*Cynosurus echinatus* L.

# Hedgehog dogtailgrass

**Family**: Poaceae
**Range**: One of the most invasive species of Oregon-oak woodlands in British Columbia. It is rapidly spreading in grasslands and oak woodlands in California, Oregon and Washington. Also reported in Montana.
**Habitat**: Roadsides, fields, grassland, chaparral, oak woodland, summer dry pasture, coastal bluffs and terraces, riverbanks, other disturbed places.
**Origin**: Native to Europe.
**Impacts**: Can increase fuel loads and create fire hazard. Heavy infestations reduce desirable forage species.
**California Invasive Plant Council (Cal-IPC) Inventory**: Moderate Invasiveness

Hedgehog dogtailgrass is an erect, cool-season annual to about 2 ft tall, with dense, bristly, head-like to spike-like panicles 0.5 to 2 inches long. Sheaths are open, and the ligules are membranous, translucent, 5-10 mm long. The collar generally surrounds the stem unevenly.

Plants generally flower between May and July. The dense panicles bear fertile and sterile spikelets in pairs, mostly on one side of the main axis. The fertile florets are tipped with a long awn up to about 0.5 inch long. Sterile lemmas and glumes taper to a bristle-like awn, slightly shorter than fertile lemmas including awns. Plants reproduce only by seed. Fertile florets fall near the parent plant and probably disperse to greater distances with water, mud, and by clinging to animals, vehicle tires, and human shoes and clothing. A persistent seedbank does not appear to develop.

### NON-CHEMICAL CONTROL

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| **Mechanical** (pulling, cutting, disking) | Hand pulling of annual grasses such as hedgehog dogtailgrass may be effective early in spring before seed set, but this is very labor-intensive and is only used on small infestations. Minimize soil disturbance when hand pulling to minimize new seed germination. Mowing or string trimming can also to reduce hedgehog dogtailgrass if done before seed sets in the early summer. Shallow cultivation shortly after the main flush of germination and again a little later can eliminate most seedlings. |
| **Cultural** | Little is known of the effect of burning and grazing on hedgehog dogtailgrass. Burning may be effective if timed so that the plants have not yet dropped their seed, but there is enough fuel to carry a fire.<br>The grass is not considered a desirable forage and it is unlikely that grazing would be very effective for its control. |
| **Biological** | No known biological agents are available. |

### CHEMICAL CONTROL

Much of the control information for hedgehog dogtailgrass is obtained for other similar annual grasses.

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.

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| **LIPID SYNTHESIS INHIBITORS** | |
| Fluazifop<br>*Fusilade* | **Rate:** Broadcast foliar treatment: 1 to 1.5 pt product/acre (4 to 6 oz a.i./acre). Spot treatment: 0.5% v/v solution<br>**Timing:** Early postemergence to plant before the boot stage.<br>**Remarks:** Fluazifop is grass-selective and will not damage broadleaf species. It has no soil activity. To select for perennial grasses, apply before perennials emerge. Include crop oil concentrate surfactant or non-ionic surfactant. |
| Sethoxydim<br>*Poast* | **Rate:** 1.5 to 2 pt product/acre (4.5 to 6 oz a.i./acre)<br>**Timing:** Early postemergence to plant before the boot stage.<br>**Remarks:** Sethoxydim is grass-selective and will not damage broadleaf species. It has no soil activity. To select for perennial grasses, apply before perennials emerge. Include crop oil concentrate surfactant or non-ionic surfactant. |
| **AROMATIC AMINO ACID INHIBITORS** | |
| Glyphosate<br>*Roundup*, *Accord XRT II*, and others | **Rate:** 1 to 2 pt product (*Roundup ProMax*)/acre (0.56 to 1.1 lb a.e./acre)<br>**Timing:** Postemergence in early spring to rapidly growing, non-stressed plants after most seedlings have emerged. If possible, apply before desirable perennials have emerged.<br>**Remarks:** Glyphosate is a nonselective herbicide. It has no soil activity. |
| **BRANCHED-CHAIN AMINO ACID INHIBITORS** | |
| Imazapic<br>*Plateau* | **Rate:** 4 to 12 oz product/acre (1 to 3 oz a.e./acre)<br>**Timing:** Preemergence in fall or postemergence in early spring. In colder climates, spring applications after snow melt are better than fall treatments.<br>**Remarks:** Imazapic has mixed selectivity and tends to favor members of the Asteraceae. It has long soil residual activity. Imazapic can tie up in litter and its efficacy may be very much reduced under situations where there is heavy thatch on the soil surface. Imazapic is not registered for use in California. |
| Sulfometuron<br>*Oust* and others | **Rate:** 2 to 6.67 oz product/acre (1.5 to 5 oz a.i./acre)<br>**Timing:** Preemergence or early postemergence. Fall and spring applications can both be effective, but fall applications may give full season control.<br>**Remarks:** Sulfometuron has mixed selectivity. It can cause minor damage to some native perennial grasses and has fairly long soil residual activity. Higher rates may increase control but will also give more bare ground. |
| **CONTACT PHOTOSYNTHETIC INHIBITORS** | |
| Paraquat<br>*Gramoxone* | **Rate:** 0.75 to 2 pt product/acre (3 to 8 lb a.i./acre)<br>**Timing:** Postemergence to rapidly growing plants. More effective on smaller plants.<br>**Remarks:** Paraquat is nonselective on annual species. It is a non-systemic herbicide that only kills contacted foliage and has no soil activity. Paraquat is a restricted use herbicide that is highly toxic to animals. The formulation has a stenching agent. |

**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.**