

Protocol Information

Natural Resources Conservation Service -
Appalachian Plant Materials Center
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United States Department of Agriculture

Family Scientific Name: **Asteraceae**
Family Common Name: **Aster family**
Scientific Name: *Conoclinium coelestinum* (L.) DC.
Common Name: **blue mistflower**
Species Code: **COCO13**
Ecotype: **Stones River National Battlefield source**
General Distribution: **Blue mistflower is widely distributed throughout most of the eastern and central states from Texas and Nebraska eastward to Florida and north to Pennsylvania and New York.**
Known Invasiveness: **Blue mistflower is recognized as potentially invasive in Weeds of Kentucky and Adjacent States: A Field Guide**
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 National Battlefield source blue mistflower was hand harvested from existing populations within the confines of Stones River**

National Battlefield.

Pre-Planting Treatments: Seed is planted into round cell greenhouse flat liners with 38 cells per flat 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. Prepared flats are lightly hand watered to slightly moisten the growing medium and cold stratified at 35 degrees Fahrenheit for a minimum of 21 days.

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

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.

References: Haragan, P.D. Weeds of Kentucky and adjacent states: a field guide. The University Press of Kentucky, Lexington, Kentucky.

USDA, NRCS. 2014. The PLANTS Database (<http://plants.usda.gov>, 23 January 2014). National Plant Data Team, Greensboro, NC 27401-4901 USA.

Citation:

Vandevender, John 2014. Propagation protocol for production of container *Conoclinium coelestinum* (L.) DC. plants (1+0 container plug); Natural Resources Conservation Service - Appalachian Plant Materials Center, Alderson, West Virginia. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 6 March 2014). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.