



Sustainable Turf Maintenance

Weeds and insect infestations on lawns are often viewed as problems. But they are more likely to be symptoms, with the problem often being an unhealthy lawn. A properly maintained and healthy lawn will often withstand the most invasive insects and out-compete weeds for sunlight, water, and soil nutrients. The following describes some basic principles of lawn maintenance and how to reduce or eliminate the need for chemical pesticides.

Soil

Soil provides the growing medium for grass. If it is not of optimal depth and composition, the health of the grass will be affected.

Soil should be 6-8 inches (15 - 20 cm) deep. If it is too shallow, gradually increase the depth by top-dressing. Use a soil, sand, and compost mixture and add approximately ½ inch in the spring. Spread it evenly with the back of a rake. You can also rebuild the lawn, if there is very little soil, by adding 6 inches (15 cm) all at once over the existing lawn. This should be done in early spring before the summer heat or in late summer when the nights begin to cool. Afterward, seed the lawn with your chosen seed mixture, cover it with a layer of compost, and keep it damp during germination and early growth.

Soil should be loose, with good air movement and water flow. If a lawn becomes compacted, grass health will suffer and provide a medium that promotes weed growth such as dandelions. The best time for aeration is in October to mid-November or in the early spring. Aeration can be done with a rented machine or by a lawn care company. These machines remove plugs from the lawn to allow for penetration and uptake of water and nutrients. The plugs (or cores) can be left on the surface of the lawn and will soon break down, providing a good top-dressing.

Healthy soil will have a high organic component which feeds the lawn and keeps it strong. A good idea is to leave grass clippings on the lawn. The clippings return nutrients and lessen the need for fertilizers (remove clippings if there is disease on the lawn). Other ideas include:

- top-dress with compost in early Spring (after aeration, if aeration is done)
- add organic fertilizer in mid-October to early November after there have been 1 or 2 frosts
- spread organic fertilizers in late May or early June for the summer

Manage the thatch. This fibrous layer can keep soil cool and moist. However, if there is a buildup of more than ½ inch, thatch can become a problem by impeding water and nutrient movement. Heavy layers of thatch can harbour turf insects such as chinch bugs. Use a dethatching machine or rake to remove thatch.

Grass Type

It is best to have a mixture of different types of grasses and/or soil covers to promote survival. Monocrop lawns (all the same cover species) tend to be more susceptible to disease and have poor winter survival. For healthier, more resilient stands of grass, choose lawn mixtures that contain a variety of grass. Blends of Kentucky Bluegrass, perennial ryegrass, and fine fescues will make a good-looking, all-purpose lawn that will tolerate foot traffic. Other tips:

- use a mixture that includes 35% tall fescues for shady areas
- seed mixtures with a higher component of perennial ryegrass is better for rough terrains and informal settings
- overseed with improved varieties of grass. White clover can also be beneficial.

MAINTENANCE

Once a lawn is well established in the proper soil, proper maintenance techniques must be used to keep the lawn healthy and strong.

Mowing - Probably one of the most important tips for keeping a weed free lawn is proper mowing techniques.

- keeping blades set at approximately 3 inches (7 cm) to allow grass to be at a height where it can shade out broad leaf weeds as well as shade the soil for better moisture retention
- keep blades sharp to avoid tearing the grass
- mow often (once a week) in order to leave the clippings on as mulch or use a mulching mower. If clippings are too long, they will take a long time to break down and will be unsightly on top of the lawn.

Watering - It is better to water deeply and less frequently. Watering for short periods of time often will lead to shallow root growth and weakened grass.

- a lawn without deep moisture reserves will need 1 inch of water once a week. Place a pie pan in the area being watered to show how much water has been delivered
- it is best to water in the early morning hours to limit evaporation. Avoid misting sprinklers which allow increased evaporation and spray drift
- a lawn can go dormant during times of drought with little effect. It will turn brown but will come back with rainfall. However, a dry and dormant lawn is more susceptible to invasive pests and weeds
- top-dressing with compost will aid in water retention.

Fertilizing and Liming - To avoid nutrient loading and the possibility of burning, bulk organic materials (compost or well rotted manure) and organic fertilizers work well. If you need to use a synthetic fertilizer, choose one that is slow release. If too much of one nutrient (i.e. nitrogen) is added all at once, the result is quick greening but weakened grass. Excess nutrients can also be washed off the property. Choose one that is labeled either water insoluble or slow release.

Liming is used to alter the pH of the soil in order to make it more suitable for turf growth. Grass prefers a pH of approximately 6.5. The soil in most areas of Atlantic Canada tends to be acidic with a low pH. Liming will raise the pH and provide an ideal environment for the growth of grass and soil microorganisms which are essential for healthy turf.

With a bit of planning and proper lawn management, the need for chemical pesticides can be greatly reduced, if not eliminated. Easing our dependency on chemical lawn additives is better for both human and environmental health and is a necessary step towards the attainable goal of sustainable gardening and landscape maintenance.

For more information...

On the Pesticide ByLaw (P-800) including signage requirements, which products can still be used, alternatives to pesticides, sustainable maintenance practices, or to access details on our public awareness sessions, visit one of the HRM Customer Service Centres or log on to our website at www.halifax.ca. You can also call our representatives at 490-4000 or email us at Pestbylaw@halifax.ca.

