

Alternatives to pesticides : healthy trees and shrubs

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# Alternatives to pesticides

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## Healthy trees and shrubs

Trees and shrubs need regular care for the first few years after they are planted. Later they need less attention. With regular monitoring, you can control insects and diseases. There are natural solutions that can be used if you are willing to put in a little effort.

The first thing is to choose trees that suit you and your surroundings. Fruit trees attract birds, flowering shrubs are always popular and crabapple trees are very common. Unfortunately, fruit trees need more care than other trees, so you shouldn't plant them if you go away for a month or two each summer.

### INSECTS COMMONLY FOUND ON TREES AND SHRUBS

You must get to know how to recognize insects and diseases and how to get rid of them without using pesticides. Healthy trees and shrubs are waiting for you; you'll soon find out what a wonderful contribution they make to the environment.

Dormant oil is a natural, nontoxic pesticide that can be found in any garden centre. It asphyxiates insects. Trees, including fruit trees and evergreens as well as shrubs, can be treated with dormant oil. Read the label carefully before spraying, because the dehydrating action of the oil can be injurious to susceptible plants. Dormant oil must be applied before the buds swallow and are ready to open.

Many shrubs may be struck by diseases like mildew or rust, if their conditions are poor. Air circulation between plants is important. Don't be afraid to cut tree branches to admit light

and air. Avoid overwatering, which is an invitation to fungal diseases. Remove leaves or branches that are infested with mould, spot, rust or canker. Applications of sulphur and lime can be used to control disease.

### INSECTS AND DISEASES OF FRUIT TREES

The most popular fruit tree in city gardens is probably the apple tree, if berry bushes are excluded. Here are a few suggestions on getting rid of insects and diseases commonly seen. **Codling moth** and **apple maggot** should be monitored because they attack apples directly. Dormant oil applied in spring helps reduce their numbers. Many other

insects can be controlled the same way as common tree and shrub pests or using traps and bait.

There are a number of methods you can try to catch insects that crawl up tree trunks, like eastern and forest tent caterpillars or fall and spring cankerworms. Wrap a 15 to 21 cm band of **corrugated cardboard** or cloth around the trunk and coat it with tar, making sure that the insects cannot crawl under it. Remove and burn the band regularly.

Start in spring and repeat through summer and fall. Also, in spring and fall, brush the trunk with a stiff brush to remove larvae that may have begun to develop there.

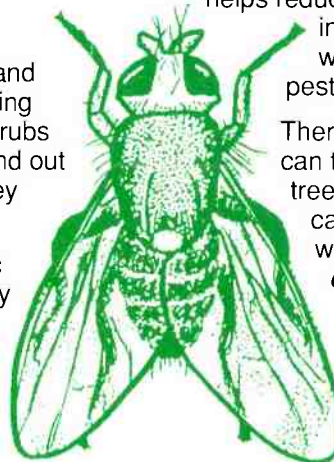
Follow this method in spring to get rid of tarnished plant bugs: fold a piece of cardboard in half, coat one side with a sticky material, and attach it 1 m above the ground. To fight apple maggot, after the petals have



Codling Moth



Apple Maggot



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**INSECTS****SOLUTIONS****REMARKS**

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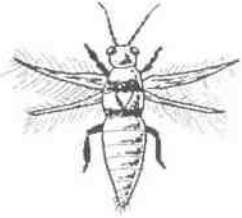
Aphid

dormant oil

apply in April before the opening of the buds.

cut the infested branches and spray with soapy water.

repeat regularly. rinse with clear water before the foliage is completely dry.



Thrips

dormant oil

apply before the buds swell and turn green.



Leafminer

remove all infested leaves and crush them to kill the bugs.

they live between the surfaces of the leaves.



Caterpillar

plant nasturtiums near the trees.

leafminers are repelled by nasturtiums.

remove leaves with caterpillars in rolled up leaves.

Bacillus Turingensus (BT)

can be used to kill carterpillars.

diatomaceous earth  
lime

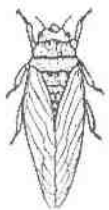
apply on caterpillars directly.



Forest tent caterpillar

destroy egg masses with a broom or a rag soaked in alcohol.

caterpillars feed on deciduous trees (falling leaves in fall).

repeat for a few weeks.  
BT, lime and diatomaceous earth.

Leafhopper

plant petunias and geraniums near the trees.

those plants deter leafhoppers.



Tarnished plant bug

apply rotenone and pyrethrum.

spread at night to avoid killing honey bees.



Mealybug

rub with a cotton soaked in rubbing alcohol.

repeat for a few weeks.



Red mite

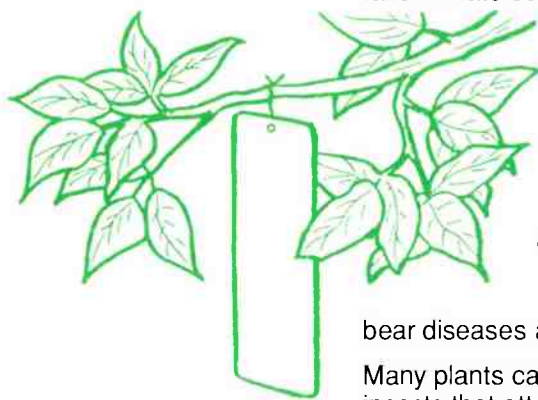
spray with cold soapy water.

hot and dry weather favors rapid multiplication.

spread wood ash, lime, rye flour, diatomaceous earth or pyrethrum on plants.

dormant oil

dormant oil is commercially sold.



Sticky yellow panel

fallen in late June, hang red balls covered with glue or tar 1.5 m above the ground.

Place **sticky yellow panels** in trees to attract insects. It will help you identify the bugs and find out the degree of infestation. A simple way to cut down on insects and disease is to pick up all the fallen fruit and leaves, which often bear diseases and insects.

Many plants can repel apple maggot and other insects that attack apple trees. Plant aromatic herbs (mint, lavender, sage), nasturtiums or marigolds under the trees. Chives planted at the foot of trees can reduce apple scab infestations.

To control mildew and apple scab, spray undiluted human urine on the foliage before the buds open. Three weeks later, repeat the treatment with a solution of one part urine and four parts water. In fall, repeat again with a solution of equal parts urine and water.

### CARE AND MAINTENANCE OF FRUIT TREES

Always plant two or three different varieties of apple trees to ensure good pollination and

thus, fruit. Crabapples are good pollinators. Apple trees don't produce fruit until their third year. The soil must be rich in nitrogen and must be fertilized with compost or fish meal. The trees need a lot of sunlight and protection against prevailing winds.

**Pruning** is hard to sum up in a few lines. Good reference books will tell you everything you need to know to do it right. You must prune trees regularly to ensure fruit production. With a good pruning program, your trees will be more resistant to pathogens. The best time to prune is on a calm, sunny day in March or April. The first few years, you need to train the trees by cutting the main limbs to give them their shape. You also need to remove branches that are damaged, that intertwine, or that compete for light.

### GENERAL CARE AND MAINTENANCE OF TREES

In Quebec, it is best to plant trees, shrubs and evergreens in the spring, because in fall they don't usually have enough time to put down new roots before the ground freezes. Spring planting can be started when the ground has thawed and the soil is dry enough to work, but before new growth has really begun.



Piece of cardboard coated with sticky material

During the first years of growth, trees need a lot of water. When they get older, a good watering once a week during the dry days of July is sufficient. To prevent fungus disease, never sprinkle the trunk and foliage.

In the summer, don't set up the barbecue under the trees, since the smoke and heat may harm them. Don't nurse tree injuries. We tend to believe that trees bleed like us when they are injured, but it isn't true. Like a bandage left too long on a human wound, a wound dressing can harbour infection, since water can seep through the cracks. Never use paint to dress a tree wound.

Call a tree specialist to have large trees trimmed, since it may be dangerous work. If the roots show up at the surface, cover them with wet peat moss to prevent dehydration.

### DECIDUOUS TREES AND SHRUBS

In spring, remove any winter protection and cut back damaged or injured branches. Fertilize older trees in early spring or late fall when growth has stopped. Water the soil around the trees for two or three days before fertilizing to soften the soil. **Dig holes at the foliage limit.** Apply a fertilizer rich in nitrogen and potassium (bonemeal, seaweed, fish meal) to each hole and fill it with sand and compost. This helps aerate compacted soil.

Prune leafy shrubs and hedges in early spring before the buds open. Spring-flowering shrubs aren't pruned until after they have bloomed. If you prune them early in spring like the others, you will cut the flower buds, so you won't have flowers later on. In fall, wrap the young trunks in a spiral casing to ward off mice. Remove dead or damaged branches.

### EVERGREENS

In spring, remove winter protection from small evergreens. Apply a fertilizer rich in nitrogen and potassium. Evergreens prefer slightly acid soil. It is important to add humus. In fall, an application of potassium, like bonemeal, will increase the evergreen's resistance to cold.

Prune cedar hedges in June and August. Make sure to **prune** the top narrower than the base so that light reaches the lower branches. In fall, wrap the evergreens with burlap or another

protective covering and water thoroughly. When the ground is completely frozen, place a mulch under the hedges to keep in the soil humidity over the winter.

### LONG-LASTING INVESTMENTS

Trees and shrubs don't require much attention, but like the rest of the garden, they do need regular care. Unfortunately, they are often neglected: trees may suffer from nutrient deficiency, insect infestation or disease. Trees and shrubs are long-lasting investments. They make houses more beautiful, provide much-appreciated shade, retain soil and moisture, and provide a habitat for birds. They deserve care and attention.

### RECOMMENDED READING

Kourik, Robert. 1986. *Designing and Maintaining Your Edible Landscape Naturally*. Santa Rosa, CA: Metamorphic Press. 370 p.

Turner, KB, CS Kirby and BW Dance. 1975. *Common Pests of Trees and Shrubs*. Publication PC, 3. Ontario Ministry of Natural Resources.

Yepsen, Roger B. Jr. 1976. *Organic Plant Protection: A Comprehensive Reference on Controlling Insects and Diseases in the Garden, Orchard and Yard without Using Chemicals*. Emmaus, PA: Rodale Press. 688 p.

Collaborator : Sylvie Deslauriers, agronomist

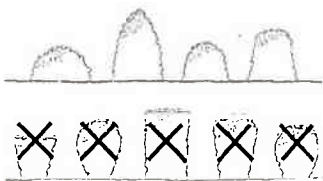
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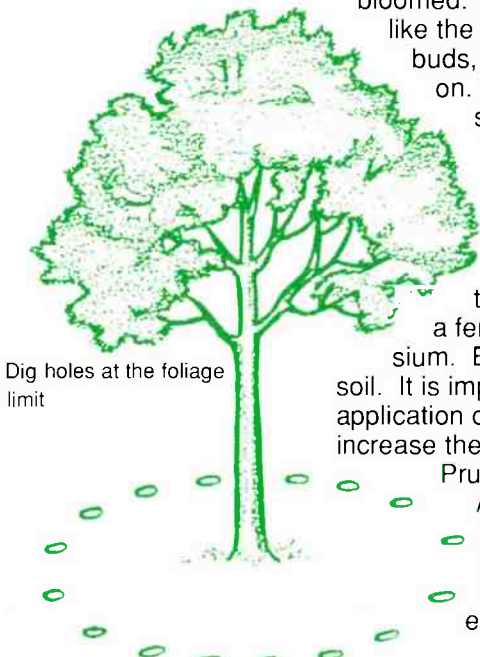
Environment Canada  
Communications Branch  
3, Buade Street  
Post Office Box 6060  
Québec City, Québec  
G1R 4V7  
(418) 648-7204  
1-800-463-4311

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Pruning



Dig holes at the foliage limit

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