

Protocol Information

USDA NRCS - Appalachian
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Family Scientific Name: **Poaceae**
Family Common Name: **Grass**
Scientific Name: ***Elymus riparius***
Common Name: **riverbank wildrye**
Species Code: **ELRI**
Ecotype: **Stones River**
Known Invasiveness: **None**
Propagation Goal: **Plants**
Propagation Method: **Seed**
Product Type: **Container (plug)**
Stock Type: **1+0 container plug**
Time To Grow: **6 Months**
Target Specifications: **A well developed plant suitable for mechanical transplanting that has at least 6 inches of top growth and a dense, fibrous root system.**

Propagule Collection: **Seed of Stones River ecotype riverbank wildrye was hand harvested from existing populations within the confines of Stones River National Battlefield.**

Pre-Planting Treatments: **De-awned seed is planted into propagation 38 trays, greenhouse flat liners with 38 2.1 " diameter by 2.2" deep round cells per liner, that have been filled with coarse processed bark and composted pine bark growing medium. Seed is surface sown at a rate of 3-5 seeds per cell and lightly covered with starter sized, 1/16" - 1/8" diameter, granite poultry grit to combat damping off diseases.**

Growing Area Preparation/
Annual Practices for Perennial Crops: **Stratified seed is placed in a greenhouse maintained under natural lighting and at a minimum temperature of 70 degrees Fahrenheit. Soil moisture is maintained during germination by an automatic overhead watering system set to cycle for 20 seconds every thirty minutes during daylight hours.**

Establishment Phase: **Germination typically occurs 7 - 10 days after placement in the greenhouse.**

Length of Establishment Phase: **7-10 days**

Active Growth Phase: **After germination, seedlings are maintained in a greenhouse environment 2-4 months to promote development of a plug with at least 6 inches of top growth and a dense, fibrous root system suitable for mechanical transplanting. Watering is reduced to overhead hand watering once daily. seedlings receive a water soluble complete fertilizer bi-weekly until hardening.**

Length of Active Growth Phase: **2-4 months**

Hardening Phase: **Acclimation is typically accomplished through placement of seedlings outdoors in a protected location for a 1-2 week period prior to transplanting.**

Length of Hardening Phase: **1-2 weeks**

Outplanting performance on typical sites: **To establish seed production fields, plugs are mechanically transplanted into a conventionally tilled seedbed. Rows are typically spaced 40 inches apart. Spacing between plugs within rows is 12 inches. Once transplanting is completed, at least 1 inch of irrigation water is applied to enhance root-soil contact and stimulate plant growth.**

Citation:

Vandevender, John. 2008. Propagation protocol for production of container *Elymus riparius* plants (1+0 container plug); USDA NRCS - Appalachian Plant Materials Center, Alderson, West Virginia. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 8 September 2008). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.