



RECOMMENDED TREES FOR AURORA

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2016

A photograph of a residential street lined with large, mature green trees. The trees are dense and provide shade over the road. On the left, a brick house with a porch is partially visible. On the right, a road sign is visible. The overall scene is bright and green, suggesting a well-maintained neighborhood.

Large Shade Trees



Hackberry



Hackberry

Scientific Name: *Celtis occidentalis*

Family Name: Ulmaceae

- **This tree in Colorado** Common hackberry is large shade tree commonly planted in urban and community landscapes. It is popular because of its vase-shaped crown structure when mature. The shape is very similar to American elm but not as aesthetic. Because of its shape, it is recommended as a replacement for the American elm. This tree is considered a Colorado native and ranges in elevations from 4000 to 7200 feet, growing in wooded draws and valleys. In developed areas, the seeds easily germinate often becoming a nuisance in flower and shrub beds.
- **Growth rate** Medium to fast growth rate. Can reach 30 feet in 20 year period. Growth is not very uniform in early years. Branching habit looks very scattered and in need of pruning during the first 10 years. It needs pruning to make it look decent and to select a main trunk in these years. Soon afterwards, it begins to develop the graceful arching structure which makes it popular as a shade tree.
- **Best advice** Grow in areas where the crown will have adequate space. Mature crown diameter can reach 30-50 feet. Remember that it will look a bit ugly in its early years and may need regular pruning to gain a strong main-stem or leader.

Pros:

- Tolerates drier conditions
- Serious insect/disease issues are uncommon
- Moderate grower
- Good Shade

Cons:

- Prone to squirrel damage
- Drops purple berries
- Prone to storm damage
- Commonly has minor but unsightly insect issues like galls and witches broom



Kentucky Coffee-tree



Kentucky Coffee-tree

Scientific Name: *Gymnocladus dioica*

Family: Fabaceae

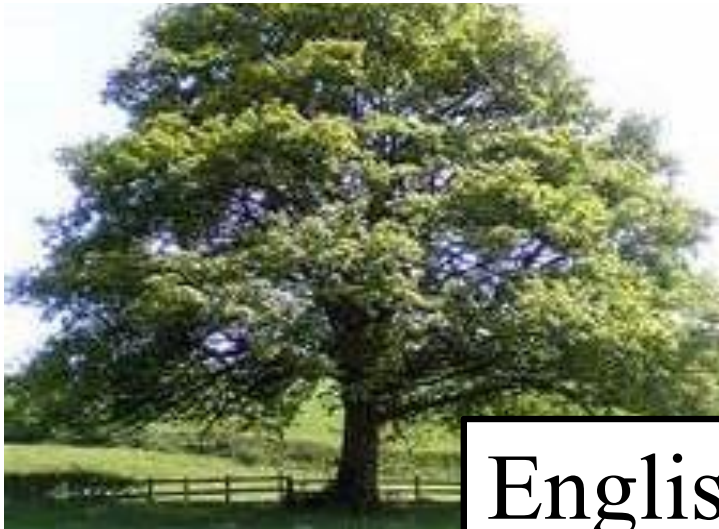
- **This tree in Colorado** A fairly large tree native to most of the central-eastern U.S. Kentucky coffee tree has a very interesting coarse texture because of the stout branches. This tree should be planted more in Colorado. The only draw back for this tree are the large seed pods on the female tree. This tree can also have an unruly growth habit when young.
- **Growth rate** Slow to medium. Once established, it can grow a foot or so per year in Colorado.

Pros:

- Tolerant of drier conditions
- Insect and disease issues uncommon
- Very hardy once established
- Unique leaves and bark
- Filtered shade for lawn
- Late to leaf to avoid frost injury

Cons:

- Female trees have large seed pods, however, there is a variety that doesn't bear pods – 'espresso'
- Small leaflets can be difficult to rake
- Slow grower
- Late to leaf making many assume tree is dead in spring



English Oak



English Oak

Scientific name: *Quercus robur*

Family: Fagaceae

- **This tree in Colorado** Several English Oaks in Europe are believed to be more than 1,000 years old. It is a large shade tree at maturity with a massive trunk and branches. It is an underused tree along the Front Range mainly due to its lack of fall color. There are several fine examples of mature English Oaks at Fairmount Cemetery in Denver.
- **Landscape value** This tree adapts well to most soil types and is relatively pest free. Plant in full sun, allow plenty of space for growth, and prune for structure often when young. English Oaks provide dense summer shade. When considering placement in the landscape, remember that the brown leaves often persist through the winter creating an ice/snow shadow on the north side of the tree. Don't plant on the south side of a building, street, driveway or parking lot. This tree is considered drought tolerant once established but is not as xeric as Bur or Gambel oak. There is also an upright variety for smaller areas or can be used for screening.

Pros:

- Drought tolerant once established
- Hardy and long-lived tree
- Relatively insect-free

Cons:

- Lack of fall color
- Drops acorns



Bur Oak



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Bur Oak

Scientific name: *Quercus macrocarpa*

Family: Fagaceae

- **This tree in Colorado** Bur oak is the mighty oak of the plains states. It is in the white oak group, meaning that the leaves are without bristle-tipped lobes and the fruit matures in one season. Bur oak is often thought to be native to Colorado, but Harrington's Manual of the Plants of Colorado does not include it. It is a stalwart tree for plains communities even though it grows slowly. More and more communities are planting it as a street tree. There are a few great examples of stately mature bur oaks located in Englewood, CO. These massive oaks were once seedlings planted by Sam Brown.
- **Landscape Value** This tree is adaptable to our soils in Aurora. One big problem is a pest called the bullet gall wasp. There is a gall free tree here at our campus, as well as once in Ft. Collins. If these can be propagated, we would consider planting them again.

Pros:

- Tolerates drier conditions
- Hardy tree
- Long lived

Cons:

- Very prone to bullet gall- unsightly and attracts wasps
- Drops large acorns



Chinkapin Oak



Chinkapin Oak

Scientific name: *Quercus muehlenbergii*

Family: Fagaceae

- **Landscape value** This is a full sun tree that is somewhat tolerant of alkaline soils and there are only a handful of oaks that will tolerate Colorado's clay alkaline soils. The closest this tree grows naturally to Colorado is eastern Kansas. This is a rare oak for the Colorado landscape that is now being planted more and more. The state champion Chinkapin oak is in Denver with a diameter over 30 inches and a height of 60 feet. Also, we have had fairly good success with this tree in Aurora, although it has not been planted extensively.
- **Special note** The Chinkapin oak was selected as the 2009 Urban Tree of the Year by the Society of Municipal Arborists (SMA). The SMA is a national organization of over 1,300 municipal arborists and urban foresters.

Pros:

- Tolerates drier conditions
- Long lived and hardy tree
- Can have nice fall color

Cons:

- Drops acorns



Elms



American Elm

Scientific Name: *Ulmus americana*

Family: Ulmaceae

- **This Tree in Colorado:** American elm continues to grace the streets and avenues of our cities and towns. Its characteristic vase-shaped branching habit makes it a superior street tree. Dutch elm disease wreaked havoc on the large leafed elms for the last 60 years. Many city streets lost their beauty and shade. However, good sanitation practices now make it worth attempting growing elms once again in our parks, along our streets and in our yards.
- **Growth Habit:** A graceful vase-shape in most situations. Other varieties can be spreading, pendulous or upright.
- **Insects and Diseases:** New cultivars and hybrids show various levels of resistance to Dutch Elm Disease. Leaf miners, European Elm Scale, and aphids are common problems associated with American Elms in Colorado.
- **Landscape Value:** This tree still has landscape value. With the ability to control the spread of Dutch elm disease, more cities are replanting these majestic trees. They possess excellent branching habits over streets and sidewalks. The only down-side to elms are the insects and diseases that affect them. But still, American elms are a stately tree and should be replanted. However they should not be replanted to a monoculture density as they were in the past.

Pros:

- Tolerate drier conditions
- Vase shape makes for excellent shade
- Moderate growers
- Can get varieties resistant to Dutch elm disease
- Many establish well in Aurora

Cons:

- Susceptible to many insect and disease problems
- Dutch elm disease is fatal
- Frequently drip honeydew from insects
- Prone to dieback
- Branches can hang
- Form is sometimes unruly when young



Linden



Linden

Scientific Name: *Tilia americana*

Family: Tiliaceae

- **This Tree in Colorado** American Linden is native in the northeast but is a hardy tree that can grow well in Colorado.
- **Landscape value** Makes an elegant shade tree in streets and parks. When choosing a location for this tree, one should keep in mind that bees favor it and is sometimes called the “bee tree”. The wood is also a favorite in the lumber industry. Its leaves hold significant amounts of calcium, magnesium, nitrogen, phosphorus, and potassium; therefore, this tree is capable of improving soil conditions wherever it is planted.

Pros:

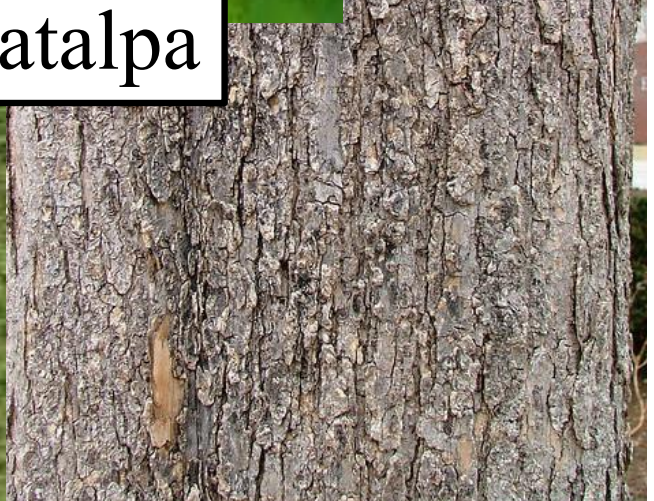
- Relatively easy to grow
- Fragrant, yellow flowers
- Insect and disease problems very rare
- Moderate grower

Cons:

- Commonly hangs very low
- Flowers can attract bees
- Flowers can be messy
- Commonly have structural issues
- Tend to drop small branches in windstorms



Western Catalpa



Western Catalpa

Scientific Name: *Catalpa speciosa*

Family: Bignoniaceae

- **This tree in Colorado** A fairly large tree native to most of the central U.S. Catalpa has an upright, coarse and distinct form. It's asymmetrical, irregular appearance gives it a lot of character and can be planted as a feature tree. The large, white, showy flowers provide the landscape with splash of interest during late May and June. It is a tree that should be considered more in the landscape but realize it has seed pods that can be messy. Stems are brittle allowing breakage during early or late snow storms.
- **Landscape value** Plant them as accent trees in yards and parks. In areas with wide parkways, they can be planted as street trees. Prune for strong branches since the wood is brittle. Branches can not support a lot of snow.

Pros:

- Large, showy flowers May-June
- Large, unique, heart-shaped leaves
- Tolerant of many conditions
- Distinct tree with a lot of character
- Moderate to fast grower

Cons:

- Commonly has hollows
- Has large bean pods
- Wood is brittle



Ornamentals



Chanticleer Pear



Chanticleer Pear

Scientific name: *Pyrus calleryana*

Family: Rosaceae

- **This Tree in Colorado** Best below 6000 ft. Callery Flowering pear has many attributes and few faults. After it is established, it is heat- and drought-tolerant. It fares well in urban conditions. There are several cultivars available.
- **Growth rate and size** Medium to fast growth; medium height, generally 40 feet or less; width varies with cultivar.
- **Cultivars** 'Bradford' was the first cultivar used but develops structural problems with age. Hardier cultivars available locally include 'Aristocrat', 'Chanticleer' and 'Redspire'. 'Stone Hill' and 'Cleveland Select' are similar to 'Chanticleer', which has been rated highly in CSU trials.
- **Landscape value** Provides 3 seasons of interest: spring flowers, glossy summer foliage and often-spectacular fall color. Tolerant of pollution, compacted soils, restricted rooting areas, drought and heat.
- **Best advice** It's probably best to avoid planting 'Bradford'. Use 'Chanticleer', 'Stone Hill' or 'Cleveland Select' as an upright screen or near west/south-facing sides of the house. 'Redspire' needs more room; use 'Aristocrat' as a shade tree in larger areas.

Pros:

- Tolerates drier conditions
- Easy to grow
- Showy flowers before leaf in spring
- Brilliant fall color
- Upright branching = rarely has clearance problems
- Doesn't need large space
- Moderate to fast grower
- Dense crown makes good visibility screen

Cons:

- Drops fruit
- Flowers can have foul odor
- Susceptible to some insect and disease issues, including fireblight, which is often fatal



Golden Raintree



Golden Raintree

Scientific Name: *Koelreuteria paniculata*

Family: Sapindaceae

- **Growth Habit:** Small to medium sized tree that is nearly as wide as it is tall with a height of 30 feet by 25 feet wide.
- **Landscape Value:** This is a hardy small to medium-sized tree for yards and open spaces. It can be used as a street tree where there are larger planting strips. The yellow flowers and unique seed pods make this tree attractive in more than one season of the year. In 2002, when a record setting drought hit Western Colorado many tree species suffered leaf scorch and overall decline. The golden raintree did not show any ill effects from this drought, which shows how tough this tree can be. There are several cultivars listed in the reference material. However, most trees observed in the Colorado landscape are seedlings.

Pros:

- Tolerates drier conditions
- Very showy yellow flowers
- Unique, persistent seed bracts in winter

Cons:

- Prone to bark damage at the base; and can be brittle in storm events
- Can attract many red-shouldered bugs
- Can storm damage more easily than other trees



Crabapple



Crabapple

Scientific Name: *Malus* spp.

Family: Rosaceae

- **Landscape value** Because of its small size and colorful flowers and leaves, this plant is often used to accent front yards and specific areas in back yards or open spaces. Planting in groups of three or more makes a major visual impact while in bloom. Many develop a fruit which can be messy later in the year so choose a variety that is less messy for areas around sidewalks and other high use areas.
- **Insects and diseases** Fire blight is the main disease that affects crabapples. Studies from Colorado State University indicate that the fireblight prone varieties are: Dolgo, Mary Potter, Ormiston Roy, Red Barron, Red Jade, Royalty, Sentinel, Silver Moon, and Strawberry Parfait. Those that currently show resistance to fire blight are: Centurion, David, Indian Summer, Molten Lava, Profusion, Royal Raindrops, Prairiefire and Robinson. Cedar apple rust is another disease that affects crabapples. Crabapples leaves get yellow or orange spots which can cause early and heavy leaf drop. The alternate host of this disease is the Juniper species. The best cultural control is to separate these plants by 500 feet or so.
- **Best advice** Study which crabapples are commonly grown in your area. Purchase varieties of crabapples that are resistant to fire blight, a bacterial disease that affects the tips of young shoots and bud clusters. Plant in areas that receive full sunlight. Remember that most crabapples have fruit that can create a mess later in the year, especially along sidewalks and driveways.

Pros:

- Tolerates drier conditions
- Fragrant, showy flowers before leaf in spring
- Can buy varieties with persistent and low crop-bearing fruit

Cons:

- Drop crabapples
- Susceptible to some diseases, including fireblight, which is often fatal, powdery mildew & apple scab
- Can be prone to decay
- Can be prone to splitting
- Can be prone to dieback
- Can be prone to poor form



Hawthorn



Hawthorn (Thornless Cockspur)

Scientific name: *Crataegus crus-galli var. inermis*

Family: *Rosaceae*

- **Landscape Value** Tree is a stout ornamental variety suitable for planting under overhead power lines. This tree has proven to be drought resistant and tolerant of different soil types. The glossy foliage, lack of thorns, unique growth habit, spring flowers, fall fruit, and attractive fall color will provide diversity to the landscape through all of the seasons of the year. Dense branching habit warrants regular interior pruning to eliminate conflicting branches.
- **Growth Habit:** Tree is densely branched and has a strong horizontal branching habit; 20 feet tall by 20 feet wide. Once established it is a reliable grower putting on as much as 6 - 10 inches of branch growth a year.

Pros:

- Tolerates drier conditions
- Can get thornless varieties
- Fruit is colorful on tree in winter
- Attracts birds

Cons:

- Drops fruit
- Some have thorns



Japanese Tree-lilac

Japanese Tree-lilac

Scientific Name: *Syringa reticulata*

Family: Oleaceae

- **Landscape Value** The common lilac shrub has long been a staple in both the amateur and professional landscaper's plant palette. It's dark green leaves blending with its fragrant lavender flowers are a favorite of Spring-time landscapes. Lilac lovers prefer the multiple-stemmed, large shrub. However, there are those that prefer the single stem, ornamental look in their landscapes, and have been steered in the crabapple and hawthorn direction for most of their ornamental tree needs.
- **Growth Habit** The Japanese tree lilac, with its mature height at around 20 feet, can be planted in tighter landscape areas around the house, or as a street tree where overhead power lines greater than 30 feet exist.

Pros:

- Large, showy flowers
- Can withstand a broad range of temperatures
- Serious insect and disease issues rare
- Urban tolerant
- Withstands droughts once established

Cons:

- Leaves can get a powdery white appearance late in the season due to powdery mildew
- Can be prone to poor form with multiple stems



Tartarian Maple



Tartarian Maple

Scientific Name: *Acer tataricum*

Family: Aceraceae

- **This tree in Colorado** Tolerant of poor alkaline soils and cold winters. Less prone to develop iron chlorosis in alkaline soils than its close relative Amur Maple. Some botanists consider Amur Maple to be a subspecies of Tartarian Maple.
- **Growth rate** Slow to medium growth to 15 - 20 feet tall.
- **Landscape value** Attractive small tree for limited spaces. Does well in alkaline soils; moderately drought tolerant. Flowers, red fruit/seeds and fall color are assets; popularity in Colorado should increase as cultivars with dependable red fall color are released. Small mature size makes it good for planting under power lines; tolerates partial shade.
- **Best advice** Underutilized due to landscape preference for Amur Maple, but consider it where iron chlorosis develops on Amur and other maples, as long as soil pH is less than 8.0

Pros:

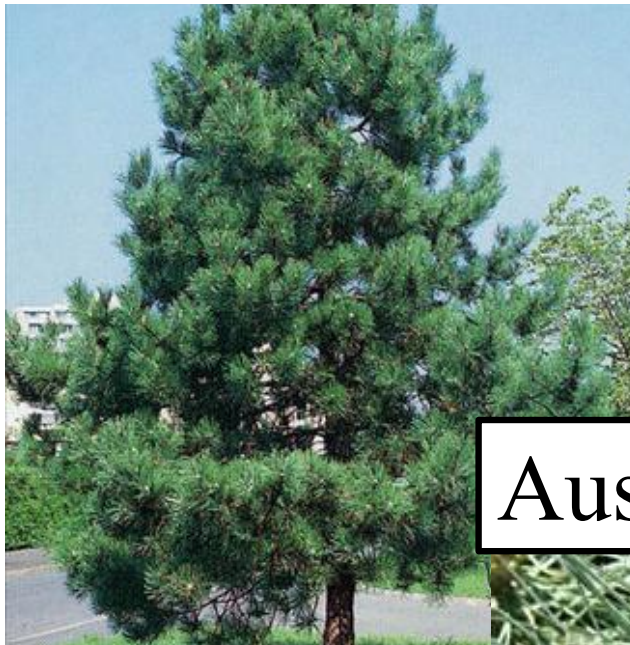
- Tolerates drier conditions
- Showy red seeds
- Usually has good fall color
- Tolerant of poor soils
- Few insect and disease problems
- Nice flowers in early season

Cons:

- Often takes on multi-stem form

A close-up photograph of a pine branch with vibrant green needles. The needles are arranged in clusters, radiating from a central point. The background is softly blurred, showing more of the tree and a hint of a bright sky. A white rectangular box with a black border is centered over the image, containing the word "Evergreens" in a black serif font.

Evergreens



Austrian Pine



Austrian Pine

Scientific name: *Pinus nigra*

Family: Pinaceae

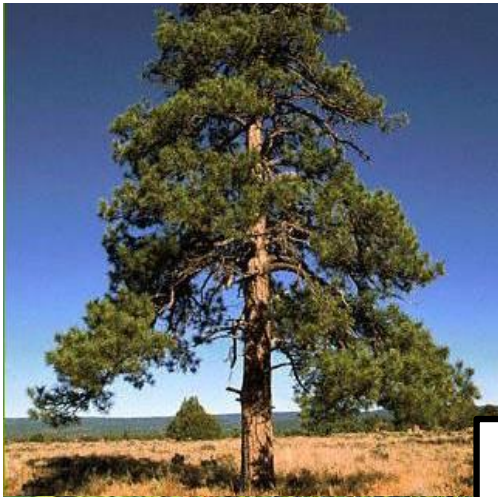
- **This tree in Colorado** Austrian pine has become a favorite ornamental pine. It is widely planted in our community landscapes and is almost as popular as the Colorado blue spruce. It adapts well to many types of soil conditions, although it will not tolerate extremely wet or soggy soils, a condition that all pines and most conifers dislike. Austrian pine has a much fuller crown than its Colorado native, ponderosa pine. For that reason, it is planted as a "screen" to hide views or block wind. Its needle color is darker green and they are slightly smaller and stiffer than ponderosa pine.
- **Growth habit** Pyramidal and full looking when young with lower branches maintained. Older tree becomes flat-topped and more open. Can reach 60' in height. In good conditions, grows 12-18" per year.
- **Landscape value** Highly valued and widely planted. Lower branches remain on main stem for a long period providing good wind and visual protection. It should be given ample space to grow. Provide at least 8' for lower branches to spread. Can be planted in groups or individually. Mature trees have a stately appearance with its silver-gray bark and flat-topped look.

Pros:

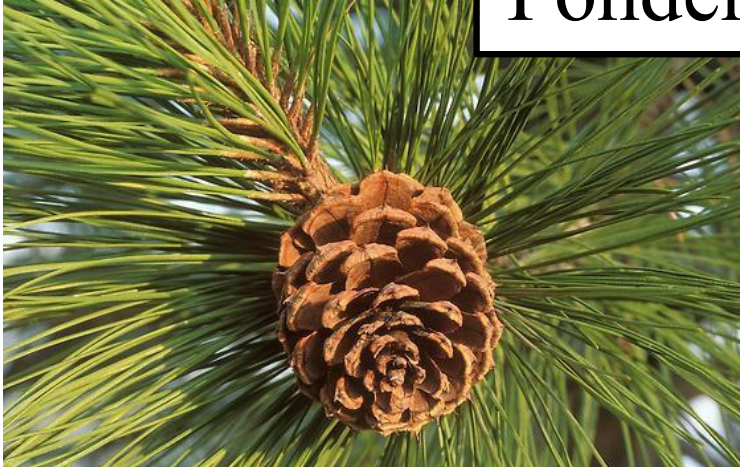
- Tolerates drier conditions
- Full, dense crown
- Great for windbreaks or visibility screen
- Widely available
- Moderate grower

Cons:

- Susceptible to several serious insect/disease problems; among them are Zimmerman pine moth, pitch mass borer & pine wilt nematode



Ponderosa Pine



Ponderosa Pine

Scientific name: *Pinus ponderosa*

Family: Pinaceae

- **This tree in Colorado** Ponderosa pine is native to Colorado. It is found throughout the state in the Mountain and Plateau areas. Its distribution is principally down the Front Range from the Wyoming line to Trinidad, east to Mesa Verde, and north to the Uncomphagre plateau. Natural elevation range is 6000' to 8500'. On north slopes, ponderosa is associated with Douglas-fir. In southern portions of state, it grows along with Gambel oak. It is the most important commercial pine in the western US. It furnishes more wood products than any other pine. It will also grow in an urban setting. It is adaptable, but is intolerant of soils with high pH (alkalinity). As a young tree, it maintains its branches and looks very full. As it grows in height, the bottom and interior branches begin to "self prune" to give it a more open appearance. Ponderosa and Austrian pine often are confused. Austrian has a fuller appearance than ponderosa and maintains its lower branches.
- **Growth rate** Medium. After they are established, growth rate can reach 12" to 18" a year. They like open areas with full sun. They are not shade tolerant and they don't like real moist soils. The best growing conditions are on dryer, well-drained locations. It can reach 75' in 50-60 years.

Pros:

- Tolerates drier conditions
- Native to Colorado
- Long-lived and stately tree
- Moderate grower

Cons:

- Susceptible to serious insect and disease issues
- Dropped needles can negatively impact grass
- Needs full sun
- Does not do well in poorly drained soils
- Lower branches die and fall off



Scots Pine



Scots Pine

Scientific Name: *Pinus sylvestris*

Family: Pinaceae

- **Growth Habit:** On sites with above average soil and irrigation this can be a fast growing tree when young. Mature height is 50' - 60' with a spread of 25' - 30'. More pyramid-shaped as a young tree becoming open and irregularly shaped as a mature tree.
- **How it will do in Colorado:** A common landscape tree also frequently planted for windbreaks and screens. Scotch pine is adaptable to a variety of soil types from somewhat basic (i.e., pH above 7.5) to acidic. This tree grows in Colorado landscapes up to 8000' elevation. Scotch pine is a very popular Christmas tree and accounts for nearly 30% of all trees grown for this use.
- **Interesting Features:** Scotch pine is the most widely distributed pine in the world. In its native habitat it can be found growing from Scandinavia near the Arctic Circle to the temperate Mediterranean region.
- **Cultivars:** A small number of selections are available with interesting characteristics that include yellow needles in the winter (e.g., Aurea), broad dwarfy growth habit (e.g., Beuvronensis), bluish needles (e.g., Watereri), and columnar tight growing habit (e.g., Fastigiata).

Pros:

- Unique orange, flakey bark
- Adapts to most soil types

Cons:

- Susceptible to serious insect/disease issues- it seems to be a favorite of Mountain Pine Beetle & Pine wilt nematode
- Can become stressed by drought, stress increases susceptibility to insect/disease problems



Blue Spruce



Blue Spruce

Scientific name: *Picea pungens*

Family: Pinaceae

- **This tree in Colorado** This is Colorado's state tree. It is normally found growing along streams from 6,000 to 9,000 feet elevation. In communities with a similar elevation the tree will perform admirably.
- **Growth habit** Strongly pyramidal as a young tree with a prominent excurrent growth habit. Maintaining a dominant central leader in a younger tree makes this an attractive tree for many years. This is normally a large tree so give it plenty of room to reach its full potential. Where there is adequate room the lower branches should be allowed to remain on the tree. Height around 60 feet with a spread of 30 feet. It is a shorter tree in hot dry climates (e.g., Grand Junction, CO).
- **Cultivars** There are several Colorado spruce selections available mostly because of their blue needle color. The most popular cultivar seems to be Fat Albert. Other cultivars include Hoops, Koster, and Iseli fastigiata (narrow upright habit).
- **Landscape value** Needle color can be green, blue, or silver blue. The fact that some trees are green in color prompted the name change to Colorado spruce. Like aspen trees this tree is extremely popular in Colorado landscapes. Trees are attractive as singles or in groups. They can be used as an accent tree or as a screen. Because this is a large tree adequate space for the tree to grow in to must be strongly considered before planting. The cultivar requires a large open space in order to develop fully, and so is not recommended for small home grounds.

Pros:

- Tolerates drier conditions
- Native to Colorado
- Attractive color
- Widely available

Cons:

- Large trees sometimes prone to blow down due to a shallow rooting system
- Very sharp needles
- Susceptible to serious insect/disease issues
- Some lack blue color



Pinyon Pine



Pinyon Pine

Scientific Name: *Pinus edulis*

Family: Pinaceae

- **This tree in Colorado** Pinyon pine is a native conifer growing throughout the four states occupying the four corners region of the Southwest. The common name for this tree comes from the Spanish word piñon, which refers to the large seed of the pino (i.e., pine). This tree is commonly found growing in association with several species of the juniper group. This growth association is commonly referred to as the pinyon/juniper woodland, or simply P/J.
- **Growth habit** Pyramidal growth habit with dense foliage when the trees are young. As the trees mature they become very irregular in growth habit. After many years the tree can reach a height of 30 feet with an equal spread.
- **Insects and diseases** Collected trees are very susceptible to the indigenous bark beetles (i.e., pine engraver beetle). This is a potentially serious problem where pinyons are being planted in landscapes near native stands of pinyon. Avoid putting these trees under stress, which can attract the engraver beetles. Check with nurseries or local tree experts for the recommended preventative insect spray to protect recently planted pinyon transplants.
- **Landscape value** This is a very popular tree in urban landscapes especially where a small evergreen is needed for a dry site. Most pinyons available through retail outlets are collected from their native habitat. This is a full-sun tree.

Pros:

- Tolerates dry conditions
- Native to Colorado
- Pine nuts are edible

Cons:

- Insect and disease problems very common. One of the more common is pinyon pitch mass borer.
- Stress attracts engraver beetles, which are often fatal for the tree.
- Does not tolerate wet sites at all – do not plant in grass.



Junipers



Juniper (Utah)

Scientific Name: *Juniperus osteosperma*

Family: Cupressaceae

- **This tree in Colorado** Native to the Intermountain West the Utah juniper is often confused with the Rocky Mountain juniper because they are so similar. These two conifer tree species differ in the following ways: 1) The needles on Utah are yellow-green and Rocky Mountain has gray-green foliage; 2) On Utah the bark is gray and on Rocky Mountain the bark is reddish-brown; 3) Utah juniper usually has male and female flowers on the same tree, whereas on Rocky Mountain the male and female flowers are found on different trees.
- **Growth habit** Upright evergreen that is more round than pyramidal in form as a mature tree. As a young tree it can have a single central leader, but as it matures it develops a short multi-stemmed appearance typically with low branches.
- **Landscape value** Utah juniper is drought and alkaline tolerant. Suited to dry rocky sites this tree is hard to find in the nursery trade, because it does not possess the striking foliage or form of the more typical landscape junipers. Landscapes that contain Utah juniper are often created using indigenous stands

Pros:

- Tolerant of dry conditions
- Tolerant of alkaline and rocky soils
- Few serious insect/disease problems
- Several juniper species are native to Colorado
- Dense crown, good for wind break or visibility screen

Cons:

- Prone to weather damage in winter and spring
- Foliage/twigs can be very sharp

