

# REDUCING PESTICIDES

it's perfectly natural.



## ORGANIC PEST CONTROL PRODUCTS: KNOW WHAT YOU'RE USING

Many of us see the magic words "organic" or "natural" at the garden centre and presume that the product on offer is harmless. But this isn't necessarily so. Some organic pest control products will kill desirable insects in our gardens as well as getting rid of undesirable ones. Others may harm or alter the environment in other ways.

Whatever product you use, it's important to know what you're using and not to overuse it. Always read instructions on labels and follow them exactly. Do not presume that if you give a plant a double dose it's going to be doubly effective. The reverse may happen – you may kill the plant or damage the delicate natural balance in your garden.

What is an organic pest control product? According to government regulations, a pesticide can be classified as "organic" if it's derived from natural sources and does not linger in the soil, water or atmosphere. There are many products on the market with varying degrees of effectiveness. Some of the effective organic pest control products that are sold in garden centres are included below. Cautions about their use are also included as appropriate.

### **Insecticides**

*Diatomaceous earth* – A white abrasive powder made from ground-up, fossilized shells of small sea creatures. It punctures holes in the skins or shells of many insects and caterpillars. However, it also kills bees, so use in the early morning, before flowers open.

*Insecticidal soaps* – A very popular organic control that contains salts of fatty acids, mixed with water and alcohol in various proportions. Sprayed onto the leaves of plants it is effective against aphids, spider mites, mealybugs, scale in its early stages and white fly.

*Dormant and horticultural oils* – Petroleum-based oils sprayed onto plants to smother insects in various developmental stages. Dormant oils are used before trees leaf out to kill overwintering eggs or larva. Horticultural oils can be used on actively growing plants against pests such as mealy bugs and scales.

### **Herbicides**

*Corn Gluten* – A cornstarch by-product, it may be mixed with soil conditioners. It works by suppressing *all* seed germination, but will not kill established weeds. It is primarily for lawns and must be applied in early spring. Do not reseed the lawn at the same time.



This fact sheet has been prepared by the Toronto Master Gardeners



*Horticultural Vinegar* – A stronger version of household vinegar that contains 20% acetic acid. It is primarily used as a spot herbicide on weeds. Use it carefully since it will kill any plant onto which it is sprayed.

### **Fungicides**

*Lime sulphur solution* – A combination of hydrated lime and sulphur used as a dormant spray in early spring. It controls powdery mildew and can be effective against scale in its early stages. Causes skin and eye irritation and must be applied using masks and gloves.

*Sulphur* – Made from ground-up sulphur dust and is relatively harmless. It is effective for acidifying soil and for controlling powdery mildew, black spot, rust and other diseases of plants. It can also be used as a dust on dahlia, gladioli and canna tubers before putting them in winter storage.

### **Biological controls**

*Bacillus thuringiensis* – Also known as BT. It works by increasing naturally-occurring organisms that kill the pests (or their eggs) or discourage the pests from multiplying. It is effective for many kinds of caterpillars and the Colorado potato beetle. It is usually sold as a dust or mixed into insecticidal soaps.

*Beneficial nematodes (Steinernema and Heterorhabditis sp)* – These help to control lawn grubs such as larvae of Japanese beetles, June bugs and European Chafer, sod webworm, wireworm and various weevils. They should be mixed with water and watered in deeply when the temperature is above 15F.

*Beneficial nematodes (Steinernema spp only)* – control Iris borer, cut worms, flea beetles, and other shallow living larvae. Should be applied when temperatures are above 15C.

### **Physical controls**

*Pheromone traps* – Use a sex pheromone to lure insects into a container where they are trapped and drown. They are effective but indiscriminate, killing good as well as bad insects.

*Toadhouses* – Attract toads by putting an upturned clay flowerpot (with an entry hole on one side) in a shady, moist place in your garden. This is an effective way to get rid of many pests since the toads eat slugs, cutworms, sow bugs, caterpillars and various beetles.