

Asteraceae

Species: *Symphotrichum cordifolium* (L.) Nesom (Synonym *Aster cordifolius* L.)

Common Name: Heartleaf aster, Common blue wood aster

Species Code: SYCO4

Ecotype:

Outplanting Site: Natchez Trace Parkway 3X section and others.

Outplanting Date: 3X section planted in 1994, other sections of the Natchez Trace Parkway were planted in 1996.

TARGET SEEDLING INFORMATION

Stock Type:

Height:

Caliper:

Root System:

SEED PROPAGATION

Propagation Environment: Greenhouse and field

Seed Propagation Method: Seeds

Source of Seeds: Natchez Trace Parkway (actual collection location was not noted – designated collection area was the lower section of the Natchez Trace Parkway, from around Jackson, MS to the terminus in Natchez, MS.)

Collector/Date: B.B. Billingsley, Jr./1990

Seeds/Kg: 4,400,000

% Germination: 1993 – 61, 1994 – 44

% Purity: 1993 – 76, 1994 – 22

Seed Processing: Seeds were harvested using a vacuum. Pappus attached to the seeds made direct cleaning with an air screen cleaner difficult. In 1993 seeds were conditioned before cleaning using a brush machine to remove the pappus, which improved purity. However, the process was very time consuming and was not repeated in subsequent years.

Seed Storage: Normal cool, dry storage. PMC cooler is maintained at 12.7 °C (55 °F) and 45% relative humidity.

Seed Treatments: None required, however, seeds of several aster species germinate more rapidly if stratified (Phillips, 1985; Andersen , 1968).

Seed Dormancy: No prolonged dormancy is apparent.

Container Type and Volume: Seedlings were grown in the greenhouse for planting in the field only. Containers used were cell packs with a 3.8 cm X 6 cm (1.5" X 2.4") cell size.

Growing Media: Jiffy Mix Plus

Total Time To Harvest: Approximately 1 year.

Sowing Date: September to October

% Emergence and Date: Most seeds germinate in the spring.

Sowing/Planting Technique: Mixed seed with sand and surface applied to plowed areas that had been cultipacked or to areas that had been closely mowed. Rates of 2.24 to 3.36 kilogram PLS per hectare (2 to 3 pounds per acre) would be required to plant a production field. Establishment was fairly poor from direct seeding, so greenhouse grown transplants were used for later plantings.

Establishment Phase:

Rapid Growth Phase:

Hardening Phase:

Harvest Date: Late September to October.

Storage Conditions:

Storage Duration: Maximum storage duration is not known. Seeds were stored for only 2 to 4 years before planting on the Natchez Trace Parkway.

VEGETATIVE PROPAGATION

Vegetative Propagation Method:

Propagator:

Comments: Plants overwinter as a rosette. Normally heartleaf aster is found growing in wooded areas, however, the production field was in a more open site. The plants grew vigorously in the open and required staking.

Distribution: Found from Nova Scotia to Minnesota, south to Georgia and Missouri.

References:

Andersen, R. N. 1968. Germination and establishment of weeds for experimental purposes. Weed Science Society of America, W. F. Humphrey Press, Inc., Geneva, NY. 236 p.

Phillips, H.R. 1985. Growing and propagating wildflowers. Univ. of North Carolina Press, Chapel Hill, NC. 330 p.