

SQUARESTEM SPIKERUSH

Eleocharis quadrangulata
(Michx.) Roemer & J. A.
Schultes

plant symbol = ELQU

Contributed by: USDA NRCS Kika de la Garza Plant
Materials Center



Uses

Wildlife: Squarestem spikerush (*Eleocharis quadrangulata*) can be used as a wetland restoration plant throughout its range. Its seeds and tubers are an excellent food source for ducks, and are heavily used by mallards, pin-tail, mottled and other puddle ducks on the Texas Coast. Snow geese, white-fronted geese, nutria and muskrats will eat the tubers and the basal portions of the plants.

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

Squarestem spikerush is a member of the Cyperaceae or sedge family. It is a native, rhizomatous perennial, often forming dense colonies, and can reach from 18 to 24 inches in height. It gets its common name from its four-angled or squarish stems. Often there are small (2-5 mm), whitish tubers found growing along

the roots. It produces seed heads throughout the warm season. There are approximately 385,700 squarestem spikerush seeds per pound.

Adaptation

Squarestem spikerush is frequently found in fresh-water to slightly saline mud (0 to 0.5ppt) on the edges of ponds, creeks, and marshes. It prefers saturated soils that are frequently or continuously flooded (0-12" deep) during most of the growing season with only occasional dry periods. Squarestem spikerush grows throughout most of the Eastern United States, as far west as Wisconsin, Missouri, Oklahoma, and Texas. In Texas, it can be found in the East and Southeast regions, and more rarely in the northern part of the Rio Grande Plains and south to Jalisco, Mexico.

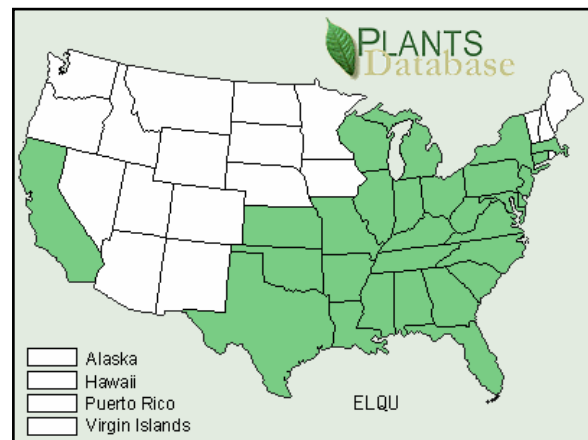
Establishment

Squarestem spikerush may be propagated from whole plant transplants, rootstocks, division of rhizomes, or by seed. We recommend using one of the vegetative methods of propagation with squarestem spikerush at this time.

Management

Squarestem spikerush generally requires little management. Plants seem to survive at a variety of water levels. Squarestem spikerush can tolerate fire, periodic dry conditions, heavy livestock use and goose grazing and grubbing. Long-term increases in salinity and water depth can result in a complete loss of the stand. Plants go dormant over the winter months, with new shoots sprouting from the basal portions in the spring.

Known Distribution



Pests and Potential Problems

Although we have been able to grow new plants from seed, germination rates have ranged from 0% at temperatures between 60°-85°F to 28% at temperatures between 70°-100°F, and the survival rate of new seedlings has been 20 % or less. The other problem with propagating squarestem spikerush from seed is that it does not appear to produce viable seed every year, at least in Kingsville. When it does produce seed, it often produces only small quantities.

If you must seed, seedlings are best done in the summer when the day temperatures are hot. Seeds should be laid on a bed of moistened soil. The soil should be kept moist until seedlings have matured to a height of a few inches tall. If conditions are too dry, the seedlings will wilt and die. If the seedlings are too wet, they are subject to damping off. Once established though, the young plants are fairly hardy.

For additional assistance regarding the production and establishment of squarestem spikerush, please contact the Plant Material Center at (361) 595-1313.

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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 <<http://plants.usda.gov>> and Plant Materials Program Web sites <<http://Plant-Materials.nrcs.usda.gov>>.

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