



healthy
landscapes



Tree Care and Maintenance

Staking

Trees need time to develop strong roots to feed themselves and anchor into the soil. When the wind howls and the rain falls, the young tree's roots react and push deeper into the soil. The winds make it stronger. In contrast, staked trees do not fully mature, despite their stability. What saplings need more than protection is the opportunity to grow and to stand on their own roots.



wider.

If and when the stakes are removed, the lack of trunk and root development makes these trees prime candidates for breakage or blow-down.

Improper tree staking replaces a supportive trunk and root system with an artificial support that causes the tree to put its resources into growing taller but not growing

The only time to stake a tree, if it is planted as a bare root tree and if it is in a very windy location and may blow over before some roots are established – But place staking as low as possible and use mesh webbing straps (no cord, wire, or hose) to support the tree. Wrap soft, stretchy tree tape, available at garden supply stores, in a figure-8 around the trunk just below the point where the first branches emerge. Tie one to each stake. It will stabilize the tree but allow enough movement to stimulate rooting. REMOVE after one season of growth.

Wrapping a tree

Trees may be wrapped for a couple of reasons:

1. To protect from sun scald and freezing damage in winter.

Bark is normally what protects trees from sunscald, but sometimes new trees don't have enough bark yet. In the winter when the bark of the tree warms up during the day and then freezes at night, this can cause the bark to split in frost cracks. To help the tree you can use products such as paper tree wrap to keep the sun's rays from beating down on the bark, especially in sub-freezing weather in winter and blazing hot weather in summer.

There are several variations of trunk wrap materials, including plastic and foil, as well as different brands of paper wraps. Find one that

works in your situation, and get it installed before damage occurs. Wrap from the ground-up, so that it will shed water like shingles. Be sure it doesn't bind the trunk in any way. That means that it will need to expand as the trunk grows larger. Leave it in place for a year or two following planting, then watch closely for the first several months after you remove it.



A tree wrapped from end of November through March should be just fine.

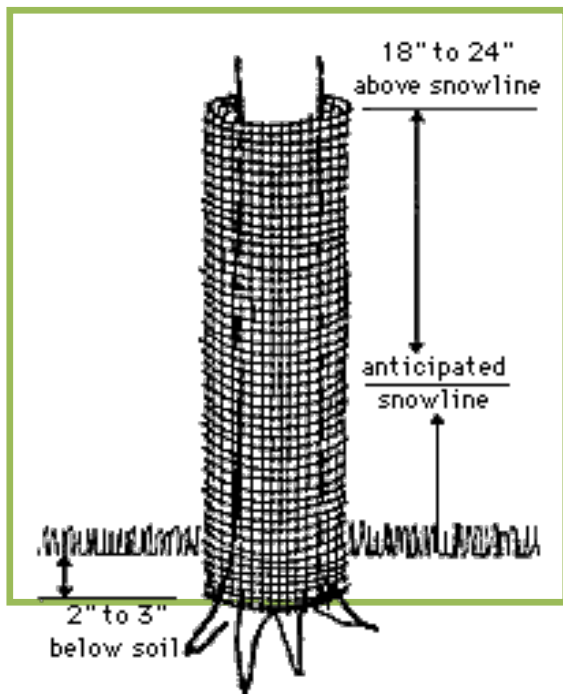
2. To protect against animal feeding damage

Rabbits and rodents enjoy feeding on young succulent tree bark in the winter. To protect young trees wrap the tree up as high as you can.

As seen in this picture, rabbits will stand on top of the snow and chew on trees.



Animal feeding damage at base of tree



Fertilizing

Trees in urban environments are often under high stress conditions due to low moisture availability, soil compaction, physical damage, nearby construction, and competition from turf and nearby trees and shrubs. Fertilizer applications may reduce, but cannot eliminate, environmental stresses such as these. It is important to keep newly planted trees watered and pruned and to keep weeds away from their bases to avoid excess stress.

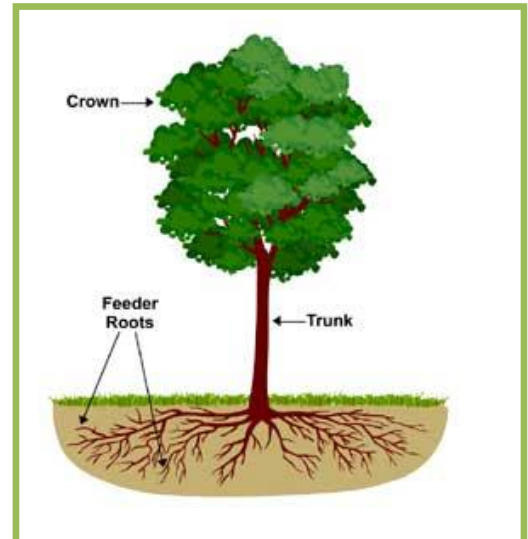
The best indicator of whether fertilization is necessary is a soil test. Ideally, a soil sample should be taken before trees are planted. Additional samples can be taken every 3 to 5 years thereafter to determine whether any nutrients are lacking.

Foliage color is another indicator of the need for fertilization. Yellow or "off-color" leaves may indicate the need for fertilization as these symptoms generally occur on trees which are not taking up enough of one or more required nutrient.

Most trees experience a single flush of growth during spring followed by slower growth throughout the summer and fall. Because of this single flush of growth, it is desirable to have nutrients available to the tree as this growth is about to occur. The most beneficial time to apply fertilizer is from when the ground is workable in the spring until just before trees start growing in early May. Do not fertilize in the fall, as this stimulates new growth that won't have a chance to harden off before freeze-up.

Plant nutrition is a balancing act and too much fertilizer, as well as too little, can negatively affect the growth and wellbeing of your trees. Over fertilizing can over-stimulate crown growth, making it harder for the tree to survive drought

All too often gardeners assume that if a plant is not doing well they should fertilize to correct the situation. Fertilization may be helpful but only after the problem causing poor growth has been corrected.



To be most effective, fertilizer must come into contact with a tree's small "feeder roots," which are located at the dripline and extend out at least one metre beyond its perimeter, but just 15 to 45 centimetres below the soil surface. While deep, woody roots provide stability, only the feeder roots are capable of taking up water and nutrients.

The best thing you can do for your new tree, is add compost around it, and mulch over the leaves with your lawnmower in the fall and let the broken down leaves enrich the soil.

Mulching

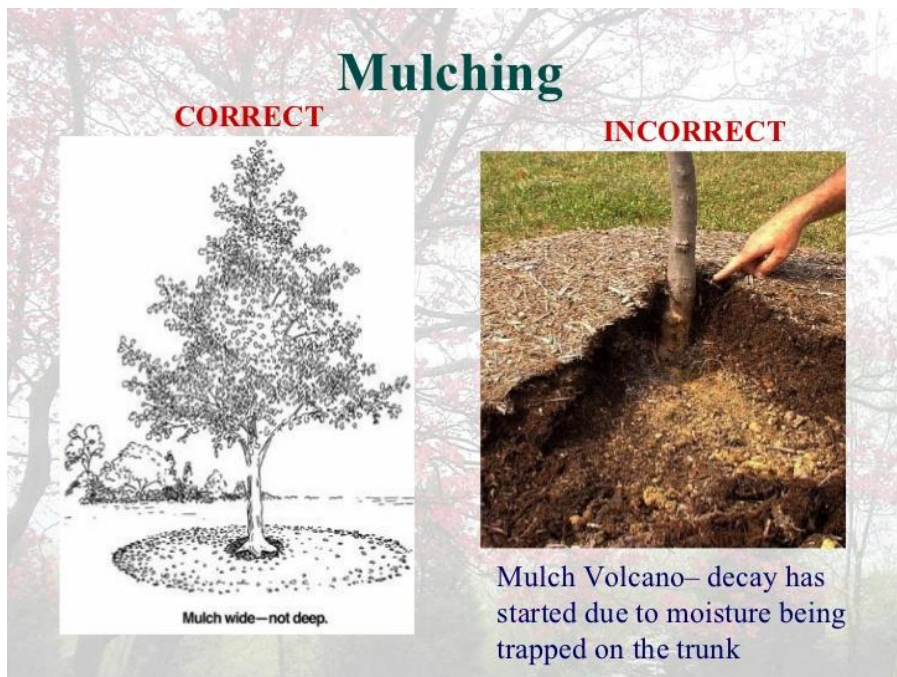
Why Use Mulch?

Mulches are used to create a layer of material which sits on top of the soil surface, and can be either organic (leaves, bark, wood) or inorganic (stone, rubber etc.). Different materials perform in slightly different ways, but generally they provide the following benefits:

- REDUCES WEED GROWTH
- RETAINS SOIL MOISTURE
- COOLS ROOT ZONE
- PROMOTES NUTRIENT CYCLING

How To Apply Mulch

Mulches should be applied 7-10cm (3-4") deep to work best. If applied at this level it will last for a number of years, so don't dig it into the ground. Mulch should be tapered down to ground level around the stems of garden plants to provide good air circulation and allow for normal growth. Do not pile mulch around the stems and trunks of trees and shrubs, as this can lead to rot, disease and death.



Mulch/Weed mat

Use a mulch mat to conserve moisture, reduce weeds, and eliminate mowing near the tree. Place the mulch mat on the top of the soil and if desired you can spread wood chips or shredded bark also on top of the mat. The mat will break down in 3-5 years. Do not place wood chips close to the trunk of the tree as this may cause too much of a moisture build up around the trunk.



Watering

Because trees go dormant during the winter, we often forget how important it is to continue watering them when the temperatures begin to cool down.

Although trees aren't producing leaves during the winter, their roots continue to grow as long as the ground is not frozen. Lack of proper care isn't realized until several years down the road, when stressors take their toll, and the tree dies.

Below are listed different ways you can water trees. No matter which method you use follow these guidelines:

- Saturate the soil around the tree within the "dripline" (the outer edges of the tree's branches) and about 30-60 cm beyond the dripline to disperse water down toward the roots.
- The objective is to water slowly, dispersing the flow of water to get the water deep down to the trees roots. Watering for short periods of time only encourages shallow rooting which can lead to more drought damage.
- Don't dig holes in the ground in an effort to water deeply. This dries out roots even more. A soil needle/deep root feeder attached to a hose is acceptable to insert into the ground if your soil is not too hard and compact.
- Overhead spraying of tree leaves is inefficient and should be avoided. Watering at ground level to avoid throwing water in the air is more efficient.

Do not fertilize a tree that is under drought stress.

Salts in fertilizer may burn roots when there is not sufficient water. Fertilizers may also stimulate top growth resulting in too much leaf area on the plant for the root system to maintain during periods of limited soil moisture.

Newly planted trees

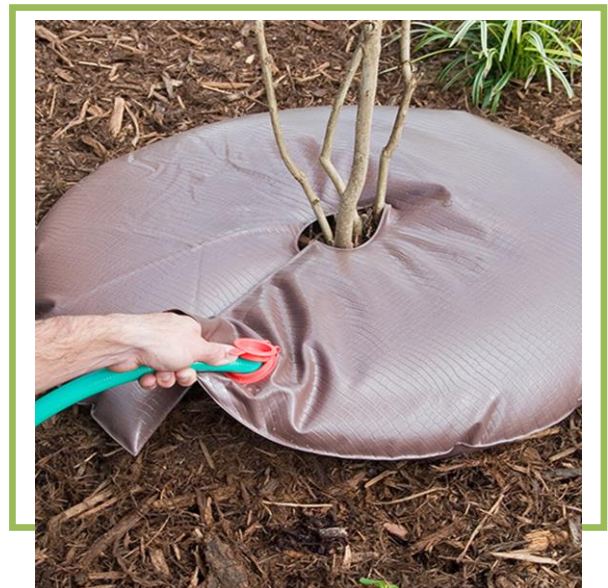
Newly planted trees require a regular supply of water to survive since they have not yet established a fine network of roots and are less able to absorb water. For this reason, it is necessary to actively maintain moisture in the soil surrounding the newly planted root ball. This can be achieved by watering the hole before planting and through regular, slow, deep watering.

The most common reason for the poor survival of new trees is inconsistent watering. Several hours of rainfall is ideal but can't be relied upon each week. During a week when it rains two or more days, watering is not necessary. Watering should continue until the first frost with one final soaking in late fall to get your tree through the winter.

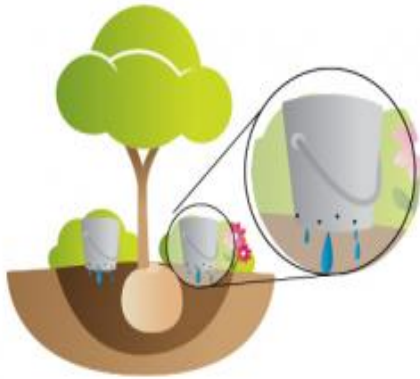
The site conditions of the tree will also determine just how much water it needs. Deeper clay soils, which are usually found in older subdivision, hold moisture and may not need to be water as often. Newer subdivisions usually have less soil and can be rocky. Water drains from these soils quickly, and thus they may need to be watered more often.

Gator bags

A gator bag is a convenient way to water trees. Place the bag around the tree and then just fill it with water from your hose. The water will slowly leak out and saturate the soil. Depending on your site conditions, you may need to fill it once to twice a week. You can remove the bag in the spring and fall if there is adequate precipitation. Then use it regularly in the hot summer months.



Bucket method



Another simple method to water trees is to use buckets. Drill a few small holes in the bottom of a 20 litre (5 gallon) bucket and place over the root zone of the tree.

Fill the bucket from a hose or a rainbarrel and let the water slowly seep into the soil. As the tree gets larger, you will need more buckets, or move the bucket around the tree and refill.

Dripping hose

The best way to ensure that the water applied to the tree actually penetrates the root ball is to maintain an earth ring or saucer around the tree. Place the hose in the saucer and water until the soil is saturated.

Watering Spikes

You can also use types of watering spikes to water trees. Attach them to your hose and inject the water right at the roots of the tree where it is needed most.

Remember the needs of your tree will change over the years – but even older mature trees need water in drought conditions.

