



*Recommended Trees
for Plains Communities of
Southeastern Colorado*

A Guide for Selecting, Planting, and Caring For Trees



Do Not Top Your Trees!



Trees that have been topped may become hazardous and unsightly.

Avoid topping trees. Topping leads to:

- Starvation
- Shock
- Insects and diseases
- Weak limbs
- Rapid new growth
- Tree death
- Ugliness
- Increased maintenance costs

<http://csfs.colostate.edu/>



www.coloradotrees.org



www.fs.fed.us



Special thanks to the International Society of Arboriculture for providing details and drawings for this brochure.

Trees to avoid!

Selecting the right tree for the right place can help reduce the potential for catastrophic loss of trees by insects, disease or environmental factors. We can't control the weather, but we can use discernment in selecting trees to plant. A variety of tree species should be planted so no single species represents more than 10-15 percent of a community's total tree population. Many trees are not recommended because of brittle wood, susceptibility to insects and diseases, or their ability to spread in to native ecosystems and out-compete native species, while others simply do not grow well in our climate. The following is a list of tree species **NOT** recommended for the Eastern Plains of Colorado:

Species **NOT** recommended:

Austree (*Salix alba* x *matsudana*)

Aspen (*Populus tremuloides*)

Silver maple (*Acer saccharinum*)

Russian-olive (*Elaeagnus angustifolia*)

Tree-of-Heaven (*Ailanthus altissima*)

Mountain-ash (*Sorbus aucuparia*)

Tamarisk (*Tamarix* spp.)

Willows (*Salix* spp.)

Birches (*Betula* spp.)

Non-native hybrid poplars/cottonwoods (*Populus* spp.)

Siberian elm (*Ulmus pumila*)

Tree Selection

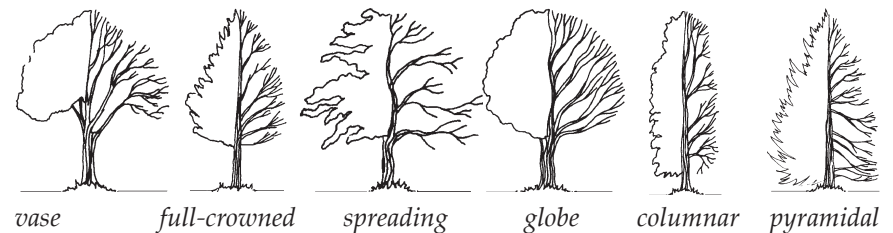
Tree selection is one of the most important investment decisions a home owner makes when landscaping a new home or replacing a tree lost to damage or disease. Most trees can outlive the people who plant them, therefore the impact of this decision is one that can influence a lifetime. Matching the tree to the site is critical; the following site and tree demands should be considered before buying and planting a tree.

Site Considerations

- Available space above **and** below ground
- Water availability
- Drainage
- Soil texture and pH
- Sunlight levels/exposure
- Weather and other environmental factors

Tree Considerations

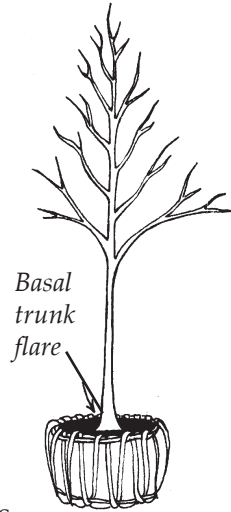
- Growth rate of the species selected
- Mature size
- Form
- Hardiness – ability of a plant to survive low temperatures
- Heat tolerance and drought tolerance
- Pest resistance
- Maintenance issues
- Native vs. non-native species



Selecting Trees at the Nursery

When you buy a high-quality tree, plant it correctly, and treat it properly, you and your tree will benefit greatly for many years. When you buy a low-quality tree, you and your tree will have many costly problems even if you take great care in planting and maintenance. Consider the following when selecting a tree at the nursery:

- Tree should appear healthy. No discolored bark, wilted leaves, etc.
- Branches should be spaced evenly around the trunk
- Tree trunk should taper from a solid base, gradually becoming more slender towards the top.
- Tree foliage and branches should be distributed on upper 2/3 of tree.
- Tree should contain a central, dominant leader.
- Tree should be free from mechanical damage.
- Tree should be free from insects and diseases.
- Roots should not be girdling, circling or potbound.



Tree Planting Tips

- Plant the top of the root ball slightly above ground level. The root collar (flare) must be visible one inch above final grade.
- Set root ball on **solid** ground and not on loose backfill in the hole; this will eliminate settling.
- Remove at least the top 1/2 of all wire and baskets from balled and burlapped trees and completely remove containers from containerized stock.
- Adding peat moss or manure to soil in the planting hole is **not** necessary. (Too much can cause a “potted tree” effect and restrict root growth.) Backfill hole with original soil.

Scots pine* (*Pinus sylvestris*)
Short needle pine, orange bark with age

Ponderosa pine* (*Pinus ponderosa*)
Long needle pine, native to Colorado, hardy tree



**Ponderosa
pine**

Small evergreens (15 - 25 feet mature height)

Piñon* (*Pinus edulis*)
Dense, bushy pine, short grayish-green needles, getting hit hard by Ips beetle in parts of State

Mugo pine* (*Pinus mugo*)
Low, broad-growing pine tolerates clay soils

Eastern red cedar* (*Juniperus virginiana*)
Very hardy tree, excellent windbreak tree, green summer foliage, rusty brown in the winter

Junipers, upright* (*Juniperus scopulorum*)
Very hardy tree, excellent windbreak tree (includes Rocky Mountain, one-seed, Utah, and Wichita blue)

Gambel (scrub) oak* (*Quercus gambelii*)

Native acorn-producing oak with great variability in size and shape

Japanese tree lilac* (*Syringa reticulata*)

Creamy, white flower clusters with showy, dark bark

Winterberry euonymus (*Euonymus bungeana*)

Showy, small, pink fruit, very few insect or disease problems, appreciates adequate watering

Weeping mulberry (*Morus alba*)

Dwarf, white mulberry with weeping foliage touching the ground, very ornamental

Redbud (*Cercis canadensis*)

Bright pink to red flowers in early spring, tolerant of a wide variety of site conditions

- Do not fertilize at planting time.
- Optimum planting periods are from March 15 to June 15 and from September 1 to October 15.
- Use mulch 3–4 inches deep, pull back 6 inches from the trunk of the tree, and extend the mulch ring one foot beyond the root ball. This will protect roots, hold soil moisture, reduce weed growth, and provide a protective strip to eliminate mechanical damage from lawnmowers and weed eaters. Porous landscape cloth may be placed between the soil and the mulch. Do **not** use plastic. Keep grass and weeds out of mulched area as they compete for the same resources as your new tree.

Large Evergreens
(30 - 60 feet mature height)
Do not use as street trees!

Colorado blue spruce (*Picea pungens*)

State tree, sharp stiff needles, color of needles range from bright green to silver blue



Colorado blue spruce

Austrian pine* (*Pinus nigra*)

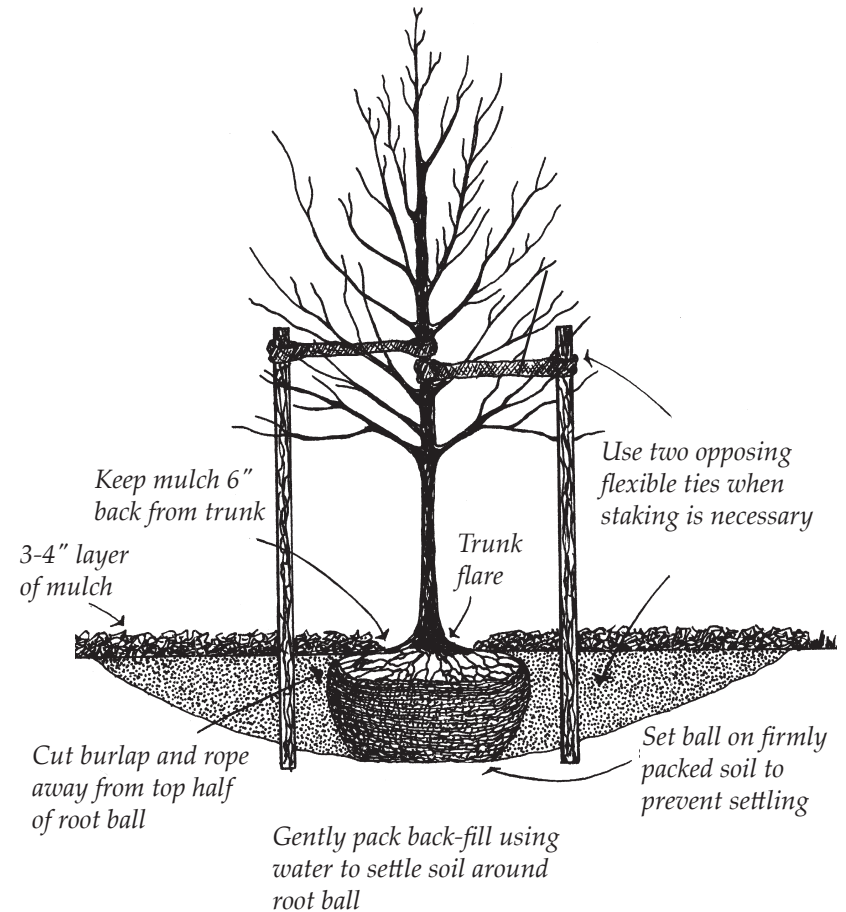
Long needle pine, works well in a windbreak

Concolor (white) fir (*Abies concolor*)

Long soft blue-green needles, plant in a protected site, shade tolerant



White fir



- If necessary, stake tree properly to keep root ball from shifting. Main tree stem **must** be able to sway slightly; if it is too rigid, root growth, diameter of stem, and height growth will be adversely affected.
- Use wide straps for tying trees to stakes. Do **not** use wire, string, rope, or rubber hose around tree.
- Remove stakes and straps after roots are established, usually one or two growing seasons.
- Keep soil moist but not saturated.

Tree Watering

The correct amount of water is the most important factor in ensuring proper tree establishment. Too much water can be as damaging to a newly planted tree as too little water, so be sure to periodically check soil moisture by examining the soil in the area of the roots. Follow these recommendations to help your tree establish in the landscape:

- **Water deeply and slowly.** Apply water so it moistens the critical root zone (from near the trunk of the tree to the dripline) to a depth of twelve inches. Methods for watering include a deep root fork or needle, soaker hose or soft spray wand. Apply water to many locations under the dripline. If a deep root fork or needle is used, insert the device no deeper than eight inches into the soil.
- **Consistent moisture is essential.** Maintaining consistent soil moisture allows for better root water absorption. Drought stressed or over-watered trees are more vulnerable to disease and insect infestations, as well as branch dieback.
- **When should I water?** Generally, water a newly planted tree every 3-5 days during the growing season, depending on weather and soil conditions. Remember that newly planted trees need water during dry periods in the winter months as well. Try to water at least once a month in the dormant season.

Ussurian pear* (*Pyrus ussuriensis*)
White flowers, small fruit, red wine fall color

Aristocrat pear* (*Pyrus calleryana*)
Very tough street tree, fast growing, brilliant display of pure white flowers in the spring, showy red fall color

Bigtooth maple (*Acer grandidentatum*)
A native Rocky Mountain species that will tolerate any well-drained soil, fairly drought tolerant, shades of yellow, orange, and red in the fall

Osage-orange* (*Maclura pomifera*)
North American native highly resistant to drought, cold, alkaline soils, exhibits few insect or disease problems, produces large, wrinkled green fruit



Ussurian
pear

Small Ornamental Trees (<25 feet mature height)

Hawthorn species* (*Crataegus spp.*)
Flowers in the spring, small fruit produced, most varieties contain small thorns

Canada red cherry* (*Prunus virginiana 'Shubert'*)
White flowers, small fruit, new growth on plant is bright green and turns maroon, suckers

Crabapple species* (*Malus spp.*)
Flowers in the spring, most varieties produce fruit, select a variety that has a high resistance to fire blight

Amur Maple* (*Acer ginnala*)
Yellow- white flowers, abundant seed, orange to red fall color

Tatarian Maple* (*Acer tataricum*)
Winged seeds good for birds, fall color orange-red, hardy tree

Sumac* (*Rhus typhina* or *R. glabra*)
Bright red fall color, spreads aggressively by suckers

Serviceberry* (*Amelanchier spp.*)
Small trees or large shrubs with showy white flowers and edible fruits

Black walnut (*Juglans nigra*)
 Edible nuts, great for squirrels and birds,
 nuts may create a mess

English elm* (*Ulmus procera*)
 Extremely drought tolerant, with a beautiful,
 full-crowned shape and dark green, rounded leaves

Lacebark elm* (*Ulmus parvifolia*)
 Similar to Siberian elm but with better structure and more resistance to pest
 problems, beautiful "lacey" mottled bark, attractive fall colors

Northern catalpa* (*Catalpa speciosa*)
 Fragrant white flowers, pencil sized seedpods,
 large heart shaped leaves

White mulberry* (*Morus alba*)
 Very tolerant of drought, pollution, and poor soils,
 with few insect problems, produces white, lavender,
 or black fruit that can be eaten raw or made into
 fantastic preserves

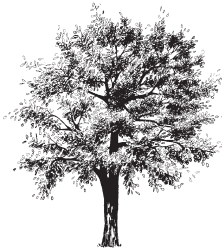
American sycamore (*Platanus occidentalis*)
 Fast growing and long-lived (up to 500 years), with very distinctive mottled
 brown, green, tan, and white bark, prefers floodplain type soils

Medium Shade Trees (30 - 45 feet mature height)

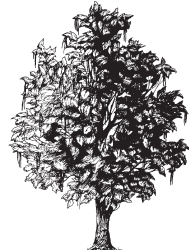
Littleleaf linden (*Tilia cordata*)
 Yellow flower clusters, pea sized fruit, formal
 pyramidal form, excellent street tree

Golden Raintree* (*Koelreuteria paniculata*)
 Yellow flowers in summer, papery pods, leaves red
 and turn green

Japanese Pagodatree* (*Sophora japonica*)
 Rounded crown, olive green bark, abundant white flowers



Black walnut



Northern catalpa

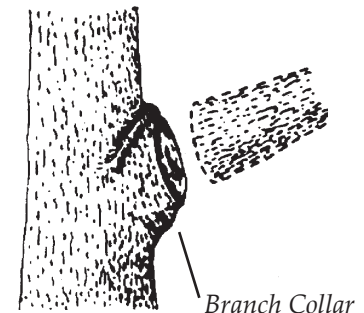


Littleleaf
 linden

- **How much water should I apply?** Utilize the following "rule of thumb" for watering: apply 10 gallons of water per inch of tree diameter, for instance a 1 inch tree will require 10 gallons of water each time it is watered. For mature trees 10 inches in diameter or more, apply 15 gallons of water per inch of tree diameter. Use a ruler to measure your tree's diameter.
- **Mulch helps conserve soil moisture.** Mulch is **critical** to conserve soil moisture. Apply organic mulch within the dripline, at a depth of three to four inches. It's best to eliminate turf prior to adding mulch. Leave a six-inch space between the mulch and trunk of trees. Mulch materials may include wood chips, bark, leaves and evergreen needles.

Tree Pruning

Limit pruning of newly planted trees to corrective pruning. Remove torn or broken branches (save other pruning measures for the second or third year). Once the tree has established a good root system after planting (usually within 1 to 3 years), proper pruning is essential in developing a tree with a strong structure and desirable form. Trees that receive the appropriate pruning measures while they are young will require little corrective pruning when they mature.



Branch Collar

Location of a pruning cut is critical to a tree's response in growth and wound closure. Pruning cuts should be made just outside the branch collar. Since the branch collar contains trunk or parent branch tissues, the tree will be damaged unnecessarily if you remove or damage it. In fact, if the cut is large, the tree may suffer permanent internal decay from an improper pruning cut.

For most young trees, maintain a single dominant leader. Do not prune back the tip of this leader. Do not allow secondary branches to outgrow the leader. Sometimes a tree will develop double leaders known as co-dominant stems. These can lead to structural weaknesses, so it is best to remove one while the tree is young. A

good structure of primary scaffold branches should be established while the tree is young. The scaffold branches provide the framework of the mature tree. Properly trained young trees will develop a strong structure that will require less corrective pruning as they mature. The goal in training young trees is to establish a strong trunk with sturdy well-spaced branches.

Need Help?

This booklet does not provide all information, on all trees, for all locations. Each tree species has its own particular needs. The Colorado Tree Coalition strongly urges you to contact your local tree expert for more information, please call your:

- Community tree board
- City Forester
- City's Parks Department
- Arborist
- Forestry Consultant
- Tree Nursery
- Colorado State University Cooperative Extension
- Colorado State Forest Service District Office

Recommended Trees for Plains Communities of Southeastern Colorado

**Signifies trees that can withstand drier conditions*

Large Shade Trees (>50 feet mature height)

English oak* (*Quercus robur*)

Produces acorns, rounded crown, dark green leaves turn brown and remain on tree through winter

Hackberry* (*Celtis occidentalis*)

Very hardy, can be susceptible to nipple gall, a cosmetic injury, reddish purple cherry like berries

Bur oak* (*Quercus macrocarpa*)

Produces acorns, fall color yellow to brown and occasionally red, very hardy and long lived

Honeylocust* (*Gleditsia triacanthos inermis*)

Hardy trees, dark green, fern-like leaves, yellow fall color

Swamp white oak (*Quercus bicolor*)

Produces acorns, deep green leaves white underneath

Kentucky coffeetree* (*Gymnocladus dioica*)

Fragrant white flowers, persistent seed pods produced, large shade tree

American elm (*Ulmus americana*)

Disease-resistant hybrids can be very hardy, broad shaped crown, excellent street tree

Ginkgo (*Ginkgo biloba*)

Few insect and disease problems, pretty fall color, distinctive leaf shape

American linden (*Tilia americana*)

Excellent street tree, dark green leaves, yellow-green fall color



Hackberry



Honeylocust



Kentucky
coffeetree