

# TREE PLANTING

Planting is probably the most important stage in a tree's life. Proper handling and care before planting and proper planting procedures are essential to survival and growth.



## Time to Plant

Early spring, when the frost leaves the soil, is the best time to plant trees. In Colorado, this is usually by March 15. Mid summer plantings are more hazardous because of higher temperatures and greater water loss from fully leafed plants; transplanting at that time will usually result in some top die-back if not death because the root system cannot provide needed water. Fall plantings are also troublesome because of variable fall and winter weather. A tree transplanted in the fall may not have sufficient root growth before a hard freeze and might not be able to take in needed moisture. If at all possible, try to conduct tree plantings in early spring.

## How to Plant

There are three steps to proper tree planting: soil preparation, tree placement and backfilling.

- 1. Tree Placement.** Placement of the tree in a proper sized hole should be the first step. The width of the hole should be two times the size of the ball or container, or eight to twelve inches of open space around the ball. This will allow space for proper backfilling. Bare root trees require a hole large enough so roots are spread out and not bent. All holes should be dug with straight sides. The hole should be dug so the top of the root ball will be two inches above ground level. This will allow for settling in the hole. In heavy clay soils, the ball's top should remain two to four inches above ground level to allow for water run-off and root aeration.

- 2. Soil Preparation.** Soil preparation before planting will affect the tree's growth for many years. Knowing the soil type is important in determining preparation needed.

Colorado soils vary widely from sand to heavy clay. A heavy clay soil does not have pore space large enough to provide air to the tree's root system, particularly under moderate watering. Water will fill the small pore space of clay, thus eliminating air to the roots and suffocating the tree. Coarse peat moss or other organic matter such as thoroughly decomposed compost can be used to amend a heavy clay soil. Do not use fine peat such as native mountain peat or fresh manure. Fine peat will fill up pore space in clay and fresh manure or other fertilizers may burn newly planted tree roots. One or two shovels of the recommended organic matter should be thoroughly worked into the soil you remove from the planting hole.

Sandy soils usually act the opposite of clays. Loose sand that has been tilled will be extremely porous, having large pore spaces which result in lack of water holding capability. This allows water to penetrate so fast that plant roots cannot benefit. Coarse peat or other organic amendment can be added to sand to increase water retention ability. Intermediate soils such as sandy loam clay will need little, if any amending.

- 3. Backfilling.** Backfilling is a simple step, but if done improperly will hinder tree growth. Remove all twine around trunk and top 2/3 of wire, burlap and ropes from balls and containers before backfilling. Begin backfilling the hole while making sure the tree is upright and straight. Fill up the hole with soil, then fill with water. Allow the water to soak in, then proceed to fill the remainder of the hole with soil. Soak the tree with water to settle the backfill, but do not tamp. Fill in around the root ball to ground level and leave rough soil surface around the tree to act as a mulch.

Mulching can be extremely helpful in stabilizing soil temperature within the root ball. Woodchips, cedar bark mulch or other coarse organic material should be spread on the surface of your planting soil three to four inches deep. This mulching will help control weeds, conserve moisture and prevent sudden freezing and thawing of the soil.

# TREE PLANTING DETAIL

## Corrective Pruning

Dead or damaged wood **ONLY**, to be completed immediately after planting.

DO NOT CUT LEADER

## Trunk Protection

Wrap trunk for first winter and remove in spring.

Canvas webbing or approved equal.

## Tree Staking

#10 guy wire; attach to grommets in straps.

Steel posts or approved equal.

Remove guy wires and posts after one growing season.

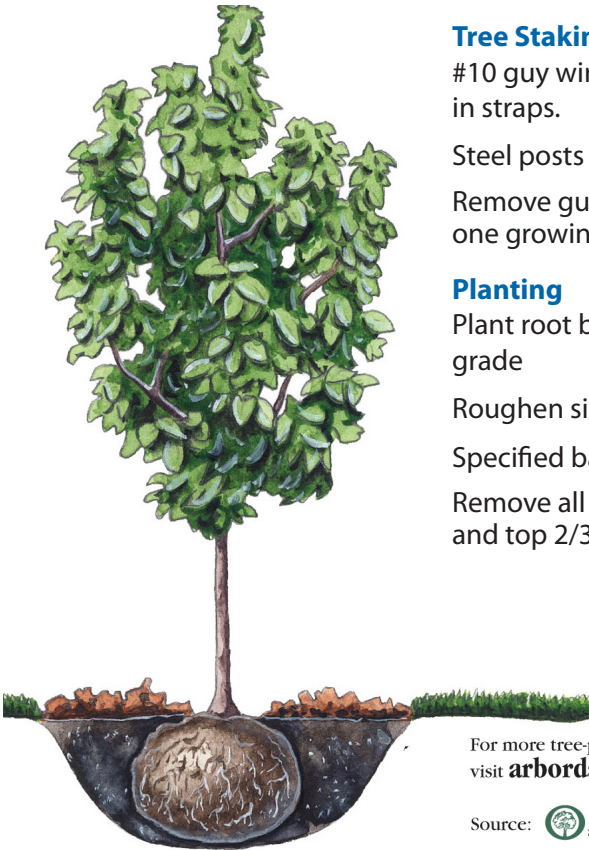
## Planting

Plant root ball 2" above existing grade

Roughen side of planting pit.

Specified backfill mix.

Remove all twine around trunk and top 2/3 of wire around ball.



For more tree-planting tips and information, visit [arborday.org](http://arborday.org).

Source:  **Arbor Day Foundation**  
90075201

# UNSUITABLE TREES For the Durango Area

The trees listed below are not planted in Durango because of one or more of the following undesirable characteristics: Prolific seed -

production, invasive habits, fruit, pods, thorn bearing, weak limbs and/or structure and insect and disease problems.

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### **Russian Olive**

*Elaeagnus angustifolia*

This species is noxious and invasive to native species in the area and is banned from being sold in Colorado. **This species is listed for eradication.**

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### **Tamarix (Salt Cedar)**

*Tamarix ramosissima*

This species is noxious and invasive to native species in the area. **This species is listed for eradication.**

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### **Siberian Elm**

*Ulmus pumila*

This species is prolific in seed production, is invasive, prone to weak limbs, insect and disease problems.

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### **Boxelder**

*Acer negundo*

The female trees of this species is prolific in seed production, is invasive and prone to weak limbs, insect and disease problems.

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### **Crabapple (malus)**

All Varieties

Abundant fruit production and are highly susceptible to disease problems.

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### **Evergreens**

Spruce, Pine and Fir varieties are not allowed in public right of way.

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### **Aspen**

*Populus tremuloides*

This species is short lived and very susceptible to Canker Disease and insect prone.

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### **Cottonwood (populus)**

All varieties

This species has a weak limb structure, is disease and insect prone and is a poor street tree selection.

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### **Willow (Salix)**

All varieties

Willows are fast growing, but have a weak limb structure and are short lived. They are also susceptible to many insects and diseases.

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### **Autumn Blaze Maple**

*Acer x freemani*

This species' trunk splits as the tree matures and color is prone to premature change.

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### **Green & White Ash**

*Fraxinus pennsylvanica* & *americana*

These species are susceptible to Emerald ash borer infestations, which girdles the trunk and is fatal to the species; insect prone.

## TREE MAINTENANCE

Little maintenance is needed on young trees, except for irrigation and fertilization. Irrigate only when needed and then thoroughly soak the soil. A tree will need watering when the soil is dry two to three inches below the surface.

After the first growing season, it may be necessary to fertilize. This can be accomplished by applying fertilizer such as 10-20-10 to the ground surface in spring and watering well. Do not use "Weed and Feed" fertilizers around root zones of trees and shrubs. Use a root feeder for aerating only, or if for fertilization, extend probe only ten to twelve inches into the soil. Trees will probably need fertilization every three to five years depending on the site and amount of lawn fertilization.

The best tree care is preventative maintenance. This can be initiated by a routine inspection. Check for insect and disease damage or potential and check for pruning needs of the trees. A schedule of maintenance can then be developed.

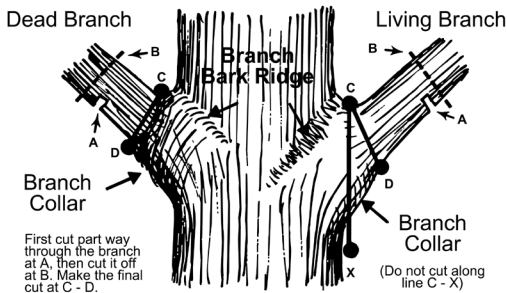
Remember, proper pruning and care will prolong tree life and provide for public safety.

## PRUNING

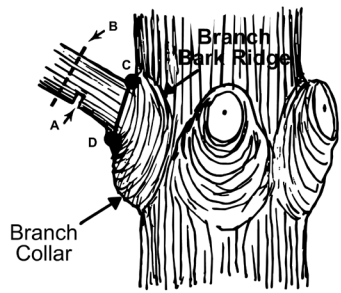
Tree pruning is one of the most important, yet most misunderstood maintenance practices we do to our trees. Properly pruning your tree will maintain the natural form, improve health, reduce insect and disease problems, and increase your trees' life span. Improper pruning can destroy the trees' natural form, create large wounds allowing disease to enter and may weaken the tree.

The old technique of "flush cutting" (cutting the branch as close to the trunk as possible) is no longer the recommended method of pruning. Instead, leave a very slight stub and avoid cutting into the swollen area where branch meets the main stem, known as the branch collar. The branch bark ridge (that furrowed area in the branch crotch) should also be left uncut.

# Proper Pruning Principles



Hardwoods



Conifers



Thanks largely to the work of Dr. Alex L. Shigo and other scientists at the USDA Forest Services' Northeastern Forest Experiment Station in Durham, NH, much is now understood about a tree's natural system of defense against infections from wounds. Based on this knowledge, these methods of making pruning cuts are recommended to help work with rather than against a tree's natural tendency to wall off injured tissues and prevent the spread of decay. In these illustrations, final cuts should be made from points C to D. Do not cut along line C-X, which is simply an imaginary vertical line to help you locate C - D

## Pruning Evergreens

Conifers normally require very little pruning except where double leaders occur or when a change in branch density is desired. Removing the terminal bud on side branches will not only slow outward growth, but also help to make the plant more bushy. If the tree develops two leaders, remove the less desirable leader early in the spring.

## Pruning Shrubs

Shrub pruning follows many of the same guidelines and techniques as trees. One note is that often shrubs receive little or no attention after planting until they are too large for their allotted space. By then, inside and lower foliage has probably been weakened by shade and pruning efforts leave a sparse, unattractive plant. To help rejuvenate old "leggy" shrubs (i.e. lilac) prune to encourage lower leaves and new stems. Pinching the tips of vigorous shoots periodically will keep the shrub compact and symmetrical. As with shrubs, to help rejuvenate old "leggy" hedges prune to encourage lower leaves and new stems.

## Pruning Hedges

To maintain low foliage, shear a hedge so that it is wider at the base than at the top. When a hedge has become too tall or too wide, prune approximately one-third of the old stems to stimulate new branching and dense growth.

## Pruning Fruit Trees

Pruning fruit trees is one of the most important steps in producing high quality fruit. Objectives are to permit entry of sunlight and remove unproductive, weak or crowded branches. Generally four to nine main scaffold branches are selected when the tree is young and maintained. The central leader is removed after the scaffold branches are selected to encourage lateral growth instead of height growth. Continue to prune undesirable branches to maintain the basic scaffold-branch structure to allow maximum light penetration for fruit production.

## ASSISTANCE IN TREE SELECTION AND CARE

This publication provides general guidelines, information and ideas for tree and shrub selection and care. Additional knowledge and assistance can be obtained from the Durango Parks and Recreation Department, Parks and Recreation Advisory Board, Colorado State Forest Service (247-5250) and commercial arborists and nurseries.

## LOCAL NURSERIES

Below is a list of local nurseries the City of Durango recommends for your landscaping needs.

### **Bayfield Gardens Greenhouses**

1715 C.R. 216  
Bayfield, CO  
(970) 884-0616

### **James Ranch Trees**

33444 Hwy 550N  
Durango, CO  
(970) 749-7795

### **San Juan Mountain Nursery**

By appointment only  
(970) 749-6879

### **Durango Nursery & Supply**

271 Kay Cee Lane  
Durango, CO  
(970) 259-8800

### **Native Roots Garden Center Inc.**

114 C.R. 250  
Durango, CO  
(970) 258-5111

### **Four Seasons Greenhouse & Nursery**

26650 Road P, Dolores, CO  
(970) 565-8274