

Playing It Safe

Healthy
Choices to
Control Lawn
and Garden
Pests



Why not try alternatives to pesticides?

The way we choose to manage pests in our yards is important for the well-being of our families and the environment. The risk of low-level pesticide exposure to the health and safety of the public, especially children, is uncertain. Just as we seek to reduce our exposure to other contaminants in our food, air, and water, the time has come to move towards the elimination of non-essential pesticide use in our community.

WHY MAKE A CHANGE?

Health And Safety Risks

Product labels provide some information on these risks, which range from minor skin or eye irritation, to poisoning and death, depending on the product and type of exposure. Some pesticides can produce noxious and/or explosive gases if combined with other materials or mixed or applied using the wrong type of container.

Environmental Risks

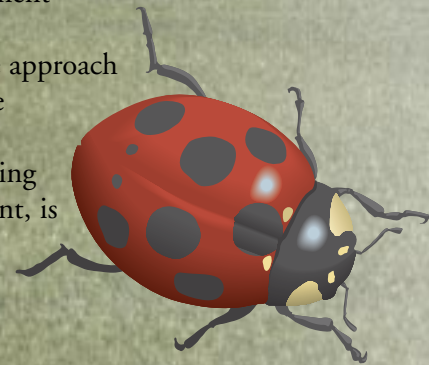
Some pesticides can pollute the soil or groundwater and can persist for long periods of time. If pesticides are unintentionally washed into stormwater collection systems, creeks, streams or other water bodies may become polluted.

Risks To Non-target Species

Some pesticides can cause accidental injury or death to aquatic organisms, birds, mammals and beneficial insects such as bees and butterflies. Microorganisms in your lawn and garden can also be harmed, reducing their ability to enrich the soil and provide nutrients for plants. The more toxic and the more you use, the greater the risk.

It's A Trend

Many communities across Canada are exploring ways to reduce pesticide use through alternative methods. A large number of municipalities have bylaws limiting the application of pesticides for certain uses. Collectively, these initiatives reflect a movement toward a safer and more environmentally sensitive approach to pest management. The Capital Region, with its reputation for healthy living and a pristine environment, is aptly suited to be part of this growing trend.





“When we kill off the natural enemies of a pest, we inherit their work”

Carl Huffaker



WHAT IS A PESTICIDE?

“Pesticide” is the general term for any substance designed to eliminate undesired insects, weeds, rodents, fungi, bacteria and other organisms. Pesticides come in many forms and even include household bleach and swimming pool chemicals. Pesticides can be categorized as:

- Insecticides (for insects)**
- Herbicides (for weeds)**
- Fungicides (for fungus diseases)**

Although an individual lawn or garden may seem quite small, the combined effect of many lawns and gardens can have a significant impact on your neighbourhood and beyond. Making responsible choices to ensure the health of your small “piece-of-the-pie” will not only benefit you and your family but also the greater community.

WHAT IS A PEST?

Residential yards are home to many seen and unseen creatures, some of which are beneficial and provide ready-made ways of eliminating undesirable insects and other pests. Some plants and bugs that flourish in your yard are highly desirable to have on your side.

Having clover in your lawn, for instance, helps make nitrogen in the air available in the soil for other plants to use. Some weeds are actually native plants that look attractive, do no harm, and need little attention.

Most bugs in your yard aren't all bad either – far from it. They pollinate plants, decompose waste material and prey on many of those pesky insects that you don't like. Common yard and garden pests

include ants, aphids, moths, cutworms, earwigs, slugs and tent caterpillars.

Many insects, parasites and small animals are not pests, but were actually doing all the work in your yard long before you got there. These beneficial creatures include spiders, honeybees, ladybugs, frogs, snakes, bats, mice and moles. Resist your initial “get-rid-of-it” response when you see things in your yard.

WHAT CAN I DO?

Find a book on pests from your local library or garden centre, join your local horticultural society, or search the Web and find out who the villains really are. If your yard happens to be lacking certain beneficial insects, say ladybugs, they can be purchased and released into your yard in large quantities at the right time to ward off specific pests.

A PLAN AND HOW TO USE IT

Once you’ve sorted out the desirables from the undesirables, you’ll need a plan. Work on the principle that it’s only necessary to suppress pest populations to low, non-damaging levels, not to entirely eliminate them. At these levels, the health and appearance of the

plant would be largely unchanged. Focus on the plant or part of your yard that actually has a pest problem – and leave everything else alone. Control – don’t eliminate.

HOW TO PREVENT THE NEED FOR PESTICIDES

A Stepped Approach

The first step is ensuring your lawn and garden get a good start with healthy soil and plants that are well matched to the site. This will greatly reduce or eliminate pest problems from the outset. Think of it as a preventative maintenance program. Plants are more susceptible to invasions if they’re already struggling with inadequate growing conditions. Minimize the potential of pest problems by making changes in the management of plants and in the way your yard is designed.



“A weed is a plant whose virtues have not yet been discovered”

Ralph Waldo Emerson



If you decide that you’d rather do away with a traditional lawn altogether, how about planting a range of substitutes that can easily adapt to the area? Periwinkle and wild ginger are good ground covers for shaded sites, while kinnikinnick and coastal strawberry are better for sunnier, dry sites.

Establishing a healthy lawn and garden will go a long way towards preventing pest problems in your yard but you still might have a problem pest. Here are six easy steps to starting an environmentally sensitive pest management program:

1. WHAT IS THE PROBLEM PEST? Is it an insect, a weed or a disease? Consult gardening books or the resources listed at the back of this publication for more help on pest identification and possible solutions.

Tips for a healthy garden

- * Ensure soil is healthy, well-conditioned with organic compost, and has adequate drainage (remember that plants get most of their nutrients from the soil)
- * Plan your garden so plants are put in areas where they naturally thrive (dry and sunny vs. wet and shady)
- * Plant in raised beds (good for the plants, good for the back!)
- * Use native plants that are already acclimatized, require low maintenance and have an in-bred resistance to local pests and diseases
- * Water deeply but infrequently to maintain strong root structure
- * Protect and attract native beneficial species (give them a place to live and a source of water – and they'll do the rest)
- * Practise annual crop rotation for each type of vegetable (keeps patterns of disease or insect invasion in check)
- * Fertilize regularly in spring and fall with organic compost

2. WHERE IS THE PEST?

Is it affecting one plant, a group of plants or the whole yard? Is the problem getting worse over time or has it stopped? Are any natural pest-predators already in the yard? Often, insect problems aren't even noticed until the pests have already left.

3. HOW SERIOUS IS THE PROBLEM?

Be realistic and accept that some damage is inevitable in nature. Are plants likely to recover if they are left untreated or is the damage more severe? Is it dangerous to the plant's health or just aesthetic?

4. DECIDE WHAT THE BEST, ENVIRONMENTALLY SENSITIVE SOLUTION IS.

What's the pest's weak point? Can it be eliminated by hand or a trap? Is it susceptible to pest predators or a natural pesticide? Will several controls in combination work better?

5. TAKE ACTION.

Start with manual, natural or biological controls. Use several in combination if necessary. If all else fails, select the lowest risk, least-toxic pesticide available, use as little as possible and always follow product instructions exactly.



“An ounce of prevention is worth a pound of pesticides”

Natural Gardening – A Guide to Alternatives to Pesticides (Metro Regional Services, Oregon)



6. ASSESS YOUR SUCCESS.

Was the pest eliminated, suppressed to acceptable levels, no change at all, or did the program fail completely? Are adjustments to the program required? Was the solution beneficial, cost effective and worth the effort?

Now is the time to think about implementing additional preventative measures.

IF THE PROBLEM PERSISTS, CONSIDER LEAST TOXIC ALTERNATIVES FIRST

Pesticide Alternatives

So now you have a pest management program in place, you've identified the problem area and what's causing the damage. Perhaps you've decided that you just cannot live without that beautiful rose bush in your garden that's infested with aphids. Or it's a more serious problem – wasps have decided to take up residence outside your bedroom window.

Now you're ready to consider what treatment or combination of treatments,

Here's a good start towards a healthy lawn

- * Ensure you have the best grass and soil for the area and climate (adequate drainage and sufficient organic matter content is just as important for lawns as gardens)
- * Use a variety of grasses that can tolerate a range of growing conditions, for both sun and shade
- * Aerate and top dress with finely screened compost and sand in the spring or fall (for proper drainage and root development)
- * Ensure the pH of your soil is between 6.0 and 7.0 (add agricultural lime to raise pH, peat moss or sulphur to lower it)
- * Remove individual weeds by hand
- * Water deeply but not too often (like a slow, soaking rain), in the early morning
- * Rake up and remove thatch build-up (dead grass on the surface of the soil)
- * Mow high and use sharp blades (maintain ideal grass height of 2½ to 3 inches – it shades the soil, prevents water evaporation and allows the grass to better compete with the weeds)
- * Mow often enough (no more than 1/3 of grass blades should be removed each time you cut)
- * "Grasscycle" – use a mulching or hand mower to leave your grass clippings on your lawn (grass clippings can supply 25 per cent of your lawn's fertilizer needs every time you mow)
- * Re-seed lawn, in spots where it's necessary, in the fall

will work most effectively on the problem. Consider the least harmful and most natural solution first.

Here are some alternatives:

PREVENTION OF FURTHER DAMAGE

– Removing opportunities for further damage may be all that is required for you to be satisfied with the results. You can minimize the potential of attracting pests in the first place by removing any welcoming place in your garden.

- Clear debris from your yard, such as piles of wood where pests lurk

- Add nutrients to soil, such as compost
- Use native and disease-resistant plant varieties
- Use companion plants that will protect other plants from weeds and pests if planted side by side. e.g., plant carrots,

radishes and cucumbers near lettuce to protect it

- Plant marigolds throughout the garden to repel many insects
- Use aromatic plants such as chives, dill and mint to attract pollinators and ward off pests
- Avoid overhead sprinkling in the evening, a major cause of mildew on sensitive plants
- Be informed – find information on your plants from books, the Internet or garden centres



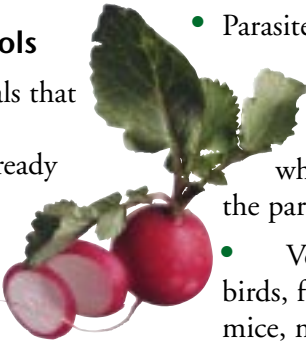
Manual Efforts

- Remove insects by brushing them away, putting out traps (for slugs), crushing by hand or using a forceful spray of water
- Eliminate weeds by spreading mulches between plants or aggressively hand weeding

Natural Controls

Since the materials that make up natural treatments are already found in nature, some tend to be more effective for longer periods of time and pests may not build up a resistance.

- Insecticides in the form of soap can be used to wash leaves and eliminate pests and diseases
- Make a natural fungicide (one tablespoon each of baking soda and horticultural oil diluted in four litres of water and sprayed on the leaves) to eliminate fungal diseases on plants such as black spot (rose bushes), blight (tomato plants), mildew and rust



Biological Controls

PEST PREDATORS are beneficial creatures that are busy working the soil, pollinating crops and feeding on (or inhabiting) pest insects. They include:

- Predator insects such as flower flies, spiders, groundbeetles, honeybees, and ladybugs
- Parasites that lay their eggs inside the eggs or bodies of host insect pests – when the eggs hatch, the parasites kill the host
- Vertebrates such as birds, frogs, snakes, bats, mice, moles and squirrels – they snack on eggs, larvae, pupae and adult insects, mites and slugs

Biologically Derived Pesticides

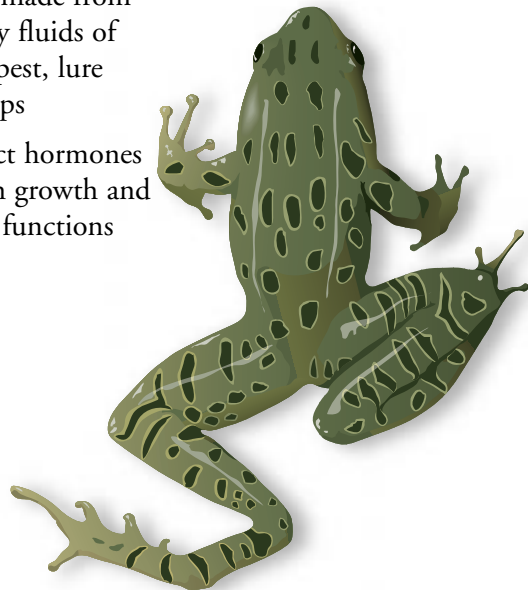
- Pheromones made from excreted body fluids of the targeted pest, lure pests into traps
- Juvenile insect hormones interfere with growth and reproductive functions of pests

CONCLUSION

Now you're ready and aware of the many sensible, safe and environmentally responsible choices that you can put into practice with your own lawn or garden. We hope you appreciate the benefits of having a beautiful yard that works in concert with nature instead of against it. With so many options to choose from, we also hope that you agree that chemical pesticides need only be used as an absolute last resort.

Good luck with your pest management control program and remember –

*Nature
Rules –
Naturally!*



When Alternatives Don't Work And You Are Considering The Use Of A Pesticide

Unfortunately, there may be times where a problem escalates to the level that seriously threatens a plant's appearance or health. Despite all your best efforts to establish healthy foundations and to "go natural" in your yard, you might now be considering the use of a synthetic pesticide. It can't be stressed enough that the most responsible way of using pesticides is to choose the LEAST TOXIC formulation and use no more than required.

The safest, hands-off way to use pesticides is to contact a licensed professional pest control company and let them handle the treatment for you. This is important if you find you have an insect infestation or rampant plant disease that affects a large area of your yard.

If you're handling pesticides yourself, here are some very important rules to remember:

DO choose the right solution for the right problem and use "domestic class" pest control products only.

DO read and follow all label directions and never use more than is recommended.

DO "spot" treat the problem rather than dispersing over wide areas. Control, don't eliminate.

DO cover yourself with protective clothing as prescribed on the label when mixing and applying. Wash clothes separately before wearing again.

DO stay clear of the treated area for the time period prescribed on the label.

DO notify your family and neighbours, keep pets indoors, and as a courtesy, post a sign that pesticide treatment is going on.

DO always wash up after use, especially if skin contact occurs.

DON'T use old, outdated products. Dispose of them at depots listed below and use only new, pre-mixed solutions.

DON'T mix any more chemicals than you'll use immediately. If using concentrates, use a brush-on rather than a spray.

DON'T apply any pesticide on a windy or rainy day.

When it comes to disposing of unwanted pesticides, ALWAYS follow the disposal rules on the label and NEVER pour unwanted portions down the drain, into storm drains or onto the ground. Take them to an approved depot. In the CRD, you can dispose of some of them for free at:

Hartland Landfill and Recycling
Hartland Avenue 360-3030

Ellice Recycle, 524 David
Street 386-4342

Alpine Disposal & Recycling
1045 Dunford Avenue
474-5145

or call the CRD Hotline at
360-3030



FOR MORE INFORMATION:

CRD Hotline

(250) 360-3030

www.crd.bc.ca

1-800-663-4425, Local 3030

hotline@crd.bc.ca

CRD Roundtable on the Environment

www.crd.bc.ca/rte/pest

BC Ministry of Water, Land and Air Protection

www.gov.bc.ca/wlap

BC Landscape & Nursery Association

1-800-421-7963

www.canadanursery.com/bclna

Victoria Horticultural Society

www.vichortsociety.org

City Green

(250) 381-9995

www.citygreen.ca

The Greater Victoria Compost Education Centre

(250) 386-WORM(9676)

www.compost.bc.ca

South Island Organic Producers Association

(250) 361-1747

www.cog.ca/siopa.htm

Society of Organic Urban Land Care Professionals

(250) 386-SOUL (7685)

www.organiclandcare.org

Society Promoting Environmental Conservation (SPEC)

(604) 736-7732

www.spec.bc.ca/pesticides

Georgia Strait Alliance

(250) 381-8321

www.georgiastrait.org



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