HOME LAWN IRRIGATION

DID YOU KNOW?

- **Watering a half acre of yard "only once per week" equals 40,730 gallons of water a month or 488,760 gallons per year!**

- **40% of our drinking water goes to watering the landscape!**

- **A lifetime supply of drinking water for one human is 16,000 gallons, less than it takes for a month of lawn irrigation!**

Water Your Plants, But Water Wisely!

A. LEARN HOW TO OPERATE YOUR IRRIGATION SYSTEM TIMER(see attachments).

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 Lakeland Irrigation. 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 home-owner's association, the builder or on the manufacturer's Web Site.

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.

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.

Figure 1. Calibration of irrigation system.

4. Measure the amount of water in each dish with a ruler. Add all of 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 1 inch, run the system for 60 minutes.

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

	Irrigation Rate (Amount of Water Per Hour)			
Amount of water to be applied	0.5 in.	1 in.	1.5 in.	2 in.
	Minutes to run each zone			
0.25 inch	30	15	10	8
0.50 inch	60	30	20	15
0.75 inch	90	45	30	23
1.00 inch	120	60	40	30

D. IRRIGATION NEEDED FOR NEWLY ESTABLISHED TURF (sandy ridge soils)

1. Apply 0.25 inches water at least twice per day for the first week (as per Table 1) - once in the morning and once in the afternoon for approximately 5-10 days or until the sod is held fast to the ground (more applications per day may be needed if leaves wilt). The Southwest Florida Water Management District will allow you to water daily before 10:00 a.m. and after 4:00 p.m. for 60 days on newly established landscape plants.

2. For weeks 2 and 3, water every other day with 0.25 inches - more often if grass blades wilt.

3. For weeks 4-6 water deeply (3/4 to 1 inch) every other day. Probably 1 inch for the deep sands in northeast Polk County.

4. By week 7, water 3/4 to 1 inch on an as needed basis (probably 1 inch twice per week depending on rainfall). You need to keep in mind that there are many variables which can effect the required amount of water and the frequency such as soil type, grass, type, shade, etc.

E. IRRIGATION NEEDED FOR ESTABLISHED LAWNS (sandy ridge soils).

1. Apply 1 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.

Figure 2. Grass wilt symptoms.

2. One inch of irrigation or rainfall in ridge sandy soil should wet the soil 12 inches deep which is the entire root zone of most grasses. Any more than 1 inch at one time is wasted and washes fertilizer and chemicals into the aquifer. Less than 1 inch applied daily or more often causes the roots to grow close to the surface and become more susceptible to drought damage.

3. Do not apply water again until stress symptoms are noticeable. Typically, you will need to make 2 waterings per week in the summer time and once every 10-14 days or less in the winter. Of course, water restrictions allow watering no more than twice per week. If you build drought tolerance into your St. Augustinegrass through good management practices, then you should not need to water (1 inch) more than twice per week in the summer months to keep your lawn looking good.

F. IMPROVING DROUGHT TOLERANCE IN YOUR LAWN (sandy ridge soils).

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 requires 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, Bitter Blue, Floratine, or Floralawn should be mowed at 3.5 to 4 inches with a sharp blade and bahiagrass should be mowed at 3 to 4 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 15-5-15 (15% nitrogen, 5% phosphorous and 15% potassium) or 15-0-15 with 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 conditions.

4. Apply chemicals to lawns wisely, because they can add the additional stress of phytotoxicity (chemical damage to plants). A healthy vigorous growing turfgrass is the best defense against insects, weeds and diseases.

Check the following circulars for more detailed lawn care information (available at the Extension Office or from the Internet http://edis.ifas.ufl.edu):
a. Improving Drought Tolerance in Your Lawn - Fact Sheet ENH57
b. Fertilizer and Irrigations Needs for Florida Lawns and Landscapes - ENH860
c. Reduced Irrigation of St. Turfgrass in the Tampa Bay area - AE264
d. Water Requirements of Florida Turfgrasses - Bulletin 200
e. Let Your Lawn Tell You When to Water - OH 60
f. Watering Your Florida Lawn - ENH9
g. How to Calibrate Your Sprinkler System - ENH61
h. Establishing Your Florida Lawn - ENH3
i. St. Augustine Grass for Florida Lawns - ENH5
j. Managing Your Florida Lawn Under Drought Conditions - ENH157
k. Bahiagrass for Florida Lawns - ENH6
l. Disease Control in Turf: Key for Identification of Turf Diseases - PDMG-V2-13
m. Insect Pest Management on Turfgrasses - ENY300
n. Disease Control in Turf: Common Turf Diseases - PDMG-V2-14
o. Turfgrass Disease Management - SS-PLP-14