

This WEED REPORT does not constitute a formal recommendation. When using herbicides always read the label, and when in doubt consult your farm advisor or county agent.

This WEED REPORT is an excerpt from the book *Weed Control in Natural Areas in the Western United States* and is available wholesale through the UC Weed Research & Information Center (wric.ucdavis.edu) or retail through the Western Society of Weed Science (wsweedscience.org) or the California Invasive Species Council (cal-ipc.org).

Rubus armeniacus Focke

Himalaya blackberry

Family: Rosaceae

Range: Common throughout the western United States, except in Wyoming, North and South Dakota.

Habitat: Disturbed, open, moist sites such as canals, ditch banks, fencerows, roadsides, open fields, and riparian zones, in a variety of plant communities. It can also tolerate periodic flooding with brackish water.

Origin: A cultivar introduced from Eurasia, originating from Armenia, quickly spread throughout Europe and the rest of the world.

Impact: Himalaya blackberry is a highly competitive plant with a growth form that allows it to quickly crowd out native species. Its thickets have dense canopies allowing little light penetration and reducing the growth of understory plants. In riparian areas it can prevent access to water sources for livestock and wildlife.

Western states listed as Noxious Weed: California, Oregon
California Invasive Plant Council (Cal-IPC) Inventory: High Invasiveness



Himalaya blackberry is an evergreen erect shrub that grows up to 10 ft tall and is climbing, mounded, or trailing. The aboveground canes are usually biennial while the roots are perennial. The roots are found in the top 20 inches of the soil but may grow down to a depth of 7 ft in loose soil. The roots can sprout new shoots from root buds, and in good conditions root fragments may sprout a new plant. The stems are green to purplish-red, woody, strongly angled, and are protected against predation by straight or curved prickles with a thick base. The leaves are pinnately compound with 3 to 5 leaflets that are dark green with a white underside covered with dense short hairs. The leaflets are broadest above the middle, toothed and sometimes shallowly lobed.

The flowers of Himalaya blackberry are white to pinkish and numerous in non-glandular panicles. They are self-fertile with 5 petals, and numerous stamens and pistils. The fruit are edible and an aggregate of drupelets that adhere to a fleshy receptacle. The mature berries are ovoid to oblong, black, 0.75 inch long, glossy, and glabrous or slightly pubescent. They typically ripen later in the season than the native berries. Seeds are dispersed primarily by birds. In addition to seeds, plants reproduce by root sprouts and stem tip rooting. Seeds likely only survive a few years in the soil.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	Hand pulling can be an effective control method for small populations. To successfully control populations with mechanical removal, it is important to remove the canes, roots and the root crowns to prevent resprouting. A Pulaski, mattock or similar device can be used to remove plants. Bulldozing may cause resprouting and can spread the weed by fragmenting roots and stems. Cutting and removing only the aboveground biomass will result in the stimulated growth of root sprouts. The root sprouts must be controlled and repeated cutting of the above-ground biomass during flowering time will exhaust the root stores. Tillage can be effective if the canes are raked and removed from the site. However, this will cause significant soil disturbance and is unsuitable in riparian areas.
Cultural	Goats will readily consume Himalaya blackberry and could help to control new populations. It is a common

	<p>method of management in Australia and New Zealand. Their consumption is indiscriminate and could result in the loss of other desirable species. This is particularly true in riparian areas.</p> <p>Burning is only effective if the root sprouts are controlled by other methods, such as chemicals, when they resprout after the burn.</p>
Biological	<p>Blackberry leaf rust fungus (<i>Phragmidium violaceum</i>) was discovered in 2005 on the coast of Oregon and has since spread through most of the counties. It appears to have been accidentally introduced. It partially to fully defoliates Himalaya blackberry and evergreen blackberry (<i>Rubus laciniatus</i>) and also reduces tip rooting. The fungus is native to Europe, the Middle East and Africa and has been used for years to control native blackberry plants in Australia and New Zealand. It is not an approved biocontrol agent yet and has not shown sustained control of Himalaya blackberry over a wide region.</p>

CHEMICAL CONTROL

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. Excellent control information, both chemical and non-chemical, can be obtained

at <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7434.html#MANAGEMENT> and <http://extension.oregonstate.edu/catalog/pdf/em/em8894.pdf>.

GROWTH REGULATORS

<p>Dicamba <i>Banvel, Clarity</i></p>	<p>Rate: 1 to 2 pt product/acre (0.5 to 1 lb a.e./acre)</p> <p>Timing: Postemergence, to weed regrowth in the late summer or fall following a mowing or tillage treatment.</p> <p>Remarks: Dicamba provides only suppression of growth. It is a broadleaf-selective herbicide often combined with other active ingredients, particularly 2,4-D. Tank mix combinations with glyphosate are also more effective. It may injure grasses at higher rates. Do not apply when outside temperatures exceed 80°F. Do not exceed 64 oz product/acre per year.</p>
<p>Fluroxypyr <i>Vista XRT</i></p>	<p>Rate: 22 oz product/acre (7.7 oz a.e./acre)</p> <p>Timing: Postemergence when target plants are growing rapidly.</p> <p>Remarks: Reduced control occurs if plants are under stressed growth conditions.</p>
<p>Triclopyr <i>Garlon 3A, Garlon 4 Ultra, Pathfinder II</i></p> <p>Aminopyralid + triclopyr <i>(Capstone)</i></p>	<p>Rate: Broadcast foliar treatment: 4 pt product (<i>Garlon 4 Ultra</i>)/acre (2 lb a.e./acre). Spot treatment: 0.75 to 1% <i>Garlon 4 Ultra</i> or 1% <i>Garlon 3A</i>; thoroughly cover the foliage. Basal bark treatment: 20% <i>Garlon 4 Ultra</i> mixed with basal oil or seed oil; <i>Pathfinder II</i> is a ready-to-use triclopyr/oil mix. Dormant stem and leaf treatment: 1% v/v solution of <i>Garlon 4 Ultra</i> with 2 to 3% v/v crop oil concentrate or seed oil. For <i>Capstone</i> use 8 to 9 pt product/acre.</p> <p>Timing: Postemergence in mid-summer or early fall after flowering and start of fruit set. Basal bark applications can be made almost any time of the year, even after leaves have senesced (aged, dried, and fallen from plant). In areas where people frequently harvest the fruit of wild blackberries, a mid-fall basal bark treatment might be desirable to avoid human contact with the chemical. For dormant stem and leaf treatment apply to dormant leaves and stems in late fall and winter in a 3% crop oil concentrate mixture. Spray the plant until it is thoroughly wet but not to the point of runoff. Like basal bark treatments, the timing of this technique prevents human contact with the herbicide during berry-picking season.</p> <p>Remarks: Foliage or stems (dormant stem application) must be thoroughly wet. Triclopyr is broadleaf-selective and safe on most grasses. It is most effective on smaller plants and has little or no residual activity. For basal bark treatment, thoroughly cover a 12 to 15-in basal section of the stem with spray but not to the point of runoff. <i>Garlon 3A</i> and other amine formulations are registered for aquatic use. Ester formulations (e.g., <i>Garlon 4 Ultra</i>) may volatilize if applied in warm temperatures. Application in some counties and grape-growing areas may be restricted. Sometimes aminopyralid + triclopyr (<i>Capstone</i>) or glyphosate and triclopyr (1% solution each) are used to achieve better control.</p>
AROMATIC AMINO ACID INHIBITORS	
<p>Glyphosate <i>Roundup, Accord XRT II, and others</i></p>	<p>Rate: Broadcast foliar treatment: 2 to 3 qt product (<i>Roundup ProMax</i>)/acre (2.25 to 3.4 lb a.e./acre). Spot treatment: 0.5 to 1.5% v/v solution.</p> <p>Timing: Postemergence in late summer to early fall when canes are growing rapidly, have reached full</p>

	<p>leaf maturity, and after berries are formed. Fall treatments must be made before a killing frost.</p> <p>Remarks: Fall treatment symptoms may not show before frost. Retreatment may be necessary for complete control. Trailing blackberry is more difficult to control. Glyphosate controls grasses in the treated area as well as other vegetation. To obtain good control complete foliage coverage (spray-to-wet) is essential. Burning or mowing 40 to 60 days after spraying with glyphosate increases the level of control and also contributes to pasture establishment by removing stem debris. Shoots recovering from sublethal glyphosate treatment tend to die more quickly when subjected to heavy grazing. Sometimes glyphosate and triclopyr (1% each in solution) are used in combination to achieve better control.</p>
BRANCHED-CHAIN AMINO ACID INHIBITORS	
<p>Metsulfuron <i>Escort</i></p>	<p>Rate: 0.5 to 1 oz product/acre (0.3 to 0.6 oz a.i./acre)</p> <p>Timing: Postemergence, to fully leafed-out vegetation before fall leaf coloration.</p> <p>Remarks: Metsulfuron is primarily active on broadleaf species. Apply only to pasture, rangeland, and non-crop sites. Do not apply when plants are under stressed growing conditions. Metsulfuron can be used in a premix with aminopyralid (<i>Opensight</i>) or a tank mix with triclopyr for better control. Metsulfuron and its formulations are not registered for use in California.</p>
<p>Sulfometuron <i>Oust</i> and others</p>	<p>Rate: 3 to 4 oz product/acre (2.25 to 3 oz a.i./acre)</p> <p>Timing: Early postemergence when target plants are germinating or actively growing. Will only be effective on very small plants and not on fully mature plants.</p> <p>Remarks: Add a surfactant at 0.25% v/v for improved control.</p>
PHOTOSYNTHETIC INHIBITORS	
<p>Hexazinone <i>Velpar L</i></p>	<p>Rate: 3 to 4 gal product/acre (6 to 8 lb a.i./acre)</p> <p>Timing: Preemergence or postemergence when plants are germinating or actively growing.</p> <p>Remarks: Hexazinone is used as a nonselective herbicide in non-cropland areas and as a selective herbicide in reforestation practices. It only suppresses the growth of Himalaya blackberry. Use higher rates on fine textured soils and soils with high organic matter. Do not apply to frozen ground. Non-target plants may be adversely affected from drift and run-off. Apply when there is adequate moisture for activation. Hexazinone can be mixed with triclopyr for better control. High rates of hexazinone can create bare ground, so only use high rates in spot treatments.</p>
<p>Tebuthiuron <i>Spike</i></p>	<p>Rate: 20 lb product (<i>Spike 20P</i>)/acre (4 lb a.i./acre)</p> <p>Timing: Preemergence before the start of spring growth or before expected seasonal rainfall.</p> <p>Remarks: Do not apply tebuthiuron at more than 20 lb/acre. Do not apply more than 10 lb/acre in areas that receive 20 inches or less of annual rainfall. May injure non-target species. Follow restrictions on the label for use around desirable plants.</p>

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