



**Cornell University**  
Cooperative Extension  
Rockland County

10 Patriot Hills Drive  
Stony Point, NY 10980  
Phone: (845) 429 - 7085  
Fax: (845) 429 - 8667  
www.rocklandcce.org

# Water Wise Lawns

## **Established Lawns**

Established lawns need about one inch of water per week during the growing season. If your lawn receives one inch of rainfall every week in the summer, it will make it through the summer without much moisture stress. If you get less rain, you may make up the difference with sprinklers or an irrigation system. If you get one half inch of rain one week, apply only another one half inch. Use a rain gauge or container (such as a tuna fish/cat food or other container) to measure rainfall and supplemental water from sprinklers.

Lawn grasses are adapted to go dormant in summer in response to a lack of moisture. Research shows that these cool season grasses will survive with as little as one tenth inch of water over a three-week period. Lawn grasses rebound when cool weather and rains return.

You may 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.

Germinating seeds and young seedlings must have adequate moisture. Seedbeds need to be moist at all times until seeds sprout. Moisten only the surface. After seedlings emerge, gradually reduce watering to promote deep rooting. Once 60 percent of the ground is covered with grass, allow the soil surface to dry and begin to follow the active watering recommendations above. Keep in mind that lawn grasses do not develop full drought tolerance until they are approximately a year old.

## **Helpful Lawn Management Tips for Drought Tolerance**

Use lawn grass mixes that are naturally drought tolerant (such as fescues) and are adapted to your site's conditions. Mow grass higher (mowed height at least three inches tall) to encourage larger root systems, leave grass clippings on the lawn, and do not apply nitrogen fertilizer in spring. Core aerate in late summer (late August/early September, once rain has resumed) so that air and moisture can move through your soil. Sharpen your mower blade to minimize water loss after mowing.

## **Timing Watering**

The best time to water is between 4:00 a.m. and 8:00 a.m. Evaporation is low so more water is adsorbed by the soil. Leaves dry quickly once the sun rises, minimizing conditions conducive to plant diseases. Avoid watering in the afternoon or evening.

## **How to Water**

Let rainfall be the main water source for your landscape. Give supplemental watering priority to newly planted lawns.

Apply water slowly, deeply and infrequently. Apply at a rate that all the water is soaked up by the soil (the infiltration rate). Water should not puddle on level areas or run off slopes.

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You may need to divide watering into two sessions in order to avoid exceeding infiltration. Deep watering (soil moist to six or eight inches) helps plant root systems grow strong, deep and long.

### **Supplemental Irrigation Methods**

Sprinklers that attach to hoses are appropriate for lawns. Place oscillating sprinklers higher than plants. Keep the water pattern even by moving sprinklers often and overlapping about one half of each pattern.

If you have an in-ground irrigation system or plan to install one, also include a timer and water saving technology, such as a rain sensor, soil moisture sensor or evapotranspiration controllers. A rain sensor, for example, detects when rain is falling and turns the irrigation system off as necessary. Rain sensors are inexpensive and usually repay their cost in water savings in a couple of years. Programmable timers for outdoor faucets are found with hoses at the garden center.

Maintain your faucets and irrigation equipment. Tighten faucets or replace gaskets to stop leaks. Make sure your sprinklers and irrigation systems do not water sidewalks, street or driveway. In-ground systems should be regularly audited by professionals who inspect for leaks and other problems. Irrigation specialists can also recommend new water-saving equipment.

Rain barrels allow you to harvest rainwater from your house or other building for use on small patches in the lawn, such as reseeded bare spots. Rain barrels save money, water and energy as well as reduce erosion and stormwater runoff. Ready made rain barrels are available from online garden companies or local garden centers. You may also construct your own rain barrel (Contact Cornell Cooperative Extension of Rockland for information).

### **When to Plant**

Fall planting allows for root development without competition for water by overly thirsty foliage. Lawn establishment and renovation should be done in the early fall (Labor Day to the end of September).

### **Limit Fertilization**

Fertilizer promotes rapid growth. Fast growth consumes lots of water. Careful fertilizer use based on proper timing and application rates produces plants that are better able to tolerate drought, pests and diseases than those that are over-fertilized. These plants require less mowing and may live longer.

Lawns should be fertilized in the fall, if indicated by a soil test, as most root growth and food storage occurs at this time. An application may be made once the weather has cooled enough to minimize fertilizer burn – around Labor Day, though you may apply fertilizer effectively through October. High maintenance lawns may be fertilized in fall and in late spring (around Memorial Day). Slow release fertilizer sources such as natural organics will provide more uniform release of nitrogen than water soluble, quick release materials. The lawn will be green for an extended period of time, and top growth won't be excessive. Some natural organic compost-based products will also suppress diseases.

New York State Law prohibits the application of lawn fertilizer containing phosphorous unless indicated by a soil test or the application of any lawn fertilizer between December 1 and April 1. Fertilizer must be removed if it is spilled or lands on an impervious surface, and cannot be applied within 20 feet of surface water, with few exceptions.

### **Drought**

Drought calls for responsible water conservation and observation of all official water restrictions.

Prepared by Elaine Brown, Cornell Cooperative Extension of Rockland County

**Resources:**

Cornell University Cooperative Extension 2009 Home Gardening—Lawn Care Library—Watering.  
<http://www.gardening.cornell.ed/homegardening/scene7866.html>

Druse, Ken, ed. 2000 Sunset Northeastern Landscaping Book. Menlo Park, CA: Sunset Books Inc.  
Georgia Environmental Protection Division 2009 Conserve Water Georgia: Tips for Saving Water Outdoors.  
[http://www.conservewatergeorgia.net/documents/indiv\\_outdoorTips.html](http://www.conservewatergeorgia.net/documents/indiv_outdoorTips.html)

Good, George L and Richard Weir, III 2005 The Cornell Guide for Planting and Maintaining Trees and Shrubs.  
Information Bulletin 24. Ithaca, NY: Cornell University Press.

Rossi, Frank 2005 Lawn Care without Pesticides. Information Bulletin 24B. Cornell University Cooperative  
Extension

University of Minnesota Extension 2009 Watering Practices. <http://www.sustland.umn.edu/maint/watering.html>  
and Mulching and Watering. <http://www.sustland.umn.edu/maint/mulching.html> Sustainable Urban Landscape  
Information Series.

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