Tree Identification & Selections for SE Colorado
Colorado Tree Coalition

www.coloradotrees.org

Trees for Conservation, a Buyer’s Guide

‘Recommended Trees for Plains Communities of Southeastern Colorado & Eastern Colorado’
Start to notice a few – General Tree Differences

... & pretty soon you’ll know quite a few trees in our area
Types of Trees

Types of Wood

Softwoods
From Coniferous Trees

Hardwoods
From Deciduous Trees
Shapes of Tree Crowns
Texture & Color of the Bark

... & Twigs
Evergreen Trees

- Hemlock
- Fir
- White Pine
- Spruce
- Juniper
- Arborvitae
COLORADO CONIFER TREE IDENTIFICATION

Conifers—produce cones (sometimes berrylike), are evergreens, and have needlelike leaves.

PINES
(Key Words: Plural, Papyry sheath)
Needles are in bundles (plural) held together by a papery sheath. Bundles may be of 2, 3, or 5 (sometimes even 4).

SPRAUCES
(Key words: Single, Stiff, Sharp, Square, and Stools)
Single, stiff, sharp, square needles sit on little pedestals (stools).

FIRS
(Key words: Flat, Flexible)
Single, blunt, flat, flexible needles attached by little "suction cups".

DOUGLAS FIR
(Key words: Darn Flat, Darn Flexible, Dip Forward)
Single, blunt, very (darn) flat, very (darn) flexible needles are attached on an inclined projection (dipped forward). Bracts on cones look like rats caught in a trap.

JUNIPERS
(Key words: Jagged, Jalousie, Joined, Juicy)
Single, awl-shaped, scalelike needles are appressed on the stem (joined) and overlap like Venetian blinds (jalousie) giving the stem a jagged appearance. The fruit is berry-like (juicy).
The Basic Leaf
Leaf Arrangement on Stem

Figure 3-4. Leaf arrangement or phyllotaxy.
Leaf Venation & Complexity

Figure 3-5. Leaf venation.

Figure 3-6. Complexity of leaves.
Leaf Shapes & Apices
Leaf Bases & Leaf Margins

Figure 3-9. Leaf bases.

Figure 3-10. Leaf margins.
Twigs
... &

Buds

NORMAL BUD
(American beech)

COLLATERAL
(Red maple)

SUPERPOSED
(Black walnut)

TERMINAL BUDS

TRUE TERMINAL BUD
(Lilacory)

FAKE OR MISSING
TERMINAL BUD
(Elm)

CLUSTRED TERMINAL BUD
(Oak)
...& Twig Pith
Fruits

FRUIT TYPES

CHERRY (Prunus, Pyrus, Cerasus, Sorbus)

DRupe
(Prunus, Viburnum, Celtis, Sassafras)

Fruit (Malus, Pyrus, Chrysanthemum)

Endocarp
Seed
Receptacle

Pericarp
(Fleshy Matrix)
Seed

BERRY
(Asimina, Lonicera)

SAMARA
(Ulmus, Platanus)

SCHIZOCARP
(Acer, Fraxinus)

SAMARA
(Fraxinus)

LEUCINE (POD)
(Robinia, Cercis, Gleditsia)

CAPSULES
(Systema, Forsythia, Rhododendron)

ACORN
(Quercus)

NUT WITH DEHISCENT HUSK
(Garya)

NUTLET
(Carpinus)

CONIFER
(Picea, Piny, Abies)

MULTIPLE FRUIT
OF SMALL DRUPES
(Morus)

AGGREGATE OF SAMARAS
(Liriodendron)

AGGREGATE OF FOLLICLES
(Magnolia)
Let’s Walk Thru the Some Tree Selections -

Large Shade Trees
Medium Shade Trees
Small Shade Trees
Evergreens
Less Desirable Choices
Large Shade Trees

> 50 Feet Mature Height
Hackberry (Celtis occidentalis)
Honeylocust
(Gleditsia triacanthos)
American Elm (Ulmus americana)
English Elm (Ulmus procera)
Lacebark Elm (Ulmus parvifolia)
Northern Catalpa (Catalpa speciosa)
Kentucky Coffeetree
(Gymnocladus dioica)
Bur Oak (Quercus macrocarpa)
White Oak (Quercus alba)

- Photos courtesy of Auburn University
Black Walnut (Juglans nigra) (TCD)
Pecan (Carya illioensis)
American Linden (Tilia americana)
American Sycamore
(Platanus occidentalis)
Japanese Pagodatree
(Sophora japonica)
White Mulberry (Morus alba)
Swamp White Oak (Quercus bicolor)
Medium Shade Trees

30-45 Feet Mature Height
Littleleaf Linden (Tilia Cordata)
Golden Raintree
(Koelreuteria paniculata)
Aristocrat pear (Pyrus calleryana)
Osage-orange (Maclura pomifera)
Persimmon (Diospyros virginiana)
Western Soapberry
(Sapindus drummondi)
Chinese Pistache (Pistacio chinensis)
Bigtooth Maple
(Acer grandidentatum)
Chinkapin oak
(Quercus muehlenbergi)
Small Shade Trees

30-45 Feet Mature Height
Hawthorne Species
(Crataegus spp.)
Crabapple Species (Malus spp)
Gambel Oak (Quercus gambelii)
Pink Lady Winterberry Euonymous 
(Euonymus bungeana)
Sumac (Rhus typhina or R. glabra)
Mulberry, Weeping White
(Morus alba)
Redbud (Cercis canadensis)
Boxelder

Tree of the Month - Sensation Boxelder
Desert Willow
(Chilopsis linearis)
Evergreen Trees
Colorado Blue Spruce (Picea pungens)
Austrian Pine (Pinus nigra)
Scots Pine (Pinus sylvestris)
Ponderosa Pine (Pinus ponderosa)
Pinon Pine (Pinus edulis)
Mugo Pine (Pinus mugo)
Eastern Red Cedar
(Juniperus virginiana)
Junipers, upright
(Juniperus scopulorum)
Bristlecone Pine (Pinus aristata)
Colorado Tree Coalition
www.coloradotrees.org

‘Find the Right Tree’ section
Front Range Tree Recommendation List

This Front Range Tree Recommendation List was developed through the collaborative efforts of 12 individuals, three from each of the four participating professional groups: the American Society of Landscape Architects (ASLA), the Colorado Nursery & Greenhouse Association (CNGA), municipal arborists representing the Colorado Tree Coalition (CTC), and the Colorado State University (CSU) Extension. Based on the committee’s collective education, knowledge, and experience over 250 trees or varieties were evaluated and rated, resulting in a single reference list for professionals to use and share with their customers or residents.

The purpose of this project was to create a Front Range tree list for use by Green Industry professionals based on decades of actual experience growing and caring for trees in our area. This list is intended to assist those involved in the buying, growing, selling, selection, siting, and specification of trees, with the ultimate goal of a healthy, diverse, and geographically appropriate landscape and urban forest. The ratings apply to the Colorado Front Range, generally defined as the region from Colorado Springs to the Wyoming border and from the foothills to the eastern plains. We encourage industry professionals to prepare similar lists for other geographic regions using this as a template.

The initial list of evaluated trees was based on a compilation of six 2010 Front Range Nursery catalogs plus recommendations from committee members. The group evaluated each tree based upon 5 Critical and 8 Cautionary Cultural Factors, resulting in one of four ratings:

A - Generally Recommended. A tree is Generally Recommended if it has consistently displayed no serious vitality issues related to any of the five Critical factors.

B - Conditionally Recommended. A tree is Conditionally Recommended if it has consistently displayed serious vitality issues related to one or more of the five Critical factors. Some cultural factors such as sun scald can be mitigated thru proper horticultural care, in this case using tree wrap.

C - Potential/Unproven. A tree is listed as Potential/Unproven if it is offered for sale locally and has the potential to do well here (a USDA Hardiness Zone Rating of 5 or below), but the committee has less than ten years of experience growing and maintaining a significant population of the tree in our area. As this list is periodically updated, the intention is to move trees with a C rating to one of the other categories based upon the collective experience of the list users.

D - Not Recommended. A tree is Not Recommended if it has consistently displayed overwhelming vitality issues related to one or more of the five Critical factors or can be expected to do poorly under normal circumstances.

When using this list to assist in tree selection for a specific planting location, a site analysis relating to the cultural factors, including a soil test to determine pH, texture, and composition should be performed. We assume the list users are aware of the physical attributes of these trees (mature size, fall color, growth habit, texture, flowers, fruit, etc) or have access to this information.

The Front Range Tree Recommendation List is downloadable on the websites of the CNGA, ASLA, CTC, and CSU Extension. This hardcopy document was paid for with contributions from the GreenCO Foundation and the Colorado Nursery Research and Education Foundation (CNREF). If you are interested in participating in future updates of this list, please provide your contact information on the CNGA website, coloradonga.org. Click on Resources and Tree List.

COMMITTEE MEMBERS
Landscape Architects - ASLA: Gail Barry, David Flagg, Don Godd NRLs
Nurserymen - CNGA: Stan Brown, Matt Edmundson, Gary Epstein CBU Representatives: Robert Cox; Jim Klett, PhD; Alison O’Connor Municipal Arborists - CTC: Tim Buchanan, Fort Collins; Scott Grimes, South Suburban Parks; Michael Swanson, Denver

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http://www.ext.colostate.edu/pubs/garden/treerecllist.pdf
| Trees Recommended for Southeastern Colorado Listed by Size Class and then Alphabetically by Common Name | Drought Tolerance | High Soil pH/Alkalinity Tolerance | Wet Areas | Sandy Soil | Sandy Loam | Loam | Clay Loam | Protected Site | Good Windbreak | Company | Recommended Cultivars | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Large Shade Trees - 50 ft at maturity | Drought Tolerance | High Soil pH/Alkalinity Tolerance | Wet Areas | Sandy Soil | Sandy Loam | Loam | Clay Loam | Protected Site | Good Windbreak | Company | Recommended Cultivars | Comments |
| Ash | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Chokecherry | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Cottonwood | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Ponderosa Pine | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Poplar | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Spruce | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Willow | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Medium Shade Trees - 50 to 80 ft at maturity | Drought Tolerance | High Soil pH/Alkalinity Tolerance | Wet Areas | Sandy Soil | Sandy Loam | Loam | Clay Loam | Protected Site | Good Windbreak | Company | Recommended Cultivars | Comments |
| Cottonwood | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Spruce | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Willow | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Large Ornamental Trees - 30 or less at maturity | Drought Tolerance | High Soil pH/Alkalinity Tolerance | Wet Areas | Sandy Soil | Sandy Loam | Loam | Clay Loam | Protected Site | Good Windbreak | Company | Recommended Cultivars | Comments |
| Ash | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Cottonwood | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Ponderosa Pine | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Poplar | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Spruce | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |
| Willow | High | Moderate | Fair | High | Moderate | Fair | Sandy | Sandy Loam | Loam | Clay Loam | Yes | Yes | Some varieties have shown superior qualities compared with others |

*All newly planted trees, regardless of drought tolerance, must be frequently deep watered to become established. Established trees must be consistently deep watered for the life of the tree. Deep watering means establishing soil moisture to a depth of 12 to 18 inches within the drip line of the tree.

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Colorado State Forest Service
La Junta District

http://csfs.colostate.edu/pdfs/SECOTreeSelectionMatrix_FINAL_SLS_March24.pdf
La Junta District Office

Serving Baca, Bent, Cheyenne, Crowley, Kiowa, Otero & Prowers Counties

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