

What is irrigation?

Irrigation has been defined as the application of water to soil in order to provide a more favorable environment for the production of high yields of quality crops. From the definition, it is obvious that to understand irrigation one must understand soil-moisture relationship, plants and irrigation equipment.

How Frequently to Water

Irrigation of many Florida lawns is controlled by a preset automatic sprinkler system. While automation is becoming increasingly necessary in many areas of our lives, automatic sprinkler systems and improper watering practices are undoubtedly the single biggest factor leading to decline of landscapes and are a waste of water. It is important to remember that, on average, we receive 60 or more inches of annual rainfall in most parts of Florida, and that the majority of this rainfall occurs between June and October.

How Much to Water

The amount of water to apply at any one time varies with the amount of water present in the soil, the water-holding capacity of the soil, and soil drainage characteristics. An efficient watering wets only the turfgrass root zone, does not saturate the soil, and does not allow water to run off.

Florida soils are typically sandy and hold 1 inch of water in the top 12 inches of soil. If the roots are in the top 12 inches of soil and the soil is dry, then $\frac{1}{2}$ to $\frac{3}{4}$ inch of water is required to wet the area thoroughly. Generally, turfgrasses require no more than 0.3 inches of water per day. Under extreme summer conditions, as much as 0.4 inches of water can be used per day. During winter, when grasses are not actively growing, water use may be only 0.05 inches of water per day. Light, frequent watering is inefficient and encourages shallow root systems. Excessive irrigation, which keeps the root system saturated with water, is also harmful to the lawn.

When to Water

The best time for lawn irrigation is in the early morning hours. Watering during the day wastes water due to excessive evaporation and can scald the lawn when temperatures are high. Watering in late afternoon or late morning may be detrimental if it extends the time the lawn is naturally wet from dew. This extended “dew period” can accelerate disease occurrence.

Turfgrass & Microenvironments Affect Landscape Plants

It is important to remember that a sprinkler zone may be irrigating not only turf, but landscape plants as well. These plants may have different irrigation requirements and may be over- or under-watered if irrigation is based on turfgrass needs. This factor emphasizes the importance of good landscape design and irrigation planning, where all components of the system must be considered.

Irrigation Controllers

Also known as a time clock or timer, irrigation controllers manage the duration and frequency of watering cycles. When properly set, an irrigation controller can make system operation easier and help prevent overwatering. Multiple programs and the ability to water in hours and minutes are required of controllers watering drip and sprinklers. Most new controllers allow for drip and sprinkler operation.

Programming information

Part 1: Setting Time and Date

<https://www.youtube.com/watch?v=GR6ec8OU1n4>

Part 2: Set Program A Start Time, Run Time and Days to Water Turfgrass

<https://www.youtube.com/watch?v=QxFFblz5cV0>

Part 3: Set Program B Start Time, Run Time and Days to Water to Water Trees

<https://www.youtube.com/watch?v=pixWcKju6w4>

How an irrigation system works

https://www.youtube.com/watch?time_continue=109&v=UADXcEJTcso&feature=emb_title

Irrigation Components

https://www.youtube.com/watch?time_continue=175&v=0Pqw6O0UF48&feature=emb_logo