



Toxic-Free Homes Challenge

Living Without Pesticides



Fact Sheet 3

Did you know that pesticides are the only man-made toxic chemicals deliberately spread over large areas? Every year we British Columbians buy thousands of litres of pesticides to spray around our gardens and even in our homes. We are poisoning ourselves and our environment all for cosmetic reasons. How have we lost touch?

Without knowing, we have become dependent on these poisons and we have forgotten the natural alternatives. What are some of the natural alternatives? Buying organic foods, grass-cycling, using compost, and practicing chemical-free pest management. Give yourself a goal to try one of these chemical-free approaches per month. Why? Beneficial organisms live in the soil, promoting healthy plants. Chemical pesticides and fertilizers kill these useful organisms, making us more reliant on the poisons.

We can stop the damaging cycle and have healthy, beautiful homes and gardens. The alternatives are inexpensive and time-saving. Here are more reasons to "Go Natural."

Hazards to Children

Every year hundreds of Canadian children are accidentally poisoned by pesticides. Children are at an exceptional risk from pesticide exposure as they are much more susceptible to synthetic chemicals than adults. Damage can be irreversible. Families with small children should try to avoid pesticide use as much as possible. Remember that pesticides used outside can be tracked back into the home and lodged in carpet dust. Half of our lifetime risk from exposure to pesticides occurs by age six.

Water Pollution

Heavy rainfall will wash commercial and household pesticides off the area of application and into our local streams and rivers. Our favourite waterways then become uninhabitable to wildlife and important fish habitat is destroyed. Pesticides will also leach into and poison groundwater. It can take modern pesticides weeks to break down. Some can take years.

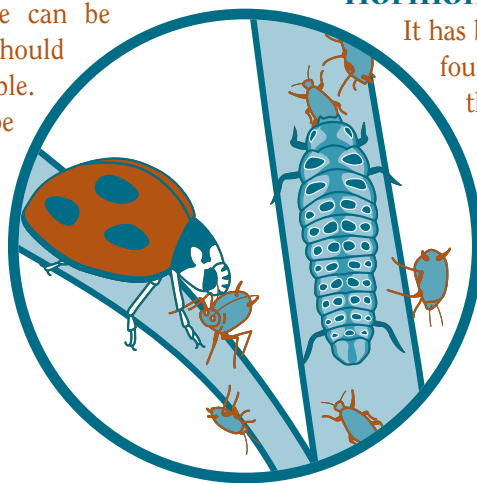
Cancer

A number of pesticides contain ingredients known or suspected of causing cancer. Breast cancer, non-Hodgkin's lymphoma, and soft tissue sarcomas in particular have

been linked to pesticide use. Almost every person in North America already has detectable levels of pesticides in his or her body.

Hormone Disruption

It has become clear that many synthetic chemicals found in pesticides have the ability to disrupt the reproduction and development systems of fish, birds, reptiles, amphibians, and mammals. Through bioaccumulation, the effects are moving up the food chain and there is evidence of hormone disruption in humans.



"Spraying pesticides will kill not only your intended pest, but also insect good-guys like ladybugs and their larvae."

Danger to Pets

Many pesticides are toxic to dogs, cats and other pets. Slug bait, in particular, is dangerous to dogs, who like the taste, and may eat enough to be killed. Also, animals with access to areas treated with pesticides may pick up residues on their paws and fur, which they can later ingest or bring inside.

Danger to Wildlife

Pesticides are toxic to birds, bees, butterflies and other beneficial insects. These natural predators are important because they control population levels of pest insects.



DELTA RECYCLING SOCIETY

7046 Brown Street Delta, BC V4G 1G8 Phone: 946-9828 Fax: 946-3823

FUNDED BY ECOACTION 2000, ENVIRONMENT CANADA

Pesticides in the Home

Remember that pesticides are not only used in the garden. Raid and similar chemical weapons are being applied around the home. We also introduce them with our weekly shopping trip. One important step to reduce your risk from pesticide exposure is to buy organic food. Broccoli, strawberries and mushrooms are some of the most pesticide-contaminated foods we eat. Here are some more tips to avoid pesticide use in the home.

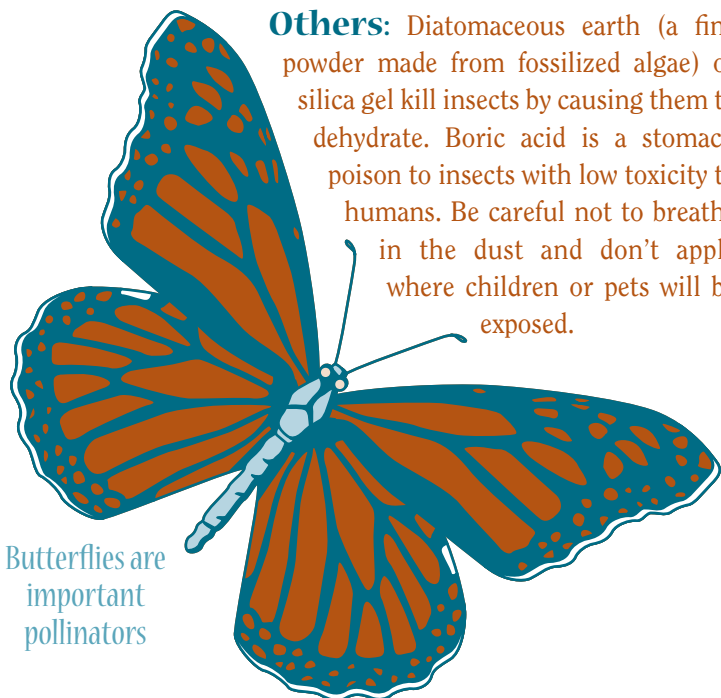
Ants: Follow their trail and find their entry point, then seal the crack. Wipe up their trail with soapy water to erase the odour trails they leave for other ants to follow. Carpenter ants are a more serious problem and their nests must be destroyed to stop an infestation. Try to find a company that will do it without using pesticides.

Cockroaches: Sprinkle Borax under the stove and refrigerator or other areas where it is difficult to plug holes.

Flies: For flies, the old ways are the best: screens on windows and doors, fly swatters and sticky paper. If you don't have screens, you could try blowing up a paper bag and hanging it in your open door or window. Flies and other insects will think it is a hornets' nest and steer clear.

Fleas: Flea killers can contain chemicals toxic to pets and humans. As soon as you suspect your pets are becoming infested, shampoo them with a pure soap, like Dr. Bronner's Castille Soap. The least toxic insecticidal soaps are Safer's Flea Soap and Daltek Organic Spray, both for dogs and cats. Use a flea comb on pets daily, drowning captured fleas in soapy water. Fleas actually live and reproduce where your pet sleeps, so keep that area clean.

Others: Diatomaceous earth (a fine powder made from fossilized algae) or silica gel kill insects by causing them to dehydrate. Boric acid is a stomach poison to insects with low toxicity to humans. Be careful not to breathe in the dust and don't apply where children or pets will be exposed.



Butterflies are important pollinators

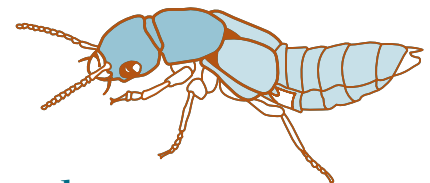


Top 10 Actions to Reduce Your Risk from Pesticides

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1. Urge your local municipality to implement pesticide reduction by-laws.
2. Garden without pesticides.
3. Buy organically or ecologically grown foods, especially for children.
4. Work with your local schools, and/or daycares to implement alternatives to indoor and outdoor pesticide use.
5. Keep away from areas freshly sprayed with pesticides.
6. Lobby Health Canada to reform pesticide laws.
7. Call the makers of your favourite brands of food and urge them to use ecologically and organically grown crops in their products.
8. Avoid fatty foods, as persistent pesticides are stored in fatty tissues.
9. Avoid using pesticide-based flea and head lice treatments.
10. If you farm, adopt ecological techniques that reduce reliance on chemical pesticides.

Rove beetles round up pests



Pesticide Disposal

Always take care when disposing of pesticides. The Ladner and Scott Road bottle depots will accept concentrated pesticides that have a PCP registration number and a poison symbol. Contact the Product Stewardship Depot to make sure your pesticide is covered. No empty containers will be accepted. For more information, call the Recycling Hotline at 732-9253.

Garden Pest Action Plan

The presence of an insect on a damaged plant does not necessarily point to the culprit. Most insects are beneficial and those that aren't are usually kept in check by natural predators. The goal of organic gardening is to mimic natural conditions with the least environmental damage. The following steps should help your garden thrive without pesticides.

1. Identify the Problem

In the vast majority of cases, what looks like a pest or disease is actually the result of a plant being planted in the wrong soil, light or moisture conditions. If a plant is unhealthy, don't be too quick to assume you have a pest. Check your plant's conditions and make the necessary changes.

2. What's Bugging You?

Your pest control method must be specific to the pest. If proper growing conditions are met, your problem may be an insect pest or a disease. To identify which, observe the damage first, then identify the culprit. Books published by Rodale are a good resource.

Ground beetles catch the bad guys

3. Is it Serious?

Keep in mind that few problems are life threatening to the plant. Most damage is in the range of not-quite-perfect to ugly. Consider the degree of damage before you take action and decide what your aesthetic threshold is.

4. For Insect Pests Handpick or Use Traps

Your first line of defence is to simply remove the pest. Beer traps are great for slugs. Newspapers under your shrubs can help you find weevils. Cut off the tents of caterpillars. Hose off insects, like aphids, with a jet of cold water.

5. For Diseased Plants Remove Affected Leaves or Branches

Make sure you clean your pruning tools so you don't spread the disease.

6. Wait and Give Predators a Chance

Birds, frogs and insects are very skilled predators and are necessary to keep a natural balance in your garden. Learn to recognize beneficial insects such as rove beetles, spined soldier beetles, tachnid flies, parasitic wasps, ladybugs and their larvae, ground beetles and lacewings. Some of them are illustrated here.

7. What About Weeds?

Did you ever think that weeds might have a beneficial role in the garden? Some, such as thistles, provide food and habitat for

native wildlife. However, be aware of plants that spread quickly and take over your garden. Prevent their spread by applying a 2-3" layer of organic mulch, such as compost, over the surface. Keep on top of weeds and remove them by hand before they go to seed.

8. Use Barriers

If your crops are threatened, prevent damage by using barriers. Remay row covers are great for protecting vegetables from damage by cabbage moth or carrot rust flies. Crushed eggshells, wood ashes, or diatomaceous earth are barriers against slugs. Tanglefoot barriers on tree trunks prevent moth larvae from climbing up to the leaves.

9. Use Least Toxic Remedies

If problems persist, try the less toxic chemical controls like soapy water or Safer's Insecticidal Soap. Remember that any control, biological or chemical, will kill beneficial insects with pests. A good general-purpose insecticide you can make at home is a garlic spray. Per litre of water add:

2 T garlic powder

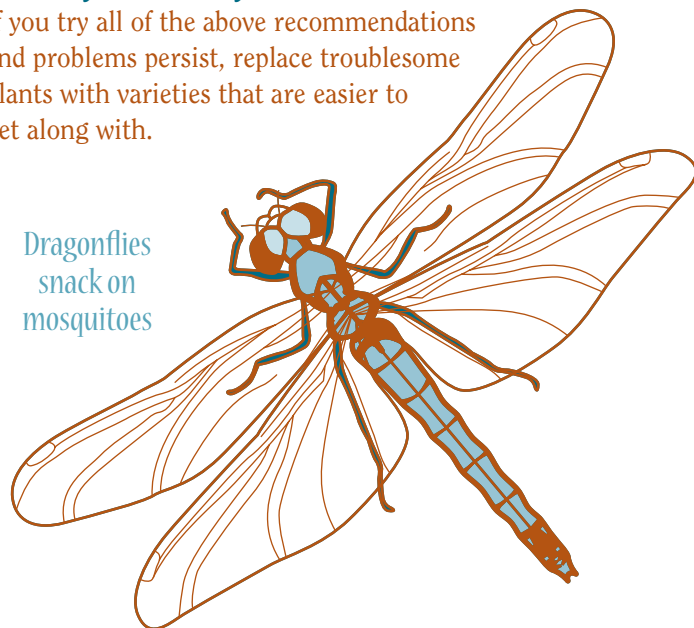
2 T onion powder

Dash tabasco or cayenne

10. Do you Really Want That Plant?

If you try all of the above recommendations and problems persist, replace troublesome plants with varieties that are easier to get along with.

Dragonflies snack on mosquitoes



Natural Lawn Care

A natural lawn is maintained without chemicals and the results are rewarding: a healthy, beautiful lawn that's easier on you and the environment. Following natural lawn care practices makes it easy to reduce the use of pesticides and fertilizers while saving time, water, money and our waterways.

- **Mow high and mow often.** Never cut more than 1/3 of the blade. A good grass length is 2-3". Longer grass will develop deeper roots and crowd out weeds.
- **Leave the clippings on the lawn.** It's called grass-cycling! Clippings provide free fertilizer and will break down quickly. You can grass-cycle with your existing mower, or use a mulching mower.
- **Water deeply but infrequently.** 1" of water per week (1 hour of watering) is all that is needed to encourage deep rooting and to crowd out weeds.
- **Aerate spring and fall and top dress with compost.** Always plant more than one species of grass and consider including other plant species, such as clover or English daisy.
- **Take a second look at weeds.** Weeds or moss in your lawn are a sign of poor growing conditions. However, moss and many lawn weeds such as clover and English daisy are beautiful. The best way to deal with unwanted weeds is to dig them out by hand. Avoid weed and feed type products. They spread toxic herbicides over entire lawn areas whether weeds are present or not.

Fertilizers – Feed the Soil, Not the Plant

Healthy soil leads to healthy soil organisms and an ecological balance in your garden. The best way to enrich your garden's soil is to add organic matter. Compost is the best source of organic matter you can add and probably the most convenient. If you don't already have a home compost bin, start one now. In the meantime you can purchase finished compost from the Vancouver landfill.

If you have to buy a fertilizer, choose organic fertilizers, such as bone meal, blood meal and kelp meal, which contain slow releasing, insoluble nutrients. This means the nutrients promote slow, steady growth while reducing the possibility of run-off.

Chemical fertilizers may keep the garden looking healthy in the short term, but they do not promote the long-term health of plants. Excess nutrients are washed away in heavy rainfalls. They end up polluting our waterways by causing algae blooms, reducing aquatic oxygen levels and suffocating fish and other aquatic life.

Chemical fertilizers also kill soil organisms, such as earthworms. Healthy soil is home to a variety of organisms busy at work aerating the soil, breaking down debris and making organic matter and nutrients available to plants. Soil organisms are the life force of the Earth. Without them, your garden will not be able to follow a natural cycle of growth and decay and you will be forced to follow a chemical regime.

**For more information on composting and organic gardening
attend a workshop in our Earthwise Garden**

Informative fact sheets, weekly workshops, and Eco-tours for school children are provided FREE to Delta residents. Become a member and support Delta Recycling Society with our commitment to the community and the environment..

Information provided in part by Georgia Strait Alliance.



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