

Protocol Information

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Aberdeen Plant Materials Center

Aberdeen, Idaho

Family Scientific Name: **Cyperaceae**
Family Common Name: **Sedge**
Scientific Name: ***Carex aquatilis* Wahlenb.**
Common Name: **Water sedge**
Species Code: **CAAQ**
Ecotype: **Rocky Mountains, western Wyoming**
General Distribution: **Throughout North America with the exception of the southeastern states.**
Propagation Goal: **Plants**
Propagation Method: **Seed**
Product Type: **Container (plug)**
Stock Type: **10 cubic inch conetainer**
Time To Grow: **3 Months**
Target Specifications: **Healthy root development filling a 10 ci conetainer.**
Propagule Collection: **Seed is most commonly collected by hand. Fruiting heads can be cut from stems using shears or a hand scythe. Seed is hard and brown when ripe.**
Propagule Processing: **Seed is air dried in paper sacks for several weeks prior to processing. Seed is removed from stem using a hammer mill with a 0.6 cm (0.25 in) screen. Seed is then pre cleaned using a small-lot air screen cleaner with a 1.80 mm screen to remove stems and other inert matter. The perigynium is then removed from the seed using a corrugated rubbing board or hammer mill and then re-cleaned with a 1.55 mm screen and light air. Purities of over 95% are typical. There are approximately 450,000 seeds/lb with perigynium still intact, and 900,000 seeds/lb**

with perigynium removed. Viability depends on seed fill. A kerosene heater “pop test” is used for quick estimates of seed fill (Tilley et al 2010). Lots with poor viability are re-cleaned with increased air.

Pre-Planting Treatments: Seed is stored in cool-dry conditions with temperatures of approximately 10° C (50° F) and relative humidity of 20 to 30%. Seed is not stratified prior to planting.

Establishment Phase: Soil is a 1:1:1 mix of coconut fiber, compost and perlite. No fertilizer is added to the soil mix. Five to 25 seeds are placed on the soil surface and pressed for good seed-to-soil contact. Seed is not covered with any soil or sand, but kept moist with an overhead mist irrigation schedule of 2 minutes/hr from 9:00 am to 5:00 pm for the first 30 days. Day time greenhouse temperatures range from 32 to 43° C (90 to 110° F). Night time temperatures average around 30° C (85° F). Grow lights are kept on during nighttime hours.

Length of Establishment Phase: First emergence occurs around 5 to 7 days after planting under temperatures and moisture conditions specified. Full stands (90-100%) are reached in 12 days.

Active Growth Phase: After full establishment, plants are fertilized once per week with Miracle Grow All Purpose Plant Food (15-30-15). After 30 days the irrigation amount is increased to 3 minutes/hr from 9:00 am to 5:00 pm and grow lights are turned off. Greenhouse day time temperatures are reduced to 30 to 32°C (85 to 90° F).

Length of Active Growth Phase: 3 months

Hardening Phase: Heat is turned off and temperatures reduced to ambient conditions. Watering is discontinued approximately 3 days prior to delivery.

Outplanting performance on typical sites: Seedlings can be hand-planted or dibbled into moist soil or standing water. 100% establishment is typical.

References: Tilley DT, Ogle DG, Cornforth BC. 2010. Quick methods to estimate seed quality. Boise (ID): USDA Natural Resources Conservation Service. Plant Materials Technical Note 35. 13p.

Citation:

Tilley, Derek James 2010. Propagation protocol for production of container *Carex aquatilis* Wahlenb. plants (10 cubic inch container); USDA NRCS - Aberdeen Plant Materials Center, Aberdeen, Idaho. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 7 October 2010). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.