

SIBERIAN ELM

Ulmus pumila L.

plant symbol = ULPU

Contributed by: USDA, NRCS, National Plant Data Center

Alternate names

Chinese elm, dwarf elm, Asiatic elm

Uses

Ethnobotanic: The inner bark of Siberian elm was dried and ground into a powder for thickening soups or adding to cereal flours in bread making. Immature fruit was used to produce sauce and wine (Facciola, 1990) and the wood was used for agricultural implements and boat making (Vines, 1987).

Agroforestry: Siberian elm is planted and managed in tree strips as windbreaks to protect livestock, enhance crop production, and control soil erosion.

Windbreaks also function to shelter home buildings against harsh weather conditions and help reduce home heating and cooling costs.

Landscape: Siberian elm has limited ornamental value (Dirr, 1990), although it has been used in the Midwest for shade along boulevards and in parks.

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.

Weediness

This plant may become weedy or invasive in some regions or habitats and may displace desirable vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, or state natural resource or agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site at plants.usda.gov.

Description

General: Elm Family (Ulmaceae). Siberian elm is an introduced, fast-growing tree, from 50 to 70 feet in height. Its leaves are alternate, oblong in shape, 1 to 3 inches long, and usually have serrate (saw-toothed)

margins. The flowers are greenish and clustered with short pedicels, and appear with or before the leaves from March through April (Vines, 1960). The bark is a light gray-brown with irregular furrows and is often streaked with stains caused by bacterial wetwood. The fruit, a samara, ripens from April to May, and consists of a dry, compressed nutlet surrounded by a thin, membranous wing (Ibid.).

Adaptation and Distribution

Siberian elm, an extremely hardy tree, is native to northern China, eastern Siberia, Manchuria, and Korea. It was introduced to the United States in the 1860s and can be found on dry sites as well as along moist stream banks, in pastures and on grasslands. This species prefers well-drained, fertile soil and full sun, however, it is highly adaptable and easily tolerates, even thrives in, a variety of conditions such as poor, dry soils, cold winters and long periods of summer drought. Siberian elm has invaded mesic, dry, and sand prairies.

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

Establishment

Propagation by seed: Siberian elm seeds do not need pretreatment and should be sown as soon as ripe in the spring. Excessive drying and dewinging will reduce viability, though the seeds may be stored at 36-40° F for up to 8 years if moisture content is kept at 3-8% (Dirr and Heuser, 1987). Seeds are sown in a cold frame, 12 to 20 per linear foot, in rows ten inches apart, and covered with ¼ inch of firmed soil. The seedbeds should be kept moist and not overly shaded. When the seedlings are large enough to handle, they are transplanted to individual pots and grown in a greenhouse for the first winter. Siberian elm seedlings are outplanted into their permanent positions in late spring or early summer the following year. Seedlings should not be held in a nursery bed for more than two years because they will develop a taproot that makes lifting difficult and reduces outplanting survival rates.

Management

Rosendahl, 1955, noted that some Siberian elm plantings in the Upper Midwest were unsuccessful because seed was collected in climatically different geographical areas of the species range and had varying levels of winter hardiness. Siberian elm may become weedy and require removal.

Pests and Potential Problems

Siberian elm is resistant to Dutch elm disease and phloem necrosis and has been used to breed resistance into elm hybrids (Dirr, 1990).

Leaf damage from elm leaf beetle has been noted in the south. (Ibid.)

Environmental Concerns

This species has been declared invasive in New Mexico.

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

Siberian elm plant materials are readily available through commercial sources.

Control

Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read the label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA, NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

References:

See the plant guide for this species to obtain a complete list of references.

Prepared By:

Lincoln M. Moore

USDA, NRCS, National Plant Data Center
Baton Rouge, Louisiana

Kathy Davis

formerly USDA, NRCS National Plant Materials
Center Beltsville, MD

Species Coordinator:

Lincoln M. Moore

USDA, NRCS, National Plant Data Center
Baton Rouge, Louisiana

Edited 20nov2003 jlk

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

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.