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Home > Consumer Product Safety > Pesticides & Pest Management

Consumer Product Safety

Frequently Asked Questions

On this page:

- About the Pest Management Regulatory Agency (PMRA)
 - What does the PMRA do?
 - How many scientists work for the PMRA?
- General Pesticide Information
 - What are pesticides?
 - Why are pesticides necessary?
 - Are there alternatives to traditional pesticides that Health Canada has approved?

Use of Pesticides

- How can pesticides be used safely?
- Are pesticide labels considered safety instructions?
- <u>Is it safe to use recipes that are available on the Internet for making homemade</u> pesticides?
- How can I dispose of pesticides?
- How can people reduce the need to use pesticides around the home?
- If a pesticide is registered in Canada, does it mean I can use it?

Assessment of Pesticides

- How does a pesticide become registered for use in Canada?
- Who can apply to register a pesticide?
- Does a company need to provide information on each ingredient in a pesticide product?
- What does Health Canada do to ensure it receives fair, accurate, unbiased information from industry?
- If industry sponsors the data that Health Canada uses, does this present a conflict of interest?
- Does Health Canada take pregnant women, children and other sensitive groups into consideration when evaluating pesticides?
- Which laboratories perform pesticide testing?

Pesticide Regulation

- How can I check to see if a pesticide is registered for use in Canada?
- Does a pesticide maintain its registration status indefinitely?
- What happens when health or environmental risks are identified for a pesticide that is already registered?
- Does Health Canada regulate pool products as well?
- Can I purchase pesticides that are registered in the United States, but not Canada, and use them in Canada?
- What should I do if I see pesticides being misused?
- What can I do if I see misuse of a pesticide which may have caused an adverse effect?

Common Questions

- Why are certain pesticides banned in some Canadian municipalities and provinces if Health Canada approved them for use?
- Is it okay to eat food that has been treated with pesticides and might have pesticide residues on it?
- What is Health Canada's response to suggestions that pesticides lead to illnesses like cancer and Parkinson's disease?

- <u>Has Health Canada reviewed the Ontario College of Family Physicians report on pesticides and, if so, what actions did PMRA take as a result?</u>
- Some groups indicate that there is a "growing body of evidence suggesting a connection between pesticides and cancer". What is Health Canada doing about this?
- Are my pets safe if they walk on a lawn that has been treated with pesticides?
- Is it safe to use the herbicide 2,4-D on my lawn?

About the Pest Management Regulatory Agency (PMRA)

What does the PMRA do?

Health Canada's Pest Management Regulatory Agency (PMRA) is responsible for pesticide regulation in Canada. Under the authority of the *Pest Control Products Act*, Health Canada:

- registers pesticides after a stringent, science-based evaluation
- re-evaluates the pesticides currently on the market on a 15-year cycle to ensure the products meet current scientific standards
- promotes sustainable pest management
- promotes and ensures compliance with the Act
- works with provincial, territorial and federal departments in Canada to help refine and strengthen pesticide regulation
- works closely with several international organizations such as the United States Environmental Protection Agency, the North American Free Trade Agreement Technical Working Group, the Organization for Economic Co-operation and Development, Codex and the United Nations Environment Programme.

How many scientists work for the PMRA?

Health Canada employs over 350 scientists in the PMRA, including biologists, chemists, toxicologists, epidemiologists, plant pathologists, weed scientists and entomologists, that are dedicated to the evaluation of pesticides.

♠ Top of Page

General Pesticide Information

What are pesticides?

A pesticide is any product, device, organism, substance or thing that is manufactured, represented, sold or used as a means for directly or indirectly controlling, preventing, destroying, mitigating, attracting or repelling any pest.

Pesticides can include:

- herbicides, which are used against weeds
- insecticides, which are used against bugs
- fungicides and antimicrobial agents, which are used against fungus and other micro organisms
- material and wood preservatives
- animal and insect repellents
- insect- and rodent-controlling devices, such as mosquito zappers and mouse traps

algicides, which can be used to control algae in pools and spas

Why are pesticides necessary?

If not properly managed, pests can affect our quality of life in many different ways. Termites can damage buildings, invasive weeds can destroy sensitive habitats, diseases can kill crops. Pests can represent a threat to public health and the environment as well as create significant negative impacts to the economy if they are not efficiently controlled.

In addition to regulating pesticides, Health Canada promotes and encourages the adoption of various pesticide-free methods for controlling pests using strategies like the following:

- answer the question: Do I really have a pest problem?
- understand pest behaviour;
- modify your physical environment to make it less attractive to pests; and,
- modify your physical environment to altogether repel the pest.

If you choose to use pesticides, be sure to use them according to label directions. More information on how homeowners can manage common pests are available via the Pest Notes series.

Are there alternatives to traditional pesticides that Heath Canada has approved?

Health Canada encourages the development and use of sustainable pest management strategies and has processes in place to allow easier access to newer and safer pesticides.

A traditional or alternative pesticide can only be registered or remain registered for use in Canada if any associated risks to health or the environment have been determined to be acceptable. Risks are acceptable if, on the basis of extensive scientific data, it has been determined that there is reasonable certainty that no harm to human health, future generations or the environment will result when the pesticide is used as directed.

Health Canada is helping to facilitate access to pesticides that act more mildly than some traditional pesticides. For example, pheromones, semiochemicals, biochemical and non-conventional products, such as mineral oils, are subject to an assessment process that can accelerate registration if Health Canada finds that the risks and effects to human health and the environment are acceptable.

Some recent alternative pesticide registrations include:

- Ammonium soap of fatty acids, a new domestic herbicide for the control of weeds, algae, and moss in various areas such as vegetable and flower gardens, driveways, patios, and gravel.
- Ferric sodium, a new molluscicide used to control slugs and snails in a variety of fruit trees, turf, grasses, vegetables, berries and ornamentals in greenhouses and outdoors.
- New herbicide products containing sodium chloride for use on roadsides, highways, walkways, vacant lots and other non-cropland sites.

♠ Top of Page

Use of Pesticides

How can pesticides be used safely?

Pesticides can be used safely by following the label directions. The text on the label reflects the results of the scientific evaluation that the product has undergone, and explains how to further reduce any potential risks to human health or the environment.

The rate of application indicated on the label is the lowest amount to use while ensuring it is effective. Essentially, using less will not have the intended result and using more will not offer better results.

If a pesticide must be used, carefully read and follow all label instructions. Before you purchase a pesticide, ensure that you have identified the pest correctly and explored other options for controlling the pest, such as physical barriers, removing the pest's access to food and water or using alternative products. Consult the Pest Notes series for more information on how to control common household pests.

Are pesticide labels considered safety instructions?

The label specifies the correct use of the product so that risks to human health and the environment are minimized. The label is a legal document that must be followed.

When using pesticides:

- make sure that the pesticide label specifies your intended use 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
- store pesticides out of the reach of children and pets

Is it safe to use recipes that are available on the Internet for making homemade pesticides?

Health Canada advises consumers to be aware that preparing, storing, and using homemade pesticides may pose health and environmental safety risks. Homemade pesticides do not undergo any scientific evaluation and do not have label directions that the user can follow to ensure safe use or effectiveness. While some recipes, such as mixtures of soap and water, are not likely to pose human health risks, other recipes that require cooking and boiling may pose health or environmental concerns.

For more information, please consult It's Your Health - Homemade Pesticides.

▲ Top of Page

How can I dispose of pesticides?

When purchasing a pesticide, try to buy only as much as you need to avoid having leftover product to dispose. If you do need to store unused pesticides, ensure that they are placed in a secure location, out of the reach of children and pets. Never store pesticides in a container other than the original container and never re-use empty pesticide containers.

To dispose of pesticides, small quantities of unused products and empty containers may be wrapped in several layers of newspaper and disposed of in the household garbage. Never burn or pour pesticides down the drain.

You may also contact municipal officials for information on hazardous waste disposal facilities.

How can people reduce the need to use pesticides around the home?

Homeowners and gardeners can systematically manage pests in their lawns and gardens using the techniques of proper pest management. This is a coordinated approach of preventing pest problems by monitoring the number and types of pests in or around your home and using pest control techniques that do not always resort to using a pesticide.

Health Canada has published a number of <u>Pest Notes</u> which provide information on approaches to control common home and garden pests that are consistent with proper pest management. For example, more information on maintaining a healthy lawn can be found at <u>It's Your Health</u> - <u>Lawns</u>.

If a pesticide is registered in Canada, does it mean I can use it?

The pesticide label outlines who can use a pesticide, and under what circumstances it can be used. Pesticides under federal regulation are organized into four distinct classes, based on where, when and by whom they may be applied:

- Domestic class products are for personal use in and around the home.
- Commercial class products are restricted to commercial activities as indicated on the label. These are not available to the general public for use in and around the home.
- Restricted products can only be used under certain circumstances by specially trained individuals. These are not available to the general public.
- Finally, manufacturing class products are used in the production of other pesticides or products regulated under the *Feeds Act* or *Fertilizers Act*.

▲ Top of Page

Assessment of Pesticides

How does a pesticide become registered for use in Canada?

First, applicants that wish to sell a pesticide in Canada must submit very detailed tests and studies that examine the potential risks posed to health and the environment and the product's value. Then, Health Canada scientists rigorously review this information in order to determine if the product is acceptable for use in Canada and will not harm humans and the environment. This process can take several years to complete.

Health Canada will also consult with its international counterparts to determine if similar decisions were made as a result of their scientific review of the same product.

Who can apply to register a pesticide?

Any company, agency, importer or person wishing to market a pesticide in Canada can submit detailed scientific information to be evaluated by Health Canada. If the product is granted registration, the individual or group responsible for the submission becomes the product's registrant.

It can cost a manufacturer many millions of dollars and a decade or more of research to discover, develop and register a new pesticide. The magnitude of the investment in the development and application process means that registrants tend to only submit products that are viable candidates for registration.

Does a company need to provide information on each ingredient in a pesticide product?

Yes. Applicants must provide Health Canada with information about all components of a pesticide, including active ingredients and formulants. These are assessed during the evaluation process.

What does Health Canada do to ensure it receives fair, accurate, unbiased information from industry?

To ensure accurate information is received, Health Canada follows a set of test guidelines and principles developed by the Organisation for Economic Co-operation and Development. Pesticide testing must be conducted under these guidelines which adhere to principles of Good Laboratory Practice. During the assessment process, Health Canada scientists cross-check the data as an additional measure of validating the study results. Scientists can also compare their findings with counterparts in other countries to ensure that similar conclusions are drawn from the assessments, and they can also request additional data from the company.

If industry sponsors the data that Health Canada uses, does this present a conflict of interest?

All pesticide applicants must develop a comprehensive database of scientific information that demonstrates the product's value and its effects on the environment and human health. Countries including Canada, the United States and other members of the Organisation for Economic Cooperation and Development (OECD) have harmonized data requirements and study protocols. Scientists and regulators have specifically designed these protocols to produce scientifically valid data. The studies are conducted either by the applicants or by independent third party laboratories, and they must be conducted in compliance with internationally accepted study protocols and Good Laboratory Practice. In addition, the laboratories are subject to independent audits to ensure their reliability.

The studies submitted by industry to Health Canada are generally of very high quality. Thousands of pages of data from industry-sponsored studies undergo a thorough, independent analysis by Health Canada's scientists, and the data is crosschecked between studies to ensure consistency. In addition, Health Canada's scientists examine published scientific studies, such as epidemiology studies, relevant to any review.

Does Health Canada take pregnant women, children and other sensitive groups into consideration when evaluating pesticides?

Health Canada conducts specific risk assessments for sensitive groups including children and pregnant women, taking their unique physiological characteristics into account. The behaviours and play-habits of children, such as their body weight and hand-to-mouth contact while playing near treated areas are considered when determining their potential exposure, and worst-case exposure scenarios are taken into account when determining application rates.

Health Canada also carefully considers the health of workers exposed to pesticides. Label directions provide workers with information for safe use, including proper handling information and directions on personal protective equipment. Also, some provinces and territories require training and licensing for professional pesticide users.

Which laboratories perform pesticide testing?

Studies are conducted by a combination of independent laboratories and registrant laboratories, and must follow internationally developed and validated test guidelines for study protocols that adhere to the principles of Good Laboratory Practice. The extensive data reporting that is required allows Health Canada scientists to conduct independent analyses of the data.

⚠ Top of Page

Pesticide Regulation

How can I check to see if a pesticide is registered for use in Canada?

All pesticide products that are registered for use in Canada have a Pest Control Product (PCP) registration number on the label. It is important to read the label on a pesticide carefully, as it also contains specific information on using the product safely.

Does a pesticide maintain its registration status indefinitely?

No. As science evolves and new information becomes available, products must be re-evaluated to ensure they meet the latest health and environmental risk assessment standards. All products are re-evaluated on a 15-year cycle, which ensures that older pesticides that no longer meet modern standards are removed from the Canadian market and the use instructions on product labels are updated to best protect human health and the environment.

However, if at any time new information indicates that a pesticide could pose unacceptable risks, the information will be evaluated and appropriate action will be taken immediately.

What happens when health or environmental risks are identified for a pesticide that is already registered?

If new scientific information indicates that a registered pesticide may pose unacceptable risks to health or to the environment, then Health Canada may initiate a special review or an early re-evaluation to address concerns. A registration may be withdrawn if the review or re-evaluation finds that the risks are unacceptable.

Health Canada closely monitors and reviews scientific findings from around the world on an ongoing basis for current, accurate information for re-evaluating a pesticide, and includes the information in pesticide assessments when it applies.

Does Health Canada regulate pool chemicals as well?

Products used to control bacteria, viruses and algae in swimming pools and spas are considered pesticides and are regulated by Health Canada. Chemical sanitizers and devices that generate sanitizers to control microorganisms, as well as ionizers and ozone generators used to control algae must be registered under the *Pest Control Products Act*.

♠ Top of Page

Can I purchase pesticides that are registered in the United States, but not Canada, and use them in Canada?

It is an offence under the PCPA to import, sell or use a product that is not registered in Canada. Look for the Pest Control Product registration number on the product label to ensure that the product is registered for use in Canada.

However, for the benefit of Canadian farmers, the Grower Requested Own Use (GROU) program authorizes the import of the US version of a Canadian registered product, with an approved Import Certificate. The GROU products must be purchased and imported by growers for their own use on their land, and for one growing season only.

What should I do if I see pesticides being misused?

If you believe a pesticide is not being used according to the label instructions, please contact the Pest Management Information Service at .

If possible, please provide the type of pesticide involved, the trade name or the name of the active ingredient. The time and location of the possible offense is also important. Upon notification, Health Canada will take appropriate action.

Provincial or municipal regulating authorities can also be contacted regarding the use of pesticides related to provincial laws or municipal by-laws.

What can I do if I see misuse of a pesticide which may have caused an adverse effect?

Members of the public can report any incident related to a pesticide to the manufacturers using the contact information available on the pesticide product label. Manufacturers are required by law to report to Health Canada any incident information they receive related to their product.

Health Canada collects and assesses incident reports for registered pesticides as part of its <u>Incident Reporting Program</u>. By reporting an incident, you contribute to the ongoing collection of information on pesticides after they have been registered.

You may also report an incident directly to Health Canada by calling the Pest Management Information Service at .

↑ Top of Page

Common Questions

Why are certain pesticides banned in some Canadian municipalities and provinces if Health Canada approved them for use?

While Health Canada has the authority to register pesticides, municipalities and provinces have the authority to further impose restrictions on the use of these products.

Pesticides must be registered before they can be imported, manufactured, sold or used in Canada. Health Canada's PMRA is responsible for administering the *Pest Control Products Act (PCPA)*. Registration under the PCPA requires a thorough scientific evaluation to determine that new pesticides are acceptable for a specific use and that registered pesticides remain acceptable for use once on the market.

Provinces and territories may enact regulations to restrict or prohibit the use of products that are registered under the PCPA in their jurisdictions. Cities, towns and municipalities may be authorized by provincial/territorial legislation to further regulate pesticide use based on local considerations within their jurisdictions, including enacting by-laws.

Is it okay to eat food that has been exposed to pesticides and might have pesticide residues on it?

Pesticides can leave residues, however, the amount and nature of the residue varies by pesticide and by crop. Maximum Residue Limits (MRLs) are established for both Canadiangrown food and food imported into Canada by using dietary studies, and are well below levels that are known to pose risks. The Canadian Food Inspection Agency monitors MRLs on food.

For more information, consult the Pesticide and Food fact sheet.

What is Health Canada's response to suggestions that pesticides lead to illnesses like cancer and Parkinson's disease?

Health Canada will not register a pesticide that is known to cause cancer or other illnesses when used according to label directions.

Before a pesticide is allowed to be used or sold in Canada, it must undergo a rigorous scientific assessment process to ensure that no harm will occur when pesticides are used according to label directions. All pesticides registered in Canada, including for agricultural, forestry and domestic uses, undergo this level of scrutiny.

If there is strong evidence that exposure to a pesticide causes Parkinson's disease, cancer, other serious illness or negative environmental effects then regulatory action will be taken.

Has Health Canada reviewed the Ontario College of Family Physician's report on pesticides and, if so, what actions did PMRA take as a result?

Scientists within Health Canada and elsewhere have carefully reviewed the Ontario College of Family Physicians report. This report examined a small group of epidemiology studies, and reported potential associations between pesticides and certain cancers. The wider scientific community raised significant concerns with respect to how this literature study was conducted because it did not consider all of the relevant epidemiological evidence.

Epidemiology studies are typically designed to look for associations, rather than causes.

Epidemiological studies have value and are used by Health Canada in different evaluation scenarios where they are considered alongside toxicity studies which examine toxic effects over various dose levels.

Examining animal toxicity studies that analyze the absorption and break down of toxins, combined with exposure studies, is a preferred method for assessing risks to human health. Health Canada uses this approach, which is also supported by the international scientific community, in determining if a pesticide can be used safely.

Some groups indicate that there is a "growing body of evidence suggesting a connection between pesticides and cancer". What is Health Canada doing about this?

Health Canada does not register pesticides that are known to cause cancer or other illnesses when used according to the label directions.

Health Canada's Pest Management Regulatory Agency is responsible for administering the *Pest Control Products Act* on behalf of the Minister of Health. Before a pesticide is allowed to be used or sold in Canada, it must undergo a rigorous scientific assessment process which provides reasonable certainty that no harm, including chronic effects such as cancer, will occur when pesticides are used according to label directions.

Under this pre-market approval process, results from more than 200 types of scientific studies must be submitted to determine if the pesticide would cause any negative effects to people, animals, birds, insects, plants, as well as on the soil and in the water. This assessment takes into consideration sensitive sub-groups, such as pregnant and nursing women, infants, children and seniors.

Additionally, Health Canada scientists review the scientific literature for studies which refer to pesticides. Health Canada recognizes the value of epidemiology studies in risk assessment. The most useful and relevant epidemiological studies are those that properly characterize exposure in terms of how the product is used.

Are my pets safe if they walk on a lawn that has been treated with pesticides?

Potential exposure may occur if pets are allowed on the treated lawn before the pesticide residue has been allowed to dry. They may be exposed through contact with their paws, licking of their bodies, or through eating grass. In order to minimize exposure, after treating your lawn, it is important to follow the label instructions as well as the instructions given to you by your lawn care professional, and restrict pets from the treated lawn until it has dried. No harm is expected, but avoiding exposures whenever possible is recommended.

Is it safe to use the herbicide 2,4-D on my lawn?

Following extensive consultation and scientific review using the most current scientific methods, Health Canada has determined that 2,4-D meets Canada's strict health and safety standards, and as such can be used safely when label directions are followed. Health Canada's review concurs with the findings of regulators in other OECD countries, including the United States, European Union, New Zealand and the World Health Organization.

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