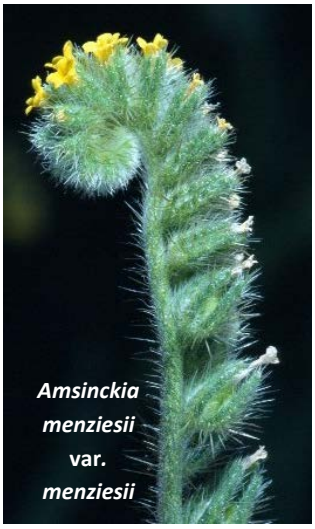
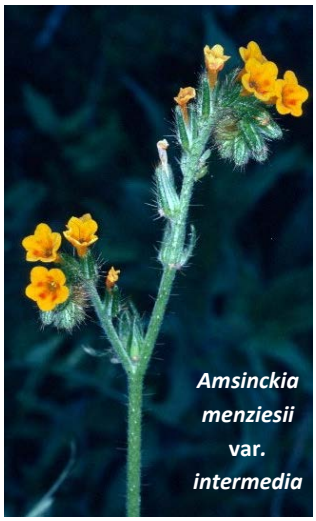
Amsinckia menziesii (Lehm.) A. Nelson & J.F. Macbr. var. *menziesii*; Menzies fiddleneck
Amsinckia menziesii (Lehm.) A. Nelson & J.F. Macbr. var. *intermedia* (Fisch. & C.A. Mey.) Ganders; coast fiddleneck
(= *A. intermedia* Fisch. & C.A. Mey [Jepson Manual 2012])

Menzies and coast fiddleneck


Amsinckia menziesii* var. *menziesii


Amsinckia menziesii* var. *intermedia

Family: Boraginaceae
Range: Widespread natives of North America, found throughout much of the western United States, except South Dakota and New Mexico. Coast fiddleneck is somewhat more common than Menzies fiddleneck.
Habitat: Both varieties are common to grasslands, pastures, roadsides, agronomic crops, orchards, vineyards, and disturbed areas. They prefer grassy and open areas below 5000 ft elevation.
Origin: Native to western North America.
Impact: Although often considered desirable natives, fiddleneck seeds and foliage are toxic to livestock due to alkaloids and sometimes high nitrate concentrations. Consuming high quantities of fiddleneck can cause irreversible liver damage in cattle, pigs and horses. Poisonings most often occur when livestock ingest contaminated grain or feed. Toxicity is fairly uncommon from grazing, as the species has poor palatability, and livestock generally avoid consuming it when other forage plants are available.

There are several different native *Amsinckia* species but coast fiddleneck is the one most often reported as a weed. All of them are annuals and most are usually not problems in natural settings. While Menzies and coast fiddlenecks are the two most common types in the western United States, all *Amsinckia* species can cause poisoning in livestock. The various species differ primarily in their flowers and/or in their distribution.

Fiddleneck is a slender, erect winter annual herb that typically grows from 8 to 32 inches tall but can occasionally reach 4 ft tall. The cotyledons are very recognizable as they have a deeply lobed Y-shape. The true leaves are linear to lanceolate and up to 6 inches long. The leaves are alternate and primarily sessile (stalkless) except for the short-stalked lower leaves. The margins are usually smooth but the foliage is covered with stiff bristly hairs. Young plants are rosettes until the flower stem develops.

The most distinctive feature of fiddleneck is the flowering head that curls like the neck of a fiddle. The flowers in most fiddleneck species are yellow and often have an orange tinge. The flowers are in a coiled one-sided inflorescence up to 8 inches long. The corolla is tubular with five lobes, 7 to 11 mm long in coast fiddleneck and 4 to 7 mm long in Menzies fiddleneck. The fruits consist of four, erect, one-seeded spineless nutlets that separate after dispersal. Plants reproduce only by seed, which germinate in fall through early spring and are primarily dispersed short distances by falling from the parent plant, or occasionally longer distances when they attach to the hair or fur of animals. Seeds are expected to survive in the soil for a few years.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting,	Hand pulling is effective but usually populations are too dense for this to be practical. In addition, the

disking)	stiff bristly hairs on the fiddleneck plant make hand pulling without gloves unpleasant. Mowing before seed production can reduce seed set and will kill many of the plants. Tillage is effective in cultivated areas but not feasible in many range or wildland areas.
Cultural	Grazing is not an attractive control measure because the plant is not palatable and is toxic to livestock. Fiddleneck is a highly competitive plant in agricultural fields but it does not compete well in a dense stand of grass or other perennial plants. Burning kills existing fiddleneck plants. However, fiddleneck completes its life cycle early in spring so it is difficult to have the fuel load necessary to carry a fire before fiddleneck has set seed. Experimental plots that were burned had the twice the population of fiddleneck seedlings compared to unburned plots.
Biological	Because these plants are native species to North America, there are no biological control programs established.

CHEMICAL CONTROL

Chemical control is difficult due to the hairs and must be done before seed production. The following specific use information is based on reports by published papers, 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.

GROWTH REGULATORS	
Aminocyclopyrachlor + chlorsulfuron *Perspective*	**Rate:** 3 to 4.5 oz product/acre **Timing:** Postemergence in early spring when fiddleneck plants are in the rosette stage. **Remarks:** *Perspective* provides broad-spectrum control of many broadleaf species. Although generally safe to grasses, it may suppress or injure certain annual and perennial grass species. Do not treat in the root zone of desirable trees and shrubs. Do not apply more than 11 oz product/acre per year. At this high rate, cool-season grasses will be damaged, including bluebunch wheatgrass. Not yet labeled for grazing lands. Add an adjuvant to the spray solution. This product is not approved for use in California and some counties of Colorado (San Luis Valley).
Aminopyralid *Milestone*	**Rate:** 3 to 5 oz product/acre (0.75 to 1.25 oz a.e./acre) **Timing:** Postemergence in early spring when fiddleneck plants are in the rosette stage. **Remarks:** Aminopyralid is a broadleaf herbicide similar to picloram, but more selective and very safe on grasses. Its soil residual activity will kill emerging seedlings.
AROMATIC AMINO ACID INHIBITORS	
Glyphosate *Roundup*, *Accord XRT II*, and others	**Rate:** For weeds < 6 in: 1 pt product (*Roundup ProMax*)/acre (0.56 lb a.e./acre); for weeds > 6 in: 22 oz product/acre (0.77 lb a.e./acre) **Timing:** Postemergence when fiddleneck plants are small and rapidly growing. **Remarks:** Glyphosate is not selective and kills or severely injures desirable vegetation. Therefore, it is ordinarily not the herbicide of choice for fiddleneck control in rangeland or natural areas with other desirable species.
BRANCHED-CHAIN AMINO ACID INHIBITORS	
Chlorsulfuron *Telar*	**Rate:** 0.25 to 0.5 oz product/acre (0.19 to 0.375 oz a.i./acre) **Timing:** Preemergence to early postemergence. **Remarks:** Chlorsulfuron has mixed selectivity and is generally safe on grasses. It is most effective preemergence for fiddleneck. Use a surfactant for postemergence applications. It has fairly long soil residual activity.
Imazapic *Plateau*	**Rate:** 4 to 6 oz product/acre (1 to 1.5 oz a.e./acre) **Timing:** Preemergence in fall to postemergence in spring. **Remarks:** Imazapic has mixed selectivity and tends to favor species in the Asteraceae, as well as some grasses. In postemergence applications, use a methylated seed oil surfactant at 0.25%. It has long soil residual activity. Imazapic is not registered for use in California.
Imazapyr	**Rate:** 3 to 4 pt product (*Habitat*)/acre (12 to 16 oz a.e./acre)

Arsenal, *Habitat*, *Stalker*, *Chopper*, *Polaris*	**Timing:** Postemergence. **Remarks:** Imazapyr is best used as a spot treatment. It is a nonselective herbicide. It also has long soil residual activity and can leave more bare ground than other treatments, even a year after application.
Metsulfuron *Escort*	**Rate:** 0.33 to 0.5 oz product/acre (0.2 to 0.3 oz a.i./acre) **Timing:** Postemergence to young, rapidly growing weeds. **Remarks:** Metsulfuron has mixed selectivity, but is generally safe on grasses. Use a surfactant. It can be tank-mixed with 2,4-D and/or dicamba, or in a premix with chlorsulfuron (*Cimarron X-tra*). Although it does not have soil activity on most species, it does have some soil residual activity. Metsulfuron is not registered for use in California.
Sulfosulfuron *Outrider*	**Rate:** 0.75 to 2 oz product/acre (0.56 to 1.5 oz a.i./acre) **Timing:** Early postemergence, winter to early spring, when desirable perennials are dormant. **Remarks:** Sulfosulfuron has mixed selectivity, but is fairly safe on native perennial grasses, especially wheatgrasses. To be most effective it may be necessary to add a non-ionic surfactant. Sulfosulfuron has fairly long soil residual activity.
PHOTOSYNTHETIC INHIBITORS	
Hexazinone *Velpar DF*	**Rate:** 0.75 to 1 lb product/acre (0.56 to 0.75 lb a.i./acre) **Timing:** Preemergence to early postemergence in late fall to early spring. **Remarks:** Apply the dry formulation of hexazinone when there is adequate moisture for activation. Hexazinone has both foliar and soil activity. Its selectivity is mixed. Use higher rates on fine soils or high organic matter soils, or when weeds are under stress. It also has fairly long soil residual activity. Hardwood trees near application site can be damaged when they absorb this chemical through the roots. 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.