



PESTICIDES, HERBICIDES AND TRADITIONAL FOODS

Fact Sheet

Indigenous traditional knowledge teaches how to walk upon Mother Earth and to respect her creation. Traditionally, every part of Mother Earth was used for ceremonies and everyday life. Water was used to purify and nourish the spirit and body. Traditional foods and plants were used for ceremonies and to nourish the communities. When the water, soil and air are poisoned, traditional lifestyles are threatened. This is why it is important to encourage First Nations' people, especially the youth, to rediscover and consume wild foods and medicinal herbs to be able to develop a relationship with Mother Earth and protect her.

One way to do this is by acquiring knowledge. So, this fact sheet will give you some information about contaminants like pesticides and herbicides that may be affecting your traditional foods and plants. Remember that trying to save your traditional foods and plants will require long-term work but it is worthwhile!

PESTICIDES

A pesticide is a substance or mixture of substances used to prevent, control, or decrease the damage caused by a pest. The damage could be that the pests compete with humans for food, destroy property, spread disease or cause a nuisance. Although there are benefits to the use of pesticides, there are also drawbacks, such as potential toxicity to humans and other animals.

TYPES OF PESTICIDES

- ❖ Chemical substances
- ❖ Biological agents
- ❖ Antimicrobial agents
- ❖ Disinfectants
- ❖ Devices

TYPE OF PESTS

- ❖ Insects
- ❖ Plant pathogens
- ❖ Weeds
- ❖ Molluscs
- ❖ Birds
- ❖ Mammals
- ❖ Fish
- ❖ Nematodes (roundworms)
- ❖ Microbes

HERBICIDES

A herbicide is a type of pesticide that is a substance used to kill unwanted plants. It is widely used in agricultural and landscape management.



TYPES OF HERBICIDES

- ❖ Synthetic:
 - Selective: Used to kill specific plants while leaving the desired crop relatively unharmed.
 - Non-selective: Used to clear waste ground and kill all plant material with which they come into contact.
- ❖ Natural: Some plants produce natural herbicides such as the genus *Juglans* (walnuts).
Organic: Much less effective and usually more expensive than synthetic herbicides and are usually combined with cultural and mechanical weed control practices. Some examples include spices, vinegar, steam and flames.

REGULATIONS

Pesticides sold, used and imported into Canada are regulated under the Pest Control Product Act (PCPA).

Health Canada is responsible for:

- ❖ Administering the Act,
- ❖ Registering pest control products,
- ❖ Re-evaluating registered products; and
- ❖ Setting maximum residue limits under the Food and Drug Act.

HEALTH EFFECTS

Pesticides are one of many big families of chemicals or natural products that can affect the health of animals, and in turn, humans.

SYMPTOMS

SKIN RASHES

Chest pain

Headaches

Nausea

FATIGUE

Death (rare)



First Nations Environmental Health Innovation Network

CAUSES

Most exposure comes from intentional or unintentional direct consumption of pesticides through:

- ❖ Improper application resulting in coming into direct contact with people or wildlife.
- ❖ Inhalation of aerial sprays.
- ❖ Food consumption prior to the labelled pre-harvest interval.
- ❖ Under extreme conditions, they can be transported via surface runoff to contaminate distant water sources.

Many of the pesticides that cause problems are ones that remain in the environment for many years compared to the others that settle or disappear.

HOW CAN PESTICIDES AND HERBICIDES AFFECT TRADITIONAL FOOD

Pesticides are like other types of contaminants that can end up in our food sources and contaminant us (see fact sheet on Bioaccumulation of Contaminants). Over 95% of herbicides and 98% of sprayed insecticides (both types of pesticides) reach a destination other than their target species like air, water, bottom sediments, and food. Pesticides are one of the causes of **water pollution**, and some pesticides are **persistent organic pollutants** (POPs) and contribute to **soil contamination**. This is why Aboriginal people, particularly those who are more closely tied to the land, are thought to be at a higher risk of exposure to contaminants.

PREVENTION

WHEN CONSUMING FRUIT, VEGETABLES AND PLANTS

- ❖ It is always a good idea to rinse them with clean water regardless of whether they come from the land or from the grocery store.

WHEN USING PESTICIDES

- ❖ Pesticides (including herbicides, insecticides, fungicides and rodenticides) should always be handled with care according to label instructions to avoid possible health concerns.
- ❖ Keep a close eye on children when they are in the garden, and keep them away from fertilizers and other chemicals.
- ❖ First Nations land is sometimes not subject to provincial legislation but complying with proposed provincial legislation should be encouraged.

ALTERNATIVE METHODS

- ❖ Explore alternative methods before using pesticides. Some First Nations have experimented with alternate methods such as applying saltwater and this works in some situations.

BE INVOLVED

- ❖ Be involved with organizations like the Centre for Indigenous Environmental Resources that helps First Nations protect and conserve biodiversity in communities and on traditional territories, as well as works with First Nations to restore and preserve First Nation lands and waters.
- ❖ First Nations require capacity in order to monitor the use of pesticides in their territory, to review the plans and determine impacts.
- ❖ Information provided to First Nations needs to be clear and meaningful and industry needs to act in a respectful way and follow-through with discussions.
- ❖ The provinces and territories need to consider traditional knowledge based on an ecosystem approach, and not just rely on scientific data when regulating the use of pesticides.

THE INFORMATION GIVEN HAS BEEN ADAPTED FROM THE FOLLOWING SITES AND DOCUMENTS:
[Integrated Pest Management and Wildlife Act of British Columbia](#)
[Environmental Contaminants and Traditional Food Workshop Report](#)
[Centre for Indigenous Environmental Resources](#)
Health Canada: [Pesticide Regulation in Canada](#)
[Garden Safety](#)
[Healthy Lawns](#)
[Responsible Pesticide Use](#)

FOR MORE INFORMATION

You can contact your local public health unit or contact Health Canada at:
Health Canada's Management of Toxic Substances Division
Room 128, Building #8
Tunney's Pasture
Ottawa, ON K1A 0L2
Telephone: (613) 957-3127

Call us Toll-Free at 1-866-960-5223 for more environmental health resources.

Prepared by: Guylaine Charbonneau, M.Sc., P.Dt