

# WATER - WHEN...HOW...HOW MUCH

Water is essential to all life...too little water and we die, too much and we drown. The same is true of the grass in our lawns. Water makes up 70% to 80% of the weight of our lawn grasses and the clippings alone are nearly 90% water. While most people are concerned about not watering their lawns enough, the fact is that more lawns are damaged or destroyed by over-watering.

Newly installed turfgrass sod has very important watering needs. Proper watering immediately after installation will ensure the turf gets established, and it will also have an impact on how well the lawn continues to flourish for years to come.

## **WHEN To Water New Turfgrass Sod**

Begin watering new turfgrass sod within a half hour after it is laid on the soil. Apply at least 2 to 3 cm. (1 inch) of water so that the soil beneath the turf is very wet. Ideally, the soil 7 to 10 cm. (3 to 4 inches) below the surface should be moist.

**Watering Tip #1:** pull back a corner of the turf and push a screwdriver or other sharp tool into the soil. It should push in easily and have moisture along the first 7 to 10 cm. (3 or 4 inches), or you need to apply more water.

**Watering Tip #2:** make absolutely certain that water is getting to all areas of your new lawn, regardless of the type of sprinkling system you use. Corners and edges are easily missed by many sprinklers and are particularly vulnerable to drying out faster than the center portion of your lawn. Also, areas near buildings dry-out faster because of reflected heat and may require more water.

**Watering Tip #3:** runoff may occur on some soils and sloped areas before the soil is adequately moist. To conserve water and ensure adequate soak-in, turn off the water when runoff begins, wait 30-minutes to an hour and restart the watering on the same area, repeating this start and stop process, until proper soil moisture is achieved.

For the next two weeks keep the below-turf soil surface moist with daily (or more frequent) watering. Especially hot, dry or windy periods will necessitate increased watering amounts and frequency.

**Watering Tip #4:** as the turf starts to knit its new roots into the soil, it will be difficult, impossible and/or harmful to pull back a corner to check beneath the turf (Watering Tip #1), but you can still use a sharp tool to check moisture depth by pushing it through the turf and into the soil.

**Watering Tip #5:** water as early in the morning as possible to take advantage of the daily start of the grass's normal growing cycle, usually lower wind speeds and considerably less loss of water because of high temperature evaporation.

**Watering Tip #6:** if the temperature approaches 37( C (100( F), or high winds are constant for more than half of the day, reduce the temperature of the turf surface by lightly sprinkling (syringe) the area. This sprinkling does not replace the need for longer, deeper watering, which will become even more critical to continue during adverse weather conditions.

During the rest of the growing season most lawns will grow very well with a maximum total of one inch of water a week, coming either from rain or applied water. This amount of water, properly applied, is all that is required for the health of the grass, providing it is applied evenly and saturates the underlying soil to a depth of 10 to 15 cm (4 to 6 inches).

**Watering Tip #7:** Infrequent and deep watering is preferred to frequent and shallow watering because the roots will only grow as deeply as its most frequently available water supply. Deeply rooted grass has a larger "soil-water bank" to draw moisture from and this will help the grass survive drought and hot weather that rapidly dries out the upper soil layer

## HOW To Water New Turfgrass Sod

Proper watering techniques are a critical aspect of lawn watering, equal in importance to the issues of when to water and how much to water. Here are several key factors to proper technique:

Avoid hand sprinkling because it cannot provide the necessary uniformity as most people do not have the patience, time or "eye" to adequately measure what is being applied across any larger areas of lawn. The only possible exception to this guideline would be the need to syringe the surface of the grass to cool it, or to provide additional water near buildings or other heat-reflecting surfaces.

Understand the advantages of different sprinkler designs, because each type has its advantages and disadvantages and its proper use will be determined by the type of sprinkler you select.

In-Ground Systems require professional design and installation and they require routine adjustments and regular maintenance to be most effective and efficient. The greatest mistake made with most in-ground systems is the "set it and forget it" philosophy that fails to account for the changing seasonal water requirements to maximize turf growth or even allowing the system to operate during or following a multi-inch rain storm. Another frequent problem is when heads get out of alignment and apply water to the sidewalk, street or house-siding, rather than to the lawn.

Hose-End Sprinklers range in complexity, cost and durability, but are highly portable and can provide uniform and consistent coverage, when properly placed on the yard and adequately maintained.

Sprinklers that do not throw the water high into the air are usually more efficient because prevailing winds are less disruptive of distribution patterns, the potential for evaporation loss is reduced and trees, shrubs and other plants do not block the pattern (or are very noticeable if they do).

Several times during the growing/watering season, routine maintenance to check for blocked outlets, leaking or missing gaskets, or mis-aligned sprinkler heads is important, regardless of the sprinkler design.

Select sprinklers and systems for uniformity of coverage across whatever area they are designed to water. Inexpensive hose-end sprinklers and in-ground irrigation systems can provide uniform coverage, but they can also be extremely variable and inconsistent in their coverage patterns.

Verify watering uniformity can be accomplished with a very simple and inexpensive method that uses only 4 to 6 flat-bottomed, straight-sided cans (tuna fish, cat food, etc.), a ruler and a watch.

Follow these steps:

**Step #1:** arrange the cans at random distances away from any sprinkler, but all within the area you assume is being covered;

**Step #2:** run the sprinkler for a specific amount of time, say a half-hour OR run the water until a specific amount of water is in at least one can, say a 1.5 cm (0.5 inches)

**Step #3:** measure the amount of water in each can, checking for uniformity. Some variation is expected, but a difference of 10-percent or more between any two cans must be addressed by replacing or adjusting the sprinkler or relocating the system.

This measuring method should be used across an entire lawn that has an in-ground irrigation system to assure maximum coverage and uniformity.

Watering difficult areas such as slopes and under trees requires some special attention to achieve maximum benefit and a beautiful lawn.

For Slopes, see Watering Tip #3

For Areas Under and Near Trees you need to know the water requirements for the specific trees, as well as for the grass. Despite having deep "anchor" roots, trees take up moisture and nutrients from the top six inches of soil...the same area as the grass. Trees and turf will compete for water. Watering sufficiently for the grass may over-water some varieties of trees and under-water others. A common solution is to not plant grass under the drip-line of trees, but rather use that area for perennial ground-covers, flower beds or mulch beds.

### **HOW MUCH Water Is Applied & Needed**

The amount of water your lawn requires and receives will determine its overall health, beauty and ability to withstand use and drought. Keep in mind that too much water can ruin a lawn just as fast as too little.

One inch a week is the standard water requirement established for most lawns; however, this will vary between different turf species and even among cultivars within a specie. There will also be varying water requirements for seasonal changes and still more differences brought about because of different soil types.

Look at your lawn to determine its water needs. Grass in need of water will have a grey-blue cast to it, rather than a blue-green or green color. Also, foot prints will still appear after a half-hour or more on a lawn in need of water, while on a well watered lawn foot-prints will completely disappear within minutes.

Use a soil probe, such as a screwdriver or large spike to determine how dry your lawn is. If the probe can be pushed into the soil easily, it's probably still moist, but if it takes a lot of pressure to push in, it's time to water.

Verify watering quantities with the same measuring can method described above, except you will want to note the time it takes for the cans to collect a specific amount of water. For example, if 0.5 cm (0.25-inches) collects in 30 minutes, you can easily calculate that it will take one hour to apply 1 cm (0.5-inches) of water or two hours to apply 2.5 cm (1-inch).

Water timers can help provide consistency and even be programmed or set to turn-off when no one is awake or at home. Some timers measure just the amount of time water is flowing through the devise and you have to know or calculate how long to set the timer for (see item above). Other units measure the number of gallons of water flowing through it. Knowing that 600 gallons per 1,000 square feet equals one-inch of water will help you calculate the timer settings your lawn will require.