

[To Grass Species](#)

Publications & Information
Animal & Range Sciences, Extension Service
Montana State University

Meadow Bromegrass (*Bromus biebersteinii*)

Plant Species

From Montana Interagency Plant Materials Handbook *

By S. Smoliak, R.L. Ditterline, J.D. Scheetz, L.K. Holzworth, J.R. Sims, L.E. Wiesner, D.E. Baldrige, and G.L. Tibke

Meadow bromegrass was collected in Turkey and first introduced to the United States in 1949. The initial evaluations of the species in the West were made at the Pullman, Washington and Aberdeen, Idaho Plant Materials Centers. The variety 'Regar' was released in 1965.

Meadow bromegrass contains some of the good features of both smooth bromegrass and orchardgrass. This grass can extend the prime grazing season as well as increase total forage production, and is very compatible with alfalfa. It yields as much or more total forage as smooth bromegrass, has much faster recovery and better fall growth. It differs from smooth bromegrass in being much less strongly creeping, and is slower to become established. It has more basal leaves. The forage quality is similar to that of smooth bromegrass. The vegetative growth is very palatable to all classes of livestock as both green forage and cured hay.

Meadow bromegrass has good drought tolerance and excellent winter-hardiness. It has performed well at elevations from 500 feet to over 6,000 feet. There is some indication that its range may extend into a lower rainfall zone and to slightly lower elevations than smooth bromegrass.

Description

It is a long-lived, perennial bunchgrass with a tendency for some vegetative spreading under dryland conditions and a moderate amount under irrigation. Meadow bromegrass produces short, stout rhizomes 4 to 6 inches long. This characteristic provides soil protection not found in other bunchgrasses. The stand does not decline in productivity as rapidly as other vigorous, sod-binding grasses. It is a heavy producer of roots and crowns.

The plant has numerous light green leaves that are predominantly basal and mildly pubescent. The seed stalks are from 24 to 48 inches high and extend above the leaf mass in an open panicle. The plants head and mature seven to 10 days earlier than smooth bromegrass.

Seeds of meadow bromegrass are similar in appearance to smooth bromegrass seeds, but are almost twice the size and have much larger awns. Plants may have either white or purple seed. The seed germinates readily, seedling vigor is good and the seedlings establish well. The seed stalks are erect with the seed in an open panicle.

Adaptation

Meadow bromegrass is adapted to the same soils and climatic conditions and will grow well wherever smooth bromegrass does well. Like smooth bromegrass, it is also adapted to slightly-acid to mildly-alkaline soils and has produced good forage yields on dryland and on irrigated land.

It tolerates drought well and is very winterhardy. This grass can be grown on dryland in areas with at least 14 inches of precipitation annually. Seedlings are vigorous and stands are easy to establish on well-prepared seedbeds.

There have been no insect or disease problems in forage-producing fields of meadow bromegrass. Banks grass mite has been observed in seed production fields, but only at moderate levels of infestation.

Limitations

It can be seeded alone or in mixtures with alfalfa or other legumes. Most of the seed heads appear in the first cutting and only a few seed heads are formed after the first two years. It is slower in establishment relative to smooth bromegrass and is sensitive to spring flooding.

Regar is susceptible to covered head smut (*Ustilago bullata* Berkeley). This organism can be either seed- or soil-borne. All seed should be treated with a suitable fungicide. Seed treatment will aid in preventing infection if the seed is planted in non-infected soil; but will not control it completely if invasion by smut spores occurs from naturally-infected soils. The organism and resulting smut is of little consequence when the grass is seeded for forage production.

Use for Hay

Grown alone or in a mixture with a legume, meadow bromegrass produces excellent hay. It is very palatable to cattle, sheep and horses. It is less aggressive than smooth bromegrass and retains a better balance with alfalfa in grass-alfalfa mixtures.

Fertilizer practices that produce good results with other perennial grasses will also produce good results with meadow bromegrass. With irrigation, nitrogen in two applications will produce high forage yields and stimulate the regrowth characteristic of the grass. Nitrogen fertilization under dryland conditions may be beneficial and produce economical returns, especially when yields decline with age of stand.

The early heading characteristics of Regar is a detriment to its compatibility with alfalfa for hay. The dense, basal leaf growth makes excellent quality hay. Chemical analysis indicates the forage to have good values comparable to smooth bromegrass.

Use for Pasture

Meadow bromegrass is palatable and well-adapted for pasture use. It starts spring growth earlier than most other grasses and is ready for grazing at an earlier date. Its strong regrowth characteristic gives it a good seasonal growth pattern and contributes to its value as a pasture forage.

Animals should not be allowed to graze until the grass is 8 to 12 inches high. Grazing animals should be removed when there is still 3 to 4 inches of stubble on the plants. A three to four week regrowth period is necessary for maximum production and longevity of the stand. About 6 inches of regrowth should be allowed in the fall to build up food reserves that will provide early growth the next spring. It can be grown on dryland or with irrigation, alone or with a legume. Solid stands give strong competition to annual and perennial weeds.

With adequate soil moisture, the leaves stay green and continue to grow after the seed matures. The plants green up early in the spring and remain green late into the fall. One of the outstanding characteristics of this variety is the excellent regrowth after cutting or grazing, from which the name Regar is derived. The forage is very acceptable to cattle, sheep and horses.

Seed Production

Seed production of new stands of Regar is excellent, but decreases rapidly with age. Expect about two to three years for economic production. Yields up to 900 pounds per acre have been recorded on a dryland site under 20 inches of rainfall. Seed production averages about 300 pounds per acre under irrigation.

* [The Montana Interagency Plant Materials Handbook \(EB69\)](#) is no longer in print, but is available for viewing in Montana County Extension Service and National Resource Conservation Service Offices.