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WATERING HOME LAWNS IN WESTCHESTER COUNTY

By Nancy Ann Cook, Senior Horticulture Consultant, Cornell Cooperative Extension of Westchester County

Home lawns require supplemental water in differing amounts depending on a number of different factors:

1. Weather: precipitation amounts, temperature, humidity
2. Varieties of grasses involved
3. Stage of growth of the grasses
4. Soil type
5. Quality of lawn desired

There is a great deal of interest in water conservation, and lawn irrigation is sometimes perceived as a wasteful and unnecessary way to use a precious resource. In addition, many homeowners do not know how to assess the water needs of their lawns and how to apply water effectively. Research has disproved many older theories on watering during hot weather so the entire issue has become confusing and often contradictory.

HOW MUCH WATER?

Here in Westchester, our soils tend to have a high clay content that retains water well. For example, our lawns require less water than lawns on Long Island where the soil is sandy and water filters easily through the soil. As a general statement, established lawns here require one inch of water per week. If rainfall in any given week provides this amount, no supplemental watering will be needed. A rain gauge can help to determine rainfall amounts; these should be placed in an open location away from a building or any trees. To assess how much water a sprinkler supplies, place straight sided containers such as coffee or tuna cans at several locations around the lawn. Turn on the sprinklers and monitor how long it takes to accumulate one inch of water.

In this part of the country, we grow primarily cool season grasses (Kentucky Bluegrass, Perennial Rye, Fine Fescue, Tall Fescue). These grasses grow vigorously in the cool weather of spring and fall. Their growth slows considerably during very hot weather in summer and virtually stops during the winter. Homeowners need to consider the type and amount of growth that is going on at any given time in order to determine how to water.

During active spring and fall growth it is desirable to water deeply and infrequently. Once per week is sufficient. This will encourage roots to extend deeper into the soil and will have the effect of producing stronger grass plants that will be more able to survive the stress of summer heat.

RESEARCH ON SUMMER WATERING

Research has shown that during the hot weather roots do not grow. In fact, there may be substantial root loss during these periods. Watering practices need to be adjusted at this time to place water in the zones where roots can actually use it. In hot weather, roots are nearer the surface. Therefore, it makes sense to apply smaller amounts of water more frequently than in spring or fall. One inch of water split two or three times per week is adequate.

WHEN TO WATER?

The optimal time of day to water a lawn is another question often obscured by conflicting opinion. The optimal time to water a lawn is very early in the morning (perhaps 5:00 am to 8:00 am) when dew would normally be present so that the duration of moisture on the grass blades is minimized, thus lowering disease pressure. There is also lower evaporation loss at this time of day so watering becomes more efficient.

ESTABLISHMENT

During the establishment of a new lawn or renovation of an existing lawn, homeowners can make choices of grass varieties that will help to lower their water use. In general, turf type Tall Fescues, which should usually be planted as a monostand (not mixed with other grass species), and Fine Fescues show good drought tolerance. Some varieties of Kentucky Bluegrass and perennial ryegrass also withstand drought moderately well. Contact Cornell Cooperative Extension of Westchester County for variety recommendations.

During the establishment phase, germinating grass seed and very young plants have somewhat different water needs than mature turf. Newly seeded areas must be kept moist, but not soggy, at all times during the germination period. Young plants with small root systems need water frequently so that they do not dry out before their roots become well established. Depending on the weather, it may be necessary to water a newly seeded area daily and very young plants every other day. Seedling turf generally does not develop heat and drought tolerance during its first season and would probably die if not irrigated during the summer.

SUMMER DORMANCY

It is important to remember that one option in a lawn care program is to allow an established lawn to go dormant during the summer. In times of drought, follow all local restrictions. Lawn grasses are adapted to go dormant in summer in response to a lack of moisture, but dormancy may provide an opening for weeds to move in. Research shows that cool season grasses will survive with as little as $\frac{1}{10}$ inch of water over a three-week period. If you allow your established lawn to go into a summer dormancy condition, proper conditioning is important. As the summer stress period approaches, gradually reduce lawn watering to help the grasses adjust to drier conditions. Most cool season grasses will revive with the return of cool temperatures and adequate natural rainfall in the autumn. Weeds may also be managed at this time.

VARIABLES

Watering practices cannot really be considered in a vacuum. Many factors affect water use by grass plants, and all maintenance practices together determine the needs of the plants. Mowing height and frequency affect depth of rooting and transpiration rates, timing of fertilizer applications affects growth rates of roots and shoots, and thatch affects water penetration, rooting depth and drought resistance. These guidelines, therefore, are intended to address a generalized situation. The individual lawn will have its own set of conditions that will determine its own water needs.

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