

Managing Your Florida Lawn Under Drought Conditions¹

Harold C. Jones, Charles Steven Lippi, and Laurie E. Trenholm, Ph.D.²

Drought-like conditions can occur in sandy Florida soils after only a few days without rain and many lawns require supplemental irrigation during these drought periods. In a perfect world, water would not be a limited resource and we could irrigate our lawns whenever needed. In reality, many parts of Florida are under mandated watering restrictions throughout the year. This often leads to homeowner frustration, since there is a notion that reduced watering frequency hurts a lawn. Actually, the majority of watering restrictions provide ample watering frequencies for most lawns, although there are always exceptions to this. To make sure that your lawn can cope with mandated restrictions, you may need to alter maintenance practices.

Mow High When You Do Mow

When irrigation is inadequate, grass will reduce growth so mowing frequency may be reduced during a drought. Be sure to mow at the highest recommended height for your grass. Be careful not to remove more than 1/3 of the top of the leaf blade at any one mowing because this will place further stress on the grass. Higher mowing encourages deeper rooting, which is one of the key factors in enhancing drought tolerance.

Sharpen Mower Blades

Sharp mower blades are particularly important when grass is under drought stress. A leaf cut by a sharp mower blade will heal faster and require less water than a leaf torn by a dull blade.

Adjust Irrigation Frequency, Not Amount of Water Applied

Turfgrass irrigation requirements vary by location in the state, time of year, soil conditions, shade cover, type of grass, amount of fertilizer applied, rainfall, and other factors. That's why there is no one single recommended irrigation frequency; rather, you have to take all of these factors into account. Because of this variability, frequency of irrigation should be adjusted according to your lawn's needs and the amount of rainfall received. How frequently you irrigate can and should be adjusted based on these needs. For a general guideline for irrigation frequencies for St. Augustinegrass, see Table 1.

The amount of water applied at each irrigation event should remain consistent. Depending on location in the state, there may be different amounts

1. This document is Fact Sheet ENH 157, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. First published: March, 2001. Revised April, 2006. Please visit the EDIS website at <http://edis.ifas.ufl.edu>.

2. Harold C. Jones, former County Extension Director, Duval County Extension Service, Charles Steven Lippi, former County Extension Director, Flagler County Extension Service, and Laurie E. Trenholm, Associate Professor, Turfgrass Specialist, Department of Environmental Horticulture, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

of soil for roots to grow into. For example, in southeast Florida, there may only be a few inches of actual soil before you hit the limestone aquifer. In other parts of the state, there may be several feet of soil for roots to grow into. Your objective should be to train the roots to grow as deeply as possible. If turf receives frequent, shallow irrigations, the roots will happily stay in the top few inches of soil, but if water is applied for longer periods, roots will seek the water out at the deeper soil levels. Deep roots can generally be achieved by applying 1/2 to 3/4 inches of water each time you irrigate. *Never irrigate to the point where you have surface runoff of applied water.* This is the point at which water is being wasted and is not benefiting the plant.

So, how do you know how to apply this amount of water? An easy method of measuring the amount of water applied by your irrigation system is to set out several straight-sided, same-size cans around the perimeter of the irrigation zone. Monitor how much water is applied if you run your irrigation system for fifteen minutes by measuring the amounts in the cans. If, for example, you have 1/4 inch after that time, your system should run for thirty minutes to apply 1/2 inch of water. For more information on how to calibrate your system, refer to ENH61, "How to Calibrate Your Sprinkler System."

Irrigate Uniformly

Some irrigation systems are improperly designed and do not evenly distribute irrigation water. Dry areas become apparent during a drought because rainfall is insufficient to mask the water distribution problem. You should periodically inspect the uniformity of your irrigation system by watching it run. If your system is not applying uniformly, contact a qualified irrigation contractor for repairs.

Irrigate Early

Irrigate early in the morning so that excess moisture on the leaf surfaces will dry during the day. Irrigating late in the day can cause turf leaf diseases. Irrigating during the late morning and afternoon will waste irrigation water to evaporation, and is not allowed under municipal or Water Management District water use restrictions.

Postpone or Reduce Fertilizer Applications

Due to increased stress and reduced growth of grasses during droughts, fertilization should be reduced or postponed until adequate rainfall is available. Trying to maintain a green lawn through nitrogen fertilization at this time will place the grass under additional stress and may affect recovery. Also, many fertilizers have a high salt content and can actually burn the grass. For a quick green-up, soluble iron may be applied, but the results will not last for long.

Lawn care professionals have a wider selection of fertilizer materials and application methods available to them and may continue to apply fertilizers at low rates throughout a dry period.

Postpone Herbicide Applications

Herbicides or weed killers can stress a lawn even under good conditions. During a drought, that stress can reduce turf growth and the ability of turf to compete with weeds. Avoid using atrazine herbicide as a spray or as a component of a weed and feed fertilizer any time temperatures may exceed 85°F.

Spot Treat Lawn Pests Only if Needed

Pesticides should only be applied as needed and then only to the affected area of the lawn. Chemicals can cause damage to the grass, which can increase stress to the turf. Keep an eye out for increased chinch bug activity during droughts, and spot treat for them as necessary to reduce damage.

Consider Using a More Drought-Tolerant Turf Species

St. Augustinegrass is the most widely used lawngrass in Florida, but it does not have good drought tolerance without supplemental irrigation. Other grass species, such as bahiagrass or centipedegrass, have better drought tolerance. Although these grasses will turn brown during a drought, they are more likely to resume growth and turn green when enough water is applied. For more

information on grass selection, refer to ENH04,
“Selecting a Turfgrass for Florida Lawns.”

Table 1. Number of days that St. Augustinegrass with 6-inch roots can go between irrigation events.¹

	Pensacola	Gainesville	Miami
Winter	8-28	7-23	3-10
Spring	3-11	3-9	2-7
Summer	1-5	1-5	1-4
Fall	2-9	2-8	2-6

¹These frequencies will vary depending upon soil conditions, shade cover, fertilization, and other factors. These frequencies assume no rainfall occurs. Data based on Meyers and Horn, Florida Turf Grower, 1969.