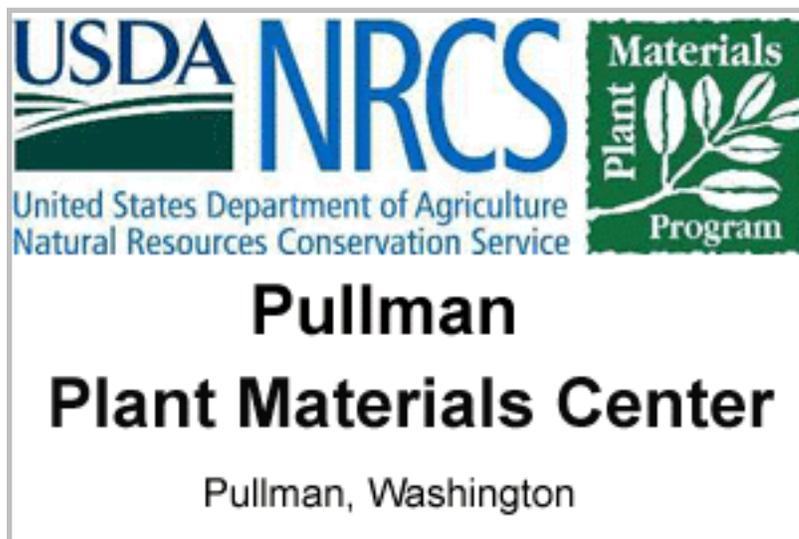


Protocol Information

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: **Poaceae**

Family Common Name: **Grass**

Scientific Name: ***Koeleria macrantha*(Lebed.) J. A. Schultes**

Common Synonym: ***Koeleria cristata* Pers.**

Common Name: **Prairie junegrass**

Species Code: **KOMA**

Ecotype: **Palouse region near Pullman, WA.**

General Distribution: **A circumboreal species native to much of temperate North America, northern Asia, and Europe. In western North America it prefers dry to mesic sites on well-drained soils of shrub-steppe, meadow-steppe, and open forest, extending into subalpine meadows. In the Palouse region of eastern Washington and northern Idaho it is usually found in open grasslands and open**

**ponderosa pine forests.
Mean annual precipitation
range is from 14-20 inches
(USDA NRCS 2007).**

Propagation Goal: Plants

Propagation Method: Seed

Product Type: Container (plug)

Stock Type: 10 cu. in.

Time To Grow: 3 Months

Target Specifications: Tight root plug in container.

Propagule Collection: Seed is collected in July when the inflorescence is dry and the seeds are in the soft to hard dough stage and brown in color. Seed can be hand stripped from the inflorescence or the entire inflorescence can be clipped from the plant. Harvested seed is stored in paper bags at room temperature until cleaned.

Propagule Processing: Small amounts are rubbed to free the seed, then cleaned with an air column separator. Larger amounts are threshed with a hammermill, then cleaned with air screen equipment. Clean seed is stored in controlled conditions at 40 degrees Fahrenheit and 40% relative humidity.

**2,315,000 seeds/lb (USDA
NRCS PLANTS Database 2007).**

Pre-Planting Treatments: Good quality seed of Palouse ecotypes germinates well without pretreatment. Rose et al (1998) reports similar information for *K. macrantha* as a whole.

Growing Area Preparation/
Annual Practices for Perennial Crops:

In January seed is sown in the greenhouse in 10 cu. in. Ray Leach Super cell conetainers filled with Sunshine #4 and covered lightly. Head space of ¼ to ½ inch is maintained in conetainers to allow deep watering. A thin layer of coarse grit is applied to the top of the planting soil to prevent seeds from floating during watering. Conetainers are watered deeply.

Establishment Phase: Medium is kept moist until germination occurs. Germination usually begins in 8-10 days and is complete in 14-18 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: 8-12 weeks

Hardening Phase: Plants are moved to the cold frame in late March or early 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 late April or early May by using an electric drill and portable generator to drill 1.5 inch diameter holes at the planting site.**

Survival in seed increase plantings without competing vegetation exceeds 95%. Transplanting into sites with existing vegetation reduces survival and vigor depending on weather conditions following planting. Flowering and seed production occurs 1 year after transplanting.

Other Comments: **No insect problems have been noted.**

Prairie junegrass is a wind pollinated species. Seed collected from widely scattered plants in native stands may be poorly filled due to low pollen densities. Seed production from closely spaced plants is much greater.

Plants may be propagated by division. This method should only be used for plants growing in cultivation. Plants should not be dug up from stands in the wild.

Most western plants from dry regions are tetraploids ($2n=28$) (Robertson 1974). Tetraploid plants are active earlier in the season (Robertson 1976). This probably allows them to mature earlier and survive the

summer drought in the west.

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