

***Pseudotsuga menziesii*: Douglas-Fir¹**

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Introduction

Douglas-Fir grows 40 to 60 feet and spreads 15 to 25 feet in an erect pyramid in the landscape. It grows to more than 200 feet tall in its native habitat in the West. Hardiness varies with seed source, so be sure it was collected from an area with suitable cold-hardiness to the area in which it will be used.

General Information

Scientific name: *Pseudotsuga menziesii*

Pronunciation: soo-doe-SOO-guh men-ZEE-zee-eye

Common name(s): Douglas-Fir

Family: *Pinaceae*

USDA hardiness zones: 5A through 6B (Fig. 2)

Origin: native to North America

Invasive potential: little invasive potential

Uses: screen; specimen; Christmas tree

Availability: not native to North America



Figure 1. Young *Pseudotsuga menziesii*: Douglas-Fir

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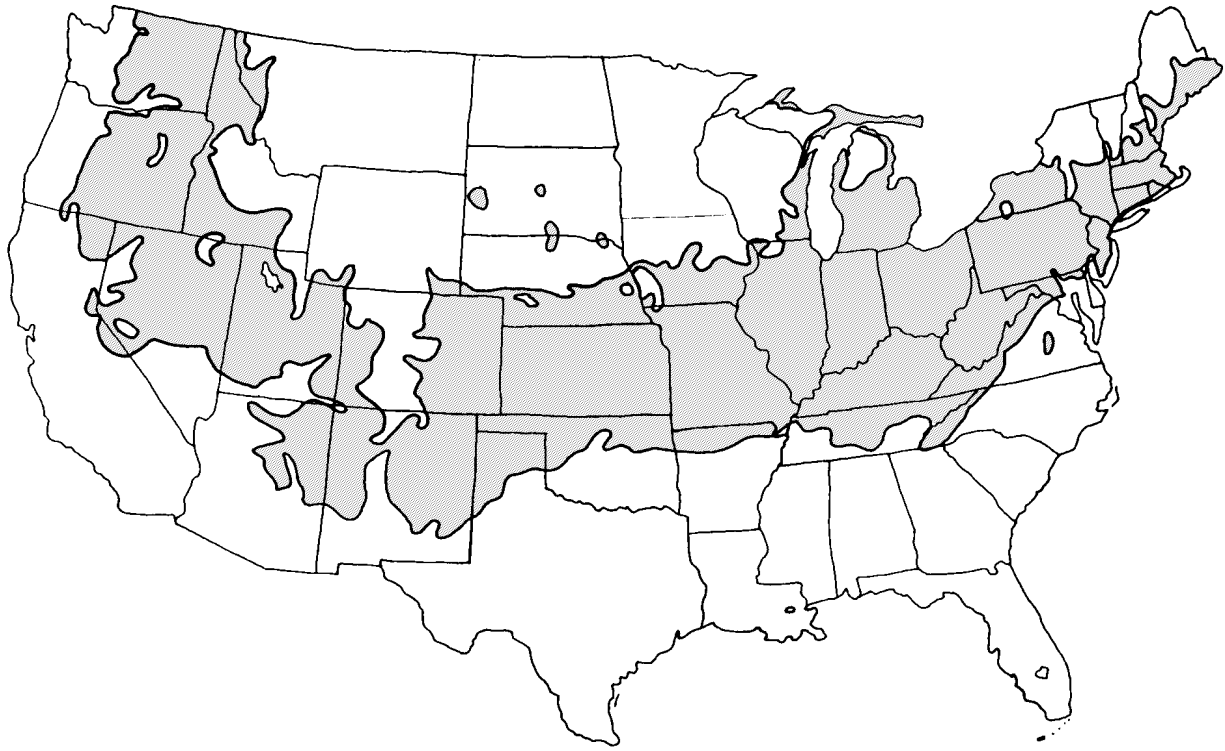


Figure 2. Range

Description

Height: 40 to 60 feet

Spread: 15 to 25 feet

Crown uniformity: symmetrical

Crown shape: pyramidal

Crown density: moderate

Growth rate: moderate

Texture: fine

Foliage

Leaf arrangement: alternate (Fig. 3)

Leaf type: simple

Leaf margin: entire

Leaf shape: needle-like (filiform)

Leaf venation: parallel, none, or difficult to see

Leaf type and persistence: evergreen, needled evergreen

Leaf blade length: less than 2 inches

Leaf color: green

Fall color: no color change

Fall characteristic: not showy

Flower

Flower color: red

Flower characteristics: not showy

Fruit

Fruit shape: oval, cone

Fruit length: 1 to 3 inches

Fruit covering: dry or hard

Fruit color: brown

Fruit characteristics: does not attract wildlife; showy; fruit/leaves not a litter problem

Trunk and Branches

Trunk/bark/branches: branches droop; not showy; typically one trunk; thorns

Pruning requirement: little required

Breakage: susceptible to breakage

Current year twig color: green

Current year twig thickness: thin, medium

Wood specific gravity: 0.48

Culture

Light requirement: full sun

Soil tolerances: clay; sand; loam; acidic; alkaline; well-drained

Drought tolerance: moderate

Aerosol salt tolerance: low

Other

Roots: not a problem

Winter interest: yes

Outstanding tree: no

Ozone sensitivity: tolerant

Verticillium wilt susceptibility: resistant

Pest resistance: resistant to pests/diseases

Use and Management

Douglas-Fir is most commonly used as a screen or occasionally a specimen in the landscape. Not suited for a small residential landscape, it is often a fixture in a commercial setting. Allow room for the spread of the tree since the tree looks terrible with lower limbs removed. It is grown and shipped as a Christmas tree in many parts of the country.



Figure 3. Foliage

The tree prefers a sunny location with a moist soil and is not considered a good tree for much of the South. It grows but struggles in USDA hardiness zone 7. Douglas-Fir transplants best when balled and burlapped and has a moderate growth rate. It tolerates pruning and shearing but will not tolerate dry soil for extended periods. Protect from direct wind exposure for best appearance. Some occasional watering in summer dry spells will help the tree stay vigorous, especially in the southern end of its range.

Cultivars are: `Anguina' - long, snake-like branches; `Brevifolia' - short leaves; `Compacta' - compact, conical growth; `Fastigiata' - dense, pyramidal; `Fretsii' - dense bush, short broad leaves; `Glauca' - bluish foliage; `Nana' - dwarf; `Pendula' - long, drooping branchlets; `Revoluta' - curled leaves; `Stairii' - variegated leaves.

Pests

Aphids infestations on small trees may be dislodged with a strong stream of water from the garden hose.

Scale and bark beetles may infest Douglas-Fir, especially those under stress.

Diseases

Root rot can be a serious problem on clay and other wet soils.

Needles infected by leaf cast fungi in spring turn brown and fall off.

Several fungi cause canker diseases leading to branch dieback. Maintain tree health and prune out infected branches.