

**Category C—Low**

**Jointed goatgrass (*Aegilops cylindrica*)**

**Identification and Impacts**



Photo credit: S. Dewey, USU



Photo credit: P. Alexander

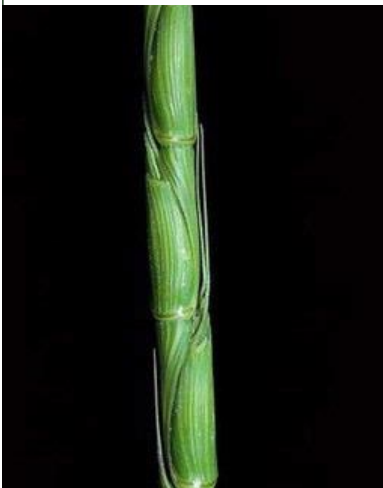


Photo Credit: J.M. DiTomaso

**Key ID Tips**

- Cylindrical shaped spike inflorescence with hard seedcoat.
- Hollow stems.
- Has a longer awn (4-8 cm) at the terminal end of the seed spikelet.

**Navajo Name**  
Cl'oh a'he ni'li

**Origin**  
Native to Mediterranean region and western Asia.

**Description**  
Jointed goat grass is a winter annual grass that can resemble winter wheat. It grows up to 20 inches tall. Its stems are hollow. Its leaves, auricles, and leaf sheaths are spaced evenly apart on the stems and it has fine hairs along the margins. Its seeds grow in distinct cylindrical spikelets with the seeds appearing to zig-zag vertically. Each spikelet is hard, cylindrical to cone shaped, and while each has an awn, the terminal spikes have significantly longer awns (USFS 2014). The seeds start green and turn red as they mature. Plants do produce tillers, but these are less productive once seed set begins.

**Biology**  
Jointed goatgrass reproduces solely by seed. However, the hard coating around the seeds makes them tolerant of fire, high temperatures, and drought. Individual plants can produce around 3,000 seeds and seeds remain viable for 3-5 years (USFS 2014). It can hybridize with wheat, and other similar species. It prefers pastures and agricultural fields, as well as disturbed sites and roadsides. It germinates in the winter and fall, sometimes while still attached to the parent plant. It has high silica content, which reduces its decomposition at sites.

**Locations**  
Unknown if present on the Navajo Nation.

**Ecological Threat and Management Concerns**  
Jointed goatgrass is a concern in rangelands and agricultural settings. Its ability to hybridize with wheat, reduces yields and degrades land values. Its high silica content allows it to accumulate in natural areas, where it can suppress other native species and increase fuels. The tough seedheads allow seeds to survive at infested sites after treatments. Additionally the tough seedheads have been known to injury humans and animals.



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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**

Hand pulling is effective for small populations and should remove and air-dry the roots before disposal. Mowing can reduce seed production if done after flowering but before seeds reach the boot stage. Tilling can be effective if seeds are buried deep enough. However, subsequent tilling within 5 years, could bring up seeds and result in germination.

**Biological**

No biological control organisms are available.

**Cultural Control**

Targeted grazing is not recommended as it can increase plant density. Burning can be effective if done before seeds/joints disarticulate to ensure seed kill. It will not affect seeds on the surface and can increase germination due to increased soil fertility. Burning treatments should be followed with additional control methods the following year.

**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
- Imazapic
- Indaziflam

**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.

USDA, NRCS. 2023. PLANTS Database. Available at <https://plants.sc.egov.usda.gov/>. National Plant Data Team, Greensboro, NC 27401-4901 USA.

U.S. Forest Service. 2014. Field guide for managing jointed goatgrass in the Southwest. U.S. Forest Service Southwest Region Forest Health. TP-R3-16-29. 10 pp.



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