

EXTENSION NOTES



TREE GUARDS PROTECT YOUR TREES

Tree guards can increase the survival rate of trees by protecting the trunks from damage caused by weather, animals and equipment.

This Extension Note provides information on the causes of trunk damage and the kinds of tree guards you can use to protect your trees.

CAUSES OF DAMAGE TO TREE TRUNKS

Trees have a thin layer of cells called the cambium that lies just beneath the bark. The cambium transports water and nutrients to and from the roots and leaves. It also produces new wood and bark tissue as plants grow. Anything that damages the bark or the underlying cambium can weaken trees and make them more vulnerable to disease and insects.

tree guards prevent this kind of damage by blocking small mammals from trees.

WEATHER

Sunscauld or frost cracking is caused by above-average temperatures in the winter or early spring. Cracks in the bark and the cambium can occur when trees are warmed in the day and rapidly cooled as the sun goes down. Some tree guards protect trees from this kind of damage by moderating extreme temperatures or reflecting sunlight.

EQUIPMENT

Careless use of lawn mowers, weed trimmers and other equipment can damage tree trunks. Some guards reduce the risk of this kind of damage by protecting trees from abrasion and making them easier to see.

ANIMALS

In the winter, when other foods are scarce, voles, mice and rabbits eat the bark of young trees. Voles, which cause the most damage, frequently girdle a tree by removing a strip of bark from around the tree, usually within 30 centimetres of the ground. Girdling can kill a tree. Some



Grass trimmers and lawn mowers can damage the bark and cambium of trees.

THINGS TO CONSIDER

When choosing a tree guard, you need to consider the site and the kind of damage your tree is vulnerable to. Choose the type of tree guard that provides the protection your tree needs. Around the home, trees are more vulnerable to lawn mowers and grass trimmers. In open fields, trees are more likely to be damaged by animals.

Several commercial tree guards are available. Homemade guards are also effective and are usually cheaper.

Tree guards should extend about five centimetres into the ground and be at least 20 centimetres high. This should protect trees from mice and voles, which travel under the snow.

Choose light-colored materials that reflect the sun. Dark or shiny materials, such as aluminum, can cause the bark to absorb heat, increasing susceptibility to frost cracking.

When you install a tree guard, leave enough room for the tree to grow. Use a material that expands with the tree or remove or adjust the guard when it begins to constrict the tree. Also leave room for air to circulate. Poor ventilation causes moisture buildup, which can lead to rot, disease and insect damage.

TYPES OF TREE GUARDS

ARBORGARD

ArborGards are plastic forms that protect trees from weather, animals and equipment. Ventilation holes in the guard allow the trunk to breathe, reducing moisture buildup. ArborGards expand as trees grow and are easy to install. They are 23 centimetres high and fit around tree trunks up to 10 centimetres in diameter. They can be joined together to fit around larger trees.

Supplier:

Canadian Forestry Equipment Ltd.

1540 Trinity Drive, Unit #4

Mississauga, Ontario

L5T 1L6

Telephone: (800) 387-4940

Fax: (905) 795-1632

Cost: \$1.78 each 1996

SPIRAL GUARD

Spiral Guards are plastic strips that can be wrapped around tree trunks. They protect trees from weather damage, and animal browsing. Ventilation holes allow the trunk to



ArborGards expand as trees grow and have ventilation holes that prevent moisture buildup.



Spiral Guards expand as saplings grow.

breathe, reducing moisture buildup. Spiral Guards are flexible and expand as trees grow. They are available in 30-, 60- and 75-centimetre lengths.

Supplier:

Canadian Forestry Equipment Ltd.
1540 Trinity Drive, Unit #4
Mississauga, Ontario
L5T 1L6
Telephone: (800) 387-4940
Fax: (905) 795-1632

Cost: \$0.79 for the 60-centimetre length 1996

TEXGUARD

Texguards are bright-blue, plastic-mesh sheets that are secured to the ground by metal pins. They are easy to see and protect trees from animals and equipment. Unlike other guards, Texguards don't need to be removed when the trees outgrow them because they break down in sunlight in a few years. Texguards come in lengths of 60 to 100 centimetres, with mesh densities of 14 to 24 strands. Tighter meshes (24 strands) are best for hardwood seedlings because they prevent branches from growing through the guards and being eaten by animals.

Supplier:

Texguard Forestry Products Ltd.
P.O. Box 139
Vananda, British Columbia
V0N 3K0
Telephone: (604) 486-7316
Fax: (604) 486-7316

Cost: \$1.05 for the 24-strand, 30-centimetre length 1996

PAPER WRAP

Commercial paper wraps are loosely placed around the tree and held in place with rope or string. They protect trees from weather damage, but not from animals or equipment. Adjust the ropes every year so that they do not constrict the tree.

BURLAP

Loosely applied and held in place with string or rope, burlap protects trees from weather. It does not protect them from animals or equipment. Adjust the ropes every year so that they do not constrict the tree.

HARDWARE CLOTH

Hardware cloth protects trees from animals and equipment, but it doesn't protect them from weather. Place the hardware cloth around the tree, but not touching it. The bottom of the wire should extend five



Loosely wrapped and secured with rope, burlap protects trees from extreme temperatures.



Hardware cloth protects trees from voles and other small mammals.

centimetres into the ground. Check the wire every year to ensure that it does not constrict the tree.

FIELD TILE

Plastic field tiles, which are normally used for drainage in fields and around houses, protect trees from weather, animals and equipment. Cut the tile to create a piece that is 35 centimetres high and cut lengthwise so it loosely wraps around the tree. The bottom edge of the tile should extend five centimetres into the ground.

PLASTIC POP BOTTLES

Two-litre, plastic pop-bottles, stacked one on top of another, protect trees from weather damage, animals and equipment. Cut the bottoms and tops of the bottles to create cylinders. Place them over the tree, putting each one on the outside of the bottle below it to form a tube that is at least 30 centimetres high. Make two holes at the top and at the bottom. Run string through the holes and tie the tube to a wooden stake.

MAINTAINING TREE GUARDS

Inspect your tree guards every year to ensure that they are not restricting the growth of your trees. Adjust any guards that constrict the trunk or branches.

Some tree guards break down in sunlight. However, most do not. As your trees outgrow the guards, you'll need to remove the guards and clean up the debris.

For more information on tree guards contact your local tree nursery or landscaper.

Note: The mention of trade names of products is for the convenience of the reader and does not constitute endorsement of a particular product by the Ministry of Natural Resources to the exclusion of any other suitable product.



Field tile protects trees from weather, small mammals and equipment. White field tiles are preferable to black.



A stack of four plastic pop-bottles protects saplings from weather, small mammals and equipment.

For more information contact:

LandOwner Resource Centre

P.O. Box 599, 5524 Dickinson Street

Manotick, Ontario K4M 1A5

Tel 613 692 2390 or 1 800 387 5304

Fax 613 692 2806

Product Ordering: 1-888-571-INFO (4636)

E-mail: lrc@sympatico.ca

Internet: <http://www.lrconline.com>

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