

PLANTING SHADE TREES



Trees enrich our lives immeasurably. In addition to their beauty they provide cooling shade, they enhance our privacy and their branches protect us. They are important components of our total environment, for they also filter and purify the air we breathe.

The enjoyment and benefits we get from trees cannot be measured precisely. However, there are ways to calculate the value they can add to our properties — as much as \$5,000 has been paid in a damage suit to replace a single tree. Depending on such factors as species, size, form, condition and location, a tree 10 inches in diameter could have a value of from \$500 to \$1,000.

selecting a shade tree

When planning to plant a tree, look around for existing trees of the same species to see how well they have grown, and their effect on their surroundings. Attention should be paid to eventual size, form, colour of foliage, strength of wood, rate of growth, silhouette, hardiness, and resistance to insects and disease. Some trees have dense foliage and shallow roots that could interfere with lawn growth. Some drop overly abundant litter. The roots of

others, notably willows and poplars, can sometimes plug water and sewer pipes.

Sugar maple, red oak, mountain ash and linden are among the deciduous trees commonly planted in eastern Canada. Other popular hardwoods that are usually faster growing — but more subject to damage from insects and disease — are red maple and Lombardy poplar. Chinese elm, many willows and Manitoba maple are fast-growing but short-lived, and are susceptible to storm damage and to insect and disease attack.

Norway spruce, Austrian pine and eastern white cedar are popular, fast-growing conifers in eastern Canada. Eastern hemlock is another attractive conifer, but it is slow-growing.

In the prairie provinces, green ash, American elm and Manitoba maple are commonly planted hardwoods, with good characteristics. Green ash is very drought-tolerant, and elm can be grown on a wide variety of soil conditions although it prefers moist sites. Manitoba maple is fairly drought-tolerant, but is susceptible to canker attack. Other popular hardwoods in this region are oak, willow and hybrid poplar.

Colorado blue spruce is the most commonly planted conifer on the prairies, but white spruce is also highly popular.

Because of the climate, many native species cannot be planted on the West Coast as shade trees — they grow so big in a short period of time they would overwhelm the average-sized residential property. A few that are favoured on Vancouver Island and the lower mainland of British Columbia are Garry oak, arbutus and maple.

On larger properties, local species such as red cedar, hemlock and fir are often used for hedges and windbreaks. In the Interior, lodgepole pine and Ponderosa pine are extensively planted.

Popular exotic species in British Columbia include Japanese plum and cherry, juniper, blue spruce and Port Orford cedar.

when to plant

Trees can be transplanted in the spring or fall. Spring tree planting can be done once the frost is out of the ground. For best results, trees should not be transplanted after new growth appears.

Fall transplanting of conifers can be started late in August and, if possible, should be completed six weeks before the ground freezes. This will permit the roots to become firmly established and will avoid frost heaving. Transplanting of hardwoods can be carried out from the time the leaves drop until the ground freezes.

selecting a planting site

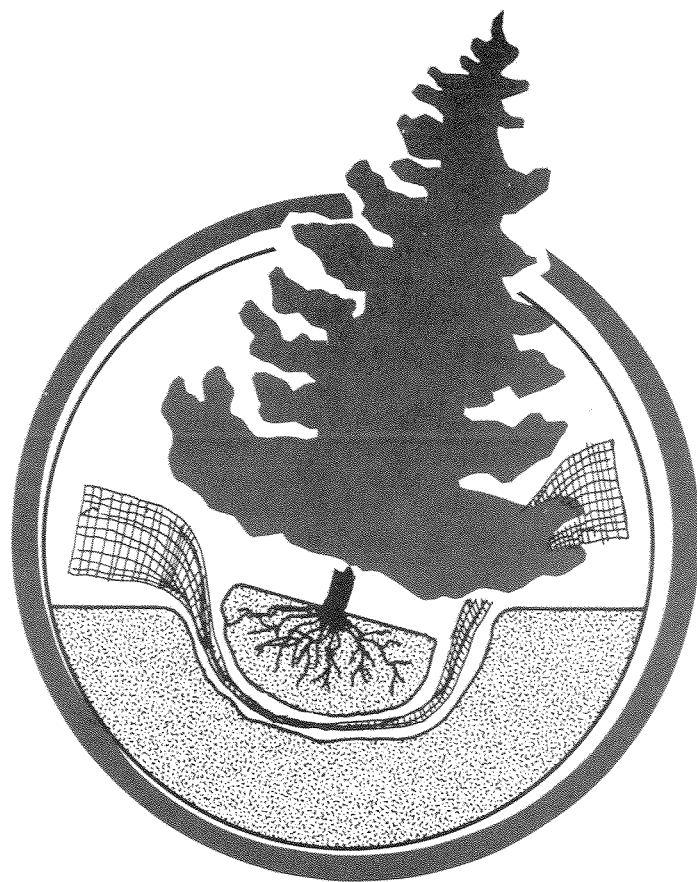
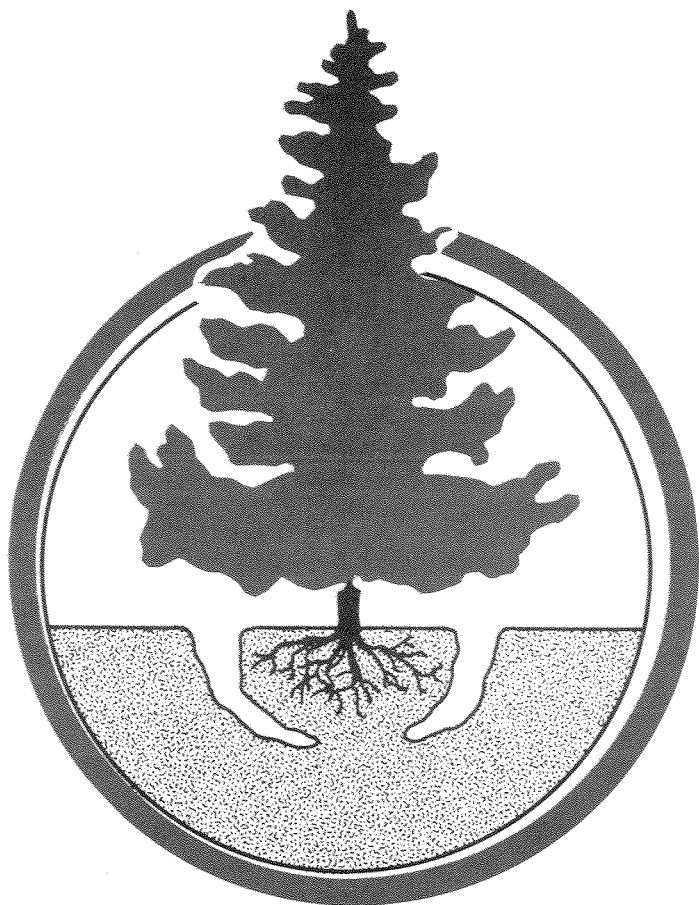
The tree as it will appear full-grown should be considered when selecting a planting site. Overhead clothes lines and utility lines may interfere with trees after a few years.

Avoid problems with your neighbours by not planting too close to common property lines. Laws vary from one locality to another but generally, branches overhanging a neighbouring property may be removed without consulting the owner of the tree. Furthermore, a tree owner should be able to care for his trees without trespassing on his neighbour's property.

obtaining a tree

Trees obtained from a nursery usually will have better roots and crown systems, and will be more likely to survive than wildlings. However, trees 10 or 12 feet high growing wild can be moved successfully, provided care is used and enough of the root system is kept. Moving larger trees requires experience, special methods and heavy equipment. Trees grown in deep, rich soil on open sites have a better chance to survive than trees obtained from poor, shallow soil and from wooded areas.

If possible, trees should be moved with a ball of soil around the roots. Dig a trench around the tree about two feet from the trunk. The trench should be wide enough to permit it to be dug 18 inches deep, or below the level of the main roots. Some larger roots will have to be cut, but



as much of the root system as possible should be retained. Cut underneath with a sharp spade so that the tree is loosened in the hole. Gently rake away earth from the top to make the ball lighter to handle. Now work burlap under and up around the ball, tying it at the top to hold the soil in place. The use of wet burlap and peat moss will prevent drying.

If much of the root system of a deciduous tree has been lost in lifting, prune back the branches to balance the top with the roots. Weak, damaged or unsightly branches should be removed to leave a well-balanced tree. To avoid forking, do not cut back the leader unless all but one of the laterals in the top whorl are also removed. Evergreens are not pruned unless there has been a severe root loss, and then only some of the past year's growth should be removed.

An axe should not be used for pruning. Use a sharp knife, pruner or handsaw. Cuts should be flush to the parent limb to promote rapid healing of the pruning wound.

planting the tree

Trees should be planted as soon as possible after digging. The hole should be large enough to permit the roots to be spread out in a natural position and deep enough to allow for at least six inches of soil under the roots. Poor soil from the hole should be replaced by sandy loam to which a one-third volume of peat moss has been added. If a chemical fertilizer is used, follow the directions closely,

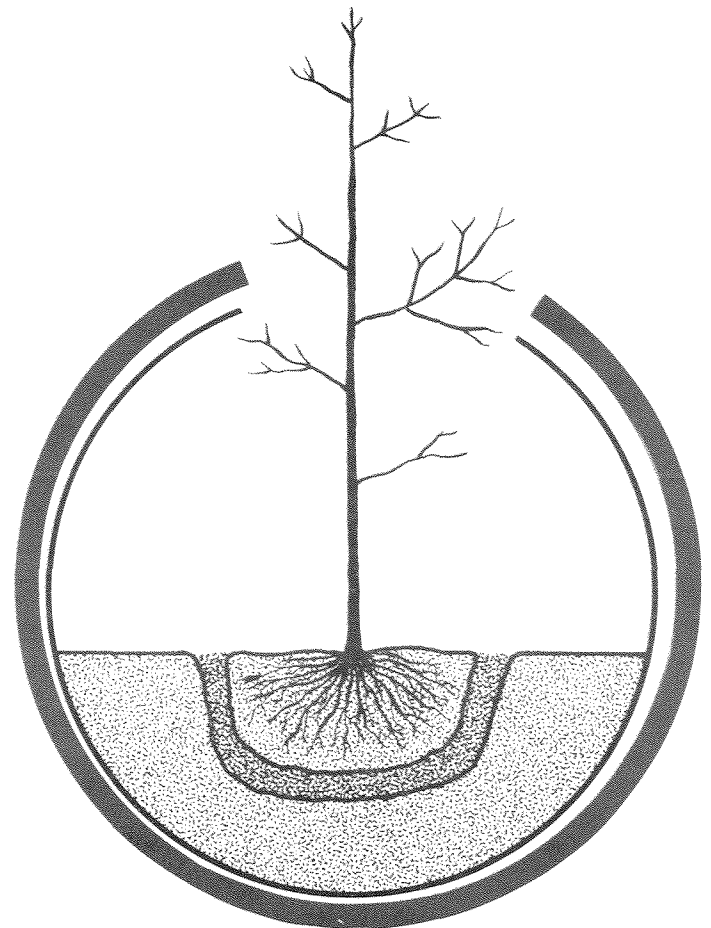
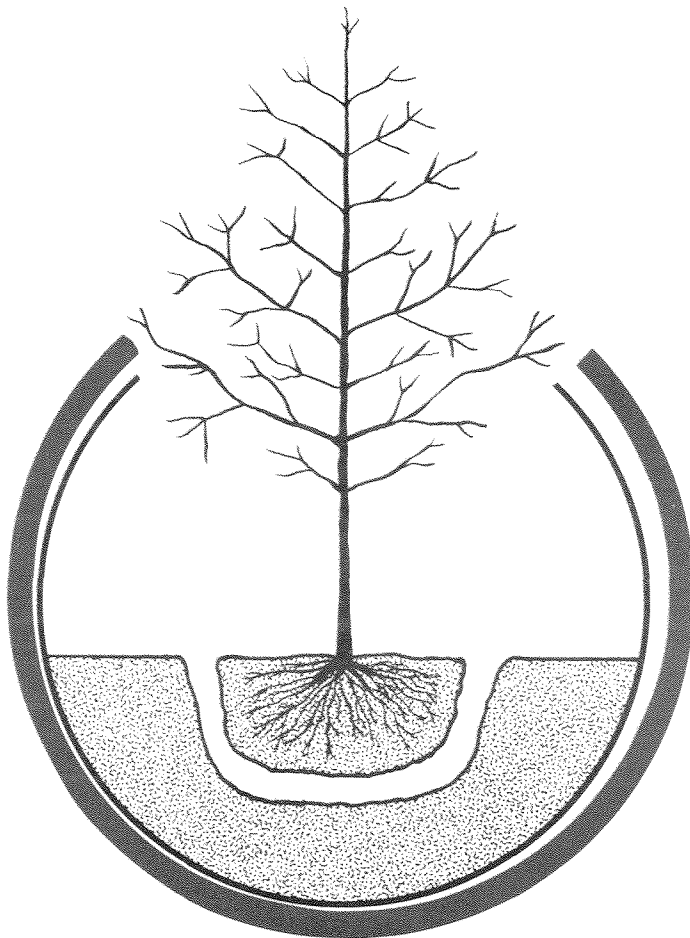
and in particular ensure that it is mixed in well with the soil. There is no need to remove burlap from the tree roots, although the binding cords around the trees should be cut.

The tree should be planted at the same depth as in its previous site. Fill in around the roots a little at a time with the soil and peat moss. When the roots are covered, water thoroughly to ensure that no air pockets remain. Complete the filling of the hole, tamping the soil down firmly. On dry sandy sites a slight depression should be left around the tree to provide for extra water during rains.

Generally, nursery-grown trees over two inches in diameter at one foot above ground level are balled and burlapped; such trees are referred to as b/b stock. These trees can be planted on a year-round basis, using the procedures outlined previously.

It may be necessary to provide the tree with some support until it becomes established. This should be done before filling in. Drive in a sturdy stake; larger trees may require guy wires. Chafing of the tree bark can be avoided by covering the loop from the supporting stake or from the guy wires with a section of rubber hose, canvas or other material. The loop should be checked for looseness periodically to ensure that the tree is not being girdled as it grows.

Trees should not have to compete with grass or weeds before they have become completely established. A circular patch three or four feet in diameter should be kept free of vegetation and mulched with wood chips or peat moss to retain moisture.



tree care

Property owners should not take their trees for granted. In particular, raising or lowering the existing lawn grade should be avoided. Removing top soil may destroy some roots and expose others to the drying of the wind and sun. Adding top soil may cause root suffocation and eventually kill the tree or weaken it until it is susceptible to attack by insects and diseases.

Soil compaction around trees can be caused by heavy vehicles or by tramping. This results in inadequate aeration of soil, suffocation of the tree and excessive surface-water runoff. Inadequate aeration may be remedied by spading.

Fertilization stimulates the growth of foliage and helps trees resist the effects of drought, disease and insect attack. It is also helpful in rejuvenating weak trees, especially where poor soil exists. Fertilizer is most effective on ground that has ample moisture and is well aerated.

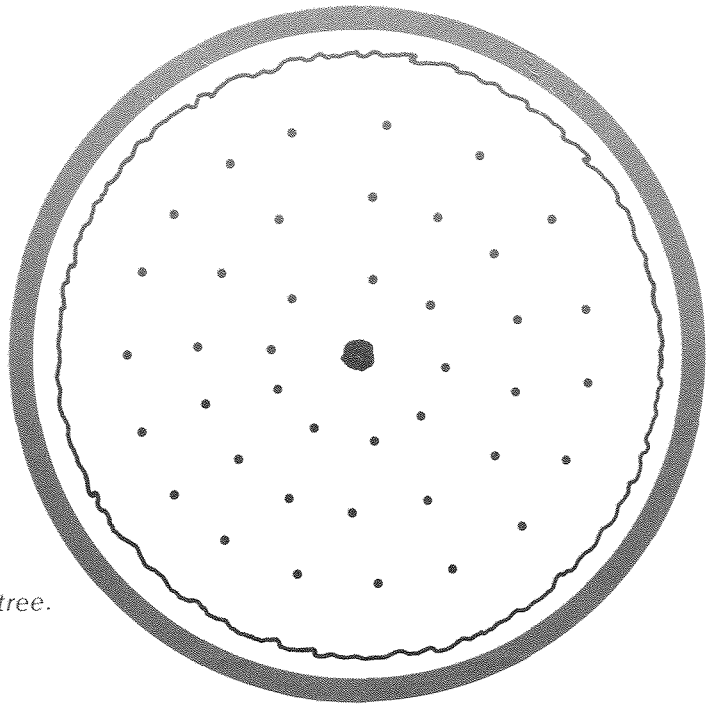
Complete fertilizers with a high nitrogen content generally produce the best results. Commercial fertilizers such as

10-6-4, 10-5-5 and 7-8-6 have been found suitable in some locations. The quantity to be applied varies. A rule of thumb for large hardwoods is three pounds of fertilizer per inch of tree diameter. For small hardwoods one to two pounds per inch is sufficient. Blood meal applied in the same ratios to conifers gives excellent results.

Slow-acting fertilizers may be applied at any time. Quick-acting fertilizers should be applied only in the spring or early summer, so that the succulent growth produced may have time to harden before winter.

Best results are obtained by applying fertilizer in holes drilled or punched with a crowbar 18 inches apart and 15 to 18 inches deep over the entire ground area covered by the tree's branches. The fertilizer is placed in the holes, with the last three or four inches filled with loose soil or peat moss to provide channels for air and water. Trees obtain only limited benefit from fertilizer broadcast over the lawn surface.

Water is important in seasons of low rainfall. It should be applied for two to four hours at a time twice a week, to thoroughly wet the soil.



Fertilizer holes should be spaced evenly around base of tree.

Cette publication est disponible en français sous le titre *Plantation d'arbres d'ombrage*.

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