

***Festuca saximontana* Rydb.**
Rocky Mountain fescue

Family: Poaceae



Figure 39. Documented range of *Festuca saximontana* in northern British Columbia.



Figure 40. Growth habit of *Festuca saximontana* growing in cultivation.

***Festuca saximontana* Rydb.
(continued)**

Rocky Mountain fescue

Background Information

Festuca saximontana is found north to Alaska, the Yukon and Northwest Territories, east to Newfoundland and south to New York, Michigan, Wisconsin, Iowa, Kansas, New Mexico, Arizona and California. It is common in southern B.C. and east of the Coast-Cascade Mountains, but occurs only infrequently in southwestern and northern B.C. (Douglas et al. 2001).

Growth Form: Small, densely tufted, erect, slender, tightly rolled leaves; auricles absent, very short ligules, finely fringed at tip; narrow panicle looks more like a spike, 3–5 spikelets, short awn 1-2 mm long; Not to be confused with *Festuca rubra* which is rhizomatous and sod-forming. Mature plant size is 25-50 cm tall.

Site Preferences: Mesic to dry meadows and forest openings at middle elevations (Douglas et al. 1994). In northern B.C. it is found on xeric to subxeric poor to very rich sites in the SBSx or SBSd subzones; on submesic to mesic, poor to rich sites in the ESSFx or ESSFd subzones; on xeric very poor to very rich sites in the BWBSw or BWBSv subzones; on xeric to mesic, very poor to very rich sites in the SBPSx or SBPSd subzones, and xeric to subxeric very poor to very rich sites in the SBPSmk (Beaudry et al. 1999). In Alberta, it is reported to grow on dry soils (Gerling et al. 1996).

Seed Information

Seed Size: Length: 3.96 mm (3.27 - 4.85 mm)
Width: 0.91 mm (0.74 - 1.09 mm)
Awn length: 1.63 mm (1.19 - 2.28 mm)

Seeds per gram: 1,500 (range: 531 - 2,130)

Volume to Weight Conversion: 189.2 g/L at 93.6% purity

Germination Capacity: At 30°/20° C untreated: 28.5%
At 25°/15° C untreated: 59.0%
(28 - 97%)
stratified: 20.7%
(10 – 31%)

Germination Speed: To first germination: 11.0 days
To 50% potential: 11.0 days

Seed Longevity: Unknown

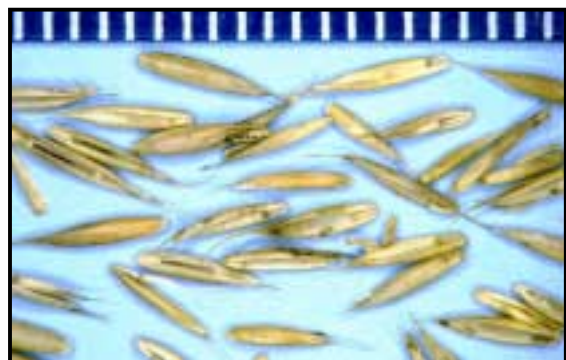


Figure 41. Seeds of *Festuca saximontana*. Rule divisions are 1.0 mm.

Considerations for Growing

Techniques for Seed Production

Seed treatment: Stratification at 5°C for two months has proven detrimental to germination capacity, so no pre-germination seed treatment is recommended.

Soil considerations: Establish on loamy, well-prepared soils with a firm seedbed. Untreated seed germinates better in cooler soils.

Stand establishment: Site should be free of all weeds, although dicot species can be sprayed with a selective broadleaf herbicide with no apparent damage to the crop.

Row spacing: Unknown; suggest 20-50 cm.

Seeding density: 131-246 PLS per linear metre.

Seeding depth: 0.6-1.2 cm; early spring seeding is best (Pahl and Smreciu 1999).

***Festuca saximontana* Rydb.
(continued)**

Rocky Mountain fescue

(Techniques for Seed Production, continued)

Stand maintenance: Regularly cultivate rows and spot spray with herbicide to keep plot weed free; annual fertilization with low N formulations may extend the life of the plot. Lightly mowing stands and then removing the straw will rejuvenate them (Pahl and Smreciu 1999).

Harvesting and Seed Processing

Dates of selective harvesting in the Bulkley Valley of northwestern B.C. have ranged from July 17th to August 20th. This species shatters moderately easily.

Hand clipping: Manually harvest with a hand sickle or clippers when seeds are ripe in August, followed by drying outdoors in the sun, or indoors in a warm dry area.

Vacuum: Direct harvesting by vacuum is not recommended. However, plastic placed between rows will enable you to harvest lost seeds that shattered early or were scattered while being harvested by hand clipping or mechanical methods. We recommend that scattered seed be vacuumed from weed cloth immediately after any method of harvesting.

Seed stripper: Should be suitable, but has not been tested; use a soft-threaded harvesting head, then dry harvested seed outdoors in the sun, or indoors in a warm dry area.

Combine/thresher settings: Use rotary flail; hold seed heads against flail till seed is removed.

Seed cleaning: Run through fanning mill with the following configuration: prescreen 1.2 x 7.1 mm slot; top screen 1.8 x 12.7 mm; bottom screen blank.

Storage requirements: Cool dry conditions.

Considerations for Use in Revegetation

- *Festuca saximontana* is suitable for reclamation at high altitudes; and for erosion control on sandy or gravelly soils.
- This native fescue has relative large, easy-to-handle seeds, and establishes and grows well under harsh conditions. It can make a robust contribution to the crop portfolio of growers, and to revegetation seed mixtures at most elevations in northern B.C.
- This species is eaten by Rocky Mountain bighorn sheep for forage, although forage production is low (Pahl and Smreciu 1999).
- Gerling et al. (1996) report that Rocky Mountain fescue has excellent forage value for livestock.

Notes: _____

