Piptatherum miliaceum (L.) Coss.

Smilograss

Family: Poaceae
Range: California, Nevada, Arizona, Utah and Idaho.
Habitat: Riparian areas, canyons, roadsides, fields, waste places, and other disturbed sites.
Origin: Native to Eurasia. Introduced as a livestock forage. Also used for heavy metal uptake in mine tailings.
Impacts: Smilograss has escaped cultivation in some areas of the western U.S. and appears to be increasing in riparian areas, ditches along roadsides, and canyons, especially in southern California, where it can threaten native plant diversity and ecosystem function.
California Invasive Plant Council (Cal-IPC) Inventory: Limited Invasiveness

Smilograss is a tufted perennial to 5 ft tall, with millet-like florets, glabrous foliage, and erect stems forming a dense clump. Ligules are membranous, 0.5 to 2.5 mm long. The open wispy panicles are large. Spikelets are 2.5 to 3.5 mm long, consisting of only one glabrous floret enclosed by slightly larger glumes. The lemma has a 3- to 4-mm long bent awn that becomes deciduous early. Plants reproduce only by seed. The seeds fall near the parent plant and disperse to greater distances with water, soil movement, human activities, and possibly animals.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	Hand removal is possible because of the bunchgrass nature of the plant. However, all roots must be removed to prevent resprouting. Tillage may fragment the root system and could spread the plant.
Cultural	Smilograss was introduced as a forage species and may be used in a grazing program. However, there is no information on the effectiveness of grazing for control of smilograss. Fire is not likely to control this perennial bunchgrass.
Biological	There are no biological control agents available for smilograss.

CHEMICAL CONTROL

There is very little information available for the control of smilograss.

The following specific use information is based on 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.

LIPID SYNTHESIS INHIBITORS	
Clethodim *Select*, *Envoy*	**Rate:** 9 to 18 oz product (*Envoy*)/acre (1.1 to 2.2 oz a.i./acre) **Timing:** Postemergence to rapidly growing plants before boot stage. **Remarks:** Treatments may need to be repeated during a single season. Clethodim is only effective on grass species. It is possible that other grass-selective herbicides, including sethoxydim, will be effective for the control of smilograss, but no information is available. Note *Envoy* is 1 lb a.i./gallon, *Select* is 2 lb a.i./gallon.
Fluazifop *Fusilade*	**Rate:** 1 to 1.5 pt product/acre (4 to 6 oz a.e./acre) **Timing:** Postemergence to rapidly growing plants before boot stage. **Remarks:** Treatments may need to be repeated during a single season. Fluazifop is only effective on grass

	species. It is also possible that other grass-selective herbicides, including sethoxydim, will effectively control smilograss, but no information is available.
AROMATIC AMINO ACID INHIBITORS	
Glyphosate *Roundup*, *Accord XRT II*, and others	**Rate:** Broadcast foliar treatment: 1 to 4 qt product (*Roundup ProMax*)/acre (1.1 to 4.5 lb a.e./acre). Spot treatment: 1 to 2% v/v solution **Timing:** Postemergence to rapidly growing plants from mid-summer to fall. **Remarks:** The standard herbicide option for control of smilograss. Nonselective, no soil activity.

ECOMMENDED 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.