Lamiaceae

Species: *Salvia lyrata* L.

Common Name: Lyreleaf sage

Species Code: SALY2

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: Field

Seed Propagation Method: Direct sown.

Source of Seeds: Seeds were collected with a flail-vacuum harvester from the Natchez Trace Parkway, from the section that runs close to Ross Barnett Reservior, near Jackson, Mississippi.

Collector/Date: B.B. Billingsley, Jr., Janet Grabowski and Jimmie Miller/May 14, 1992

Seeds/Kg: 730,000

% Germination: 1992 – 7, 1993 – 4, 1994 – 53, 1995 – 75

% Purity: 1992 – 99, 1993 – 99, 1994 – 98, 1995 – 98

Seed Processing: Direct combined and cleaned using an air screen cleaner. The seeds are obovoid to ellipsoid and the size is often quite variable, which presents a challenge in cleaning. Usually there is a small quantity of seeds left after cleaning the majority of the lot that have an unacceptable amount of contaminants mixed with them, but due to their size, there is no way to screen the contaminants out using resources available at the PMC. It is important to keep all seeds from moisture sources after harvest, but it is especially critical for this species because they will stick together and then become more difficult to clean.

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

Seed Dormancy: None is apparent.

Seed Treatments: Some *Salvia* species respond to light (Hartmann and Kester, 1975), however, it is not known if this species does. Andersen (1968) reported fairly low germination percentages (40 – 50 %) for *S. aethiopis* L. and *S. verticillata* L. Germination percentages for this species usually fall within that range. When a seed is moistened, it produces a layer of some sort of gelatinous substance surrounding itself.

Container Type and Volume:

Growing Media:

Total Time To Harvest: Theoretically, seeds could be harvested approximately 9 months after planting, however, it generally takes several years for a good stand to develop.

Sowing Date: August to September.

% Emergence and Date: September to October.

Sowing/Planting Technique: Seeds were planted using a Marliss no-till drill, with the seeds placed in the legume box. Fields were either clean tilled or closely mowed before planting. The prostrate growth habit and management requirements of lyreleaf sage allow it to be grown with established turf. Planting rate used was approximately 65 seeds per meter (6 seeds per foot) of row; however, this may have been low. Better establishment might occur if this rate was doubled or tripled. Meter openings on the drill were 9.5 mm (3/8 inch) and seeds were planted 6 mm (1/4 inch) deep with the furrows left open.

Establishment Phase: Seed germinates in the fall and overwinters as a rosette.

Rapid Growth Phase: Plants begin to elongate seed heads very early in the spring.

Hardening Phase:

Harvest Date: Mid-May. Seeds are naked and held very loosely in the calyces, which means that they are easily lost due to shattering. Harvest must be timed so that a maximum number of seeds are mature.

Storage Conditions:

Storage Duration: Seeds were stored for 2 to 4 years before planting on the Natchez Trace Parkway.

VEGETATIVE PROPAGATION

Vegetative Propagation Method:

Propagator:

Comments: Seed production potentials for this perennial *Salvia* species are not as large as several of the other species produced for the Natchez Trace Parkway. Yields up to 34 kilogram per hectare (30 pounds per acre) can be produced from well established, dense stands.

Distribution: *Salvia lyrata* is found from Connecticut, Pennsylvania, southern Ohio, Illinois and Missouri, south to Florida and Texas.

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.

Hartmann, H.T. and Kester, D.E. 1975. Plant propagation principles and practices. Prentice-Hall, Inc., Engelwood Cliffs, NJ. 662 p.