



## PLANTING BARE ROOT TREES

Trees and shrubs are available from the nursery in one of three forms: bare root, balled and burlapped or container-grown. Planting bare root trees successfully requires specific planting techniques.

### Handling Bare Root Trees

Bare root trees have had the soil shaken from their roots after digging and are placed in cold storage in a closely controlled environment. Most bare root trees are planted during the dormant season, before roots and buds begin to grow. Since there is no soil on the roots, it is vital that care always be taken to protect the roots from exposure to wind or sun. Bare roots should be kept moist and trees planted immediately.

Before planting the tree, soak roots completely in water for at least twenty minutes. Products are available to stimulate the root system and can be added to the water while soaking.

### Planting Procedures

The quality of the planting hole will determine the long-term health of the root system and tree. To plant bare root trees, the planting hole is dug in a saucer shape, two to three times the width of the root spread. The hole should be wider at the top than the bottom with sloped walls. (See picture on reverse side)

Planting too deep can stress the tree and drown or suffocate the roots. Drainage is also an important consideration for successful planting. A poorly prepared planting hole may act as a dish and hold water, especially in clay soils, which limits oxygen uptake by the roots. Dig the hole to a depth that will allow the root flare to remain slightly above the soil surface. A mound of soil should be created in the bottom of the hole. The exposed roots should be carefully placed over the soil mound and native soil placed into the hole to stabilize the tree. Do not put gravel in the bottom of the planting hole as it does not aid drainage. Do not add fertilizer in the first year of tree establishment. Mature trees may never need fertilization.

While backfilling around the roots using the original (native) soil, work the soil around the roots gently so that no air pockets remain. Large pockets of air can allow roots to dry out. Firm the soil so that the tree is vertical and adequately supported. Provide thorough watering while backfilling to the surrounding soil grade. Forming a water-retaining basin the diameter of the planting hole will help maintain a moist roots.

### Mulching

Fill the planting basin with water and let it drain. Apply two to three inches of organic mulch. Leave the mulch several inches away from the trunk to prevent bark decay, rot, winter injury or rodent damage. Otherwise, use inorganic mulch such as crushed gravel or assorted sizes of river rock. Mulching will conserve soil moisture, moderate soil temperature extremes and reduce competition from weeds and turf.

### Staking

Most trees do not need support after planting. Staking can have detrimental effects on the development of trunk taper and root growth. However, if staking is necessary, do not stake the tree rigidly. If two support stakes are used, a single, flexible tie attached to the tops of the stakes will be sufficient. Support tapes and stakes generally should be removed after one growing season. If staking is left in place for too long, the tree's ability to stand alone may be reduced and the chance of girdling injury increases.

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