

Our Changing Environment

By Nathan Helder

Ontario's Cosmetic Pesticides Ban Act will change how we care for lawns and gardens. Learn alternate strategies for maintaining a healthy and beautiful environment.

OVER THE last several years evidence of fluctuating weather patterns have been at the forefront of the public consciousness. We have seen documentaries and news reports of melting polar ice caps, depletion of the rainforest, increased smog and greenhouse gas emissions. The environment has dominated the headlines. We read of anti-idling and pesticide free bylaws, of an increased focus on health and fitness, and protecting our diminishing green space via the Green Belt legislation. Is there a shift towards Green?



More recently, the Ontario provincial government has proposed a province-wide ban on the use of pesticides for cosmetic uses, for both residential and commercial applications. The *Cosmetic Pesticides Ban Act* was passed in June 2008. The Act provides exceptions for agriculture, forestry, health or safety and golf courses if certain conditions are met. The provincial ban supersedes local municipal pesticides bylaws to create one clear, transparent and understandable set of rules across the province. There are no exceptions for pest infestations (insects, fungi or weeds) on lawns, gardens, parks, unless human health is affected. (www.ene.gov.on.ca/en/land/pesticides/Factsheet-pesticides.pdf) As you can see, this provincial ban will change the outlook of our neighbourhoods.

■ A Perspective on the Original Green Industry

This article will try to put into perspective what the true “Green Industry,” the horticultural trade, is and can do for the environment. As with anything in life it is important to be informed and then as informed citizens of the planet make wise decisions about our immediate environments – our homes and properties.



An Environmental Management System can reduce costs, promote innovation and improve public relations.

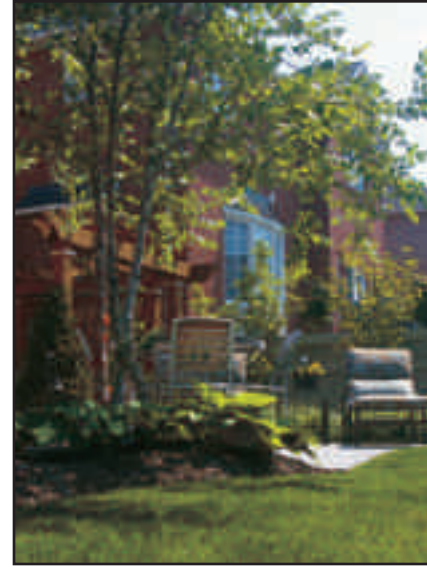
■ **Definitions**

Pests are defined “as a harmful, noxious or troublesome organism including insects, weeds, diseases and rodents.” Pests compete with humans, domestic animals and desirable plants for food or water. Pests can injure humans and animals and damage desirable plants, structures and possessions. They can spread disease to humans, domestic animals, wildlife and desirable plants.

A *pesticide* “is anything that is intended to prevent, destroy, repel, attract or manage a pest. Pesticides may be developed from chemicals, found in nature, synthesized by man, or living organisms like bacteria, fungi, nematodes and viruses which attack pests.” The most common



An appealing view from ground level and above.



Enjoy a pesticide-free lawn this summer.

types of pesticides are herbicides which control weeds, insecticides – insects, bactericide – bacteria, fungicides – fungi and rodenticide – rats, mice.

IPM – Integrated Pest Management “is a decision-making process for preventing pests from reaching damaging levels and for determining what actions to take when pest problems occur. IPM does not eliminate pests, but rather reduces the pest population.

The IPM program consists of prevention – planning and managing ecosystem, pest identification – identify pests and the beneficial organism, monitoring – monitor pest damage and environmental conditions, threshold limits – set limits to determine when to treat pests, taking action – select which pest control practice, if any, to achieve acceptable control with the least harm to humans and the environment, and evaluation – evaluating the effects and success or failure of the pest management strategies. The advantage of using IPM versus blanket application of pesticides is that the

IPM method provides long-term solutions, it protects the environment and human health by reducing pesticide use, and it provides pest control options other than pesticides.

■ **Environmental Management System (EMS)**

Environmental Management Systems are the framework developed by an organization to help improve environmental performance by taking environmental consideration into account when making decisions or managing risk. Creating an environmental management system (policy) might seem like an overwhelming task, however, many of the elements needed may already be in place. Environmental Management Systems can do more than improve your environmental stewardship performance; they can produce cost savings, promote innovation, and improve public relations.

By providing a systematic way to review and improve operations for better environmental performance, these systems can help a company



You can utilize good practices to maintain your properties.

use materials more efficiently and streamline operations.

Without the use of pesticides for your lawns and gardens, alternative strategies will need to be introduced in order to maintain a healthy environment. These strategies are:

Soil Analysis

A proactive multi-step program is needed. How can we maintain thick healthy turf and reduce turf diseases and pests? Why is the lawn doing poorly? Over/underwatering? Poor soil conditions? Over/underfertilizing? We need to identify the conditions and problems. The first step is to perform a soil analysis. The soil analysis focuses on six major nutrients: (Nitrogen(N), Phosphorus(P), Potassium(K), Calcium(Ca), Magnesium(Mg), Sulfur(S)) and Soil pH. Depending on the soil conditions, correcting soil pH and nutrient levels will take time.

Fertilizing

Once the analysis is performed decisions can be made regarding what combination of nutrients is needed. Ensuring a balanced diet of N, P, K will result in robust, strong,

disease and insect resistant turf. Proper timing of application is vital for maximum results. In the last several years the industry has begun to use corn gluten meal that is 100% natural corn byproduct and can also be used as both a natural slow release fertilizer and used to inhibit weed germination. Application and specific requirements are extremely important for it to inhibit germination. It must be applied in early spring or late fall according to Iowa State University.

Overseeding

To ensure thick healthy turf, consideration for slit seeding, core aeration and topdressing should be given. Slit seeding slices rows into the lawn and drops seed at a predetermined rate into the slits. Since the seed is placed in direct contact with the soil, seeding success is usually high.

Core aeration

Core aeration physically removes cores of soil, leaving holes or cavities in the lawn. Core aeration improves nutrient and moisture absorption, promotes root development through reduced soil compaction and dis-

courages thatch development.

Topdressing

By topdressing the lawn, the organic matter of the soil is increased. This enhances the soil's ability to hold water. Topdressing also is used to fill in bare patches, enhance the lawn's colour and density and to establish improved grass varieties.

Water Management

The average Canadian resident uses about 120,000 L of water per year. Demand for fresh water increases each year due to increased populations. Demands can be met either by capital investment or by water conservation. New technologies in irrigation systems have been made. SMART Watering Systems (SWS) is an industry leader in weather-based irrigation scheduling, central control and rainwater harvesting. Daily watering will cause shallow root growth that reduces the durability of the turf, ensure 1-2" of water per week.

■ Questions To Ask

How are your contractors reducing their carbon footprint? How

can we become better environmental stewards for future generations? What is your contractor doing to enhance the environment? Do they have an environmental management system in place?

How do we manage people's expectations when keeping the environment in perspective? How do we tell them "Perfection is not natural and is not sustainable"?

■ What is the Horticultural Industry Doing?

As green industry members, by definition, we are all environmentalists. Our day-to-day activities have positive influences upon the environment. The horticultural industry has been growing and maintaining plants, trees and turf that sequester carbon dioxide, produce oxygen, attract birds and other wildlife. Plants and trees have been shown to provide cooling to buildings and outdoor spaces. Deciduous trees allow radiation in the winter months to warm buildings and provide windbreaks resulting in 10–12% savings. Plants enhance human health, lower blood pressure and produce a calming effect.

For many years landscapers and horticulturists have been informing themselves and utilizing "good practices" to maintain properties. However, we still need to do more! We must ask more questions. We must all become better environmental stewards. Landscape Ontario's Environmental Stewardship committee has developed an Environmental Score Card.

■ Keeping Score

This scorecard is designed to evaluate horticultural businesses from an environmental perspective, stimulate innovation and jumpstart your creativity. The Scorecard measures impact on air quality, waste management, water stewardship, greening your office, and optimum horticultural practices (landscape design, maintenance, retail garden centres, snow removal, etc.) This Environmental Scorecard also can be used as a "gap analysis" to determine what is missing from the Environmental Management System.

Although the evidence of fluctuating weather patterns was perhaps the catalyst for the "Green" industry to assess its position and how it can demonstrate leadership in the situation, we as members of the industry know that we have a responsibility to respond and educate ourselves and our customers.

We know that the day of blanket spraying of herbicides, insecticides and fungicides is not supportable and have been actively pursuing a more "green" approach so that we work *with* the balance that we see in creation all around us. We all must

accept that the perfect lawn is not natural, but it can be maintained properly and soundly; it will take more effort and knowledge to keep it that way. The technicians that work on the lawns are better trained and the actions and remedies are much more labour intensive. We are looking forward to a more informed customer so that we all can see the best results for our environment. ■

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