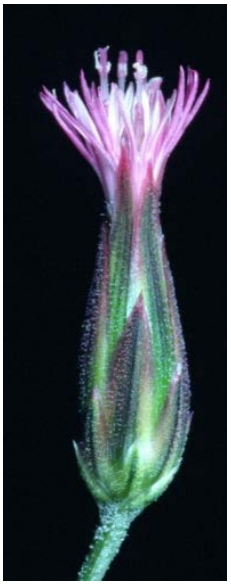
Crupina vulgaris Cass.

Common crupina



Family: Asteraceae
Range: Fairly uncommon in its distribution. Found in California, Idaho, Oregon, and Washington.
Habitat: Inhabits many moisture and temperature regimes and soil types. Often associated with disturbance. Generally found in grasslands, pastures, rangeland, forested areas, canyons, and riparian areas.
Origin: Native to the Mediterranean region of Europe.
Impacts: Primarily a noxious rangeland weed. Plants are adapted to many environmental conditions and are highly competitive for limited soil moisture. Dense populations displace desirable forage species and contaminate hay.
Western states listed as Noxious Weed: California, Colorado, Idaho, Montana, Nevada, Oregon, South Dakota, Washington
California Invasive Plant Council (Cal-IPC) Inventory: Limited Invasiveness

Common crupina is an erect cool-season annual to 2 ft tall. The rosette leaves are sessile or petioled, to 3 inches long, oblong to obovate in outline, with deep, narrow, opposite pinnate divisions, and covered with short, stiff hairs. The stems are openly branched and longitudinally ridged. Stem leaves are alternate, deeply pinnate-lobed once or twice, lobes narrow, reduced near stem tops. Plants produce dense fibrous roots.

The purple flower heads are cylindrical to ovoid or slender urn-shaped on stalks 0.5 to 1.5 inches long, with one to two fertile disk flowers in the center and two to four sterile disk-like flowers around the margin. Both flower types have a pappus of bristles. Plants produce 2 to 850 fairly large seed. Most of the seed falls near the parent plant, with some long distance dispersal via wildlife, livestock, and water. About 85% of the seeds germinate the following fall. Most germination occurs after the first significant rains of fall or early winter. Seeds can survive ingestion by most animals, except sheep, and remain viable in the soil for up to 3 years.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	Small infestations can be removed by manual methods such as hand-pulling and digging. When digging, sever the root below the soil surface. Remove plants before seed is produced. Plants should be removed every 3 to 4 weeks during spring to ensure complete removal before seed maturity. Plants regrow after mowing. Mow before flowering to prevent seeds from developing in severed flowerheads. Mowing can stimulate lateral branching and increase seed production. Tillage will control emerged plants but often stimulates germination. Land managers using tillage for seedbed preparation for reseeding should prepare for a flush of seedlings when soils become saturated.
Cultural	Most livestock avoid grazing common crupina unless palatable forage is unavailable. However, it is highly favored by sheep and goats in the Mediterranean region. While they cannot be used to eradicate common crupina, they have been shown to suppress populations. Quarantine livestock for at least 6 days after foraging on infested rangeland to prevent introduction of common crupina to non-infested sites. Seeds often adhere to livestock. Fire is not an effective control method, and common crupina populations increase in response to nutrient release and more light at the soil surface following wildfire. Promoting competitive vegetation can slow spread and help prevent establishment. Perennial grass stand density and vigor should be managed to minimize bare ground exposure.

Biological	Potential biocontrol agents are being studied, but no biological controls are currently available 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.

GROWTH REGULATORS	
Aminocyclopyrachlor + chlorsulfuron *Perspective*	**Rate:** 4.75 to 8 oz product (*Perspective*)/acre **Timing:** Postemergence when plants are growing rapidly. **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 + metsulfuron *Opensight*	**Rate:** 3 to 3.3 oz product/acre **Timing:** Postemergence from the rosette to young bolting stage. **Remarks:** This combination has some soil activity. It is safe on most grasses, although preemergence application at high rates can greatly suppress some annual grasses, such as medusahead. Applications can decrease seed production in some annual and perennial grass species. For postemergence applications, add a non-ionic surfactant at 0.25 to 0.5% v/v. This combination is not registered for use in California.
Clopyralid *Transline*	**Rate:** 0.33 pt product/acre (2 oz a.e./acre) **Timing:** Apply split application at 0.33 pt in fall and spring. Both applications are postemergence. **Remarks:** Most effective for young plants. Clopyralid has a fairly short soil residual activity. It controls or injures plants in the Asteraceae and Fabaceae but is safe on most other broadleaf species and all grasses. For postemergence applications, adding a non-ionic surfactant at 0.25 to 0.5% v/v to spray solution may enhance control.
Dicamba *Banvel*, *Clarity*	**Rate:** 1 pt product/acre (0.5 lb a.e./acre) **Timing:** Postemergence to rapidly growing plants. **Remarks:** Dicamba is a broadleaf-selective herbicide often combined with other active ingredients. It is often mixed with 2,4-D at 0.5 to 1 lb a.e./acre.
Picloram *Tordon 22K*	**Rate:** 1 to 2 pt product/acre (4 to 8 oz a.e./acre) **Timing:** Preemergence or postemergence in fall or winter. **Remarks:** Picloram controls a wide range of broadleaf species and has relatively long soil residual activity. It is considered one of the best products to control common crupina. Although well-developed grasses are not usually injured by labeled use rates, some applicators have noted that young grass seedlings with fewer than four leaves may be killed. Do not apply near trees, or where soil is highly permeable and where water table is high. Picloram is a restricted use herbicide. Picloram is not registered for use in California.
BRANCHED-CHAIN AMINO ACID INHIBITORS	
Chlorsulfuron *Telar*	**Rate:** 1 to 2.6 oz product/acre (0.75 to 1.95 oz a.i./acre) **Timing:** Postemergence when plants are growing rapidly. **Remarks:** Always use a surfactant. Higher rates can cause grass injury.
Metsulfuron *Escort*	**Rate:** 0.5 to 1 oz product/acre (0.3 to 0.6 oz a.i./acre) **Timing:** Postemergence when plants are growing rapidly. **Remarks:** Always use a surfactant. Other premix formulations of metsulfuron can be used at similar application timing. These include *Cimarron Max* (metsulfuron + dicamba + 2,4-D) and *Cimarron X-tra* (metsulfuron + chlorsulfuron). Metsulfuron is not registered for use in California.

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.