



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

'Kaneb' Purple Prairie Clover

Dalea purpurea Vent.

A Conservation Plant Release by USDA NRCS Manhattan Plant Materials Center, Manhattan, KS



Photo by R. Alan Shadow, East Texas PMC

'Kaneb' purple prairie clover (*Dalea purpurea* Vent.) is a cultivar released in 1975 in cooperation with the Kansas Agricultural Experiment Station.

Description

Purple prairie clover is a member of the legume family which is native to North America and is perennial and herbaceous. The plant has an erect type growth habit that typically grows from 12 to 24 inches tall. It is recognized by its alternate, pinnately compound leaves and multiple stems that arise from a woody crown. The inflorescence is a terminal spike 1 to 1.5 inches long and cylindrical in shape. The first flowers to bloom are located at the base of the spike with the circle of flowers moving upward along the spike as new buds bloom and old flowers fade. The flower petals, which are rose-purple with projecting gold-orange anthers, are small and simple compared to other typical legume flowers. Pollination is accomplished by a host of native insects from bumblebees to beetles. The fruit is a one seeded legume pod enclosed in a persistent calyx. The legume seed is yellowish-green to yellow and is 1/16 to 1/8 inch long. The plant is deep rooted with a 6 foot tap root that has 3 to 7 lateral roots located within a foot of the soils surface. These lateral roots travel horizontally 12 to 18 inches away from the plant and then proceed vertically into the soil.

Source

The germplasm source was originally collected in a native grassland area in 1948 in Riley County, Kansas. Testing of the accessions collected indicated that Kaneb was superior in stand, height, and overall vigor. Kaneb was also tested at Plant Materials Centers in North Dakota and New Mexico.

Conservation Uses

Purple prairie clover is used for native prairie restoration and re-vegetation of natural areas. It produces excellent forage quality for livestock, but its overall production is not very high. It can cause bloat in cattle, but is high in protein which increases its forage quality.

Area of Adaptation and Use

Kaneb has potential for use in Kansas, Nebraska, northern Oklahoma, Texas panhandle, northeastern New Mexico, eastern Colorado and southwestern Wyoming. It is a relatively drought tolerant species and tends to disappear under intense livestock grazing pressure. It grows on a wide range of soil types from clay loams to loamy sands. It prefers well drained, moderately alkaline calcareous soils.

Establishment and Management for Conservation Plantings

This species is easily established from seed; however germination can be low depending on the level of dormancy expressed by the seed unit. The easiest solution to this problem is to provide the seed units with a scarification process that will break the physical dormancy and allow germination to proceed. Purple prairie clover seed should be planted on a tilled, weed free, firm soil surface. The seedbed should be firm enough to plant at a reliable 1/4 to 1/2 inch level depth. Seed should be inoculated prior to seeding with Type F inoculant to facilitate nodulation of the root system. A drill equipped with a legume box will provide good seed-to-soil contact and enhance the likelihood of successful stand establishment. Weed control during establishment of native legumes produces a healthier final plant stand. Mowing at a height that will not damage purple prairie clover seedlings is one method of reducing weed competition.

Ecological Considerations

Purple prairie clover does not spread aggressively by seed or vegetatively. Grasshoppers and small rodents in moderate numbers can cause damage especially to new seedling stands. While containing high protein levels and good overall forage quality, if eaten in large quantities, purple prairie clover can cause bloat problems for cattle.

Seed and Plant Production

Seed of Kaneb purple prairie clover is harvested with a standard combine, dried and then processed with a fanning mill. To determine seed production potential of purple prairie clover the weight of seeds per plant were

measured and the numbers of seeds per plant were counted. Purple prairie clover was determined to produce approximately 275,000 seeds per pound. Five year averages of seed yields at Manhattan Plant Materials Center (PMC) were 122 pounds per acre. Purity of harvested, processed seed is typically 99 percent or better with a germination range of 36 to 83 percent (including germination plus hard seed). A long term seed storage study conducted at Manhattan PMC indicated that Kaneb can be stored successfully under cool dry conditions for up to 26 years and still retain good germination percentages. Kaneb's initial germination was 81 percent and after 26 years of storage the germination was still 77 percent. There was however, a much lower percentage of hard seed in the latter test results when compared to the initial test results.

Availability

For conservation use: Kaneb is generally available from a variety of commercial seed vendors. However, Certified Class seed is for the most part not available commercially.

For seed or plant increase: Breeder and Foundation Class seed can be obtained from the Manhattan Plant Materials Center. There is no Registered Class of seed recognized for this variety.

For more information, contact:
Manhattan Plant Materials Center
3800 South 20th Street
Manhattan, KS 66502
(785) 539-8761 FAX (785) 539-2034
<http://www.plant-materials.nrcs.usda.gov>

Citation

Release Brochure for Kaneb purple prairie clover (*Dalea purpurea*). USDA-Natural Resources Conservation Service, Manhattan PMC. Manhattan, KS 66502.
Published [March 2013]

For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov>>, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov>>

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