



Abies firma Japanese Fir¹

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INTRODUCTION

Japanese Fir has a similar form to White Fir, but has stiffer, medium to dark green needles and may grow taller (Fig. 1). It probably grows 20 feet in 30-years. The trunk grows straight up the center of the tree and the crown maintains a soft, tight, pyramidal shape without pruning. Branches are held upright on young trees but give way to a more horizontal form as the tree grows older. The tree looks best with lower branches left on the tree so they sweep the ground. Growth is very slow in the seedling stage and after transplanting, but once established the tree will grow about 12 inches per year.

GENERAL INFORMATION

Scientific name: *Abies firma*

Pronunciation: AY-beez FEER-muh

Common name(s): Japanese Fir

Family: *Pinaceae*

USDA hardiness zones: 5B through 8 (Fig. 2)

Origin: not native to North America

Uses: Bonsai; recommended for buffer strips around parking lots or for median strip plantings in the highway; screen; specimen; Christmas tree

Availability: grown in small quantities by a small number of nurseries

DESCRIPTION

Height: 20 to 30 feet

Spread: 10 to 15 feet

Crown uniformity: symmetrical canopy with a regular (or smooth) outline, and individuals have more

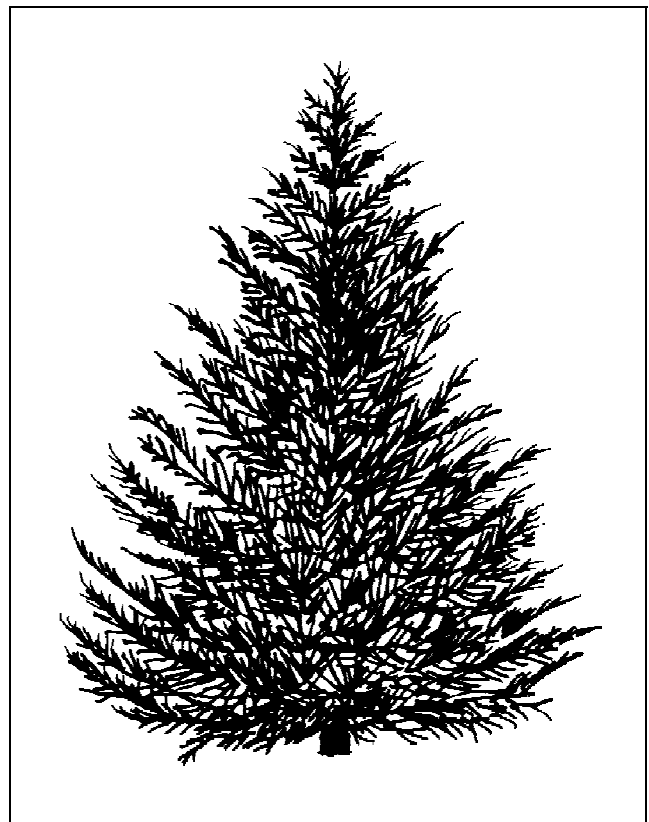


Figure 1. Middle-aged Japanese Fir.

or less identical crown forms

Crown shape: pyramidal

Crown density: dense

Growth rate: slow

Texture: fine

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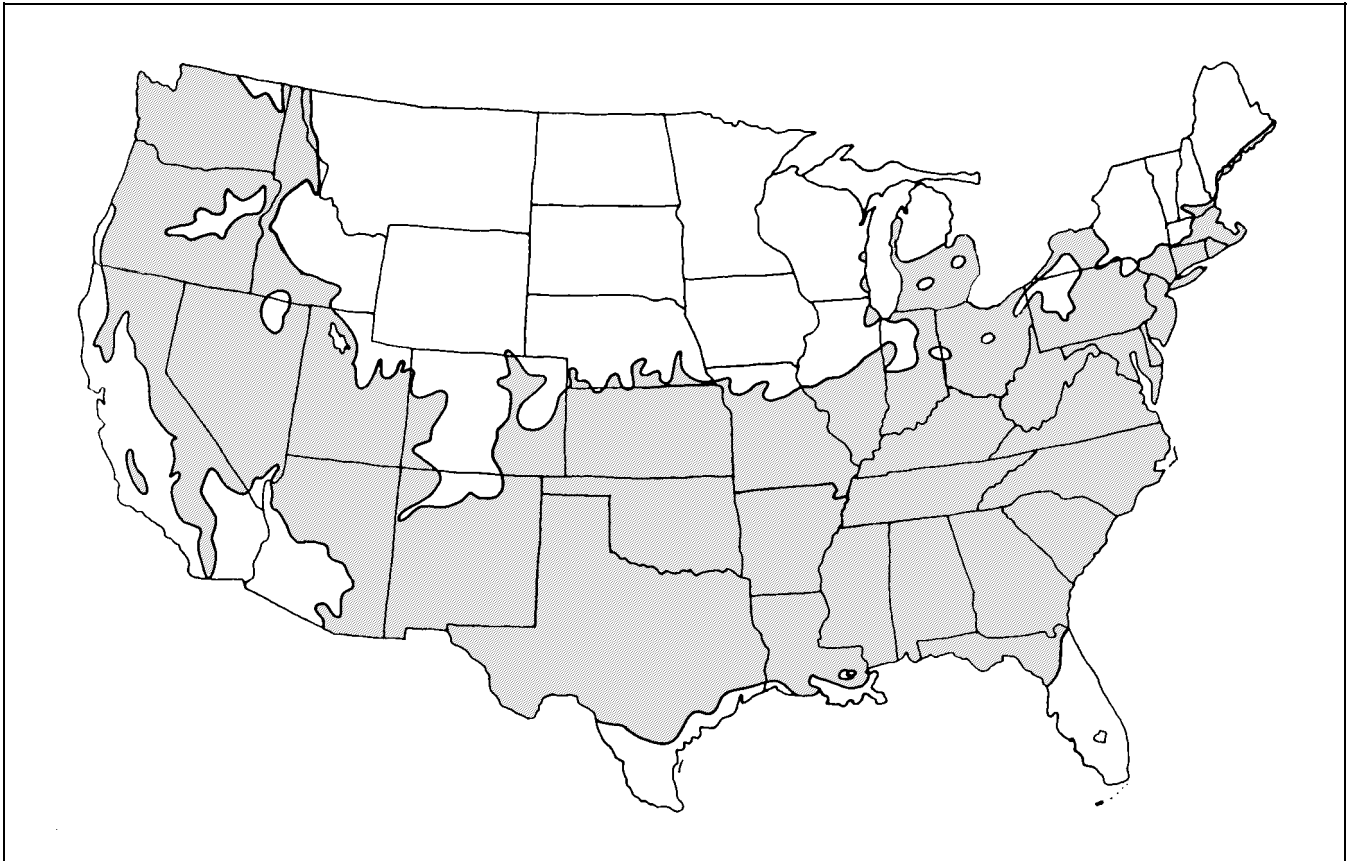


Figure 2. Shaded area represents potential planting range.

Foliage

Leaf arrangement: spiral (Fig. 3)

Leaf type: simple

Leaf margin: entire

Leaf shape: needle-like (filiform)

Leaf venation: parallel

Leaf type and persistence: evergreen; needle leaf evergreen

Leaf blade length: less than 2 inches

Leaf color: green

Fall color: no fall color change

Fall characteristic: not showy

Flower

Flower characteristics: inconspicuous and not showy; spring flowering

Fruit

Fruit shape: elongated

Fruit length: 3 to 6 inches

Fruit covering: dry or hard

Fruit color: brown

Fruit characteristics: does not attract wildlife; inconspicuous and not showy; no significant litter problem; persistent on the tree

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; not particularly showy; should be grown with a single leader; no thorns

Pruning requirement: needs little pruning to develop a strong structure

Breakage: resistant

Current year twig color: green

Current year twig thickness: medium; thick

Culture

Light requirement: tree grows in full sun

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

Drought tolerance: high

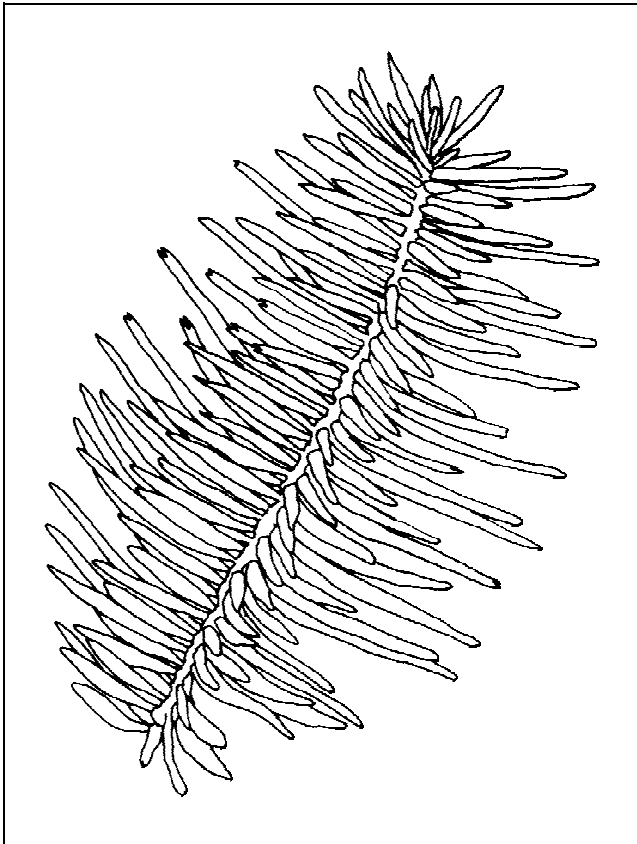


Figure 3. Foliage of Japanese Fir.

clay soil but allow for good drainage. It has not grown well in alkaline soil. It should be a low-maintenance tree requiring little or no fertilizer or irrigation. It is probably one of the best (if not the best) firs to grow in the southeast.

Propagation is by seed.

Pests and Diseases

There are no reports of serious pest problems, although the tree has not been grown much or extensively tested in the east.

Other

Roots: surface roots are usually not a problem

Winter interest: no special winter interest

Outstanding tree: tree has outstanding ornamental features and could be planted more

Invasive potential: little, if any, potential at this time

Verticillium wilt susceptibility: not known to be susceptible

Pest resistance: no pests are normally seen on the tree

USE AND MANAGEMENT

It is used as a Christmas tree in the western United States, and should be tried in the east as a landscape plant and Christmas tree. Although rare in the nursery trade, Japanese Fir is a beautiful plant making an outstanding specimen which should be grown and planted more often. It can be seen in a number of arboreta in the southern part of the country. Use it to create a slow-growing screen planted on 10 foot centers, or as a specimen.

Grown best in acid soil in the full sun, Japanese Fir is surprisingly tolerant of heat and drought, even in