

Category C—Low

Smooth brome (*Bromus inermis*)

Identification and Impacts



Photo credit: University of Massachusetts



Photo credit: J.M. DiTomaso



Photo Credit: J.M. Randall, TNC

Navajo Name
Bijh ṭ óh

Origin
Native to Eurasia

Description
Smooth brome is a cool-seasonal perennial grass that can vary in height from 2 to 4 feet tall. The plants has deep-rooted rhizomes with erect stems. Leaves and stems are usually smooth with no hairs. The blades are thin and flat, and some may have an “m” or “w” shaped imprint midway down the blade. They have a small ligule, no auricle, and sheaths are closed. The inflorescence is an open panicle 2 to 8 inches long. The spikelets are nearly cylindrical and smooth and begin green and turn purple to brown as the seeds mature. When in bloom, they have yellow flowers that hang from the spikelets.



Photo credit: P. Rothrock

Biology
Smooth brome can reproduce vegetatively and by seed, creating dense populations that eventually take over sites. They prefer sunny areas and disturbed sites, such as roadsides and pastures, but can grow in open spaces in forests. They are not shade tolerant. It was originally used to control erosion and as forage. They form thick sods that crowd out native plants and deplete soils of nitrogen, limiting the growth of native plants. Its deep rhizomes make them tolerant of prolonged drought and cold environments.

Locations
Populations have been detected in the Chuska Mountains north of Long Lake and along Highway 34.

Ecological Threat and Management Concerns
Smooth brome’s rhizomatous roots and ability to alter soil conditions gives it a competitive advantage over native plants, quickly dominating sites where it establishes. It can also act as a vector for several agricultural viruses and pests. There is research that suggests its presence alters the life cycles of native arthropods as well.

Key ID Tips

- Rhizomatous perennial grass.
- Seeds are awnless.
- Some leaves may have an “M” or “W” constriction midway and have no hair.
- Inflorescence can be green, purple, to brown.

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Additional safety measures and limitations may apply for each method. Refer to the [Navajo Nation Integrated Weed Management Plan](#) for more information.

Mechanical/Manual Removal

Mowing during the boot stage can be effective when repeated. The ideal time is during dry periods that follow hot and moist conditions. Hand pulling and digging can be limited as the rhizomes can resprout. If done, the entire root ball should be removed to limit resprouting.

Biological

No biological control organisms are available.

Cultural Control

Burning can be effective if done in the early spring between the boot and early bloom stage. Burning will control the spread, but will not eliminate the species. Grazing can also control smooth brome spread and is most effective when done at the beginning of the growing season when plants are young.

Chemical

Use of herbicides can be effective. Refer to the product labels for information application rates, timing, and approved application methods.

Recommended herbicides include:

- Glyphosate
- Indaziflam
- Metribuzin

References

DiTomaso, J.M., G.B. Keyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center, University of California. 544 pp.

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