

Rosaceae

Species: *Rosa carolina* L.

Common Name: Carolina rose

Species Code: ROCA4

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: Containerized.

Height: 0.3 to 1 meter (1 to 3 foot).

Caliper:

Root System:

SEED PROPAGATION

Propagation Environment: Field (division) and greenhouse (seeds).

Seed Propagation Method: Division of plants was the main propagation method, however, some seedlings were also produced in the greenhouse.

Source of Seeds: Root suckers were dug from the Natchez Trace Parkway close to Jackson, Mississippi. Seeds were collected from the plants grown from these root suckers.

Collector/Date: PMC staff/July 1991 and June 1992 (root suckers), Janet Grabowski/1993, 1994, and 1995 (seeds).

Seeds/Kg: *Rosa* sp. seeds range from 53,000 to 106,000 per kilogram (Dirr and Heuser, 1987).

% Germination:

% Purity:

Seed Processing: Hips were collected when they were just turning red, because achenes from fully ripened hips have a higher level of dormancy (Dirr and Heuser, 1987). The hips were macerated in a blender and the pulp and immature seeds were floated off. Seeds were then dried and stored.

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

Seed Dormancy: Achenes possess both a physiological dormancy and a hard seed coat (Dirr and Heuser, 1985).

Seed Treatments: Scarification in concentrated sulfuric acid for 45 minutes followed by cold stratification in moist growing medium for 3 months. Some rose species also require a period of warm stratification before cold stratification (Dirr and Heuser, 1985); however, germination of this seed appeared to be fairly good without warm stratification.

Container Type and Volume: 2 gallon plastic containers were the final planting container for the 3X section. Plants to be planted on the other sections needed to be held longer so they were moved from a 2 to a 3 gallon in 1995. Seedlings were initially planted in 4 inch pots before moving up to the 2 gallon size.

Growing Media: Media was mixed by PMC staff and ranged from a 3:1 to 6:1 pine bark to sand medium throughout the production years.

Total Time To Harvest:

Sowing Date: February

% Emergence and Date: Percentage not determined. Seedlings had sufficient growth within 2 to 3 months to be transplanted.

Sowing/Planting Technique: Sow seed/growing medium mixture on the surface of the planting flat and then cover with 6 mm (1/4 inch) of additional medium.

Establishment Phase:

Rapid Growth Phase:

Hardening Phase:

Harvest Date: August

Storage Conditions:

Storage Duration: Seed stored under the proper conditions retain viability for 2 to 4 years (USDA Forest Service, 1974).

VEGETATIVE PROPAGATION

Vegetative Propagation Method: Softwood cuttings root easily (Dirr and Heuser, 1985), however, cuttings were not taken during production for the Natchez Trace Parkway.

Propagator: Janet Grabowski, B.B. Billingsley, Jr.

Comments:

Distribution: Native range extends from Maine to Minnesota, south to Florida and Texas.

References:

Dirr, M.A. and Heuser, C.W, Jr. 1985. The reference manual of woody plant propagation from seed to tissue culture. Varsity Press, Inc., Athens, GA. 239 p.

U. S. Department of Agriculture, Forest Service. 1974. Seeds of woody plants in the United States. Agric. Handb. 450, U. S. Government Printing Office, Washington, D.C.