

Protocol Information for Powderpuff (*Mimosa strigillosa*)

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Family Scientific Name: Fabaceae

Family Common Name: Pea Family

Scientific Name: *Mimosa strigillosa*

Common name: Herbaceous mimosa or powderpuff

Species Code: MIST2

Ecotype: Originally collected in east Texas (Houston County, Texas along the Trinity River)

General Distribution: *Mimosa strigillosa* is a warm season legume found from east Texas to Florida and grows on open, somewhat sandy areas.

Propagation Goal: Plants

Propagation Method: Seed

Product Type: Container (plug)

Stock Type: Container plugs

Time to Grow: 3.5 to 4 months

Target Specifications: *Height:* N/A, herbaceous perennial

Caliper: N/A, herbaceous perennial

Root System: Firm plug which leaves no soil when pulled from container cell.

Propagule Collection: Seed is combine harvested at the USDA-NRCS East Texas Plant Materials Center production field. Plants bloom in June and seed is harvested in July. Multiple harvests are possible in a single growing season if plants receive adequate rainfall or supplementary irrigation water.

Propagule Processing: Seed is run through a 2 screen scalper to remove excess stems and leaves. The processed material is then air dried. Next the seed is cleaned with a 3 screen air cleaner with dual air adjustments. **Seed storage:** in woven polyester bags and stored in a cooler at approximately 50°F/50% humidity.

Preplanting Treatments: Seed is mechanically scarified with a Westrup® laboratory brush machine or Forsberg® sample seed scarifier lined with P100 to 150 grit sandpaper. When using the Forsberg, scarify the seed for ~ 5 seconds. The Westrup laboratory brush machine settings include medium stiff bristles, heavy sandpaper lined mantle and brush machine control speed set at 4. The exit gate opening is approximately ¼". Damage from heat or friction is possible if seed is left too long in the brush machine. When viewed under a microscope, the scarified seedcoat should be lightly scratched, not broken or cracked.

Growing Area Preparation/Annual Practices for Perennial Crops: Propagation Environment: Greenhouse with temperature set at 74°F, with natural day length. **Seed Propagation Method:** Seed may be hand or mechanically sown in germination trays. **Container Type and Volume:** Seed is sown into Hiko HV93 plug trays (cavity volume: 5.7 in. or 93 ml).

Growing Media: Seed is sown into a 1:1 soilless mixture of Promix® BX and Sunshine® rediearth. Use only media to cover seeds. If vermiculite or other light material is used, emerging seedlings will push themselves out of the media and expose their roots.

Establishment Phase: *Sowing Date:* February depending upon the outplanting date. At sowing, inoculate scarified seed with rhizobium inoculant for Mimosa sp. from Plant Probiotics, Indianapolis, Indiana. ***Emergence and Date:*** Emergence of seedlings should begin within a week of sowing. The majority of seed emergence is completed in 2 weeks. Keep planting media moist, but not wet.

Active Growth Phase: *Rapid Growth Phase:* Emerged seedlings will first grow dicot leaves. Then the first stem will emerge from the center of the dicot leaves and begin growing true leaves. Afterward the seedling produces more stems as it matures. A small amount of Osmocote® Smart Release Plant Food (14-14-14) pellets are applied to each container cell shortly after seedling emergence.

Hardening Phase: Two to three weeks before transplanting, plants are moved outdoors to a shade house and watering is reduced.

Harvesting, Storage and Shipping: *Harvest Date:* Plugs are usually ready for transplanting 12 to 14 weeks after seedlings emerge. Storage Conditions: n/a. Plugs are seeded in late winter and outplanted the same spring.

Length of Storage: Storage Duration: N/A

Outplanting Performance on Typical Sites: *Outplanting Date:* Spring

Other Comments: Uninoculated seedlings lag behind in vigor and exhibit yellowish tinted leaves. Seed emergence is approximately 50% or greater, therefore thinning of seedlings may be needed.

References: Diggs, G.M., B. Lipscomb and R. O'Kennon. 1999. Shinner and Mahler's Flora of North Central Texas. Botanical Research Institute of Texas. Ft. Worth, Texas.

Nuruddin, A.A. and M. Chang. 1999. Responses of herbaceous mimosa (*Mimosa strigillosa*), a new reclamation species to soil pH. Resources, Conservation and Recycling 27: 287-298.

Citation:

Brakie, M., A. Shadow, and M. Woody. 2013. Propagation Protocol for production of container *Mimosa strigillosa* plants (Container plugs); USDA NRCS East Texas Plant Materials Center, Nacogdoches, TX. In: Native Plant Network.