



FUZZYTONGUE PENSTEMON

Penstemon eriantherus Pursh

Plant Symbol = PEER

Alternate Names

Common Names: fuzzytongue penstemon, beardtongue penstemon, Cleburn's penstemon, longsac penstemon, Whited's Penstemon

Scientific Names:

Penstemon eriantherus Pursh var. *argillosus* M.E. Jones,
Penstemon eriantherus Pursh var. *cleburnei* (M.E. Jones) Dorn,
Penstemon eriantherus Pursh var. *eriantherus*,
Penstemon eriantherus Pursh var. *redactus* Pennell & D.D. Keck,
Penstemon eriantherus Pursh var. *whitedii* (Piper) A. Nelson

Description

General: Fuzzytongue penstemon is a perennial forb with a short taproot and one or more stems that grow 4 to 16 inches tall and are occasionally decumbent at the base. Basal leaves are spatula-shaped, tend to be poorly developed, but can grow to 3 inches long. Leaves are petiolate, leathery, narrowly oblong, entire or sharply toothed and grow up to 5 inches in length (Hitchcock and Cronquist, 1973; Lackschewitz, 1991; Lesica, 2002).

The inflorescence is narrow or branched with a glandular panicle of short stalk flower clusters. The flower is funnel-shaped, grows to 1 inch in length, has pale purple petals and long, yellow hairs. Flowers have a three-lobed lower lip and a smaller, two-lobed upper lip. Four of the five stamens are fertile and lie against the upper portion of the petals. The sterile stamen protrudes from the petal tube and is covered with dense, yellow hairs. The fruit capsule is 0.5 inches long and filled with brown seeds at maturity. Flowers bloom from late May into early September after first year growth (Hitchcock and Cronquist, 1973; Lackschewitz, 1991; Lesica, 2002; Rocky Mountain Herbarium, 2008; Luna et al., 2008).

Distribution: Fuzzytongue penstemon is native to western North America, including British Columbia and Alberta, Canada (USDA-NRCS, 2020). For current distribution, please consult Plant Profile page for this species on the PLANTS Database Web site.

Habitat: Fuzzytongue penstemon is commonly found on dry open slopes among meadows, mixed grass prairies and mountain areas from 850 to 8200 feet in elevation. Fuzzytongue penstemon can be observed in shallow, gravelly, sandy to sandy-clay soil and soil derived from limestone (Lackschewitz, 1991; Rocky Mountain Herbarium, 2008; Consortium of Pacific Northwest Herbaria, 2021).

Adaptation

Fuzzytongue penstemon grows on well-drained soils and tolerates disturbed, mildly saline to weakly acidic soils (Marty, 2003). Commonly found in barren open areas and upland, prairie grasslands, fuzzytongue penstemon has also been seen among disturbed roadsides and mine pit tailings (Consortium of Pacific Northwest Herbaria, 2021).



Figure 1. Fuzzytongue penstemon. Image: USDA-NRCS Bridger Plant Materials Center (June 2010).

Uses

Fuzzytongue penstemon is appropriate for site revegetation of disturbed areas and on normal to somewhat acidic pH soils. Pollinator plantings and bird habitat are suitable uses for fuzzytongue penstemon (Hildebrand, 1979; Becker and Sieg, 1987; USDA-NRCS, 2018).

Ethnobotany

Fuzzytongue penstemon was used for human and animal medicinal remedies by Assiniboine and Dakota people in the current geographic area of Fort Peck in northeastern Montana (University of Montana, 2021). Today, its primary use is as an ornamental species (University of Montana, 2021).

Status

Fuzzytongue penstemon is not a threatened or endangered species, wetland indicator species, or state noxious weed. Please consult the PLANTS Website (<http://plants.usda.gov/>) and your state's Department of Natural Resources for this species current status (e.g., threatened or endangered species, state noxious status, and wetland indicator values).

Planting Guidelines

Drill seeding, broadcast seeding, or container planting are effective methods for establishing fuzzytongue penstemon. Drill or broadcast seed at a depth of 0.25 inches or less into a firm, weed-free seedbed. Adjust per acre seeding rates based on between-row spacing, percentage in the mix, and method of seeding. The full stand drill seeding rate is approximately 3 pounds of Pure Live Seed (PLS) per acre or 25 PLS seeds per square foot. The full stand broadcast seeding rate is 6 PLS lb/acre. For a full stand broadcast seeding on highly disturbed critical areas, quadruple the seeding rate to 12 PLS lb/acre (USDA-NRCS, 2013). Broadcast seeding should be followed by raking or harrowing to ensure good seed to soil contact.

Dormant late fall seeding provides the cold stratification needed to overcome seed dormancy and facilitate germination the following spring. Growth begins in early spring. Flowers appear from April through August of the second growing season (Luna et al., 2008; USDA-NRCS, 2018).

Management

For optimal fuzzytongue penstemon establishment, manage weeds and other herbaceous competition with mowing before the flowering stage. Fuzzytongue penstemon is responsive to herbicide application on undesired species; establishment was negatively affected by trifluralin/pendimethalin and trifluralin/imazapic herbicide combinations in a 2006 native plant seed mix study in Bozeman and Bridger, MT. These herbicide combinations are not recommended for herbaceous competitor control when fuzzytongue penstemon growth is desired (Wiese, 2009).

Environmental Concerns

Fuzzytongue penstemon is not considered weedy or invasive and no known pests or problems are associated with the species.

Seeds and Plant Production

Seed production at the USDA-NRCS Plant Materials Center in Bridger, Montana, involves dormant fall sowing of 25 to 35 PLS seeds per linear foot at approximately 1/8 - to 1/4 -inch depth with a plot seeder. Row spacing is 30 inches between rows, a spacing largely dictated by available equipment and supplies. Fields are flood irrigated 2 to 3 times each growing season in Bridger, an area receiving approximately 10 inches of annual precipitation. Within-row weed control is by hand, and between-row weed control is conducted with a multi-row rototiller. Invasion by broadleaved weeds such as bindweed (*Convolvulus arvensis*) and common buckwheat (*Fagopyrum esculentum*) can be problematic. Harvesting typically occurs July 10 to July 30 in Bridger and is accomplished with a plot combine and yields approximately 34 PLS lb/acre. Hand harvesting is effective but laborious. Harvesting with a swather that has a tarp suspended below the header is also possible. A hammer mill removes the seed from the capsule and a screen fanning mill separates the seed from the chaff.



Figure 2. *Fuzzytongue penstemon*. Image: USDA-NRCS Bridger Plant Materials Center (June 2010).

Mature seeds are hard, black in color, and enclosed in capsules (Hitchcock and Cronquist, 1973). Seed longevity is at least five years when stored from 34° to 37°F in sealed containers (Luna et al., 2008). Fuzzytongue penstemon seeds do not overcome dormancy with smoke from fire, although germination of other penstemon species is enhanced by smoke treatment (Fornwalt, 2015).

Fuzzytongue penstemon seeds can be sown indoors or outdoors for container production. For indoor production, sow 3 to 5 PLS seeds 0.25-inch-deep in 10-cubic-inch containers using a standard peat-based potting mix. Fertilize seedlings with 13-13-13 liquid N-P-K fertilizer at 100 ppm. Irrigate containers thoroughly and allow to drain overnight. Place seeded containers in a walk-in cooler maintained at approximately 36°F for 120 days. Frequently inspect containers for emergence after 90 days of prechilling. If emergence occurs, or after 120 days of prechilling, transfer containers to a greenhouse maintained at 68°F day/50°F night. Thin seedlings to one plant per container and irrigate to maintain moderate soil moisture. Be mindful not to overwater the seedlings, which are susceptible to damping off. During the active growth phase, fertilize seedlings with 20-20-20 liquid N-P-K fertilizer at 100 ppm (Marty, 2003; Luna et al., 2008).



Figure 3. Fuzzytongue penstemon. Image: USDA - NRCS Bridger Plant Materials Center (May 2010).

For outdoor container production, sow seeds in late fall like indoor container production. Thoroughly irrigate containers and place outdoors, preferably in a hoop house to shelter containers from drying winds. Irrigate containers through winter to keep soil moist. Germination should occur in spring when temperatures reach 68°F (Marty, 2003; Luna et al., 2008).

Cultivars, Improved, and Selected Materials (and area of origin)

These plant materials are somewhat available from commercial sources. Old Works Germplasm fuzzytongue penstemon was released in 2002 by the Bridger, MT Plant Materials Center, USDA-NRCS and is intended for conservation uses including revegetation of sites with moderate heavy metal soil concentrations and soil with acidic pH. Based on the original collection location in Deer Lodge County, Montana, at the Anaconda Superfund Site, Old Works is intended for use in dry, open landscapes (Marty, 2002).

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Citation

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