Phytolacca americana L.

Common pokeweed

Family: Phytolaccaceae
Range: Throughout the contiguous U.S., but less common in the western states. In the west, it is found in Washington, Oregon, California, Arizona, and New Mexico.
Habitat: Woodlands, pastures, fields, forest margins and disturbed sites such as roadsides, ornamental landscapes, agricultural fields, and urban waste areas. Survives in most environments and can tolerate many soil types.
Origin: Native to the eastern United States. It is sometimes cultivated as an ornamental or garden vegetable.
Impacts: Pokeweed is an occasional weed throughout much of the United States and is rapidly increasing in abundance in some areas. All plant parts, especially the root, contain numerous saponins and oxalates and can be fatally toxic to humans and livestock when ingested raw or with improper preparation. Severe digestive tract irritation is the primary symptom. Birds are reported to eat the berries without ill-effect and may occasionally become intoxicated following ingestion.

Pokeweed is a large herbaceous perennial shrub, 2 to 8 ft tall, with large leaves and showy purple-black berries. It has a smooth, stout, purplish stem that branches extensively. The bright green, elliptic leaves are simple, alternate on the stem, and have a strong unpleasant scent when crushed. Pokeweed's above-ground growth dies back every winter, but it has a large white fleshy rootstock that allows it to survive and regenerate each spring.

The flowers form in elongated clusters that hang from the branches. Flowers are white to magenta and give way to distinct deep purple berries with crimson juice by mid-summer to fall. The purple berries hanging from the bright green leaves in late summer are the most distinguishing characteristic of pokeweed. Reproduction is only by seed and a single plant can produce numerous seeds. The seeds are large, lens-shaped, glossy, and black. Birds eat the berries and scatter the seeds. This probably accounts for single, isolated plants in areas where pokeweed has never been noticed before. The seeds occasionally are found as impurities in garden and vegetable seeds. It is not known how long the seeds survive in the soil.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	Hand pulling is effective on small plants. Once plants are established and develop an extensive root system, hand removal is difficult. Cultivation or cutting before fruits mature can control common pokeweed. Because plants produce numerous viable seed, cutting after fruit production will only result in numerous seedlings the following year. Cutting well below the root crown prevents regrowth.
Cultural	Grazing is not considered an effective control option. Seeds and foliage contain numerous saponins and oxalates and can be fatally toxic to livestock when ingested.
Biological	There are no biological control agents available for the management of pokeweed.

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	**Rate:** Broadcast treatment: 1 to 2 qt product (3.8 lb a.e./gal formulation)/acre (0.95 to 1.9 lb a.e./acre). Spot treatment of seedlings: 2% v/v with the 6 lb a.e./gal ester formulation, plus 5% methylated seed oil **Timing:** Postemergence when plants are growing rapidly. Applications in spring provide best control. **Remarks:** 2,4-D is a selective herbicide for broadleaf species; will not damage desirable grasses growing nearby. Good coverage is necessary. Some reports indicate that using a premix combination of 2% 2,4-D amine with 2% fluroxypyr (*Vista XRT*) can be very effective as a foliar mix.
Dicamba *Banvel*, *Clarity*	**Rate:** Broadcast treatment: 1 to 2 pt product/acre (0.5 to 1 lb a.e./acre) and water plus 0.25 to 0.5% v/v surfactant to thoroughly wet all leaves. **Timing:** Early postemergence when plants are small and rapidly growing. **Remarks:** Dicamba is a selective herbicide for broadleaf species and will not damage desirable grasses growing nearby. Dicamba is available mixed with diflufenzopyr in a formulation called *Overdrive*. This has been reported to be effective on common pokeweed. Diflufenzopyr is an auxin transport inhibitor which causes dicamba to accumulate in shoot and root meristems, increasing its activity. *Overdrive* is applied postemergence at 4 to 8 oz product/acre to rapidly growing plants. Higher rates should be used when treating perennial weeds. Add a non-ionic surfactant to the treatment solution at 0.25% v/v, or a methylated seed oil at 1% v/v solution.
Triclopyr *Garlon 4 Ultra*	**Rate:** Basal bark or drizzle treatment: 5% v/v *Garlon 4 Ultra* (ester formulation), mixed with 95% crop oil **Timing:** Foliar treatments using drizzle technique are effective in spring or fall, less effective in summer. Stem and stump treatments are probably most effective late in the growing season. **Remarks:** Triclopyr is a broadleaf-selective herbicide with very short soil residual. Basal bark treatments have been shown effective in experimental trials. Treat basal stems to 18 inches in height and thoroughly soak the root collar. Older plants have a large root mass, and it is necessary to get effective downward translocation to control pokeweed. Downward translocation is most active late in the growing season.
AROMATIC AMINO ACID INHIBITORS	
Glyphosate *Roundup*, *Accord XRT II*, and others	**Rate:** Broadcast treatment: 2 qt product (*Roundup ProMax*)/acre (2.25 lb a.e./acre). Spot treatment: 3 to 5% solution v/v *Roundup* (or other trade name) and water to thoroughly wet all leaves. Higher rates may be necessary with less concentrated formulations. **Timing:** Postemergence when plants are growing rapidly. Applications in mid- to late-summer provide best control. New seedlings can be controlled in spring. **Remarks:** Glyphosate is a nonselective herbicide with no soil activity.
BRANCHED-CHAIN AMINO ACID INHIBITORS	
Imazapyr *Arsenal*, *Habitat*, *Stalker*, *Chopper*, *Polaris*	**Rate:** Broadcast treatment: 3 to 4 pt product/acre (0.75 to 1 lb a.e./acre) plus 0.25 to 0.5% v/v surfactant to thoroughly wet all leaves. **Timing:** Preemergence or postemergence. **Remarks:** Imazapyr is a preemergence and postemergence herbicide effective for controlling broadleaf weeds and grasses. Its success on pokeweed is variable; it may not always provide effective control in preventing new seedling germination.

ECOMMENDED 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.