

## **A YEAR-LONG ORGANIC LAWN CARE PLAN (OR, WHEN TO DO WHAT FOR YOUR TURFGRASS)**

Spring is a great time for lawn care, right? Well, yes and no. Lawn chores, like any other part of gardening, are best tackled throughout the year. Creating a healthy, attractive lawn involves following guidelines that will help the lawn crowd out weeds and resist diseases and insects. The outline below is specific for the greater Hudson Valley and can be used as the basis for a year-long organic maintenance plan.

**March - Soil Testing:** Once the ground thaws in the spring, the soil pH can be tested. This is a measure of the relative acidity of the soil. Lawn grasses generally like a pH in the range of 6.2 to 7.0, which is slightly acidic to neutral. Lime raises the pH, or lessens the acidity, of the soil. Routinely adding lime to the lawn is not a good practice, since the pH may be raised too high. Cornell Cooperative Extension offices as well as some garden centers can test the pH for you, or you can buy a home test kit that is relatively simple to use. Another good time to check the pH of the soil (and add lime, if needed) is in the fall.

**April - Early weed management:** For some non-organically managed lawns, chemical pre-emergent herbicides are used to keep out the crabgrass (and other annual weeds). Since there is no directly analogous organic solution, good management principles are the best way to reduce crabgrass infestations. Practices which will create a denser lawn (i.e., correct pH, proper fertilization, overseeding with high quality seed, etc.) should be used to try to reduce crabgrass infestation to a tolerable level. Applications of corn gluten in the early spring have been touted as a way to reduce crabgrass as well. While this is sometimes true, most researchers now believe that the corn gluten provides the same benefits as fertilizer -- it stimulates growth so that the lawn can out-compete the crabgrass. Hence, corn gluten may only be an expensive form of fertilizer.

**Late May - Fertilizer:** High maintenance lawns are often fertilized three times a year on or around three holiday dates: Memorial Day, Labor Day, and just after Halloween. For medium maintenance lawns, fertilizer can be applied at the Memorial and Labor Day times, and for low maintenance, just once at Labor Day. Each application generally supplies one pound of nitrogen per one thousand square feet. Using a slow-release, organic-type fertilizer will provide nutrients over several weeks, and reduce the chance of fertilizer leaching into groundwater or burning the turfgrass foliage. Organic fertilizers "feed the soil" as well as benefiting the lawn, and have been shown to increase the populations of microbes and earthworms in some cases. Certain organic fertilizers can also decrease the incidence of turfgrass diseases. Organic fertilizers tend to be more expensive than synthetic fertilizers. Often, more material is needed to apply the same amount of nutrients, since organic fertilizers are generally lower in nutrient content. In the Capital District, organic fertilizers are harder to find in stores, since the demand is higher for synthetic fertilizers.

**Summer - Watering:** Lawns generally need one inch of water per week to remain growing through the summer. This can be supplied in the form of rainfall or irrigation, so if consistent rainfall occurs, make sure to reduce the amount of water applied by automatic sprinklers. Watering in the early morning hours is best, since

the rising sun will dry the leaf blades and reduce the chances of disease. Providing one inch of water in two or three waterings per week is better than watering a little each day. If left unwatered, many types of turfgrass will turn brown but remain alive for several weeks.

There is nothing wrong with letting your grass go dormant during a short summer drought! This dormancy period does not harm the turfgrass unless the dry period becomes prolonged. At that point, the lawn may be weakened, and then insects and weeds will have a much better chance of invading and compromising the lawn. Some types of turfgrass, including the fine fescues, are more drought tolerant than others and are good choices for unirrigated lawns.

**Summer - Mowing:** Not many people get excited about mowing the lawn, but there are a couple of important considerations. Dull lawnmower blades provide jagged cuts to the leaves of grasses and give the lawn a brownish cast, so sharp blades are a must. Mowing the lawn to a height of two and one half to three inches tall is better than keeping the lawn very short, since the taller plants will grow deeper roots and compete with weeds more effectively. If a mulching mower is used, or the lawn is mowed frequently, leaving the grass clippings on the lawn can reduce the need for nitrogen fertilizer by up to 30%, as well as reducing the amount of organic material which ends up in a landfill or incinerator.

**Mid-August - Seeding, Overseeding and Renovation:** If you are seeding a new lawn, renovating an old one, or fixing patches, late summer and early fall are the best times for these jobs. Warm days, even soil moisture, and less weed competition increase the chances of establishing a good lawn. In our area, most seeding should be done by mid-September, since adequate time is needed for germination and growth before the weather cools further. Sodding, on the other hand, can be done from March into November if adequate irrigation is provided. If seeding, buy only high-quality seed. Avoid seed mixes with annual ryegrass, which will die after one season, and examine seed labels carefully for low weed seed content and high germination rates.

Mid-August through much of September is also a good time to core aerate lawns that have thatch and/or compaction problems. Core aeration is a process where cores of soil are taken from the lawn and deposited on the surface. The holes created in the lawn allow for increased air and water penetration. Overseeding (sowing seed into an existing lawn) can follow core aeration to increase the density of the lawn.

**Late August through September - Grubs:** Grub eggs hatch at this time of year, so carefully cutting a section of lawn and examining the roots will indicate if young grubs are present. Most lawns do not always have high numbers of grubs each season. Many lawns are treated with insecticide needlessly because there are few or no grubs present. Fewer than five grubs per square foot indicates a low population that will cause little damage, but finding higher numbers may be reason for concern.

There are two biological controls for white grubs in lawns. Milky spore (*Bacillus popilliae*) is a bacteria which can be spread on the lawn which will control Japanese beetles. Unfortunately, it takes years to build up to sufficient levels in cold New York soils, and it does not control European chafers, which are common in the Capital District. It is therefore most useful on low-value lawns. Beneficial nematodes (*Steinernema glaseri* and *Heterorhabditis bacteriophora*) are microscopic organisms which, once sprayed on the lawn, will seek out and destroy grubs. While beneficial nematodes sometimes work well, there are many possible pitfalls in their use (i.e., they must be alive when you buy and apply them, soil moisture must be sufficient, they must be applied in the evening, etc). While nematodes sometimes provide excellent grub control, their results are not consistent. Hopefully, further research at Cornell and other universities will improve their performance. This leaves a homeowner who has a grub problem with no control options other than chemicals. See the fact sheet "European Chafers, Japanese Beetles And Their Damage To Lawns" for more information.

**Mid-August into October - Broadleaf Weed Management:** Unfortunately, there are no organic ways to directly control broadleaf lawn weeds (including plantain, ground ivy, and dandelion) other than hand-pulling. The homeowner must therefore provide optimal growing conditions (i.e., fertilizer, pH, water, etc.) in order to help the lawn crowd out weeds.

**November: Relax** - Hopefully, your efforts have created a dense, healthy lawn. After your post Halloween fertilizer application, you can take a well-deserved break from lawn care!

Detailed information about any of the lawn care tasks above can be obtained from Cornell Cooperative Extension of Rensselaer County (phone 272-4210).

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