Companion Planting (It's Worth A Try!)
Vegetables and flowers have different odors and root secretions that are believed to affect the activity of insects and the growth of nearby plants.

- ❑ Plant marigolds and other members of the chrysanthemum family throughout the garden to protect tomatoes, beans, and other plants from a variety of insects.
- ❑ Sow aromatic plants at intervals throughout the garden to ward off pests. Chives, dill, nasturtiums, geraniums, thyme, basil, celery, mint, garlic, and onions are examples of aromatic plants often grown for their own value anyway.
- ❑ Basil is said to keep tomatoes free from infestation, and savory to protect beans. Onions or garlic sowed next to carrots will foil the **carrot fly.**
- ❑ Plant horseradish at the corners of a potato patch, and plant beans near potatoes to repel the **Colorado potato beetle.**
- ❑ Consult gardening books and magazines. Again, magazines such as *Harrowsmith* and *Organic Gardening* are a good source.

Finally

Remember that pesticides only relieve symptoms . . . they are not a cure-all. Insects will never be eradicated. Instead, why not tolerate minor flaws and blemishes on fruit and vegetation? Think of your yard and garden as a small portion of nature in which pests too have their place. Oftentimes nature provides its own pest control in the form of birds or other insects that feed on the species we consider nuisances.

But if you do want to give nature a helping hand, next time consider the alternatives before reaching for a spray can.

Suggested Reading

Forsyth, A. 1981. The Botanical Arsenal. pp. 49-51 *in* Harrowsmith, vol. VI, no. 37, August.

Forsyth, A. 1981. Flower Power Reconsidered, pp. 44-49 *in* Harrowsmith, vol. VI, no. 37. August.

The Encyclopedia of Organic Gardening, 1985. *by* Organic Gardening magazine. Rodale Press, Inc., Pennsylvania.

Zimmerman, L. 1978. Strange Bedfellows: the Voodoo and Science of Companion Planting. pp. 73-77 *in* The Harrowsmith Reader. Camden House Publishing Limited.

For more information on the proper use of pesticides and alternatives to their use, please see the other fact sheets in this series:

- ❑ Using Malathion Safely
- ❑ Using Dimethoate Safely
- ❑ Using Diazinon Safely
- ❑ House and Garden Aerosols
- ❑ Pesticides: Use Them Safely
- ❑ A Safe Insecticide for Caterpillars
- ❑ Non-Pesticidal Control of Insects
- ❑ The Pros and Cons of Pesticides
- ❑ Lawn Herbicides
- ❑ Wood Preservatives – An Overview

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Environment Canada offices in

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Yellowknife	(403) 873-3456

Provincial environment departments, or call the Agriculture Canada pesticide information number: 1-800-267-6315.

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Alternatives to Pesticides

Canada

Alternatives to Pesticides

Many city dwellers expect instant solutions when it comes to controlling insects and weeds in their gardens and back yards: simply spray a pesticide and the problem is solved. Unfortunately, it's not as simple as that. Pesticides are poisons, otherwise they wouldn't work.

Like any poison around the home, pesticides should be used as a last resort and with extreme caution. Have you ever stopped to consider that for some pest problems you may not need a pesticide? On the small scale of yards and family gardens, nonchemical pest control can be a feasible alternative.

Why Try Alternative Pest Control?

Pesticides are toxic to many forms of life in addition to the species to be controlled. Honeybees and useful predatory insects such as ladybugs can be killed outright when the pesticide is applied. Pesticide residues can accumulate in the food chain, causing damage to birds, fish, and other forms of animal life. In many cases these side effects are not immediately apparent, but show up later; for example, in the abnormal eggs laid by birds that have fed on pesticide-treated insects. Ultimately some side effects may extend to human life as well.

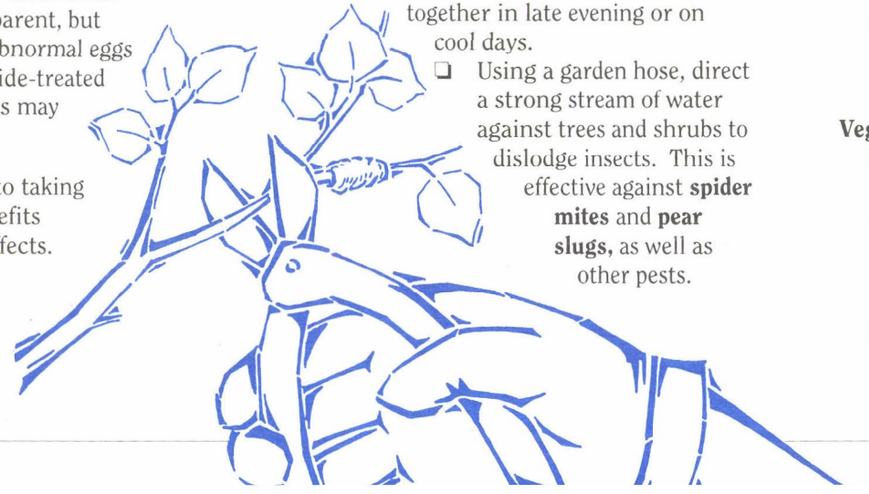
Using a pesticide can be compared to taking a prescription drug, in that the benefits must be weighed against the side effects. Pesticides alleviate symptoms, but do not provide a cure: they have not eliminated one insect species from the planet. In fact, extensive use of pesticides in agriculture has led to the development of genetically resistant insect and weed species that are no longer affected by some commonly used pesticides.

Alternative Methods of Pest Control

Trees and Shrubs

In the majority of cases, damage by insect pests is more troubling to the homeowner than it is to the plant. Most trees and shrubs can survive infestation by pests. And there are several ways to control pests without resorting to chemical pesticides.

- ❑ Pick off infested leaves by hand and dispose of them. This will control moderate infestations of such pests as the **lilac leaf miner, leaf rollers,** and **spruce budworm** larvae.
- ❑ In late fall or early spring, prune off branches containing the greyish egg bands of the **forest tent caterpillar.** Use a knife to scrape the egg bands off the larger limbs.
- ❑ If **forest tent caterpillar** eggs have hatched, pick off larvae by hand when they cluster together in late evening or on cool days.
- ❑ Using a garden hose, direct a strong stream of water against trees and shrubs to dislodge insects. This is effective against **spider mites** and **pear slugs,** as well as other pests.



- ❑ Make your own safe insecticide by adding 30 ml (2 tablespoons) of soap flakes to a litre of water and dousing the infested leaves. Use ordinary soap flakes (not laundry detergent) or an insecticidal soap, and apply the solution with a watering can.
- ❑ If a pesticide is needed, try a biodegradable product such as the biological insecticide ***Bacillus thuringiensis*** (the label will say "thuricide" or "biological insecticide") or a botanical containing pyrethrum. Pyrethrum is a natural substance derived from flowers of the chrysanthemum family; both it and ***Bacillus thuringiensis*** are relatively safe to use.

Lawns

2,4-D and its cousin compounds are commonly used to rid lawns of dandelions and thistles. These compounds are biological poisons and may remain on the lawn for a number of weeks.

- ❑ Whenever possible, dig out the weeds by hand.
- ❑ Keep your lawn well watered and fertilized. A healthy lawn is a very effective deterrent to weeds.

Vegetable Gardens

- ❑ Pick off infested leaves by hand to control insects such as the **Colorado potato beetle.**
- ❑ To keep **cutworms** away from tomatoes, peas, cabbages, and beans, remove both ends from tin cans and sink them around the bedding plants.
- ❑ Place tar-covered paper around the base of cabbage plants to prevent **cabbage flies** from laying their eggs.
- ❑ Scatter onions throughout the garden instead of planting them in rows so **root maggots** can't simply travel from plant to plant.
- ❑ Rotate crops each year to prevent the soil from being depleted of nutrients and to control soil-borne diseases.
- ❑ Use a soap flake solution to dislodge or suffocate insects (see "Trees and Shrubs").
- ❑ Use a biodegradable product such as thuricide, or biological insecticide, to control **caterpillars** attacking cole crops such as cabbage, cauliflower, and broccoli.
- ❑ Cultivate your garden. Regular hoeing will control weeds and keep plants healthy and more resistant to insects.
- ❑ Consult gardening books and magazines for more suggestions. *Harrowsmith* magazine is a good source of both theoretical and practical information on gardening without pesticides.