*Ageratina adenophora* (Spreng.) King & H. Robins.

# Croftonweed

**Family:** Asteraceae
**Range:** In the western U.S., croftonweed is found only in California, near the coast from north of the San Francisco Bay region to the Mexican border.
**Habitat:** Disturbed places, coastal canyons, riparian areas, scrub, and slopes. Grows best where moisture is available year round and can tolerate both full sun and highly shaded areas.
**Origin:** Native to southern and central Mexico. Brought to the U.S. as an ornamental.
**Impacts:** Croftonweed has escaped cultivation and is especially invasive in mild coastal regions. It can cause a fatal respiratory illness in horses when ingested over a period of several months to years. Sheep and goats are unaffected, and cattle generally avoid eating the plant. Croftonweed is one of the most important invasive plants of forests in southern China. It is also a problem in forests and pastures of coastal Australia, New Zealand, South Africa, and Hawaii.
**Western states listed as Noxious Weed:** California, Oregon
**California Invasive Plant Council (Cal-IPC) Inventory:** Moderate Invasiveness

Perennial to shrub-like, to 6 ft tall, with opposite ovate-triangular leaves and a woody crown or with lower stems woody. Upper stems purplish with sparse small purplish glandular hairs. The leaves are 2 to 4 inches long and 1 to 3.5 inches wide, with three main veins from the base. The leaf margins are toothed on a petiole about 1 to 2 inches long. The lower surface of the leaves is sometimes purple and also contains the purple glandular hairs.

Plants can flower nearly year round, producing flat-topped clusters of white or sometimes pink flowerheads. The flowerheads are less than 0.5 inch wide and consist of 10 to 60 flowers in a head. The achenes (seeds) have a bristly pappus that is deciduous. Mature plants can produce abundant quantities of apomictic seed (seed develops without fertilization). Seeds disperse with wind, water, soil movement, human activities, and by clinging to the fur, feathers, and feet of animals. Seeds can germinate nearly year round under good conditions. It is unknown how long the seeds last in the soil, but it is presumed that they survive at least a couple of years. Seedlings tolerate light shade and if damaged, can regrow from the crown by 8 weeks of age. Most vegetative growth occurs in summer and fall.

### NON-CHEMICAL CONTROL

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| **Mechanical** (pulling, cutting, disking) | Mechanical control is possible where plants are accessible. This can include digging plants out, but crowns must be removed. However, plants often grow on steep slopes making hand removal difficult.<br>Cutting a plant may not control it, but over time it will reduce the seedbank and reduce the population.<br>Disking or cultivation can also be used successfully to remove plants, but this is often impractical in infested terrain. |
| **Cultural** | Generally unpalatable to cattle; however, goats are known to eat croftonweed. The success depends on the stocking rate, weed density, and availability of other feed at the site. Goats can suppress large infestations. Because of its toxic nature, the same group of goats should be used for only one or two seasons to avoid risk of chronic health problems. |

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| **Biological** | No biological control agents have been released for this species in the continental U.S. In Hawaii, South Africa, and Australia, a gall fly (*Procecidochares utilis*) has been released. The fly inhibits the production of flowerheads. Its effectiveness is mixed, with no impact on the invasive plant in South Africa and Australia and some seedhead suppression in Hawaii. A leaf spot fungus (*Cercospora eupatoris*) does exert some effect, especially on seedlings. Even at best, biological control agents have never achieved high levels of control on croftonweed. |

## CHEMICAL CONTROL

There is very little information available for the chemical control of croftonweed. 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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| **GROWTH REGULATORS** | |
| Fluroxypyr<br>*Vista XRT* | **Rate:** 0.5% of concentrate for spot treatment.<br>**Timing:** Postemergence to fully developed leaves. This is generally in late summer or autumn when the weed is growing actively.<br>**Remarks:** Recommendations in Australia suggest a spray-to-wet application. This herbicide is not typically used alone. |
| Picloram<br>*Tordon 22K* | **Rate:** 0.65% of concentrate for spot treatment.<br>**Timing:** Postemergence to fully developed leaves. This is generally in late summer or autumn when the weed is growing actively. Application would be expected to have preemergence activity on germinating seedlings.<br>**Remarks:** Recommendations in Australia suggest a spray-to-wet application. Can be tank mixed with triclopyr or 2,4-D. In steep or rocky areas, a low volume, high concentration application of picloram + triclopyr can give good results. Picloram is a restricted use herbicide. Picloram is not registered for use in California. |
| **AROMATIC AMINO ACID INHIBITORS** | |
| Glyphosate<br>*Roundup*, *Accord XRT II*, and others | **Rate:** 0.5% of *Roundup ProMax Concentrate* for spot treatment.<br>**Timing:** Postemergence to fully developed leaves. This is generally in late summer or autumn when the weed is growing actively.<br>**Remarks:** Recommendations in Australia suggest a spray-to-wet application. Glyphosate is nonselective and can damage other non-target species it contacts. |
| **BRANCHED-CHAIN AMINO ACID INHIBITORS** | |
| Metsulfuron<br>*Escort* | **Rate:** 1 oz to 50 gals (0.015%) for spot treatment.<br>**Timing:** Postemergence to fully developed leaves. This is generally in late summer or autumn when the weed is growing actively.<br>**Remarks:** Recommendations in Australia suggest a spray-to-wet application. 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.