant seed production make it an aggressively intrusive weed.

Annual Blugrass | *Poa annua*

The first thing to understand is annual bluegrass has a high light requirement for seed germination. Therefore, when sunlight penetrates through the turfgrass canopy, conditions for germination of annual bluegrass are enhanced. Another way of stating this is, the thinner the turfgrass canopy, the more annual bluegrass will germinate and the worse the problem will be the following spring.

When the same few herbicides are used frequently with little diversity in management practices, there is an increased risk of herbicide resistance. Annual bluegrass has been shown to quickly develop resistance to herbicides and is ranked third among all herbicide-resistant weed species globally, with resistance to at least nine herbicide sites of action.

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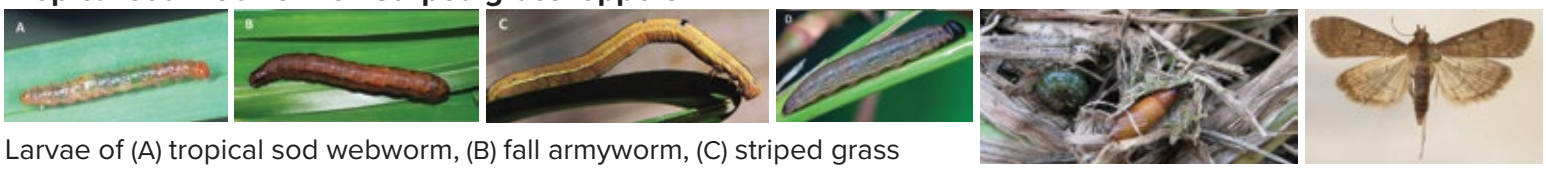
A Closer Look at Predators of our Turf

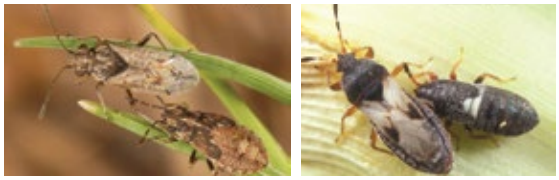
In the months ahead, various insects will attempt to eat lawns. Some of these insects are beneficial, some don't make much difference, but some can severely damage your lawn. Identifying the culprit is essential to treating the lawn for insect infestations. Different Florida lawn pests attack different grass types, and how we treat those pests is unique to the kind of insect present.

Tropical sod webworms - Striped grass loppers



Larvae of (A) tropical sod webworm, (B) fall armyworm, (C) striped grass loopers, (D) fiery skipper. Sod webworm pupa found in cocoon in St. Augustine grass thatch, adult tropical sod webworm.

Chinch bugs: false, southern



left: adult & nymph false chinch bug. right: adult & nymph southern chinch bug

Armyworms

(1) newly hatched larva of the armyworm, (2) mature larva of the fall armyworm, (3) adult male armyworm, (4) adult female armyworm

Hunting Billbugs

Larva of the hunting billbug, adult weevil hunting billbug has a long snout with small mandibles at the tip. A natural enemy of zoysia and Bermuda.

Granulate Cutworms

Larva of the granulate cutworm, adult of the granulate cutworm.

White grubs

White grub is a general term for all scarab beetle larvae. There are over 100 different species. left top, larvae of the Japanese beetle, adult Japanese beetle, green June beetle, Typical June beetle, bottom row, right, ten lined june beetle,masked chafer, May beetle, and the European chafer.

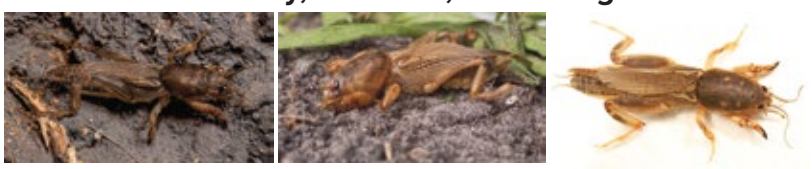
Greenbug Aphids

Feeding causes yellow or red leaf spots and tip "burning." Females reproduce without mating, one generation takes only 7-9 days.

Two-Lined Spittlebug

Spittle mass created by the two-lined spittlebug nymph. Nymph (facing downward) inside the spittle mass. Adult on St. Augustine grass.

Mole crickets: tawny, southern, short-winged



Three mole cricket species: left, shortwinged mole cricket; center, tawny mole cricket; right, southern mole cricket. When mole crickets build their surface tunnels, they sever the lawn's roots and create bulges of soil in the ground.

Seeing Yellow: The Pollen is Back

According to the National Allergy Bureau, the pollen count in the region has risen to levels not seen in several years. The primary culprits are oak, pine, and cedar tree pollen, both highly prevalent in the area. Mold spores are present in Florida year-round due to the humid climate. Still, levels are elevated due to the especially rainy winter, and the weeds and grasses haven't even started pollinating yet!

Florida has seven cities listed in the top 20 Most Challenging Places to Live with Pollen Allergies by the Asthma and Allergy Foundation of America.

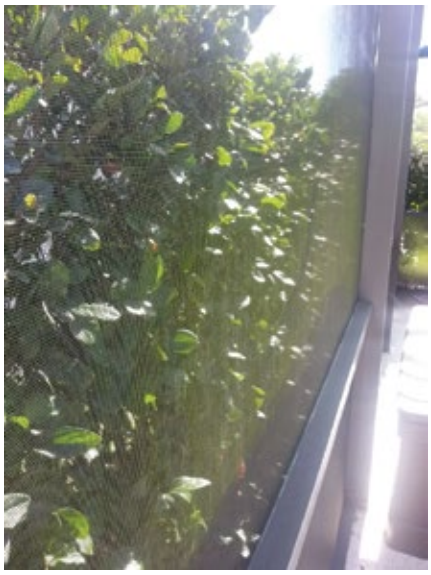
While any type of tree can produce pollen, there are a few types that seem to put in some pollen-producing overtime here in Florida, and they are not all flowering trees:

The Offenders
Oaks
American Elms
Bayberries
Maples
Pines
River Birches
Cypress
Cedar
Melaleuca tree
Orange trees

Many people mistakenly believe that trees that produce large, showy flowers and foliage are the most significant contributors to tree pollen season, but this is not the case. That's because the pollen from flowering trees tends to be heavier and stickier than those from the trees listed above. The heavier, stickier pollen falls to the ground faster and doesn't have as much of a chance to spread around.

You'll notice maples producing pollen first, while oaks will produce the longest. Melaleuca and orange trees are insect-pollinated but still leave a yellow film on everything around them.

Our hardy, majestic Oak trees are a staple in many communities across the state, adorning residential and commercial properties. However, for tree pollen allergy sufferers, oak trees are the most malicious. Oak trees produce flowers each spring, although their flowers are not the showy type. Showy flowers are showy for a reason; they must attract insect pollinators to transfer their pollen. The plants that don't have showy flowers – cedars, oaks, pines, hickories, grass, and the notorious ragweed- make the lives of allergy sufferers miserable each year. These plants have chosen wind as their means of spreading pollen, which has proven effective. Windblown pollen is produced in abundant quantities and can be carried for miles in the breeze.



The pollens peak in the morning from dawn until noon, so if you do any outdoor activities, try to postpone that to the afternoon or the evening. We just need a good rain to come and wash all the pollen out of the air.

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