



Saskatchewan Forage Council

Downy Brome

Excerpt from "A Cattlemen's Guide" by the Grazing and Pasture Technology Program with additional information from Gordon Pearse, P.Ag. (Newfield Seeds) and Randy Pastl, MSc. P.Ag. (Saskatchewan Forage Council)

Downy brome was introduced from Europe and has been a problem weed in the winter wheat regions of the USA since the late 1800's. It is believed downy brome did not reach the prairie region of western Canada until the 1930's. Downy brome is also referred to as cheat, cheatgrass, or downy chess.

Downy brome grows as a winter annual, spring annual or biennial. Growth is rapid, beginning very early in the spring and producing mature seed around mid-June. At maturity, the whole plant has a purplish-red appearance. It often grows in large tufts. The plant resembles a miniature smooth brome grass plant except that it is very pubescent, with erect and slender stems, including the swollen nodes on the stem which are also covered with soft straight hairs. The jagged ligule is 1 - 3 mm (1/8-1/4 in.) in length. The inflorescence is a many-branched panicle, which droops to one side. There are 6 - 10 florets per spikelet, which are long, narrow in shape, and very hairy. Each gray to purple coloured seed is tipped with a straight awn 12 - 17 mm (1/2-3/4 in.) long.

Downy brome is an indicator of poor range condition. It readily invades where the native vegetation has been disturbed by overgrazing, fire, or cultivation. Since it does not compete well with perennial grasses it is not normally present on good condition range sites. Downy brome has spread over native range, tame pastures, disturbed soils and forests throughout the western U.S.A. In Canada, south-western Saskatchewan and Alberta are becoming heavily infested and plants can be found in isolated areas from the U.S. border to the Peace River in Alberta. Once it dominates an area it is very difficult to eradicate.

Your voice in the forage industry

Livestock, deer and antelope can get fair to good forage value out of downy brome early in the growing season, prior to flowering. It is a major forage source in regions of the north-western U.S.A., supplying the bulk of early spring forage for all livestock classes. It is the principal feed source on spring lambing ranges and supplies good quality forage in the short term.

Downy brome remains green and palatable for about a month in both spring and fall. Uncontrolled, downy brome can be a fire hazard and has extremely high flammability allowing fires to kindle and spread rapidly. The rough awns can puncture the soft tissues of the mouth, nostrils and eyes of grazing animals. Perforation of the intestines has also been reported in livestock that are allowed to graze mature plants or consume hay with high proportions of downy brome. The presence of awns also reduces feed intake. □

Downy brome uses moisture from shallow layers in the sod, which directly influences the establishment of other desirable grasses, especially perennials. Downy brome must produce seed in order to reproduce, therefore to control infestations, it is imperative to prevent seed production. Mowing large infested areas as the majority of the panicles emerge is one method. Fall tillage is another method to destroy the fall seedlings, followed by spring tillage to control spring seedlings. For smaller infestations, roguing is the best way to remove plants prior to seed set. Note, if seed has already set prior to roguing, the seeds will work their way through woven poly-bags. To prevent this, line them with plastic garbage bags first. For herbicide control consult the provincial Crop Protection Guide.

When considering buying forage seed it is advisable to ask for, and read, the field inspection sheet prior to purchase. Always request downy brome-free seed and accept nothing less. For additional information, contact Randy Pastl at the Saskatchewan Forage Council, Saskatoon, SK. Phone: (306) 966-8663; Fax: (306) 966-2614; email: rpastl@saskforage.ca.