Sporobolus indicus (L.) R. Br.

Smutgrass

Family: Poaceae
Range: California, Oregon, Hawaii. Other regions of the United States.
Habitat: Roadsides, turf, ditches, pastures, especially irrigated pastures, turf, occasionally agronomic crop fields and other disturbed open places.
Origin: Native to tropical America.
Impacts: Coarse and less palatable than other pasture species, so livestock avoid grazing it. As a result, smutgrass may invade and take over irrigated pastures.

Smutgrass is a warm-season perennial bunchgrass up to 3.5 ft tall, with dense, slender spikelike panicles. Especially in humid areas, the panicles and upper leaves are sometimes infected with a black fungus commonly referred to as smut. The mature plant is mostly hairless, except for a few tiny hairs on the collar margins. The stems are spreading to erect, round in cross-section, wiry, branched, tough and fibrous at the base. The root system is fibrous. The plant forms dense tufts that enlarge by developing new stems around the perimeter.

This plant usually flowers in summer to fall, but can go into flower as early as spring in mild winter areas. The panicles are long and thin, generally 4 to 20 inches long, sometimes as long as 32 inches, and 5 to 10 mm wide at the base. They are often gray-green or purplish in color.

Smutgrass spreads by producing large numbers of tiny seeds. When damp, the seeds are sticky and can disperse by clinging to the fur, feathers, and feet of animals, the shoes and clothing of people, vehicle tires, tools, and agricultural equipment. Seeds can also spread with water, mud, or as a seed contaminant. Seeds can survive in the soil seedbank for more than 2 years.

In California, smutgrass often invades irrigated pastures, especially those that are heavily grazed and/or poorly drained. Livestock generally avoided consuming smutgrass unless more palatable forage is unavailable. Smutgrass is most problematic in southern California and in the southern United States.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	Small plants can be hand pulled from wet soil. If individuals are noticed in a new area, they should be pulled as soon as possible. Mowing is not effective alone, and mowing after flowering can spread seeds. However, mowing early in the growing season can remove old top growth, making it easier to treat regrowth with herbicides. Cultivation when the soil is dry can kill mature plants, but also disturbs the soil, allowing the seedbank to reinfest the site.
Cultural	Smutgrass is palatable, but not a preferred forage. Intensive grazing (e.g., 42 cows/acre for 21 days) can overcome grazing preferences and can help to suppress smutgrass. Since livestock preferentially graze other species, a moderate grazing will reduce the height of desirable species, leaving tall smutgrass, which can be selectively controlled by herbicide wiping. Burning alone is not an effective control. Burning can remove old biomass, making smutgrass more palatable for grazing the following spring. Burning may also facilitate subsequent wiper treatments. Stopping irrigation for summer and allowing a pasture to dry out has been shown to kill adult smutgrass, but the infestation reestablishes from the seedbank.
Biological	There have been no biological control efforts for smutgrass in the United States.

CHEMICAL CONTROL

The following specific use information is based on published papers and reports by researchers and land managers. Other trade names may be available, and other compounds also are labeled for this weed. Directions for use may vary between brands; see label before use. Herbicides are listed by mode of action and then alphabetically. The order of herbicide listing is not reflective of the order of efficacy or preference.

AROMATIC AMINO ACID INHIBITORS	
Glyphosate *Roundup*, *Accord XRT II*, and others	**Rate:** Broadcast foliar treatment: 2 to 3 qt product (*Roundup ProMax*)/acre (2.25 to 3.375 lb a.e./acre). Spot treatment: 3% product v/v solution. Wiper treatment: 33% to 50% of concentrated product in water. **Timing:** Postemergence, to rapidly growing plants. Wiper treatments are most effective when flowering panicles are tall but still green, before seed set (e.g., July in California's Central Valley). **Remarks:** Glyphosate is nonselective, so may kill desirable competitors. It has no soil activity. Effectiveness is increased by addition of ammonium sulfate. Some formulations (*Rodeo* and *Aquamaster*) are registered for use in or near water.
BRANCHED-CHAIN AMINO ACID INHIBITORS	
Imazapic *Plateau*	**Rate:** 10 to 12 oz product/acre (2.5 to 3 oz a.e./acre) **Timing:** Postemergence in spring after plants have greened up. **Remarks:** Imazapic has mixed selectivity and tends to favor Asteraceae and some grasses. Safe for most native grasses, but higher rates may suppress seed of some cool-season grasses. Use methylated seed oil surfactant at 0.25%. Imazapic has some soil residual activity. Depending on conditions, it may provide only suppression. Not registered for use in California.
PHOTOSYNTHETIC INHIBITORS	
Hexazinone *Velpar L*	**Rate:** 2.75 to 4.5 pt product/acre (11 to 18 oz a.i./acre) for pasture and rangeland; 3 to 4 gal product/acre (6 to 8 lb a.i./acre) for non-crop use **Timing:** Preemergence, or postemergence to rapidly growing plants. **Remarks:** Hexazinone is less effective on heavy soils. It generally provides only suppression at pasture/rangeland rates. Since it can move in soil, it should be kept away from roots of desired trees. High rates of hexazinone can create bare ground, so only use high rates in spot treatments.

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