Plant Data Sheet

Urtica dioica

William S. Justice @ USDA-NRCS PLANTS Database www.humboldtredwoods.org/images/nettle.jpg

Species (common name, Latin name)

Common Name: Stinging nettle, tall nettle, California nettle, slender nettle, Latin Name: *Urtica dioica* (2)

Range

Common throughout North America, in much of the Unites States, throughout Canda and south along the west coast to Mexico. (7)

Climate, elevation

Stinging nettle occurs from sea level to subalpine elevations.
Stinging nettle persists in northern climates, spreading vegetatively rather than by seed. (7)

Local occurrence (where, how common)

Stinging nettle is a common understory component of riparian communities and also occurs in and adjacent to marshes and meadows and in disturbed areas. (7)
Stinging nettles are widespread, growing mostly in moist woods often under alders where the soil is soft and black. Colonies sometimes cover acres. (4)

Stinging nettle is considered a weedy, invasive species. (7)

Habitat preferences

Stinging nettle occurs in moist sites along streams, open forests, and ditches, on mountain slopes, in woodland clearings, and in disturbed areas such as roadsides and old fields. Stinging nettle generally grows moist, nitrogen-rich areas, preferring open, rich forests. (7) (5)

Stinging nettle probably occurs in most ecosystems (7) see ‘Local occurrence’ for more information.

Stinging nettle is a common understory component of riparian communities. (7)

Plant strategy type/successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)

Stinging nettle is probably intermediate in shade tolerance. It occurs and produces seed in shady habitats but produces more seed in full sun. It establishes colonies from which other plants are virtually excluded. (7)

Stinging nettle invades disturbed sites. Stinging nettle colonizes wetland sites when water levels drop. (7)

Associated species

Alnus rubra, red alder (5)

May be collected as: (seed, layered, divisions, etc.)

Stinging nettle reproduces vegetatively and by seed. (7)

Stinging nettle produces abundant seed. Plants growing in the shade produce approximately 500 to 5,000 seeds per shoot and plants growing in full sunlight produce 10,000 to 20,000 seeds per shoot. (7)

Collection restrictions or guidelines

Seeds remain on the plant until frost when they fall to the ground. Seeds are not dormant and can germinate 5 to 10 days after maturity. (7)

Stinging nettle sends new shoots up each year from buds on rhizomes. Maximum root development occurs in the spring prior to flowering. Stinging nettle flowers mid-May on into early July. (4)

Seed germination (needs dormancy breaking?)

Pre-planting treatments: seeds after-ripened in dry storage and area warm stratified. (1)

Seed life (can be stored, short shelf-life, long shelf-life)

The fruit is an achene and viability is maintained after 8 years hermetic storage at -18°C (Montezuma-De-Carvalho et al., 1984); long-term storage under IPGRI preferred conditions at RBG Kew, WP, and oldest collection 3 years. (6)

Recommended seed storage conditions

Seeds after-ripened in dry storage for three months (1) and (3)
Urtical dioica seeds are orthodox seeds with their viability maintained after 8 years of hermetic storage at -18°C (6)

Propagation recommendations (plant seeds, vegetative parts, cuttings, etc.)

Propagation of nettle can either take place by seed or vegetatively by divisions.(7)

Once completing their after-ripening process, seeds should be warm stratified. Seeds germinate at 20/15C in light. (1) Also, germination is reported to occur at alternating temperatures of 25 and 15ºC following warm stratification and in the presence of light on seeds that were dry stored. (3) Alternatively seeds can be planted in late fall to allow for germination to take place the following spring or summer. (3)

Propagation of nettle can also take place vegetatively by divisions. Vegetative propagation is simple but labor intensive; it can be done using conventional cabbage planting machinery. (3) Seedlings initiate vegetative spread in the first growing season.

Soil or medium requirements (inoculum necessary?)

Information on cultivation of nettle crops is limited although it is thought that the plant prefers loose soil, preferably with a layer of organic matter to encourage growth. The plant is thought to be responsive to nitrogen and will require high phosphate levels for rapid growth rates. (3)

Stocks should be grown in rich potting medium with regular fertilization to ensure healthy nursery stock is produced. (3) Another reported method is imbibing seed on 1% agar for 56 days at 06 ºC with a germination medium of 1% Agar and germination conditions of 33/19 ºC, 12/12. (6)

Installation form (form, potential for successful outcomes, cost)

During propagation and planting, care should be taken as hairs on the leaves and stem contain formic acid that will be injected into the skin when touched. Seeds can be planted in late fall to allow for germination to take place the following spring or summer. (3)

A rhizome planted in late summer can spread into an 8.2 foot (2.5 m) diameter area by the following year. (3)

Recommended planting density

Urtica diocia is known to form dense thickets (4) so there should not be cause for worry about planting too closely.

Care requirements after installed (water weekly, water once etc.)

If not in a moist area, *Urtica dioica* may need supplemental watering through its first summer of establishment.

Normal rate of growth or spread; lifespan

Fast grower, growing 1 to 3 meters tall each year. (Pojar)

Sources cited

1. Baskin, Carol C.; Baskin, Jerry M. 2002. Propagation protocol for production of container Urtica dioica L. plants; University of Kentucky, Lexington, Kentucky. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 28 April 2004). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.

2. Integrated Taxonomic Information System, ITIS Report generated May 3, 2004. http://www.itis.usda.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=19152

3. Interactive European Network for Industrial Crops and their Applications. DG Research of the European Commission. http://www.ienica.net/crops/nettle.pdf

4. Jacobson, Arthur Lee. 2001 “Wild Plants of Greater Seattle” Arthur Lee Jacobson. Seattle, WA.

5. Pojar, J. and MacKinnon, A. Plants of the Pacific Northwest Coast. Lone Pine Publishing, Redmond, WA. 1994.

6. Royal Botanic Gardens, Kew “Seed Information Database Search Results” http://www.kew.org/sid/SidServlet?Source=epic&ID=6238&Num=987

7. USDA Forest Service, FEIS website:
http://www.fs.fed.us/database/feis/plants/fern/blespi/introductory.html

8. USDA-NRCS. 2004. The PLANTS Database (http://plants.usda.gov/plants). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Data compiled by (student name and date)
Wendy DesCamp 5/3/04