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# Healthy Lawns

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Canadians take pride in having attractive lawns. Many Canadians use lawn care products to maintain their lawns. Pesticide use for lawn care has become an issue in many communities across Canada, due to an increased awareness of the potential impact that human activities can have on our shared environment.

In this section, you will find information on how to establish a new lawn or maintain an existing one, how to prevent and identify pest problems, and how to apply [Integrated Pest Management](#) (IPM) techniques. This section also details the standards for education and training on pesticides that retailers, lawn care and landscape professionals must follow to ensure that pesticides are sold and used safely in Canada.

Between 2001 and 2006, Health Canada worked in partnership with provincial and territorial governments to deliver the *Healthy Lawns Strategy for Urban Pesticide Risk Reduction*. The aim of this Strategy is to help Canadians reduce their reliance on pesticides for lawn care. The Strategy emphasizes Integrated Pest Management (IPM) principles, such as pest prevention, use of reduced risk products and the application of pesticides only when necessary.

Several fact sheets were developed under the Healthy Lawns Strategy to help Canadians grow and maintain a healthy lawn:

- [Starting a Lawn](#)
- [Lawn Maintenance](#)
- [Life of a Lawn](#)
- [Common Lawn Problems](#)

[Healthy Lawn tips](#) were also developed that summarize the key steps towards having a healthy lawn.

For more information on urban pest management and pesticide regulation in Canada, please contact the [Pest Management Information Service](#).

Fact sheets and other documents about pest control and pesticides can be found in the [Reports & Publications](#) section.

## How to Have a Healthy Lawn

A green and healthy lawn is relatively easy to achieve with a bit of work. A healthy lawn can be achieved by using these maintenance practices:

- **Mow high**  
Cut your grass at a height of 6 to 8 centimetres (2.5 to 3 inches) to promote growth, prevent weeds, and discourage insect pests.
- **Water deeply**  
Apply approximately 2.5 centimetres (1 inch) of water. Placing a small pet food or tuna can on the lawn can help you measure how much water has been applied. Water your lawn deeply and infrequently to promote the growth of deep roots. Too much water starves the soil of oxygen and invites disease.



- **Feed**  
Feed your lawn with compost.  
Allow grass clippings to remain on the lawn to provide nutrients.
- **Aerate**  
Aerate your compacted soil to allow a better flow of water, air, and nutrients to the plant roots.
- **Overseed**  
Overseed thinned areas or choose alternative ground covers for difficult spots.
- **Replace**  
Replace grass with paving stones or mulch in heavy traffic areas.
- **Check**  
Check your lawn regularly to detect pests and other problems early.

### **Caring for Your Lawn**

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Whether you hire a professional or care for a lawn by yourself, having a healthy lawn and reducing reliance on pesticides requires decisions. Begin by asking:

- What kind of lawn do I want?
- Can I tolerate a certain amount of weeds or other pests?
- How can I prevent weed and pest problems?

### **Set realistic goals for the appearance of your lawn.**

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- Take an environmentally friendly approach to lawn care by being practical about how you want your lawn to look.
- Recognize that it may take a season or two of improving lawn care practices to achieve the results you want.

### **Keep your lawn healthy using good maintenance practices.**

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- Prevention of pest problems is the best approach to maintaining a healthy lawn:
  - Use correct fertilizing, liming, aeration, mowing, top dressing, overseeding and irrigation practices.
  - If a few weeds appear, pull them by hand.
  - Beneficial insects can keep pest insects in check.
- Healthy lawns are:
  - Less susceptible to pest damage;
  - Less affected by drought, temperature extremes and general wear and tear;
  - Able to be maintained without using herbicides or other pesticides.

### **Include a mix of many different plants and grasses in your lawn.**

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- A diverse landscape is better for the environment, because it:
  - Is more attractive to birds, butterflies and other wildlife; and



- Can be easier to maintain when the right plants are chosen to suit the conditions.
- Variety in plant types can prevent pest problems from spreading to the whole lawn.
- Where conditions are not suitable for a lawn, try plants more adapted to the area.
- Experiment with native plants and alternative landscapes, such as perennial beds or rock and alpine gardens. Once established, these are drought resistant and require less maintenance.

### **Protect birds, beneficial insects, earthworms and other organisms that play an important role in keeping lawns healthy.**

Birds and predatory insects feed on grubs and other pests. Insects, earthworms, beneficial fungi and other micro-organisms break down thatch and aerate the soil. Use insecticides and fungicides only when needed.

### **Use Integrated Pest Management to manage pests on your lawn**

An effective way to reduce reliance on pesticides is through the use of Integrated Pest Management (IPM). IPM puts the emphasis on prevention, looks at all available information and considers all the management options. This is done before deciding on the most effective, economical and environmentally friendly means of managing a pest problem.

Elements of IPM programs are:

- Prevention
- Regular monitoring
- Identification of the pest or problem
- Assessment of the problem to determine the correct action
- Use of a variety of tactics as necessary to deal with pest problem
- Evaluation of the results and adjustment to lawn care practices as needed

#### **Prevention:**

Prevent pest problems from occurring by:

- Providing good soil, with ample depth and organic matter
- Choosing the right mixture of grasses for the conditions
- Making long-term changes, such as improving drainage in wet areas or replacing lawns with other types of landscaping.

#### **Regular Monitoring:**

Check your lawn regularly.

- Regular inspection of the lawn makes it possible to detect pests and other problems early.



### Identification of the pest or problem:

Make sure pest problems are correctly identified.

- Plant damage may not be caused by pests. Plants can be injured by poor growing conditions, improper maintenance, road salt or dog urine.
- Beneficial insects may be mistaken for pests.
- Knowing about the pest and its life cycle will help you decide if and when to take action and how to prevent further problems.

### Identification of the problem to determine the correct action:

Check for pest damage and decide whether action is necessary.

- The presence of a few weeds or insect pests in healthy lawns may not be cause for concern.
- Keep an eye on the pest problem and get more information if necessary before deciding:
  - Whether or not treatments are needed
  - How and when to apply treatments

### Use of a variety of tactics as necessary to deal with pest problem:

Recurring pest problems are often a sign that lawn care practices need to change.

- These changes can include:
  - Correcting drainage or fertility problems
  - Adding lime
  - Increasing mowing height
  - Removing thatch

Evaluation of the results and adjustment to lawn care practices as needed.

### When using a Pesticide

#### Always read and follow the label directions.

The label specifies the correct use of the product so that it poses no health or environmental concerns. The label is a legal document that must be followed.

When using pesticides:

- Make sure that the pesticide label specifies use on lawns and lists the pest you wish to control;
- Follow all label directions;
- Comply with any additional local, regional or provincial government regulations for use and disposal of unused product or empty containers;
- Use any protective clothing, gloves or other equipment specified on the label; and,
- Store pesticides out of the reach of children and pets.



## Minimize pesticide use

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If you need to use a pesticide, only apply it when and where the pest is present.

- Time applications correctly to avoid the need for repeat treatments;
- Use spot treatments rather than broadcast applications;
- Only treat the problem area or plants; and,
- Try to buy only the amount of pesticide that you expect to use in one season. This helps avoid storage and disposal of excess pesticides.
- Effective pest management doesn't have to involve pesticide use.
- Provide good soil and the right mixture of grasses for the conditions to manage pests.
- Before using herbicides, try managing weeds. This can be done by improving the general condition of the lawn and doing some occasional hand weeding.
- Try pouring boiling water on weeds growing between patio stones.
- Remember that pesticides give short-term control of lawn pests, but rarely long-lasting solutions.

## Choosing a Lawn Care Service

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### Find out what services the companies in your area provide and what results you can expect.

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- There are a wide range of services available for lawn maintenance and pest control. These may include services marketed as:
  - Integrated Pest Management (IPM);
  - Organic; or,
  - Pesticide-free programs.
- Find out what lawn care practices the companies include with their programs and choose the one that is right for you.
- Avoid lawn care programs that regularly apply pesticides whether or not pests are present.
- If pesticides are used, make sure that they are used as part of an Integrated Pest Management (IPM) program.

## Integrated Pest Management

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Integrated Pest Management (IPM) is an approach to planning and managing that uses a combination of methods to reduce pest populations to acceptable levels.

A pest is any animal, plant or other organism that is directly or indirectly, noxious, troublesome or can cause injury.

IPM includes biological and cultural controls, forecasting, sampling, and establishing thresholds for pests to define when corrective action is necessary.



IPM strategies are tailored to the needs and requirements of the local situation. They involve using materials and methods that are:

- least disruptive of natural controls;
- least hazardous to human health;
- least toxic to non-target organisms;
- least damaging to the general environment;
- most likely to produce permanent reduction in the pest;
- easiest to carry out effectively; and
- most cost-effective in the short-and long-term.

IPM emphasizes pest prevention, the use of reduced risk products, and the application of pesticides only when necessary.

To use IPM properly, you first need to correctly identify the pest and understand its life cycle:

- Knowing when and how a pest is most susceptible to control measures is important when making decisions on when to take action.
- Timing the application of a pesticide correctly is essential for effective control and to ensure the least amount necessary for control is used.
- Refer to the label's directions for use for guidance on the proper timing and recommended rate of application.

### **A Note for Pesticide Applicators and Vendors**

As a pesticide applicator or vendor, you have opportunities to inform the public about Integrated Pest Management (IPM) principles. Consider the following pest management opportunities:

#### **Lawns**

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The public's concern about pesticide use in urban areas emphasizes the need to help homeowners make informed decisions about their lawn care. As a lawn care professional, your expertise is valued in helping them make these decisions. By offering alternatives and reduced-pesticide-use lawn care programs, you can help alleviate homeowners' concerns.

#### **Schools**

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Responsibility for the care of lawns and turf around schools in Canada varies widely. Responsibility may lie with the local school board, the municipality, regional government, or provincial authorities.

An IPM program can help to maintain healthy turf on school grounds and playing fields. This helps lessen the potential for sports-related injuries to children, while reducing the need for pesticide use.



## Golf courses

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Superintendents will sometimes face concerns from their patrons about pesticide use. Demonstrating proper use and application of the correct pesticide will help to address these concerns.

## Vendors

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An awareness of the principles of IPM will help ensure that consumers of household-use pesticides choose the right product and make responsible pest management decisions.

## Certification

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Pesticide applicators and vendors must be certified to sell or apply pesticides in Canada. Certification programs are the responsibility of the provincial and territorial governments and are based on the Standard for Pesticide Education, Training and Certification in Canada.

## Applicators

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The Federal Provincial Territorial Working Group on [Pesticide Education Training and Certification](#) has prepared modules that explain how to properly apply pesticides. The Applicator Core module contains information relevant for all pesticide applicators. The Landscape module contains information specific to lawn care.

- [Applicator Core](#)
- [Landscape Module](#)

If you must use a pesticide, knowing which ones can be used is an important step. To learn more about these, please refer to:

- [Re-evaluation Summary Table](#)

## Vendors

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The Standard for Pesticide Education, Training and Certification in Canada (known as the [National Standard](#)) outlines the knowledge requirements for the training and certification of pesticide vendors. The National Standard was adopted by all provinces in 1995. Certification of pesticide applicators, vendors and dispensers is a provincial responsibility, and some have also implemented training and certification programs for store employees who sell household pesticides.

For more information:

- [Vendor/Dispenser Core and Module](#)
- Provincial codes and fact sheets
  - [Alberta](#)
  - [Ontario](#)





- [Pesticide Education, Training and Certification Working Group](#)

## Frequently Asked Questions

### 1. What does the term "cosmetic use" mean?

The term "cosmetic use" has been frequently associated with the application of lawn care pesticides. This term implies that pesticides are being used for aesthetic purposes only.

Health Canada registers only those products that provide effective management of pest problems and that can be used safely when label directions are followed.

General information on the health evaluations, environmental risk assessments and value assessments Health Canada conducts on proposed pesticide products is available in the [Fact Sheet on the Pest Management Regulatory Agency](#).

### 2. Why are pesticides used?

Pesticides are used to control, destroy, attract or repel any animal, plant or other organism that is directly or indirectly, noxious, troublesome or can cause injury.

Examples include:

- [Algae and microorganisms](#) in swimming pools and spas
- [Mosquitoes](#) that may carry West Nile Virus (WNV)
- [Rodents](#) that may infest schools and homes.

Pesticides are also used to manage pests that can interfere with the health of an animal, plant or other organism.

Pesticides differ from many other substances that enter the environment in that they are not the by-products of a process, but are released intentionally for a specific purpose.

The text on the label of a pesticide shows you how to use the product safely.

### 3. How many weeds are too many?

The presence of a few weeds or insect pests in healthy lawns may not be cause for concern. If only a few weeds are present, removing them manually will ensure these plants will not spread further.

Keep an eye on pest problems and get more information if necessary before deciding on next steps. Regular inspection of your lawn makes it possible to detect pests and other problems early. Regular inspections will also help you decide if treatment is needed and when to apply appropriate treatments.



## Monitoring

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There are several ways to monitor weeds to determine if treatment is needed. Here are three methods for counting weeds to determine the percentage of weed cover on turf. Once you choose a method, this same method should be used each time.

### Transect Method:

1. Use a rope or string to stake out a 10 metre (10 m) straight line (transect) through an average section of turf.
2. Walk along the line and record the plants you see in a 10 centimetre square (10 cm<sup>2</sup>) area at 10 points along this line.
3. Check ten or more lines per site.
4. Averaging the scores from each type of site gives a percentage of weeds in the turf.
5. Transect lines can be marked or knotted to show where to sample or you can pace along the length of the line and record the plants seen near your toe after each large stride.

### Grid Method:

1. Make a wire or wood frame 1 metre square (1 m<sup>2</sup>).
2. Lay it down randomly on the turf and count all of the weeds inside the frame.
3. Count at least 10 squares per site.
4. Average the scores to arrive at a percentage of weed cover.

### Centerline Method:

Walk the centre of sports fields from goalpost to goalpost and estimate the percent of weed cover in a 10 centimetre square (10cm<sup>2</sup>) area at every second step.

## Thresholds

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Some provinces set treatment thresholds for the maintenance of lawns and turf. Check with your province to learn the treatment threshold that would apply to your lawn.

### 4. How can I dispose of pesticides?

- [Pest Management Regulatory Agency Frequently Asked Questions](#)

### 5. What should I do if I see pesticides being misused?

- [Pest Management Regulatory Agency Frequently Asked Questions](#)

### 6. How can people reduce their use of pesticides around the home?

- [Pest Management Regulatory Agency Frequently Asked Questions](#)



## 7. How can I identify what pest is in my home or garden?

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Health Canada's [Pest Notes](#) provide information on how to identify commonly-occurring pests. The *Common Lawn Problems* fact sheet provides information on how to identify diseases and pest problems in your lawn. Your local garden centre or provincial agriculture ministry may be able to help you in identifying a pest. You can also access good sources of information on the Internet or in reference books.

## 8. What is Integrated Pest Management (IPM)?

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- [Integrated Pest Management](#)

## 9. Are children's special characteristics taken into account when pesticides are evaluated for their risk to health?

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- [Pest Management Regulatory Agency Frequently Asked Questions](#)

## 10. How does Health Canada manage risks associated with pesticide use?

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To manage the risks associated with pesticide use, Health Canada evaluates the health and environmental impacts and value of proposed pesticides before they are registered. Health Canada also monitors the market place for compliance with the *Pest Control Products Act* and Regulations, and promotes the safe use of pesticides.

If Health Canada is concerned about the suspected misuse of any pest control product, inspectors across the country are employed to verify compliance with the *Pest Control Products Act*. Concerns about the risks these products may pose to people, pets, and the environment should be directed to Health Canada's [Pest Management Information Service](#).

The Health Canada [Fact Sheet on the Regulation of Pesticides in Canada](#) explains the responsibilities of the different levels of government. The provinces manage the risks associated with the sale, use, storage, transportation, and disposal of pesticides through education, licensing, and monitoring for compliance. Municipalities are responsible for enforcing municipal by-laws and restrictions.

If a poisoning is suspected, contact your local Poison Control Centre.

### Additional Resources

- Important information on [Homemade Pesticides](#)