



Sustainable Maintenance Tips **- Fall Practices for Taking Care of the Soil**

Fall is a great time to take care of the soil in your landscapes. Plant growth slows and often more time is available to the gardener. Resources, such as your compost pile or newly fallen leaves, may be right under your nose. Recycling these into your landscape is an easy way to improve soil health. If you have problems such as compacted soil, weak or thin turf, excessive thatch development, or poor fertility, you can work towards building your soil and eventually reducing these problems. Taking steps now will help create healthy soils and sustainable landscapes.

Healthy Soils

Healthy soils are biologically active, deep enough to provide nutrients and moisture to plants, and loose enough to allow a good supply of air space. While soil requirements vary for different landscapes, all soils benefit from good management practices. Cultivating to alleviate urban stresses such as compaction, while adjusting fertility or adding organic matter as required, helps reduce the need for pesticides. The result is healthy soils producing healthy plants that are more resistant to pests and disease.

Compaction

Foot traffic is the main source of compaction in landscapes and causes problems by reducing air space in the soil. Compaction makes it difficult for roots and water to move through soil, resulting in poor growth. Cultivation in the fall can help alleviate this problem. A common practice is to aerate the soil by removing cores. Loosened cores and the resulting holes provide a direct route for air, water, fertilizer, and organic matter additions to the soil. Doing this in the fall allows for both improved fall growth and continued success next spring. If the coring is done late in the fall, the cores may be left in place but the holes should be filled to prevent winter injuries. Coring also helps to reduce thatch levels in your turf.

Organic Matter

A good level of organic matter should be maintained. Organic matter contributes to long-term soil health by providing carbon - the basic building block for soil life. These life processes are essential to the growth of plants. Regular contributions of soil conditioners such as compost, peat or bark can increase carbon levels in the soil and help reduce compaction. Fall is an excellent time to add these materials to give soil microbes time to get started before spring growth begins. Winter moisture will work the compost into turf. Mulches of chopped fallen leaves or other soil conditioners insulate plants and eventually increase soil organic matter levels.

Soil Fertility

Fall fertilization helps create healthier root systems in turf before winter and stimulates turf that greens up earlier in the spring, without excessive top growth. Fall fertilization produces dense, green spring lawns. It helps to reduce mowing chores that come with spring fertilization, and lawns are less likely to be invaded by weeds. Thick full turf is the best defense against weed invasion and prevents the loss of fertilizer materials from the landscape.

Using slow release sources of nutrients, especially nitrogen, helps ensure good, even growth through the fall period. Natural source nitrogen fertilizers are a good choice as their release slows with falling temperatures. This helps reduce the chance of loss through leaching. Natural source fertilizer materials also contribute to fertility in the following season when temperatures warm up. Nitrogen fertilizers should be applied while turf is still green (up to the middle of November). Follow the label directions carefully and prevent applications to non-plant areas. Take care not to apply fertilizer to frozen soil as it may be washed away and contribute to pollution.

Analyzing the fertility level of your soil can be achieved with a soil test. The test indicates soil pH and the base amounts of major soil nutrients that are stored in your soil. It can help you to understand how to unlock the nutrients already there or determine what should be added. Check your local garden centre for information on the availability of soil tests.

The adjustment of soil pH is an important step in making nutrients available to plants. Application of limestone raises pH (optimum 6.2 to 6.8), helps release nutrients, and stimulates microbial action responsible for good soil health.

Other tips:

Re-seeding - Seeding in the fall facilitates less weed growth in spring and helps the seed tolerate the hot, dry conditions of summer.

Disease control- Topdressing or mulching helps prevent disease by encouraging the natural breakdown of old leaves and stems. Recycled leaves and composted garden waste are good sources for this purpose.

Grasscycling - Leaving clippings on the lawn can help to reduce the need for additional fertilizers by nearly 25%, while supplying valuable organic matter to the soil.

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.

