

Colorado (Blue)  
Spruce



# Colorado (Blue) Spruce (*Picea pungens*)

## General Description

A broad, dense, pyramidal tree with stiff branches horizontal to the ground. Native to intermountain states of the west. Choice specimen tree. The largest tree in North Dakota is 85 feet tall with a canopy spread of 30 feet.

### Leaves and Buds

Bud Arrangement - Buds are in whorls.

Bud Color - Yellowish-brown, not resinous.

Bud Size - Broadly conical, tips are blunt, about ¼ inch long.

Leaf Type and Shape - Sharply pointed needles are attached individually on peglike projections called sterigmata.

Leaf Margins - Needles are 4-sided.

Leaf Surface - Variably glaucous, 4 to 5 stomatal lines on both sides.

Leaf Length - Needles ¾ to 1¼ inches.

Leaf Width - 1/16 inch needles.

Leaf Color - Variable from dull green, blue-green, to silvery-blue, glaucous.

### Flowers and Fruits

Flower Type - Monoecious, separate male and female strobili.

Flower Color - Female strobili are green to purple; male are orange.

Fruit Type - Cones 2½ to 4 inches long, with papery cone scales that have a truncated edge; small, winged seeds, chestnut brown.

Fruit Color - Light yellow-brown or tannish cones, chestnut-brown seeds.

### Form

Growth Habit - Branching is broad and dense, with branches extending to the ground.

Texture - Medium, summer and winter.

Crown Height - 30 to 65 feet.

Crown Width - 15 to 25 feet.

Bark Color - Bark is scaly or flaky and ash-brown.

Root System - Shallow and wide spreading.

## Environmental Requirements

### Soils

Soil Texture - Performs best on moist, well-drained loams.

Soil pH - 6.0 to 7.5.

Windbreak Suitability Group - 1, 3, 4 and 5.

### Cold Hardiness

USDA Zone 2.

### Water

Does not tolerate flooding. Prefers moist areas, but is the most drought tolerant of the spruces.

### Light

Full sun. Does not tolerate shade.

## Uses

### Conservation/Windbreaks

Medium to tall evergreen for farmstead and field windbreaks.

### Wildlife

Nesting sites for birds.

### Agroforestry Products

Wood - Used for firewood but burns fast. Good for kindling. Used for Christmas trees.

### Urban/Recreational

Popular specimen or ornamental landscape tree. Used singly or in group plantings.

## Cultivated Varieties

Blue Globe Spruce (*Picea pungens* 'Glauca Globosa') - Excellent blue-needled dwarf bush.

Hoops Blue Spruce (*P. pungens* 'Hoopsii') - Striking steel-blue, beautiful.

Iseli Foxtail Spruce (*P. pungens* 'Iseli Foxtail') - Blue, bushy-needled form.

Mission Blue Spruce (*P. pungens* 'Mission Blue') - Blue needle color.

Moerheim Blue Spruce (*P. pungens* 'Moerheimii') - A dense, compact form with blue color.

Montgomery Spruce (*P. pungens* 'Montgomery') - Dwarf, blue-needled selection. Excellent, dense habit, but sometimes reverts to taller form.

Thompson Blue Spruce (*P. pungens* 'Thompsonii') - Silvery-blue needles, similar color to 'Hoopsii'.

## Related Species

Black Hills Spruce (*Picea glauca* var. *densata*)

Norway Spruce (*P. abies*)

## Pests

Common diseases include Rhizosphaera needle cast, Cytospora canker, and Lirula needle blight. Common insect pests include spider mites, spruce needle miner, pine needle scale, yellow-headed spruce sawfly, and aphid.