



Florida-Friendly Landscaping™ Fact Sheet

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HOME LAWN IRRIGATION FOR POLK COUNTY

DID YOU KNOW?

- Overwatering not only contributes to the depletion of our water supply; it also makes our lawns more susceptible to pest and disease problems.
- Outdoor water use accounts for over 50% of our total household water use!

Water Your Plants, But Water Wisely!

A. LEARN HOW TO OPERATE YOUR IRRIGATION SYSTEM TIMER

1. Knowing how to use your irrigation timer is a must if you are going to water wisely. Make sure that you keep the directions for operating your irrigation timer in a place where you can find them from year to year. You may forget how to program the timer over a period of several months.

If you can't find the directions, contact an irrigation supply company such as Polk Pump or Florida Irrigation Supply. If you tell them the make and model of the timer, they should be able to give you a copy of the directions. You also could check with a neighbor, your homeowner's association, the builder or on the manufacturer's website.



Figure 1. Learn how to set your irrigation timer.

2. Most timers allow you to: select watering day(s), select time of day to water, select number of minutes the irrigation will run for each zone and allow you to put the system on automatic or manual.

3. You should have a rainfall sensor on the system that deactivates the timer when rain has occurred recently (required by law on all systems).

B. CHECK THE IRRIGATION SYSTEM FOR ANY MAINTENANCE PROBLEMS

1. Now that you know how to operate the timer, you can turn the system on with the manual control and check for broken sprinkler heads, broken pipes and emitters that are not working properly.
2. Make adjustments so sprinklers are not irrigating the driveway, sidewalk or road.
3. Repairing PVC pipes and sprinkler heads is not difficult - most parts can be found at retail hardware stores. The employees at these stores are usually willing to give advice.

C. LEARN HOW TO CALIBRATE YOUR IRRIGATION SYSTEM

1. The calibration should be done at a time when you normally run the system, because water pressure can vary during the day and wind can become a problem later in the day.
2. Randomly place flat-bottomed containers (like coffee cans or tuna fish cans) in one irrigation zone at a time and run irrigation for fifteen minutes.
3. If you have a hose end sprinkler to water your turf, place the containers in a straight line from the sprinkler to the edge of the watering pattern.
4. Measure the amount of water in each dish with a ruler. Add the amounts together and divide by the number of containers which gives you the average for all of the containers. Multiply this figure by four and that will give you the amount of water your system is applying per hour.
5. After you calibrate your irrigation system, use Table 1 below to determine the amount of time that you need to run your system. For example, if your irrigation system is applying 1 inch per hour and you want to apply 3/4 inch, run the system for 45 minutes.



Figure 2. Calibration of irrigation system.

Table 1. Time required to apply water for a given irrigation rate.

Amount of water to be applied	Irrigation Rate (Amount of water per hour as calculated in your calibration test)			
	1/2 inch	1 inch	1 1/2 inches	2 inches
Minutes to run each zone				
1/4 inch	30	15	10	8
1/2 inch	60	30	20	15
3/4 inch	90	45	30	23

D. IRRIGATION NEEDED FOR NEWLY ESTABLISHED TURF

1. Apply no more than 1/4 inch of water at least twice per day for the first week - once in the morning and once in the afternoon. This will keep the sod from drying out but will not waste water that would otherwise run off since the root system is just starting to grow in newly planted sod. The Southwest Florida Water Management District will allow you to water daily before 10:00 a.m. and after 4:00 p.m. for 30 days on newly established landscape plants.

2. For week 2, water with 1/4 inch water daily. For week 3, apply 1/2 inch every other day.

3. By week 4, water 1/2 to 3/4 inch on an as needed basis. These guidelines may take less or more time in some yards, depending on the soil, shade and other conditions in the yard, time of year, etc., but these provide a general guideline to follow to get your roots established.

E. IRRIGATION NEEDED FOR ESTABLISHED LAWNS

1. Apply 1/2 to 3/4 inch irrigation when the turf is at the “time to water” stage (Figure 2). Signs of wilt are: footprints or tire tracks remain in the grass long after being made, many leaf blades folded in half and soil samples from the root zone are dry.

When the leaf blades are totally folded over or at the drought stage (Figure 2), then permanent damage is beginning to occur. Bahiagrass will recover, but St. Augustinegrass may be permanently damaged.

2. 1/2 to 3/4 inch of irrigation or rainfall should wet the soil 12 inches deep which is the entire root zone of most grasses. Any more than 3/4 inch at one time is wasted and washes fertilizer and chemicals into the aquifer. Less than 1/2 inch applied daily or more often causes the roots to grow close to the surface and become more susceptible to drought damage. If your lawn is on a compacted soil, you may experience runoff at these rates since the water cannot infiltrate into the soil easily. In this case, you may need to apply the irrigation in two separate applications. For example, you might apply 1/4 inch and then apply another 1/4 inch after the water has worked into the soil an hour later or so.

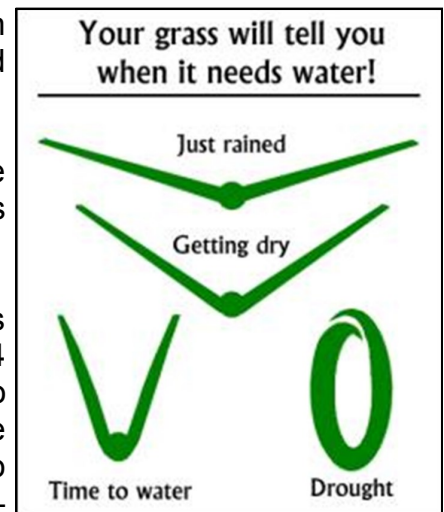


Figure 3. Grass wilt symptoms.

3. Do not apply water again until stress symptoms are noticeable. Typically, you will need to make one to two waterings per week in the summer time, depending on rainfall, and once every 14 days or less in the winter. If you build drought tolerance into your St. Augustinegrass through good management practices, then you should not need to water (3/4 inch) more than once per week on many soil types in the summer months to keep your lawn looking good. However, homeowners growing St. Augustinegrass on the deep sands of the central ridge in northern Polk County or other very sandy soils may need to water their turf two times per week, which is currently allowed by the Southwest Florida Water Management District. Hot spots which develop in the lawn may be watered any day of the week with a hand held hose.

F. IMPROVING DROUGHT TOLERANCE IN YOUR LAWN

1. Less frequent, longer irrigations will assist in establishing a deeper, more viable root system. Many people rely on their automatic sprinkler systems to apply small amounts of water several times per week to their lawn. This practice is actually detrimental to the lawn because it promotes a lawn with shallow roots that require more water and one that cannot withstand drought stress.

2. Proper mowing is important for improving the drought tolerance of your lawn. St. Augustine cultivars Floratam and Bitter Blue should be mowed at 3 1/2 to 4 inches with a sharp blade and Bahiagrass should be mowed at 3 to 4 inches. Semi dwarf cultivars of St. Augustinegrass like Pursley Seville and coarse leaved cultivars of Zoysiagrass like Empire should be mowed at 2-2 1/2 inches. A taller grass will produce and store more carbohydrates which makes the grass more tolerant under stress. A jagged cut with a dull mower blade increases the cut area at the end of the leaf blade, which results in greater water loss and a weaker, less drought tolerant grass.

3. Fertilize wisely. Do not over-fertilize with nitrogen. Excessive nitrogen increases leaf growth but root growth is reduced. Drought conditioning can only be accomplished by applying just enough nitrogen to obtain a small but continuous amount of growth. Use a fertilizer that has similar amounts of nitrogen and potassium such as a 15-2-15 (15% nitrogen, 2% phosphorous and 15% potassium) or 15-0-15. Either formulation should have 30-50% slow release nitrogen. Only use the 15-0-15 if a soil test indicates adequate phosphorous in your soil. You may even want to make a separate application of just potassium in the fall, because potassium builds strong root systems which will better tolerate drought and cold conditions. Do not apply more fertilizer than allowed by the label at any one time. This amount is equal to 1 lb of N per 1,000 sq. ft of lawn. For a guide on how to apply this amount, refer to ENH962, Figuring Out Fertilizer for the Home Lawn.

4. If you are applying a pesticide, be sure that you are using the correct product for the pest you are trying to control. Proper identification of the pest is critical to controlling pests! Always follow all label directions.

Check the following circulars for more detailed lawn care information (available at the Extension Office or from the Internet) :

- a. Homeowner Best Management Practices for the Home Lawn - ENH979
- b. Managing Your Florida Lawn Under Drought Conditions - ENH 157
- c. Watering Your Florida Lawn - ENH9
- d. Let Your Lawn Tell You When to Water - ENH 63
- e. Basic Repairs and Maintenance for Home Landscape Irrigation Systems - AE451
- f. How to Calibrate Your Sprinkler System - ENH61
- g. Establishing Your Florida Lawn - ENH-03
- h. St. Augustine Grass for Florida Lawns - ENH5
- i. Bahiagrass for Florida Lawns - ENH6
- j. Figuring Out Fertilizer for the Home Lawn - ENH962
- k. Key for Identification of Landscape Turfgrass Diseases - SS-PLP-1
- l. Insect Pest Management on Turfgrasses - ENY-300
- m. Turfgrass Disease Management - SS-PLP-14

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