Colorado (Blue) Spruce
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(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 3/4 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 - Monocious, 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 'Glaucia 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.
Thompsen Blue Spruce (P. pungens 'Thompsenii') - 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.