

BALSAM FIR

Abies balsamea (L.) P. Mill.

Plant Symbol = ABBA

Contributed by: USDA NRCS Plant Materials Program



Robert H. Mohlenbrock
USDA NRCS 1995 Northeast Wetland Flora
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Alternate Names

Pinus balsamea L.

Uses

Balsam fir is used primarily for Christmas trees and pulpwood, although some lumber is produced from it in New England and the Lake States. The wood is light in weight, low in bending and compressive strength, moderately limber, soft, and low in resistance to shock.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

Balsam fir is a small to medium sized coniferous tree. Growth occurs in whorls of branches surrounding an upright leader or terminal, making a symmetrical tree with a broad base and narrow top. It is relatively short-lived and is considered a sub-climax type species in the New England states, but may be a climax type in the zone below timberline.

Needles are 3/4 to 1 inch long, flat, and often strongly curved. Twigs with needles have a generally flattened appearance. Both male and female flowers are found on the same branch. Cones are 2 to 4 inches long, purplish in color, and stand erect on branches (as do those of all true firs). There are about 60,000 seeds in a pound. The bark is smooth, thin, and grayish, distinguished by soft blisters containing a clear, odiferous resin known as Canadian balsam.

Adaptation and Distribution

The soils on which balsam fir grows range from silt loams developed from lake deposits to stony loams derived from glacial till. Fir will grow, but comparatively slowly, on gravelly sands and in peat bogs. It grows on soils of pH ranging from 4.0 to 6.0. It is generally found in areas with a cold moist climate and with 30 inches or more of annual precipitation. Fir is subject to windthrow, especially on shallow wet soils. Because of its thin bark, shallow root system, and flammable needles, balsam fir is easily killed by fire.

Balsam fir is distributed throughout the Northeast and upper Midwest. For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

The use of natural regeneration methods for balsam fir is very effective on open and disturbed sites (heavily cut areas), but an adequate seed source must exist. This species can also be readily grown in nurseries, for transplanting to abandoned fields, Christmas tree plantations, and open areas. Use conventional tree planting techniques and equipment. Three or four year old seedling stock should be utilized.

Management

This section is under development. Please consult the Related Web Sites links on the PLANTS Plant Profile.

Cultivars, Improved, and Selected Materials (and area of origin)

Although most available seedlings of balsam fir are of unknown parentage, some are produced from local selections.

Prepared By & Species Coordinator:
USDA NRCS Northeast Plant Materials Program

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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