



# Pesticides and Food

To be healthy, we need to eat a variety of foods, especially fresh fruits and vegetables. Pesticides play an important role in making sure there is enough food for everyone, by protecting food and crops from pests (insects, weeds and fungal diseases).

While we have our own native pests to deal with in Canada, globalization has caused the spread of invasive plants and animals not originally from Canada, increasing some pest problems. If not controlled properly, pests can destroy crops and make some fresh fruits and vegetables less available.

While pesticides help protect our food supply, many people are concerned about pesticides on the food they eat. Small amounts of pesticide residues may stay in or on our food after it is applied, but pesticides 'break down' over time, meaning very little residue is left by the time we eat the food.

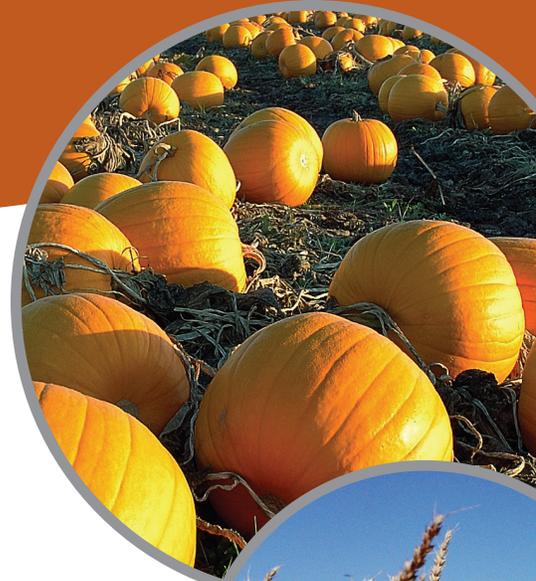
The rate of 'break down' depends on the type of pesticide used, the application conditions, and the type of food treated. So, the amount and nature of pesticide residue can be different from one pesticide or food type to another.

Health Canada is responsible for approving pesticide uses and conditions of use, and for setting Maximum Residue Limits (MRLs) for pesticides.

## Food safety

Food safety in Canada is a shared priority between growers, industry, provinces and federal organizations. Health Canada and Agriculture and Agri-Food Canada work together on a number of programs that help provide safe food for Canadians and encourage environmental protection.

Food producers help keep food safe by using and improving on good agricultural and pest management practices. One key practice is to follow pesticide label directions, because they give instructions for the safe and proper use of pesticides. This helps keep residues within the limits, helping ensure a safe food supply. Food producers also participate in a variety of on-farm programs to help put in place effective food safety procedures in their day-to-day operations.



The Government of Canada uses compliance and enforcement activities to make sure producers properly use and apply pesticides and respect established residue limits. The Canadian Food Inspection Agency (CFIA) monitors and enforces residue limits in both domestic and imported foods. The CFIA reports that over the last 10 years, residue data shows that the compliance rate is consistently very high for fresh fruits and vegetables.

For example, in 2006/07:

- More than 99% of Canadian fruits and vegetables and 99% of imported foods tested were well below Canada's residue limits.
- No residues were found in 90% of Canadian fruits and vegetables and in 89% of food imports tested, at CFIA's analytical limit.

If tested food products contain residues exceeding limits, enforcement action may be taken: removing the food from stores, seizing food stocks, rejecting imports and/or prosecuting offenders.

### Organic produce

Whether you eat organic or conventionally grown produce is a personal choice. Health Canada regulates all products that make pesticidal claims, including products intended to repel pests and protect organic produce. To date, there is no evidence to show that there is a health risk from eating conventionally grown produce because of pesticide residues, or that organic foods are safer to consume than conventionally produced food.

### Pesticide regulation in Canada

Health Canada regulates pesticides under the *Pest Control Products Act (PCPA)* and its Regulations. Under this Act, pesticides must be registered before they can be used in Canada.

Before any pesticide can be registered in Canada, Health Canada must review the scientific information to make sure that it has value and there are no health or environmental concerns related to its use. Determining value includes figuring out whether the pesticide is effective in dealing with the pest problem when used according to label directions. Health and environmental risks are considered acceptable if there is reasonable certainty that no harm to human health, future generations or the environment will result from exposure to or use of the pesticide, based on its conditions or proposed conditions of registration.

As part of its assessment of potential risks to human health, Health Canada critically examines available scientific information, including toxicology studies (the study of the effects of toxic substances) and epidemiology studies (the study of diseases in human communities). Health Canada takes into consideration the effects of a single, multiple and/or lifetime exposure to a pesticide. Also, special consideration is given to more vulnerable people like infants and toddlers, pregnant and nursing mothers, and the elderly. Only those uses where human exposures are well below, from 100 times to 1,000 times lower than the no-effect level, are registered for use in Canada.

To make sure that pesticides on the market today continue to meet Canada's strict health and environmental protection standards, Health Canada re-evaluates registered pesticides every 15 years, or when new and relevant information suggests further study is needed.

## Setting maximum residue limits

As part of its health risk assessment process before a pesticide is registered, Health Canada determines whether eating residues that are likely to remain in or on food at the time of harvest is acceptable and unlikely to cause a health concern to any group of people, including infants, children, and pregnant women. This maximum amount of expected residue is then legally established as a Maximum Residue Limit (MRL), following public (national and international) consultation.

MRLs ensure that exposure to the pesticide residue presents no concerns for human health. Each MRL is set for a specific pesticide and food type combination, taking into consideration Canada's unique climate, geography, topography and water systems. MRLs apply to food types that include, but are not limited to, fruits, vegetables, meat, dairy products, grains and some processed foods. The MRLs set by Health Canada are assessed using modern scientific methodology and are consistent with those of other major Organisation for Economic Co-operation and Development (OECD) countries.

Canadian MRLs are set at levels far below the amount of pesticide residue that could present a health concern. MRLs are set for all food commodities sold in Canada, whether imported or produced locally. Pesticide residues in or on imported foods are measured at the point of entry into Canada to make sure that imported foods meet Health Canada's stringent MRL pesticide residue standard before they are distributed in Canada.

Under the guidance of international organizations like the OECD and the United Nations, Health Canada participates with other countries in developing the standards and processes used worldwide for determining acceptable pesticide residue levels.

## Sustainable and integrated pest management

Sustainable pest management happens when pest management strategies are integrated: that is, when all possible effective techniques, including both chemical and non-chemical methods, have been considered to get rid of pests economically, in an environmentally sound manner, and in a way that protects human health.

Health Canada encourages Canadians, including growers, to reduce their reliance on and minimize their exposure to pesticides. Through different programs at the Pest Management Regulatory Agency, Health Canada works with partners like Agriculture and Agri-Food Canada, and with Canadian pesticide users, to achieve sustainable pest management. Health Canada also works with the provinces and industry associations on research projects to identify and promote different methods to effectively control pests and prevent infestations, and to identify and provide access to newer, reduced risk pesticides.

## For more information

### PESTICIDES AND FOOD

- For information about pesticide residue inspection, monitoring and surveillance programs, please contact the [Canadian Food Inspection Agency](#) at 1 800 442-2342.
- For information about agricultural practices, please contact [Agriculture and Agri-Food Canada](#) at (613) 759-1000.
- For more information about pesticides, please contact the Health Canada [Pest Management Information Service](#) toll free at 1 800 267-6315.
- Information available on the Health Canada Web site.

### MANAGING PESTS SAFELY AND RESPONSIBLY

- **Homeowner Guidelines for Pesticide Use**  
Learn how to use pesticides properly and safely at home and in your garden.
- **Pest Control Tips (Pest Notes)**  
These fact sheets give specific advice on managing and controlling a number of common household and garden pests.
- **Healthy Lawns**  
More information on starting and maintaining a healthy lawn and dealing with common lawn problems.
- **Report a Pesticide Incident**  
Learn why and how to report a problem with a pesticide product.
- **Proper Use of Pesticides**  
More information on a variety of issues related to pesticide use in and around your home.

### REGULATING PESTICIDES AND ASSESSING RISK

- **Cosmetic Bans and the Roles of the Three Levels of Government**  
Learn about cosmetic pesticide bans and which level of government (federal, provincial or municipal) is responsible for what.
- **The Regulation of Pesticides in Canada**  
This fact sheet explains how federal, provincial and municipal governments work together to regulate pesticides in Canada.
- **Assessing Human Health Risks During Pesticide Review in Canada**  
This Information Note explains what issues the government looks at when reviewing a pesticide, including risks to human health.

Visit Health Canada's consumer portal for safety information about food, health and consumer products.