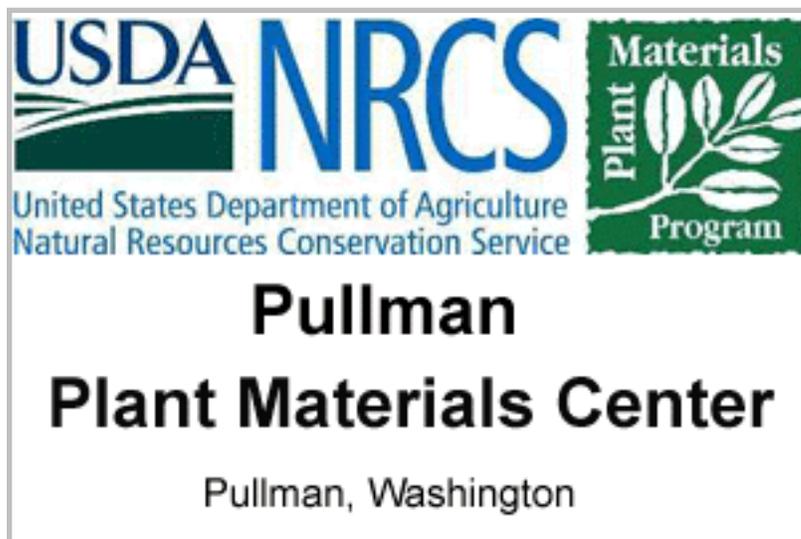


Protocol Information

Dave Skinner
PMC Farm Manager
Pullman Plant Materials
Center
Room 211A Hulbert Hall
WSU
Pullman,
Washington 99163-6211

509-335-9689
509-335-2940 Fax
abbie@wsu.edu



Family Scientific Name: **Loasaceae**

Family Common Name: **blazing star**

Scientific Name: ***Mentzelia laevicaulis* (Dougl.
ex Hook) Torr. & Gray**

Common Name: **blazing star**

Species Code: **MELA2**

Ecotype: **Moses Coulee**

General Distribution: **Desert valleys and lower mountains of eastern Washington and British Columbia east to Montana and south to Utah and Colorado. It is usually found in central Washington and is not a typical Palouse Prairie species. However, it may occur in the canyon grasslands of the Snake River and tributaries.**

Propagation Goal: **Plants**

Propagation Method: **Seed**

Product Type: **Container (plug)**

Target Specifications: **Tight root plug in container. However, the plants are tap-rooted and a tight root plug was not obtained. Plugs must be handled carefully to prevent root damage.**

Propagule Collection: **Fruit is a capsule. Seed is grey in color. Seed is collected when the capsules begin to split in August and is stored in paper bags or envelopes at room temperature until cleaned.**

Propagule Processing: **Capsules can be crushed to release seed. Seed is cleaned with an air column separator. Clean seed is stored in controlled conditions at 40 degrees Fahrenheit and 40% relative humidity.**

Pre-Planting Treatments: **Mirov & Kraebel (1939) obtained 30% germination without pretreatment. Kruckeberg (1996) recommends fall seeding outdoors. Unpublished data from trials conducted at the Pullman Plant Materials Center revealed that 10% emergence occurred without stratification. 30 days of cold, moist stratification resulted in 48% emergence. 90 or more days of cold, moist stratification resulted in 65% emergence. Some seed germinated after a second winter.**

Growing Area Preparation/
Annual Practices for Perennial Crops:

In the fall seed is sown in 10 cu. in. Ray Leach Super cell conetainers filled with Sunshine #4 and covered lightly. A thin layer of pea gravel is applied to prevent seeds from floating. Conetainers are watered deeply and placed outside.

Establishment Phase: Containers are moved to the greenhouse in late January. Germination usually begins in 6-7 days and is complete in 10-12 days.

Length of Establishment Phase: 2 weeks

Active Growth Phase: Plants are watered deeply every other day and fertilized once per week with a complete, water soluble fertilizer containing micro-nutrients.

Length of Active Growth Phase: 8-10 weeks

Hardening Phase: Plants are moved to the cold frame in mid April, depending on weather conditions. They are watered every other day if the weather is cool, and every day during hot, dry spells.

Length of Hardening Phase: 2-4 weeks

Outplanting performance on typical sites: Transplanting is done in early May by using an electric drill and portable generator to drill 1.5 inch diameter holes at the planting site. On dry sites where this species is typically found, it should be planted out much earlier to take advantage of early spring moisture. This will require moving the stratification period ahead or using artificial methods to stratify the seed.

Other Comments: **The leaves are covered with a barbed pubescence, causing them to cling to each other and to clothing. Because of this, care must be exercised in handling the plants to prevent uprooting of the seedlings. Uprooted seedlings do not survive when replanted.**

References: **Hitchcock, C. Leo, and Arthur Cronquist. 1973. Flora of the Pacific Northwest. University of Washington Press. Seattle, WA. 730 pp.**

Kruckeberg, Arthur R. 1996. Gardening with Native Plants of the Pacific Northwest. 2nd ed. University of Washington Press. Seattle, WA. 282 pp.

Larrison, Earl J., Grace W. Patrick, William H. Baker, and James A. Yaich. 1974. Washington Wildflowers. The Seattle Audubon Society. Seattle, WA. 376 pp.

Mirov, N.T., and C.J. Kraebel. 1939. Collecting and Handling Seeds of Wild Plants. Civilian Conservation Corps Forestry publ. No.5. US Government Printing Office. Washington, DC.

Parish, Roberta, Ray Coupe, and Dennis Lloyd (eds.). 1996. Plants of Southern Interior British Columbia. Lone Pine Publishing, Vancouver, BC, Canada. 463 pp.

Piper, C.V., and R.K. Beattie. 1914. The Flora of

Southeastern Washington and Adjacent Idaho. Lancaster, PA. Press of the New Era Printing Company. 296 p.

St. John, Harold. 1963. Flora of Southeastern Washington and of Adjacent Idaho. 3rd edition. Outdoor Pictures. Escondido, CA. 583 pp.

USDA NRCS. 2007. The PLANTS Database (<http://plants.usda.gov>, 22 March 2007). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Citation:

Skinner, David M. 2007. Propagation protocol for production of container *Mentzelia laevicaulis* (Dougl. ex Hook) Torr. & Gray plants; Pullman Plant Materials Center, Pullman, Washington. In: Native Plant Network. URL: <http://www.nativeplantnetwork.org> (accessed 22 March 2007). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.