

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).

Gypsophila paniculata L.

Baby's-breath

Family: Caryophyllaceae

Range: All western states except Arizona and New Mexico.

Habitat: Disturbed sites, especially on sandy soils and in open, grassy places. It can tolerate considerable variation in temperature and moisture, including Mediterranean, semi-desert, and cold winter climates. Baby's breath is common along roadsides, ditches, and fences. Infestations are often found near homesteads, cemeteries, and residential areas where it escaped cultivation.

Origin: Native to Eurasia. Baby's breath was introduced as an ornamental for its showy white inflorescences. Dried plants were and still are used in flower arrangements.

Impacts: Baby's breath is an ornamental species that has escaped cultivation. Once established, it can form dense stands and is difficult to control. In pastures and rangeland, it competes with forage species and decreases hay forage quality.

Western states listed as Noxious Weed: California, Washington



Baby's breath is an herbaceous perennial that grows up to 3 to 4 ft tall. The stems are slender, erect to spreading, swollen at the nodes. The leaves are opposite, narrowly lanceolate and glabrous. It has a thick crown and rhizome, but the rhizome is not creeping. The new shoots grow from the crown and rhizome, but not the roots. Roots grow deep and can penetrate soil to a depth of 13 ft.

The inflorescence is open, panicle-like, and lacks bracts below the flowers. White flowers are numerous, mostly 6-8 mm wide. The seeds are black and 1.5 to 2 mm long. Plants reproduce primarily by seed. Most seed disperses near the parent, but plants can break off at ground level and tumble with the wind, dispersing seed greater distances. Plants average about 14,000 seeds. Seeds typically lack or have a short dormancy period and may survive in the soil for 1 to 2 years.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	Suppressing the root system and preventing seed production is the management goal for established plants. Hand pulling mature baby's breath plants is difficult. The root system must be severed below the thickened crown and rhizome. This may require digging to a depth of 6 inches to 1 ft. Regrowth is usually rare if the complete crown and rhizome are removed. Plants regrow following mowing. Frequent mowing along roadsides has not resulted in a noticeable decrease in populations in northeastern California. Plants can tolerate shallow infrequent tillage, but plants rarely persist in fields that undergo frequent deep tillage.
Cultural	Baby's breath has low nutritional value and medium palatability for grazing. Populations often increase in lightly grazed systems. Plants left to grow in small patches for their ornamental and horticultural attraction often spread over time and are the source of most infestations. Promoting competitive vegetation can slow spread and help prevent establishment.
Biological	No biological controls are available for the control of baby's breath.

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	
2,4-D Several names	<p>Rate: 1 to 2 qt product/acre (0.95 to 1.9 lb a.e./acre)</p> <p>Timing: Postemergence to spring rosettes or to bolting plants with green basal leaves.</p> <p>Remarks: 2,4-D provides only suppression of baby's breath. The best control is achieved at high rates applied to bolting plants. 2,4-D can be tank-mixed with chlorsulfuron for quicker burndown. It is broadleaf-selective and is safe on most grasses. 2,4-D has minimal soil activity. Do not apply ester formulation when outside temperatures exceed 80°F.</p>
Aminopyralid + metsulfuron <i>Opensight</i>	<p>Rate: 2.5 to 3 oz product/acre</p> <p>Timing: Preemergence at 3.3 oz in fall, or postemergence when target plants are in the seedling to rosette stage.</p> <p>Remarks: Not registered for use in California.</p>
Dicamba <i>Banvel, Clarity</i>	<p>Rate: 1.5 to 3 pt product/acre (0.75 to 1.5 lb a.e./acre).</p> <p>Timing: Postemergence to spring growth or to bolting plants with green basal leaves.</p> <p>Remarks: Dicamba is most effective at high rates. It is a broadleaf-selective herbicide and is safe on most grasses. Dicamba has very little soil activity.</p>
AROMATIC AMINO ACID INHIBITORS	
Glyphosate <i>Roundup, Accord XRT II, and others</i>	<p>Rate: 2 qt product (<i>Roundup ProMax</i>)/acre (2.25 lb a.e./acre). Spot treatment 1.5 % v/v solution.</p> <p>Timing: Postemergence to spring growth or to bolting plants with green basal leaves.</p> <p>Remarks: Glyphosate has no soil activity. It is nonselective and also kills most non-target plants, creating bare ground conditions that are susceptible to weed recruitment. In areas with desirable vegetation, use spot treatment. Glyphosate is a good control option if reseeding is planned shortly after application, as it will not injure seedlings emerging after application. Add a surfactant when it is not already included in the herbicide formulation (e.g., <i>Rodeo, Aquamaster</i>).</p>
BRANCHED-CHAIN AMINO ACID INHIBITORS	
Chlorsulfuron <i>Telar</i>	<p>Rate: 1 to 2.6 oz product/acre (0.75 to 1.95 oz a.i./acre)</p> <p>Timing: Postemergence to spring growth or to bolting plants with green basal leaves.</p> <p>Remarks: Chlorsulfuron is an effective treatment. At higher rates (2.6 oz product/acre) it will cause grass injury. Always use a surfactant.</p>
Imazapic <i>Plateau</i>	<p>Rate: 8 to 12 oz product/acre (2 to 3 oz a.e./acre)</p> <p>Timing: Postemergence to spring growth or to bolting plants with green basal leaves.</p> <p>Remarks: Imazapic gives effective control with soil residual activity. The addition of 2,4-D at 1 to 2 pt product/acre can aid in burndown. It is selective to most native grasses. Higher rates may suppress seedings of some cool-season grasses. Add a methylated seed oil. Imazapic can be used in combination with glyphosate (premix trade name of <i>Journey</i>). Imazapic is not registered for use in California.</p>
Metsulfuron <i>Escort</i>	<p>Rate: 1 to 2 oz product/acre (0.6 to 1.2 oz a.i./acre)</p> <p>Timing: Postemergence to spring growth or to bolting plants with green basal leaves.</p> <p>Remarks: Use a non-ionic or silicone surfactant to improve control. Metsulfuron is not registered for use in California.</p>

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.