

Asteraceae

Species: *Coreopsis tinctoria* Nutt.

Common Name: Plains coreopsis, Calliopsis, Golden tickseed

Species Code: COTI3

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: 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: 3,087,000

% Germination: 1992 – 50, 1993 – 27, 1994 – 65, 1995 – 84

% Purity: 1992 – 62, 1993 – 40, 1994 – 61, 1995 – 80

Seed Processing: Direct combined and cleaned using an air screen cleaner. The concave shape of the seeds makes cleaning more difficult compared to the other composite species grown. The stage of seed maturity at harvest also affects seed cleaning; seed harvested when slightly immature, although completely viable, has a greater tendency to retain the wings on either side of the nutlet. If harvest is delayed until the seeds are fully mature, the majority of them will shed their wings during combining. This makes it much easier to screen out a higher percentage of foreign material.

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

Seed Dormancy: No apparent dormancy. Seeds may respond to light (Hartmann and Kester, 1975).

Seed Treatments: None required.

Container Type and Volume:

Growing Media:

Total Time To Harvest: 10 to 11 months.

Sowing Date: August to September.

% Emergence and Date: September to October.

Sowing/Planting Technique: Broadcast a mixture of seed and sand onto the soil surface of a mowed field. Heavy layers of residue will prevent germination. Also, there was some success drilling seeds very shallowly in rows in a clean tilled field. If seeds are to be broadcast on a clean tilled field, soil should be cultipacked or otherwise firmed before planting. Planting rate is 3.35 to 4.48 kilograms PLS per hectare (3 to 4 pounds per acre).

Establishment Phase: Seeds germinate in the fall and the plants overwinter as a rosette.

Rapid Growth Phase: Plants begin to rapidly elongate in April.

Hardening Phase:

Harvest Date: Mid-July. Wait until seeds are fully mature (see seed processing above). Seeds stay in the seed head for a fairly long period time, so seed shattering is not a problem.

Storage Conditions:

Storage Duration: Seeds were stored for 3 to 5 years before planting on the Natchez Trace Parkway. Under the proper conditions, seeds of *C. auriculata* L. can be stored for at least 3 years (Phillips, 1985).

VEGETATIVE PROPAGATION

Vegetative Propagation Method:

Propagator:

Comments: *C. tinctoria* is an annual species that produces a large quantity of seed. Yields up to 224 kilogram per hectare (200 pounds per acre) are not unusual. Reseeding will be poor in fields that are not disturbed. Some pest problems have been encountered in production fields. In the early summer plants can be damaged by a small larvae that feeds at the base of the plant. The pest was not identified but was some species of beetle. Also, the plants appear to be susceptible to a root/crown rot in certain years when environmental conditions are conducive to development. Again the causal organism was not specifically identified but symptoms appeared to be characteristic of those caused by *Pythium* sp.

Distribution: Native range of the species extends from Minnesota to Washington, south to California, Texas, and Louisiana. It is naturalized in most areas of Mississippi. It is fairly tolerant of wet soils.

References:

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

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