USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Plant Guide

BEBB WILLOW

Salix bebbiana Sarg.

Plant Symbol = SABE2

Contributed by: USDA NRCS National Plant Data Center

Wetland Plants and Plant Communities in Minnesota and Wisconsin
Northern Plains Wildlife Research Center

Alternative Names

diamond willow, beak willow, long-beaked willow, livid willow, smooth gray willow, smooth Bebb willow

Uses

Ethnobotanic: A decoction of the branches was taken by women for several months after childbirth to increase the blood flow (Moerman 1998). A poultice of bark and sap was applied as a wad to bleeding wounds (Ibid.). A poultice of the damp inner bark was applied to the skin over a broken bone (Ibid.).

Economic: The diamond shaped wood is carved into canes, lampposts, furniture, and candleholders (Viereck & Little 1972). The wood has also been used to make furniture, baskets, baseball bats, charcoal, and gunpowder.

Wildlife: snowshoe hares, deer, elk, and moose browse Bebb willow. The buds, shoots, and catkins are eaten by birds, beaver and small mammals.

Agroforestry: Bebb willow is used in forested riparian buffers to help reduce stream bank erosion, protect aquatic environments, enhance wildlife, and increase biodiversity.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

Description

General: Bebb willow (*Salix bebbiana*) is a large native shrub ten feet tall or a small bushy tree fifteen to twenty-five feet (Viereck & Little 1972). The leaves are elliptical to oblanceolate; one to three inches long, and are hairy when young smooth and strongly veined when old. The fruit is capsules, six to eight millimeters long, long beaked, and sparsely hairy (Farrar 1995). The bark is thin, reddish, olive-green, or gray tinged with red and slightly divided by shallow fissures (Sargent 1961). The roots are shallow and dense.

Distribution: Bebb willow range from Alaska south to British Columbia to east Newfoundland and in northeast United States and upper mid-western United States. For current distribution, please consult the Plant profile page for this species on the PLANTS Web site.

Adaptation

Bebb willow is adapted to a wide variety of soil textures. It prefers moist sites and is drought tolerant. This species tolerates moderate alkaline soils but not extremely alkaline conditions. It is frequently found in swamps, lakes, borders of streams, open woods and forests (Sargent 1961). Bebb willow is a fast growing but short-lived species that occurs most commonly under shade of trees where the sites are poor (Viereck & Little 1972).

Establishment
Propagation from Seed: Seeds must be sown as soon as they are ripe in the spring. Seeds are viable for only a few days and the maximum storage period is four to six weeks with germination rates dropping off fast after ten days at room temperature (Dirr & Heuser 1987). Willow seeds have no dormancy and germinate within twelve to twenty-four hours after falling on moist ground (Ibid.). Seedbeds must be kept moist until seedlings are well established.

Propagation from Cuttings: Hardwood cuttings can be collected and prepared for insertion, normally from November through March. Cuttings seven to ten inches long and a half to one inch thick are initially planted close in stool beds and dug after one year (Dirr & Heuser 1987). Willows have a rooting percentage of ninety to one-hundred percent and the rooting number is not promoted by rooting hormones (Ibid.).

Management
The depressions on these willows are caused by one or more fungi, which attack willows at the junction of a branch with the main trunk (Viereck & Little 1972). The term "diamond willow" applies to species when the stems are carved resulting in a pattern of diamond-shaped cavities with a sharp contrast between the white or cream sapwood and the reddish-brown heartwood.

Cultivars, Improved and Selected Materials (and area of origin)
Readily available through native plant nurseries within its area of distribution. Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office for more information. Look in the phone book under "United States Government." The Natural Resources Conservation Service will be listed under the subheading "Department of Agriculture."

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