

Foothills Selected Class Germplasm Canada Bluegrass

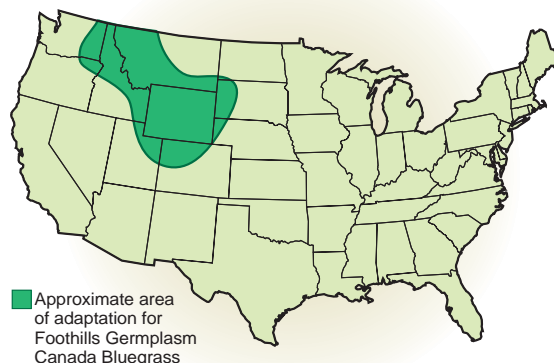
Foothills is a selected class germplasm release of Canada bluegrass (*Poa compressa* L.). It is a composite of eight collections from Europe (Denmark, Romania, Netherlands, Czechoslovakia), Asia (former USSR), and the United States. A total of 37 different accessions of Canada bluegrass were evaluated at the Bridger, Montana, Plant Materials Center. These eight accessions were selected for their seedling vigor, rate of spread, forage production, seed production, and uniformity of phenology. This release was tested in comparison to 'Reubens' and found to be superior in seedling vigor, rate of spread, and seed production.

Description

Canada bluegrass is a cool season, low-growing, rhizomatous, perennial grass introduced from Eurasia. This species is often confused with Kentucky bluegrass, but has a distinct blue-green foliage, flattened wiry stems, and short, compact panicles. There are few basal leaves, while culm leaves are short and erect. Unlike Kentucky bluegrass, Canada bluegrass does not form a tight sod and regrowth is relatively slow following clipping or grazing. The seeds have a strongly keeled lemma with sparse webbing at the base and slight pubescence toward the base of the keel and margin nerves. This species is considered apomictic (producing seed asexually). This mode of reproduction is common in the high polyploides of the genus *Poa* (*Poa compressa* 2N=42). Foothills germplasm has an average of 1,600,000 seeds/lb (3,500,000 seeds/kg).

Adaptation

Although introduced, Canada bluegrass has naturalized throughout much of North America since its introduction into Canada (circa 1792). This species is most common along the northern tier of the United States and the southern tier of Canada. Canada bluegrass is considered a pioneer species, readily colonizing on disturbed soils. Although it does well on wet sites, it thrives on moderately acidic, droughty, and low-nutrient soils. This species can be found in open meadows, open deciduous and coniferous stands, and waste areas from Newfoundland to Alaska, south to Georgia, Tennessee, New Mexico, and California.



Uses

Canada bluegrass is considered a pioneer species on low-fertility and medium-acid sites. Its primary use would be ground cover and erosion control on disturbed sites; e.g., roadsides, hardrock mines, dam sites, heavy-use recreation areas, wildlife habitat, ski slopes, and low-maintenance landscaping. Foothills is adapted for use as a forage and grazing species on low-fertility, high elevation sites where common forages would perform poorly. It is relished by all classes of livestock and is readily used by large wildlife ungulates such as deer and elk. It stays green well into the fall and early winter and withstands close cropping and heavy trampling.

Establishment

Seed should be planted into a firm, weed-free seedbed, preferably with a drill that will ensure a uniform seed placement depth of 1/4 inch (6 cm). Broadcast seeding, followed by harrowing and packing, can be utilized in higher soil moisture situations. Early spring seeding is preferred, but late summer or dormant fall seeding can be successful. The pure stand seeding rate is 1 lb/acre (1.1 kg/ha), but it is often seeded at two or three times that rate because of the difficulty in metering out that small quantity of seed. A carrier such as rice hulls assists with uniform seed distribution. If included in a mixture, the rate would be 1/2 lb/acre (0.6 kg/ha) or less.

Seed Production

Seed production fields can be established as a solid stand or in rows spaced 18-24 inches (45-60 cm) apart. Solid stands should be attempted only with clean fields and con-



fidence in chemical weed control. If planted in rows, the stand can be allowed to go solid following two years of cultivation for weed control. Foothills Canada bluegrass has uniform maturity, ready for harvest during the last week of July or first week of August. There is a minimal amount of seed shatter from mature plants, making this species easy to harvest. The stand can be swathed and combined out of a cured windrow, or it can be direct-combined. The short stature of this plant may add to the difficulty of direct harvest, plus direct harvested seed may require some drying prior to storage. On irrigated sites, seed production of 250-500 lbs/acre (280-560 kg/ha) can be expected. Dry-land seed production should not be attempted on sites receiving less than 16 inches (400 mm) of annual precipitation.

Availability

The USDA-NRCS Plant Materials Center, Bridger, Montana, released Foothills as a selected class germplasm release. G₁ seed (equivalent to foundation seed) is produced at the Bridger PMC and made available to commercial growers through the Foundation Seed Stock program at Montana State University-Bozeman and the University of Wyoming Foundation Seed Program at Powell, Wyoming. Two generations (G₂ equivalent to registered and G₃ equivalent to certified) beyond foundation (G₁) are recognized.

Authors:
Mark Majerus and Larry Holzworth

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

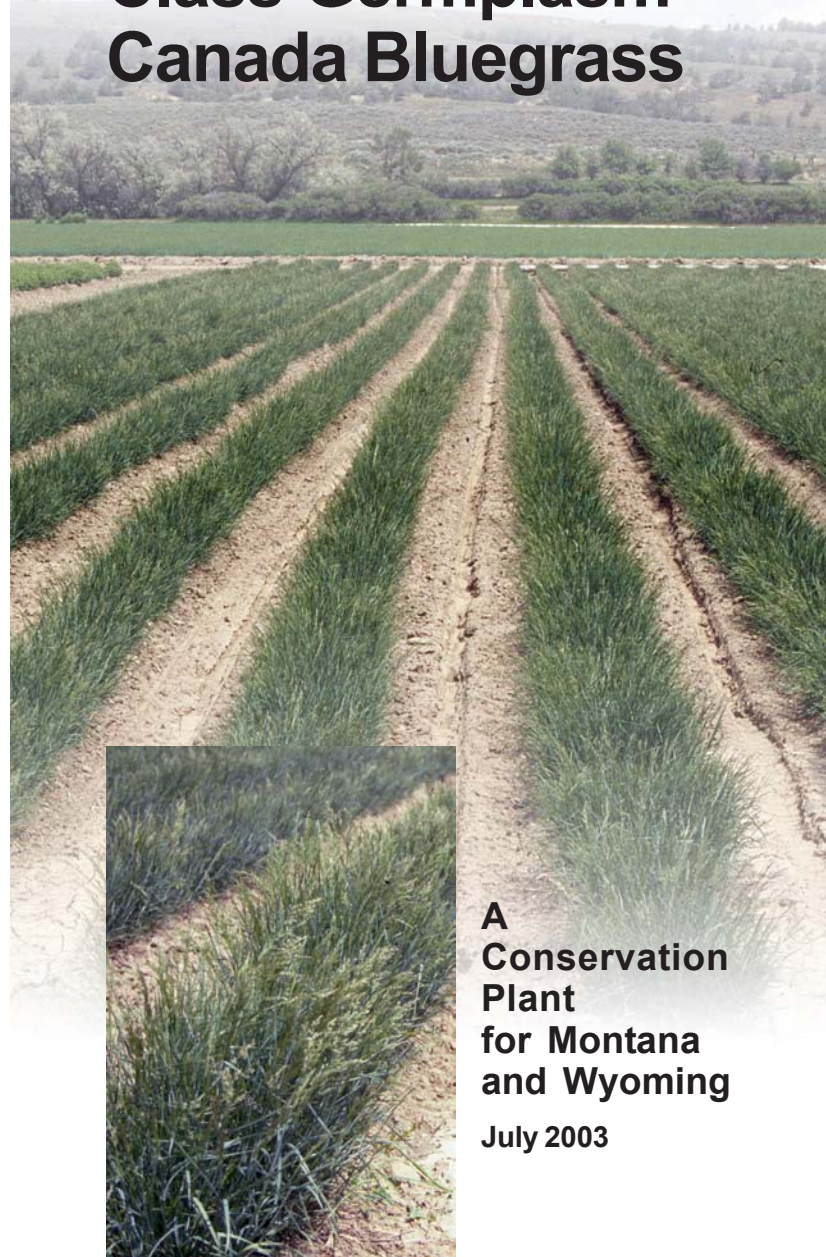
To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, DC, 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.



Printed on recycled paper

07/2003 MT

Foothills Selected Class Germplasm Canada Bluegrass



**A
Conservation
Plant
for Montana
and Wyoming**

July 2003



**United States
Department of
Agriculture**

**Natural
Resources
Conservation
Service**