

Greener Lawns



Urban
Fertilizer
Council

Getting it right for the environment

Taking charge

The industry's new initiative

Feeding your turf

Learning good fertilizer habits

Spreading the word

Finding answers to tough questions

Taking charge

PROTECTING THE ENVIRONMENT is a priority for Canadians. The fertilizer industry wants to show them how they can do that and at the same time enjoy healthy green yards and bountiful gardens.

The Canadian Fertilizer Institute and the companies that sell plant nutrient products designed for use around residences, parks and golf courses have recently created the Urban Fertilizer Council to help homeowners and turf management professionals understand how to look after their properties safely and properly.

The Council's emphasis is on promoting stewardship of the environment and providing homeowners, park managers, groundskeepers and municipal leaders with science-based information so they can make decisions on the best kind of fertilizer to use and other landscaping practices, says Clyde Graham, Vice-President of the Canadian Fertilizer Institute.

"We want to promote stewardship by encouraging people to follow the simple practices involved in applying the right

amount of fertilizer the right way that will enable the products to work the way they're intended to and protect the environment," he added. "That way they'll be able to protect the environment and have lawns and gardens they can be proud of."

Surveys show that Canadians consider looking after the environment to be an important matter. Canadians also devote a lot of time to their lawns and gardens and don't want that recreational pastime to be harmful to the air, water or soil.

They also want assurances that the money they spend on fertilizer or hiring a lawn care company is a good and environmentally sound investment, Graham says. The Council will provide advice and information to help them in making the right decisions for their lawns and gardens.

The use of fertilizers has been criticized by some environmentalists for contributing to air and water pollution, but research shows that most problems with adding nutrients to the soil are linked to overuse of a product or applying it under the wrong conditions,



Graham pointed out. Grass and other plants need a balanced supply of nutrients to grow and stay healthy just like humans and animals need food.

The Council aims to provide information on the right way to apply fertilizer so it only feeds the soil and doesn't end up in streams or rivers. Also fertilizers get a bad rap for problems for which there are many other, generally unappreciated causes.

Graham says that rather than shunning fertilizers, municipalities and school boards should consider the state of parks, playgrounds and sports fields. Do kids prefer running and rolling around on lush grass or barren areas where there are rough, bald spots where the grass lacks the vigor to recover from heavy use? How about playing soccer on a field that's poorly maintained compared to one that's in good shape?

The Council's stewardship approach begins with acknowledging that "we all have a responsibility to protect our environment and our waterways," Graham says. "Almost everything we do and the choices we make can affect the world we live in. Fertilizer use is no exception. Using fertilizer to create healthy lawns and parks is consistent with protecting the environment."

The Council wants to unite the fertilizer manufacturers and users to make the public more aware of the importance of healthy green spaces for both recreational and environmental reasons and what's required to achieve that goal, he said.

It will also strive to create partnerships between the industry and municipalities and other customers for its products, he added.

The Council will play a leading role in the industry's efforts to better explain how its products can benefit, not harm, the environment. ☀️



Feeding your turf

THERE'S NO DENYING the attractiveness of lush green grass. It feels good under bare feet, provides a playground or sports field and makes a comfortable cushion to relax on during a warm summer day or at night to gaze at the stars.

A green carpet, unbroken by bald spots, brown patches and pesky weeds, depends on the landscaping care a property, park or golf course receives. The good looks are taken for granted by most people as they walk, run and bike over the turf unless it's obviously in poor condition.

There are good reasons beyond appearance for keeping grass in good health. It helps clean the air we breathe and generates oxygen. It helps prevent erosion and runoff while absorbing rainwater to recharge our groundwater supplies. The plants absorb gases like carbon dioxide from automobile exhaust and other human activities that otherwise escape into the atmosphere.



Grass also helps muffle the sounds of a busy city by absorbing, deflecting and refracting noise. Studies show that grass can trap and help control dust and pollen in the air that can cause allergic reactions.

So what does it take to establish and maintain healthy grass? The most important factors are adequate watering, proper feeding and timely cutting. Those practices enable the plants in a lawn or park to cope with the swings in conditions they face during the year: snow in winter, the spring melt and soaking rains, parching conditions in the summer and repeated freezing and thawing in the late fall.

When fertilizer is properly applied, it will not degrade water quality. The primary nutrient found to cause the growth of algae and aquatic weeds in streams and lakes is phosphorus, which has many sources other than fertilizer. Phosphorus from properly applied fertilizers rapidly binds with the soil following application. When applied on soils that need it, as determined by a soil test, its losses in runoff are reduced.

A healthy lawn is also important to controlling the spread of weeds. Well fed grass will fill in spots that develop in a lawn before weeds can take root and crowd out those that do get established.

A soil test can help determine what nutrients a lawn requires. It's like getting the ground to tell you what it needs to best feed the grass. The tests are easy to do and the property owner or manager can use them to determine what nutrients are required so they can purchase the right mixture of fertilizer for the soil type.

Using the right amount of fertilizer to replenish nutrients is crucial as too little will starve the grass, making it more susceptible to an infestation by weeds or insects as well as damage from weather conditions. Excess can damage the plants so they turn an unsightly brown or even die out which can again lead to trouble with weeds or insects.

For proper plant growth all plant nutrients must be available in sufficient quantities. Although there are 17 essential plant nutrients, in most cases, the minor ones are available in sufficient quantities that supplementation isn't required for normal plant growth.

Nitrogen (N), phosphorus (P) and potassium (K) are the major plant nutrients in fertilizers. Bags of fertilizer are marked with three numbers, such as 25-3-10, that denote how much N-P-K are in the particular brand. The label will also list what secondary and micro-nutrients are in the bag. They could include sulphur, calcium, boron, chloride, copper, iron, manganese, molybdenum and zinc.



Nitrogen promotes growth and that deep, lush green that draws admiring looks. It is a staple in most fertilizers. Phosphorus is important for establishing new lawns because it promotes the development of strong, healthy roots, vibrant flowers, seeds, early maturity, and a normal healthy green colour. Potassium is seldom deficient but it's still recommended to avoid growth problems.

Use of the other nutrients really depends on what a soil test shows.

Modern lawn fertilizers are formulated to provide the appropriate amounts of nutrients necessary to maintain a healthy turf. As the Canadian Fertilizer Institute notes, "The ingredients in all fertilizers come from nature. Fertilizers provide the identical nutrients found in manure or compost, however, fertilizers can be applied with more control to match plant needs and protect the environment.

"Fertilizer manufacturers follow strict regulations and standards to ensure effectiveness, consistency and composition of products," the Institute says. "With each growing season, plants consume nutrients from the soil. Commercial fertilizers, manures and composts replenish soil nutrients and help maintain soil organic matter. All nutrient sources play a vital role in enhancing soil quality.

TURF PROFESSIONALS INFORMING THE PUBLIC

Turf professionals are often asked for advice from the public on how to keep their lawns healthy and protect the environment using fertilizer. Nutrients contained in fertilizer, compost and manure have to be used with care to protect our water and air.

The **Canadian Fertilizer Institute (CFI)** has developed the **Right Product@Right Rate, Right Time, Right Place™** system to help city officials and homeowners apply gardening nutrients responsibly. Although the Right Product@Right Rate, Right Time, Right Place™ system was designed for use in agriculture, the basic principles apply to anyone using fertilizer. *Getting it right can be made simple by using the following:*

Best Management Practice	Examples
 <p>Right Product <i>Use the correct fertilizer for your soil conditions.</i></p>	<ul style="list-style-type: none"> · Have your soil tested every couple of years to determine what type of fertilizer nutrients are needed. · When purchasing your own fertilizer, look for products that contain slowly available nitrogen. Slowly available nitrogen can be found in organic and synthetic forms (<i>both organic and synthetic products are environmentally responsible choices</i>). · Carefully read and follow the directions on the fertilizer bag. Those directions are there to ensure the best results for your lawn and the environment.
 <p>Right Rate <i>Use the right amount of fertilizer</i></p>	<ul style="list-style-type: none"> · Follow fertilizer rate recommendations. More is not always better. · Too much fertilizer can result in burning and yellow strips in your lawn. · Use a good quality spreader and make sure to check the setting.
 <p>Right Time <i>Use fertilizer at the right time of the year</i></p>	<ul style="list-style-type: none"> · Know your lawn and the grass variety. Different grass varieties require different fertilizer timings for best results. · Lawns go through a normal period of dormancy during the driest parts of the summer. During that time, you should not fertilize your lawn – let it rest. · During dormancy, reduce the amount of foot-traffic and stop mowing. As the rain returns grass will green up in 7-10 days. · Fertilizer shouldn't be applied when the ground is frozen or just before a heavy rain is expected.
 <p>Right Place <i>Make sure fertilizer stays where it has the most benefit to your lawn and the least impact on the environment and our waterways</i></p>	<ul style="list-style-type: none"> · Keep fertilizer off hard surfaces such as driveways, patios and sidewalks. Clean up any spills immediately. · Leave a small strip unfertilized on the edge of the lawn. · Avoid fertilizing steep slopes or in gullies. · Avoid run-off into storm sewers, rivers, lakes and ponds. · Fertilizer should only be used as a source of nutrients for lawns. Fertilizer should not be used to de-ice walkways and driveways.

When in doubt, get advice from your lawn care company, lawn and garden centre, or check the fertilizer company's website for helpful tips.

SUSTAINABILITY GOALS

Sustainability can only be achieved by balancing the economic, social and environmental goals of our stakeholders, including turf professionals, researchers, conservationists, government officials, industry members and communities across the country.

To qualify as a “best” management practice, our science-based BMPs must be economically sustainable for turf professionals while contributing to healthy lawns and protecting the environment. A tall order, but essential for the effectiveness of our BMPs and for the success of our sustainability efforts.

By engaging stakeholders in the process and continuing our research efforts, we will keep adding new BMPs to improve nutrient management. Each new BMP is an important step forward on the path to sustainability.

Economic

- Provides a cooling effect and reduces the strain on energy needed by air conditioners. Healthy lawns, trees and shrubs can reduce air temperature by 4°C – 8°C.



Environmental

- Generates oxygen. One acre of grass produces more oxygen per year than one acre of rainforest.
- Reduces soil erosion and run-off. Increased run-off can lead to an increase in the amount of sediment and naturally occurring soil phosphorus making its way to waterways.
- Helps improve water quality and quantity. A healthy lawn is a significant and important filtration system. It helps recharge groundwater supplies and reduces the strain on municipal water treatment systems.



Social

- Creates a safe and stable surface for playgrounds, parks and sports fields.

"Nutrients and the natural process of decay are essential to the health of natural ecosystems," CFI explains. "Nutrients such as nitrogen and phosphorus cycle within ecosystems through a variety of processes and can become depleted or accumulate due to a variety of reasons. Therefore, it is important to manage and balance the supply of nutrients to prevent both over- and under-fertilization."

adopt best practices to ensure fertilizer techniques don't damage the environment

Homeowners and property managers can adopt best practices to ensure their fertilizer techniques don't damage the environment. They include:

- selecting the right fertilizer based on soil tests.
- following the directions on the package so you help, not harm, the grass. There's usually a help line number if additional information is needed.
- keeping fertilizer off sidewalks, driveways or streets by sweeping or blowing any spilled granules onto the lawn because fertilizer may be washed into storm drains and sewers. Load the fertilizer spreader on a hard surface so any spillage

can be swept up but don't open the spinning mechanism until the cart is in motion. Wash the cart out over the grass.

- spreading half the fertilizer in one direction and the rest at right angles to get the most even possible distribution of granules. Close the spreader whenever you stop or turn, otherwise the fertilizer continues to spill out.
- applying fertilizer on a dry lawn. Wet grass (even with dew) can burn when the fertilizer dissolves on the leaves. Water the lawn immediately after fertilizing to dissolve the fertilizer. This makes it available to the plant by washing it off the grass leaves and down into the rooting zone.
- watering deeply, at least once per week, by applying about 2.5 cm (~1 inch) of water at a time. This can be measured by placing a container (e.g. an empty can) on the lawn while it is being watered. Watering early in the morning is the ideal time of day as it minimizes the amount of water lost through evaporation. Avoid over watering as it can lead to poor growing conditions and disease problems.

In extended hot dry periods, a lawn may wilt and turn yellow or brown, but don't worry. It will green right up again when regular moisture conditions return.

- keeping your mower blade sharp. Grass can recover quickly and stays healthier if it is mowed by a sharp blade instead of being ripped and torn by a dull one. Let your grass grow a little higher this summer, cut grass at a height of 6-8 cm (2.5-3 inches). Your lawn will look greener, develop a deeper extensive root system, grow thicker blades, and retain more soil moisture.

- covering bare ground with vegetation or mulch to prevent soil erosion to keep any nutrients from leaching out of the ground.

Statistics Canada says that its surveys have found a wide range of practices across Canada but "on a typical day in 2005, nearly 11% of Canadians aged 30 and over spent time working on their lawn or garden, with the average participant spending more than two hours doing yard work." In 2006, almost three quarters of Canadians living in single detached homes maintained a lawn or garden.

Many Canadians use fertilizers to keep their lawns in top shape. StatsCan found fertilizer use was highest in Alberta and Saskatchewan, where nearly half of households with lawns or gardens applied fertilizers in 2005. Manitoba trailed closely with almost 40% of households using them. In Quebec, only 15% of homeowners applied fertilizers, the lowest percentage in the country.

Watering is important to lawns as well. Residents of dry regions of the country have adopted timers for water sprinklers with B.C. leading the way while water barrels or cisterns to collect rain water are most popular on the Prairies.

StatsCan says that looking after lawns and gardens has become a growth business in Canada. The sale of lawn and garden products, equipment and plants from large retailers rose by more than \$600 million from 2002 to 2006, reaching over \$2 billion. The amount of land used to produce sod for lawns and plants for gardens expanded by 24% between 2002 and 2006.

All of which says that the business of keeping lawns, park and golf courses well landscaped will continue to be important as will explaining the balanced role of water, fertilizer and soil in creating all that greenery. ☀️



Spreading the word

IN THE ONGOING DEBATE about protecting the health of backyards, parks and golf courses, professional turf managers often find themselves looking for handy and reliable information to counter critics of fertilizer use.



There are plenty of sources of science-based data that turf managers can turn to. The Urban Fertilizer Council aims to make it easier to quickly access the kind of information they need when fielding queries about their use of fertilizers on city green spaces or responding to calls for banning lawn and garden fertilizers.

The Council was formed by companies that supply lawn fertilizers with the intention of proactively communicating to consumers about the responsible use of fertilizers and protecting the urban environment as well as lakes and rivers. It sees turf managers as key players in delivering the message about responsible fertilizer use because their job puts them at the centre of the debate and their education and experience is connected with how best to care for green spaces.

The message for turf managers to deliver can be as simple as educating homeowners to follow the directions on fertilizer bags and providing tips on spreading fertilizer that so it won't harm the environment.

The Council's approach is built around the Canadian Fertilizer Institute's trademarked *Right Product@Right Rate, Right Time, Right Place* system. Originally developed in connection with agriculture practices, the basic principles of the 4Rs applies to anyone using fertilizer. In other words, having the right fertilizer for what the soil on your property needs, applying it as directed when plants can absorb it and keeping it on the lawn or garden.

The Urban Fertilizer Council believes that voluntary nutrient management programs based on sound science, expert advice and public education are the best approach. Applying too much fertilizer is simply wasteful and can harm the soil or cause losses to the environment. At the same time, too little fertilizer can leave plants and crops stunted for a lack of nutrients. But used in the right way, fertilizers keep lawns, parks, sports fields and golf courses green and healthy.

The Council hopes to attract the support of everyone whose job involves applying fertilizers or plant nutrients in urban areas.

Let's focus on the facts: healthy grass produces oxygen and consumes carbon dioxide that contributes to greenhouse gases. Green spaces help absorb excess heat in urban areas and prevent soil runoff that clogs waterways. A good lawn or park absorbs rainwater and filters it through the soil rather than letting it run straight into water courses.

It's also important to tell the public that fertilizers are safe. As the Canadian Fertilizer Institute notes, "Air is about 78% nitrogen, but most plants can't use it directly. Nitrogen fertilizers, which are manufactured from the nitrogen in the atmosphere, supply this nutrient in a form that plants can easily use. Phosphorus comes from fossil remains found in phosphate rock, and potash fertilizers come from ancient seabed deposits."

Handy sources of information are just a click away:

Urban Fertilizer Council
www.cfi.ca/urbanfertilizer.asp

Canadian Fertilizer Institute
www.cfi.ca

International Plant Nutrition Institute
www.ipni.net

Ontario Agriculture
www.omafra.gov.on.ca/english/ctops/facts.03-058.htm#fert

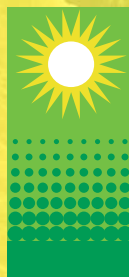
By acting now, the fertilizer industry intends to keep the voice of reason and science in any debate about the use of its products and to ensure members of the public fully understand that green lawns and parks have an important function beyond looking pleasing to the eye. ☀



Finding answers to tough questions

Key Lawn Benefits

- ☀️ 230 m² of lawn produces enough oxygen for a family of four and reduces carbon dioxide.
- ☀️ A healthy lawn has the same cooling power as 3 to 4 central home air-conditioning units.
- ☀️ On a hot day, a green lawn can be 8°C cooler than dry bare soil, 21°C cooler than brown dead turf, and up to 39°C cooler than dry synthetic turf.
- ☀️ Good lawns are one of the safest playing surfaces for children.
- ☀️ Discourages noxious weeds and rodents.
- ☀️ Healthy lawns are the best prevention for runoff and water contamination (They absorb rainfall more effectively than a weedy lawn – 6 times more effectively than wheat fields and 4 times more effectively than a perennial garden).



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