



United States Department of Agriculture
Natural Resources Conservation Service
Plant Materials Program

'Regar' Meadow Brome

Bromus biebersteinii Roem. & Schult.
[excluded]

A Conservation Plant Release by USDA NRCS Aberdeen Plant Materials Center, Aberdeen, Idaho



'Regar' Meadow brome

'Regar' meadow brome was released in cooperation with the Idaho Agricultural Experiment Station in 1966 and is well adapted for use as a pasture grass.

Description

Regar is an introduced, long-lived perennial bunchgrass, 20-48 inches tall, with short rhizomes. Plants produce numerous light green basal leaves that are somewhat pubescent. Flowering stalks extend taller than the leaves ending in an open panicle. The spikelets are 7-11 flowered. Seeds are similar in appearance to smooth brome grass seeds but are almost twice the size and have much larger awns. Plants green up in early spring and remain green until late in the fall when irrigated or when adequate moisture is available.

Source

The original collection was made in 1949 near Zek, in the Kars Province of Turkey. The USDA Natural Resources Conservation Service Plant Materials Center in Aberdeen, Idaho received seed from this collection in 1957. Detailed collection site information is not available. Fifteen clones were selected from an irrigated test nursery

at Aberdeen in 1958. This seed was multiplied for testing. Plants were evaluated at Aberdeen and Pullman, Washington during the 1960's and was officially released in 1966 as Regar, named for its outstanding regrowth characteristic. Other qualities include drought tolerance, winter hardiness, rapid seed germination and seedling establishment.

Conservation Uses

The primary use of meadow brome is for forage production. It is used for pasture and hay and is highly palatable to all classes of livestock and wildlife. Meadow brome also provides good erosion control with its dense network of fibrous roots. It is excellent forage for big game animals and waterfowl (particularly geese), and can be used in grass-legume mixes for nesting, brood rearing, escape, and winter cover in upland wildlife conservation plantings and field borders. Regar has good regrowth characteristics and does not go dormant after harvest or during the high temperatures of summer. Regar can be grown in pure stands or with a legume component such as alfalfa, sainfoin, trefoil or cicer milkvetch.

Area of Adaptation and Use

Regar is well adapted to sites receiving 14 inches or more annual precipitation in the Intermountain west and Northern Great Plains. It is best suited to locations above 3,000 feet elevation in sagebrush-grass, piñon-juniper, ponderosa pine, aspen and Douglas fir communities. Regar is very winter hardy and does better in areas with spring frost than orchardgrass.

Regar performs well in a broad range of soil conditions. It performs best on moderately deep to deep, fertile, well-drained soils, but also performs fairly well in shallower soils. Preferred soil textures range from coarse gravelly to medium textured loams. Regar grows well in moderately acidic to weakly saline to sodic soil conditions. It does not do well in wet, saline soils or areas with high water tables.

Establishment and Management for Conservation Plantings

A clean, firm, weed-free seedbed is recommended. Dryland and erosion control plantings should be made in the late fall or very early spring when soil moisture is not limited. Irrigated plantings should be made in early to mid spring. Meadow brome does not flow uniformly through a drill unless it is diluted with rice hulls or other carrier. The recommended seeding rate is 10 pounds Pure Live Seed (PLS) per acre. If broadcast or planted for

critical area treatment, double the seeding rate to 20 pounds PLS/ac. Meadow brome is very compatible with legumes such as alfalfa, cicer milkvetch, birdsfoot trefoil, sainfoin, and clover species. When planting with legumes, alternate row planting is recommended due to differences in seedling vigor. Use 6 to 8 pounds PLS of meadow brome seed per acre when planting in alternate rows with a legume. Adjustments in seeding rate should be made when seeding in mixtures to percent of stand desired. Seeding depth should be ¼ to ½ inch.

Under dryland conditions the new planting should not be grazed until late summer or fall of the second growing season. The plants may be severely damaged or pulled out by overgrazing especially in the seedling year due to poorly rooted seedlings. Under irrigated conditions the new planting should not be grazed until late summer or fall of the first growing season. Harvesting for hay during the establishment year is most beneficial to eliminate grazing damage.

Do not graze in the spring until forage is 8 to 12 inches high and remove animals from pasture when 3 to 4 inch stubble height remains. A 3 to 4 week rest period between grazing is recommended. Meadow brome matures early and can become stemmy if not harvested quickly in the spring. Use no more than 60% of the annual growth during the winter season or 50% during the growing season. This plant responds well to rotation-deferred grazing systems. To maintain long-lived stands, the grass should be allowed to periodically mature and produce seed for continuation of the stand.

Regar responds very well to good fertility management. One strategy to even out the forage production is to fertilize the stand after the first and second cutting or grazing periods to boost late spring and summer production. Apply fertilizer based on soil tests. Fertilizer nutrient rates need to be balanced rates of nitrogen and phosphorus to maintain optimum stands of grasses and legumes. Nitrogen will favor the grass while phosphorus will favor the legume.

Ecological Considerations

Regar is from a species native to the Middle East, western and central Europe and China and was introduced to the United States in 1949. It has since been used in the northern United States and southern Canada and has not posed any environmental concerns. It is not considered weedy but could spread into adjoining degraded plant communities via seed under ideal conditions.

Seed and Plant Production

When planting for seed increase, seed may need to be treated with a fungicide to reduce potential head smut

problems common in bromes. Irrigated seed production plantings should be in at least 24-inch rows and preferably 36-inch rows. Seeding rate is 4.7 pounds PLS/ac at 36 inch row spacing. Dryland seed yields are commonly 150 to 200 pounds per acre and irrigated seed yields range from 450 to 600 pounds per acre. Seed matures fairly evenly and is ready for harvest in mid-late July. The preferred method of harvest is to windrow at the firm dough stage and then combine about 7 days later, once seed has matured in windrow. Direct combining is also acceptable, but the field must be monitored closely and harvested when seed is mature and before seed shatter occurs. The seed should be dried to 12 percent moisture in bins and 15 percent moisture in sacks before storing.

Regar meadow brome seed production fields are only productive for about two to three seed crops and seed production beyond 2-3 years are normally not economical. Proper row culture (cultivation) and ripping may help to extend the stands productive life.

Availability

For conservation use: Certified seed is available from commercial seed vendors.

For seed or plant increase: Breeder and Foundation seed is maintained by the Aberdeen PMC. Foundation seed is available through the University of Idaho Foundation Seed Program and the Utah Crop Improvement Association. Certification of seed is limited to not more than two generations from Foundation seed.

For more information, contact:
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For additional information about this and other plants, please contact your local USDA Service Center, NRCS field office, or Conservation District <<http://www.nrcs.usda.gov/>>, and visit the PLANTS Web site <<http://plants.usda.gov/>> or the Plant Materials Program Web site <<http://www.plant-materials.nrcs.usda.gov/>>

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