

## SMOOTH BROME

### *Bromus inermis* Leyss.

Plant Symbol = BRIN2

Contributed by: USDA NRCS Plant Materials Program



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**Caution: This plant may become invasive. Please consult a specialist in your area.**

#### Alternate Names

bromegrass, Austrian brome, Hungarian brome, Russian brome

#### Uses

*Livestock:* Smooth brome may be used for hay, pasture, or silage. It is compatible with alfalfa or other adapted legumes. The grass is highly palatable and is high in protein content and relatively low in crude-fiber content.

*Erosion Control:* Since the plant has a massive root system and is a sod former it can be used effectively for critical area planting and grassed waterways if the

areas can be irrigated or where annual precipitation exceeds 20 inches.

*Wildlife:* Smooth brome can be used as a component in various upland wildlife and conservation cover mixes for nesting cover and food. *Note: This species is no longer recommended for wildlife use in some states because of its aggressive nature.*

#### Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values). This plant has threatened status in Michigan.

#### Weediness

This plant may become weedy or invasive in some regions or habitats and may displace desirable vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, or state natural resource or agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site at [plants.usda.gov](http://plants.usda.gov).

#### Description

*Bromus inermis*, smooth brome, is a leafy, sod-forming, perennial, cool season grass that spreads by rhizomes. This species is both native and introduced. The stems vary in height from 2 to 4 feet. The plant produces numerous basal and stem leaves that vary in length from 4 to 10 inches. Frequently the leaves are marked by a transverse wrinkle resembling a "W" a short distance below the tip. The flower head develops a characteristic rich purplish-brown color when mature. The seed is produced in semi-compact 5 inch long panicles with ascending branches. The flat compressed seed is usually awnless, about 1/3 inch long, and smooth. There are approximately 136,000 seeds per pound. Smooth brome is the most widely used of the cultivated bromegrasses and has been cultivated in the U.S. since the early 1880s.

#### Adaptation and Distribution

Smooth brome is best adapted to cooler climates and is generally hardier than tall fescue or orchardgrass. It is resistant to drought and extremes in temperature. This plant is very susceptible to disease in areas of high humidity. Smooth brome grows best on slightly

acid to slightly alkaline well drained clay loam soils with high fertility but it will also grow well on lighter textured soils where adequate moisture and fertility are maintained. Smooth brome performs best in a pH range of 6.0 to 7.5. Stands are difficult to obtain and growth is poor on soils high in soluble salts.

Smooth brome is distributed throughout most of the United States. For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

### **Establishment**

A clean firm seedbed is needed. Due to the slow germination and establishment of smooth brome, spring seedings are especially preferred in the northern states. In southern areas, late summer seedings are a second option. Fall seedings should be made at least 6 weeks before a killing frost is expected. Seeding rates are typically 5-10 pounds per acre in mixtures, and about 15 pounds when seeded alone. When smooth brome is seeded in a mixture with alfalfa, the alternate row method will give the best results. For seed production plantings under irrigation, seed in rows 30 to 42 inches apart at a rate of 3 to 4 pounds per acre. Seedings should be drilled at a depth of 1/2 to 3/4 inch. If broadcast increase the seeding rate and cultipack after planting.

### **Management**

Smooth brome requires heavy early spring and fall applications of nitrogen to maintain high yields in a pure stand. Mixtures with alfalfa will require less nitrogen but the alfalfa will usually need P<sub>2</sub>O<sub>5</sub> each year to maintain vigor. Alfalfa cannot be maintained in pasture seedings without rotation. Best forage production is obtained from smooth brome when used in a planned cropping system and plowed out after 3 to 4 years. Its heavy sod makes it an excellent soil conditioning crop when included in cropping systems. In deep, well-drained soils it will root to 4 feet.

Smooth brome performs best in grassed waterways, field borders, and other conservation uses where the forage can be cut and removed while in early bloom. Do not graze the new seeding; cut the first crop for hay.

In brome-grass-legume pastures, allow the legume to go to bud or early-bloom stage before turning cattle in to avoid bloat hazard, and manage thereafter for optimum regrowth of the legume. Pastures should not be grazed prior to smooth brome attaining a minimum height of about 10 inches at the beginning

of the grazing season. Grazing pressures should be adjusted throughout the season to avoid grazing this grass to less than a minimum height of 4 inches. Grazing schedules should be so arranged that a regrowth period of 28 to 35 days between grazing periods is available.

### **Pests and Potential Problems**

Grasshoppers and seedling blight are influences that may impede establishment. Foliar diseases are more common in humid areas and seasons. The brome-grass seed midge, *Stenodiplosis bromicola*, can seriously hinder seed production.

### **Cultivars, Improved, and Selected Materials (and area of origin)**

Northern type cultivars: 'Superior', 'Manchar', 'Carlton', 'Jubilee', 'Saratoga' (various), 'Polar', 'Bravo'

Southern type cultivars: 'Lincoln' (Hungary), 'Achenbach', 'Elsberry', 'Lancaster', 'Lyon', 'Southland', 'Rebound', 'Baylor' (various), 'Beacon'

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

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