

EASTERN WHITE PINE

Pinus strobus L.

Plant Symbol = PIST

Contributed by: USDA NRCS New York State Office



Robert H. Mohlenbrock
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Uses

Timber: The wood of white pine is light, durable, and easy to work. It is good lumber for toys, boxes, cabinet work, and similar items.

Christmas tree and ornamental: White pine is used occasionally in Christmas tree plantations and as ornamental planting in landscaping around homes and office buildings. It can also be sheared as a hedge.

Wildlife: It has fair wildlife value. Gray and red squirrels, deer, mice and 16 species of songbirds have been known to eat the seed.

Erosion control: White pine is frequently used for windbreaks and screens along fields new right-of-ways and around campsites.

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

Pinus strobus L., eastern white pine, is the largest conifer of the eastern and upper Midwest forests, reaching 150 feet in height and up to 40 inches in diameter. In dense stands, trees produce tall, cylindrical stems with pyramidal shaped crowns, characterized by distinctive, plate like branching, especially noticeable as the trees become older. On young growth, the bark remains rather thin, smooth, and greenish-brown in color. On older trees the bark becomes deeply fissured and dark grayish-brown in color. Its evergreen needles are in clusters of 5, soft, flexible, 2 1/2 to 5 inches long, and bluish-green in appearance. Its cones are about 4 to 8 inches long and 1 inch thick. These remain attached for 1 to several months after ripening in the autumn of the second season.

Adaptation and Distribution

Eastern white pine grows on a variety of soils ranging from light, sandy to heavy textured soils. White pine ranges across southern Canada from Manitoba to Newfoundland, throughout the northern and eastern states from Minnesota and northern Iowa to the Atlantic coast, and southward along the Appalachian mountains to northern Georgia and Alabama.

For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Seedlings of white pine are grown in nursery beds for field planting. They may either be left in the nursery for 2 to 3 years and directly planted into the field, or they may be transplanted after the second year and left in a transplant bed for 1 or 2 years before field plantings. This will produce a seedling approximately 12 to 16 inches in height with 1/4 to 1/2 inch caliper. Field establishment of seedlings is accomplished with tree planting procedures, using machine transplanters or hand planting.

Management

White pine seedlings require weed control for the first few years after outplanting. Chemical and/or mechanical control can be used, preferably starting the year before planting.

Management of white pine should focus on thwarting the white pine weevil where straight trunks and tree form is desired. Growing white pine where there will be partial shade on the developing saplings and pole-sized trees (especially on the terminal leader) seems to reduce infestation by the weevil. Thus growing white pine in mixed uneven aged stands is a good idea to avoid this pest and those described below.

Pests and Potential Problems

The white pine weevil is the tree's greatest insect pest affecting both timber quality and volume. Terminal leaders may be killed repeatedly and result in such serious stem crooks that the tree has reduced merchantable saw timber value.

The pales weevil is an insect that often attacks white pine seedlings in areas where white pine timber has been cut recently. Cone crops may be destroyed by the pine cone beetle. This insect compounds the problem of infrequent seed years and is a serious threat to white pine management.

Diseases, including white pine blister rust, red ring rot, root rot, wood decay, and certain needle fungi, cause losses in white pine stands. Such natural elements as snow, ice, and wind may also cause damage to white pine.

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

There are no documented varieties for reforestation purposes. Local or regional ecotypes are typically utilized for this purpose. There are several varieties available for ornamental applications. Seeds and seedlings are available from most eastern conifer nurseries.

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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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