

Evergreen Trees

Fact Sheet No. 7.403

Gardening Series | Trees and Shrubs

James Klett and Lisa Mason (10/2020)

Narrowleaf evergreen (conifer) trees give a landscape year-round interest, color and texture. Conifer trees are versatile and can be used as specimens, hedges, privacy screens, backdrops for smaller flowering plants, or as a windbreak planted on the north and west to deflect or intercept winter winds. (See fact sheet 7.225, [Landscaping for Energy Conservation](#).)

“Evergreen” refers to trees that normally retain most of their foliage (needles) through the winter. Such trees, however, do not retain all of their needles indefinitely. For example, ponderosa pine drops needles each year that are three years old. These older needles are the innermost ones toward the main trunk. Younger needles, further out on the branch, are retained until they are three years old. This annual browning and drop of innermost, older needles can cause concern, but it is a natural process.



Bristlecone pine trees have needles in groups (fascicles) of five. Photo: Lisa Mason

Selection

Examine the intended planting space for good soil drainage, adequate sunlight and sufficient space to accommodate the desired evergreen tree at its mature size. Allow for clear access to driveways, sidewalks and entryways. Determine whether the tree’s growth will affect any overhead utility lines. Before planting, call the utility companies’ hotline (dial 811) to mark the location of any underground lines to avoid damaging them while digging. For other considerations on species selection and location, refer to CSU Extension Garden Note #631 [Tree Placement: Right Plant, Right Place](#), and #632, [Tree Selection: Right Plant, Right Place](#).

In smaller sites, consider smaller trees or shrubs. (See 7.418, [Small Deciduous Trees](#), 7.414, [Evergreen Shrubs](#), 7.415, [Deciduous Shrubs](#), or 7.427 [Columnar and Fastigiate Trees for CO Landscapes](#)). Consider dwarf conifers for limited space areas. If there is sufficient space, use several kinds of evergreens to add variety to the landscape.



White fir cones stand upright on the branches. Photo: Robert Cox



Quick Facts

- Most evergreens prefer full sun; some will tolerate partial shade.
- When selecting evergreens, consider available space, soil and site conditions, and weather factors.
- Evergreens have different soil moisture preferences. Group drought-tolerant types separately from those that require more moisture.
- All evergreens benefit from mulches. All need sufficient water to become established after transplanting.
- Most evergreens benefit from supplemental water during dry, warm or windy periods from November to March.

J. Klett, Extension Specialist, Colorado State University; and L. Mason, Horticulture Agent, Colorado State University Extension. R. A. Cox, Retired Horticulture Agent, Colorado State University Extension contributed to the original version of this fact sheet.

Above: A Colorado blue spruce in winter. Photo: Lisa Mason

Watering and Maintenance

The following list (Table 1) indicates the relative moisture needs of evergreens. Plant species with similar water needs in the same general area – do not mix trees with widely different water needs.

Evergreens that need less moisture may work well on slopes. All evergreens usable in Colorado prefer well drained soils. Avoid planting them in swales or poorly drained, soggy areas. Evergreens that need less moisture may not do well in lawn areas because of the amount of water needed to sustain the lawn. Even for those trees that need more moisture and are compatible with lawn watering, leave the planting area free of sod to allow for good root development. An organic mulch is recommended over the entire planting area. (See 7.214, [Mulches for Home Grounds](#), and CSU Extension Garden Note #658, [Mulching Trees](#)).

Most evergreens growing in Colorado landscapes, whether recently transplanted or well-established, benefit from supplemental water during winter dry spells. Often, such spells are accompanied by drying winds or unseasonably warm temperatures, further emphasizing the need for watering. (See 7.211, [Fall and Winter Watering](#), CSU Extension Garden Note #657, [Watering Mature Trees](#), and 7.240, [Watering a Home Landscape During Drought](#)).

For gardeners above 6,000 feet, some of the plants listed in Table 1 are not adapted. Refer to 7.423, [Trees and Shrubs for Mountain Areas](#) for specific recommendations. Refer to 7.421, [Native Trees for Colorado Landscapes](#) and 7.422, [Native Shrubs for Colorado Landscapes](#) for native evergreens.

Planting Evergreen Trees

Growing a healthy evergreen tree begins with proper planting techniques. Mistakes such as planting a tree too deep are common in the landscape, and lead to trunk-girdling roots which can shorten the life span of the tree significantly. Proper planting techniques promote rapid root growth while reducing water stress from the harvest and planting process. For more information, refer to CSU Extension Garden Note #633, [The Science of Planting Trees](#), #636, [Tree Planting Steps](#), #635, [Care of Recently Planted Trees](#), #634, [Tree Staking and Underground Stabilization](#), and fact sheet 2.926, [Healthy Roots and Healthy Trees](#).

Table 1. Recommended evergreen trees for Colorado.

Scientific Name	Cultivar	Common Name	Estimated Mature Size (H x W)	Tree Shape	Growth Rate ¹	Soil Moisture ²	Comments and Cultural Hints
Arborvitae							
<i>Thuja occidentalis</i>	–	Eastern or American arborvitae	20' x 10'	conical	s	H	Prefers higher humidity; all varieties listed below are subject to winterburn and snow damage.
<i>Thuja occidentalis</i>	'Degroot's Spire'	Eastern or American arborvitae	12' x 4'	columnar	s	H	Rich green foliage turns bronze in winter.
<i>Thuja occidentalis</i>	'Smaragd' ('Emerald')	Eastern or American arborvitae	12' x 4'	columnar	s	H	Dense, medium green foliage.
<i>Thuja occidentalis</i>	'Green Giant'	Eastern or American arborvitae	30' x 15'	pyramidal	s	H	Dense branching; dark green foliage; can be sheered.
Cypress							
<i>Cupressus arizonica</i> var. <i>glabra</i>	–	Arizona cypress	30' x 20'	columnar to broad	m	L-M	Exfoliating bark; glaucous green to silvery blue foliage. Protect from winter sun during establishment.
Fir							
<i>Abies concolor</i> *	–	White fir	60' x 20'	conical	m	M-H	Flat, blue-green needles; may winterburn in windy sites; may perform poorly in clay soils.
<i>Abies concolor</i> *	'Candicans'	White fir	40' x 15'	broadly columnar	m	M-H	Longer, silvery-blue needles.
<i>Pseudotsuga menziesii</i> *	–	Douglas-fir	60' x 20'	conical	m-f	M	Unique cones with "mouse-tail" bracts; more cold-tolerant and soil-adaptable.

Juniper							
<i>Juniperus chinensis</i>	'Blue Point'	Chinese juniper	12' x 8'	broadly columnar	m	L	Slower growing with silver-blue foliage, blue-green fruit.
<i>Juniperus chinensis</i>	'Hetzi Columnaris'	Chinese juniper	15' x 5'	narrowly columnar	m	L	Abundant fruit.
<i>Juniperus chinensis</i>	'Spartan'	Chinese juniper	12' x 5'	conical	m-f	L	Dense green foliage.
<i>Juniperus chinensis</i>	'Spearmint'	Chinese juniper	15' x 6'	conical	m	L	Dense, bright green foliage.
<i>Juniperus scopulorum</i> *	—	Rocky Mountain juniper	variable	broadly columnar	s-m	L	Foliage color varies from green to blue-green.
<i>Juniperus scopulorum</i> *	'Cologreen'	Rocky Mountain juniper	15' x 8'	broadly columnar	s-m	L	Dense, green foliage; abundant fruit.
<i>Juniperus scopulorum</i> *	'Gray Gleam'	Rocky Mountain juniper	15' x 6'	conical	s	L	No fruit; dense, gray foliage.
<i>Juniperus scopulorum</i> *	'Moonglow'	Rocky Mountain juniper	15' x 8'	broadly columnar	s-m	L	Dense, silver-blue foliage.
<i>Juniperus scopulorum</i> *	'Skyrocket'	Rocky Mountain juniper	15' x 3'	columnar	m-f	L	Silvery blue foliage.
<i>Juniperus scopulorum</i> *	'Wichita Blue'	Rocky Mountain juniper	12' x 6'	broadly columnar	s-m	L	Bright blue foliage color.
<i>Juniperus virginiana</i>	—	Eastern redcedar	40' x 15'	conical	s-m	L	Open, horizontal branching; foliage turns brownish in winter.
<i>Juniperus virginiana</i>	'Blue Arrow'	Eastern redcedar	15' x 3'	narrowly columnar	s-m	L	Bright blue foliage on narrow upright form.
Larch							
<i>Larix decidua</i>	—	European larch	45' x 18'	broadly columnar	m	M-H	A deciduous conifer. Needles in clusters that turn yellow in fall before dropping.
Pine							
<i>Pinus aristata</i> *	—	Bristlecone pine	25' x 15'	irregular	s	L-M	Shorter, dark green needles with white resin dots; specimen plant.
<i>Pinus aristata</i> *	'Formal Form'	Bristlecone pine	20' x 12'	narrow, upright	s	L-M	Dwarfer form.
<i>Pinus edulis</i> *	—	Piñon pine	20' x 15'	conical to rounded	s-m	L	Not suited for frequently watered lawn areas; edible seeds may not develop dependably in urban landscapes.
<i>Pinus flexilis</i> *	—	Limber pine	40' x 20'	broadly columnar	m	L-M	Wind-tolerant; adaptable to dry soils; very flexible branches; needles about 2".
<i>Pinus flexilis</i> *	'Vanderwolf's Pyramid'	Limber pine	35' x 20'	pyramidal	m	L-M	Blue-green needles on ascending branches.
<i>Pinus heldreichii</i> var <i>leucodermis</i>	—	Bosnian pine	20' x 12'	broadly columnar	s	L-M	Stiff, dark green needles in brush-like tufts.
<i>Pinus heldreichii</i> var <i>leucodermis</i>	'Emerald Arrow'	Bosnian pine	20' x 12'	narrow, upright	s	L-M	Ideal for limited space; slow growing.
<i>Pinus heldreichii</i> var <i>leucodermis</i>	'Iseli Fastigiata'	Bosnian pine	20' x 8'	upright, columnar	s	L-M	Dark green needles; ideal for limited spaces.
<i>Pinus heldreichii</i> var <i>leucodermis</i>	'Mint Truffle'	Bosnian pine	12' x 8'	pyramidal compact	s	L-M	Dark green needles that cover the shoots.
<i>Pinus mugo</i>	—	Mugo pine	variable	irregular	m	L-M	Variable growth habit; tree-like to shrubby; dwarf forms commonly sold for landscapes.
<i>Pinus mugo</i>	'Tannenbaum'	Mugo pine	12' x 6'	broadly columnar	s	L-M	Good winter color and hardiness.
<i>Pinus nigra</i>	—	Austrian pine	50' x 25'	broadly columnar	m	L-M	3-5", dark green needles; tolerates many soil types and urban pollution.
<i>Pinus nigra</i>	'Arnold Sentinel'	Austrian pine	15' x 5'	narrowly columnar	s	L-M	Dense, dark green needles.

<i>Pinus nigra</i>	'Frank'	Austrian pine	20' x 7'	upright, columnar	s	L-M	Dark green with slightly twisted needles; compact.
<i>Pinus nigra</i>	'Oregon Green'	Austrian pine	15' x 12'	broadly columnar	s	L-M	Stiff, dark green needles.
<i>Pinus ponderosa</i> *	—	Ponderosa pine	50' x 25'	broadly columnar	m	L	Longer, yellow-green needles; older trees develop cinnamon-brown bark.
<i>Pinus strobiformis</i> *	—	Southwestern white pine	45' x 25'	broadly columnar	m-f	L-M	Blue-green needles; similar to limber pine; attractive elongated cones.
<i>Pinus strobus</i>	—	Eastern white pine	50' x 20'		m-f	M	Horizontal branching; fine-textured, blue-green needles; best in protected sites; subject to winter burn; limited availability.
<i>Pinus strobus</i>	'Fastigiata'	Eastern white pine	35' x 10'	narrowly columnar	m	M	Fine textured blue-green needles.
<i>Pinus strobus</i>	'Pendula'	Eastern white pine	15' x 15'	weeping	m	M	Bluish-green needles on long branches that sweep the ground.
<i>Pinus sylvestris</i>	—	Scotch pine	40' x 25'	broadly columnar	m	M	Blue-green, twisted needles; mature bark is orange-brown.
<i>Pinus sylvestris</i>	'Fastigiata'	Scotch pine	20' x 5'	narrowly columnar	m	M	Tightly angled branches often damaged by snow storms.
Spruce							
<i>Picea abies</i>	—	Norway spruce	50' x 25'	broadly columnar	m-f	M-H	Short green needles; branches droop with age.
<i>Picea abies</i>	'Cupressina'	Norway spruce	15' x 5'	narrowly columnar	m-f	M-H	Good vertical accent; withstands snowloads.
<i>Picea glauca</i>	—	White spruce	50' x 20'	broadly columnar	m	M	Short, greenish-white needles; adaptable tree.
<i>Picea glauca</i>	'Pendula'	White spruce	20' x 5'	narrowly weeping	s	M	Gray-green needles on weeping limbs; sheds snow loads.
<i>Picea glauca</i> var <i>densata</i>	—	Black Hills spruce	30' x 15'	conical	s	M	Dense, short, dark green needles.
<i>Picea pungens</i> *	—	Colorado spruce	60' x 25'	broadly columnar	m	M-H	Needles short, sharp, green to blue-green.
<i>Picea pungens glauca</i> *	—	Colorado blue spruce	60' x 25'	broadly columnar	m	M-H	Needles short, sharp, blue; several varieties selected for blue needles. Colorado state tree.
<i>Picea pungens glauca</i> *	'Baby Blue Eyes'	Colorado blue spruce	15' x 8'	broadly columnar	s	M-H	Lighter blue needles, dense growth habit.
<i>Picea pungens glauca</i> *	'Bakeri'	Colorado blue spruce	30' x 15'	broadly columnar	s	M-H	Brilliant blue needles and slightly irregular branching.
<i>Picea pungens glauca</i> *	'Hoopsii'	Colorado blue spruce	45' x 15'	broadly columnar	m	M-H	Intense silver-blue needles.
<i>Picea pungens glauca</i> *	'Fat Albert'	Colorado blue spruce	30' x 20'	broadly pyramidal	s	M-H	Outstanding blue-needled form with strong central leader.
<i>Picea pungens glauca</i> *	'Iseli Fastigiata'	Colorado blue spruce	15' x 5'	narrowly columnar	s	M-H	Striking blue needles.
<i>Picea pungens glauca</i> *	'R.H. Montgomery' ('Montgomery')	Colorado blue spruce	12' x 8'	broadly pyramidal	s	M-H	Striking silver-blue needles.
<i>Picea pungens glauca</i> *	'Sester Dwarf'	Colorado blue spruce	10' x 5'	conical	s	M-H	Silver-blue needles on a dense, conical form.

¹ Growth rate: s = slow; m = moderate; f = fast

² Soil moisture: H = high; M = medium; L = low

* Native to Colorado