

This flyer is a modified version of the silverleaf nightshade entry from the UCIPM Weed Gallery (available at http://ipm.ucanr.edu/PMG/WEEDS/silverleaf_nightshade.html) and a modified version of the silverleaf nightshade section of the Weed Control in Natural Areas in the Western United States book (available at http://wric.ucdavis.edu/information/natural%20areas/wr_S/Solanum.pdf). This flyer also includes a map from www.calflora.org. Information from the weed gallery and Weed Control in Natural Areas in the Western United States book was simplified for use at the San Benito County Weed Management Area's 16th Annual Continuing Education Seminar for Ranchers.

Silverleaf Nightshade (*Solanum elaeagnifolium*)

Silverleaf nightshade, a deep-rooted broadleaf perennial, is common throughout California to 3900 feet except in the North Coast, Klamath Ranges, and Great Basin. It is particularly widespread in California's desert valleys, especially in poorly managed fields.

Sometime silverleaf nightshade is troublesome in agricultural areas, particularly tomatoes and cotton fields. Large infestations can reduce crop yield and pasture production by competing for soil water and nutrients with desired plants. Once established, it is difficult to eradicate and reduced tillage favors it. Often more problematic are its relatives, black nightshade, *S. nigrum*, and hairy nightshade, *S. sarrachoides*, and horsenettle, *S. carolinense*. Leaves and berries contain varying amounts of glycoalkaloid compounds that can be toxic to humans and livestock when consumed. However, berries are eaten by many bird species and small mammals.

Habitat

Orchards, vineyards, crop fields, rangeland, pastures, forest openings, roadsides, and disturbed, unmanaged places.

Seedling

Cotyledons (seed leaves) are gray-green, narrowly lance shaped and up to 2/5 of an inch (10 mm) long. The first true leaves have wavy edges and are covered with small star-shaped hairs, which require 20X magnification to observe.

Mature plant

The mature plant is 1 to 3 feet (30–90 cm) tall and has many branches and an open form. Leaves are egg shaped to lance shaped, reach 6 inches (15 cm) long, usually have wavy to coarsely lobed edges, are alternate to one another along the stem, and are covered with dense, short, star-shaped hairs (visible with 20X magnification). The dense covering of hairs give the leaves a dull, silvery green to pale yellowish-green color. Stems often have prickles which range from tan to reddish. Creeping stems produce young shoots that are a dusky, silver-gray and resemble seedlings but do not have cotyledons.

Flowers

Flowers bloom from May through September. They are showy, 4/5 to 1-1/5 inches (20–30 mm) in diameter and have deep violet to light blue (sometimes white) fused petals with yellow centers. Flowers cluster along branches of the flowering stem and the oldest flower grows singly at the tip of the main stem.

Fruits

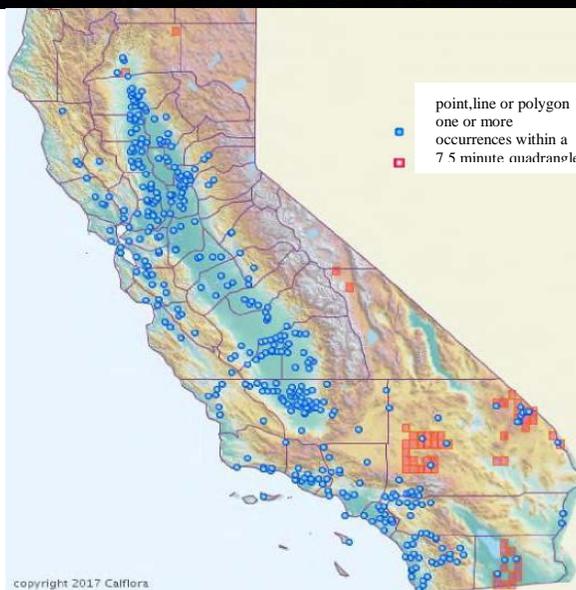
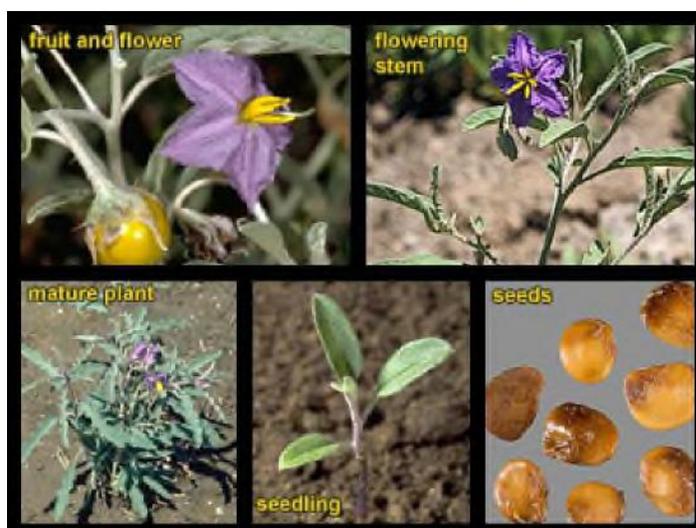
Mature berries are 1/3 to 3/5 of an inch (8–15 mm) in diameter, globe shaped, and greenish yellow to brownish orange.

Seeds

Seeds are tiny, less than 1/6 of an inch (4 mm) in diameter, semi-glossy, and yellowish brown to dark yellow brown.

Reproduction

Reproduces by seed and creeping roots that give rise to bud shoots.



TREATMENT OPTIONS from the book *Weed Control in Natural Areas in the Western United States* This 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 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).

Silverleaf Nightshade (*Solanum elaeagnifolium*)

Family: Solanaceae (nightshade)

NON-CHEMICAL CONTROL

<i>Cultural:</i> grazing	toxic to livestock, goats can handle 25% in forage consumed, may reduce fruit production	Poor control, below 50%
<i>Cultural:</i> prescribed burning	below ground structures not affected	Poor control, below 50%
<i>Mechanical:</i> mowing and cutting	can reduce infestation and seed production, plants will develop rosettes below mower blades	Fair control, 50-80%
<i>Mechanical:</i> tillage	deep root system can recover, must be repeated several times to be effective	Poor control, below 50%
<i>Mechanical:</i> grubbing, digging or hand pulling	will resprouting from root system	Poor control, below 50%

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.

2,4-D <i>Several names</i>	It selectively kills broadleaf weeds	Excellent control, generally better than 95%
Aminopyralid <i>Milestone</i>	It is used in the control of broadleaf weeds, especially thistles and clovers.	Excellent control, generally better than 95%
Clopyralid <i>Stinger, Transline, Reclaim¹</i>	It is used in the control of broadleaf weeds, especially thistles and clovers.	Poor control, below 50%
Dicamba <i>Banvel, Diablo, Oracle and Vanquish</i>	It is used to control brush and in bracken pastures, as well as legumes and cacti. It kills broadleaf weeds before and after they sprout.	Excellent control, generally better than 95%
Glyphosate <i>Roundup</i>	It is used to kill weeds, especially annual broadleaf weeds and grasses that compete with crops.	Fair control, 50-80%, to Excellent control, generally better than 95%, depending on the season
Imazapy <i>Roundup GroundClear, Roundup Extended Control</i>	It is a non-selective herbicide used for the control of a broad range of weeds including terrestrial annual and perennial grasses and broadleaved herbs, woody species, and riparian and emergent aquatic species. Also, it is used to control annual and perennial grass and broadleaved weeds, brush, vines and many deciduous trees	Good control, 80-95%, to Excellent control, generally better than 95%, depending on the season.
Picloram <i>Tordon.¹</i>	It is used for general woody plant control. It also controls a wide range of broad-leaved weeds, but most grasses are resistant.	Excellent control, generally better than 95%
Triclopy <i>Turflon, Weed-B-Gon (purple label), and Brush-B-Gon ("Poison Ivy Killer")</i>	It is used to control broadleaf weeds while leaving grasses and conifers unaffected or to control rust diseases on crops.	Poor control, below 50%, to Good control, 80-95%, depending on the season.