

STEVE'S Weed of the Month

Mediterranean sage

Also Known as: African sage, Ethiopian sage

Mediterranean sage is a Class A Noxious Weed. Class A Noxious Weeds: Non-native species that are limited in distribution in Washington. State law requires that these weeds be **eradicated**.

Mediterranean sage (*Salvia aethiopis* L.), is native to Europe and is said to have been introduced into the United States as a garden ornamental or in contaminated alfalfa seed. A biennial, Mediterranean sage is a member of the mint family. It reproduces solely by seed. First year rosettes have ground-hugging basal leaves that are bluish-green, woolly and slightly notched. A stout taproot forms, providing an energy reserve for the next season's growth. In the second year, a sturdy squarish stem bolts, reaching up to 3' in height. Basal leaves are irregular with indented margins, while upper leaves are opposite, smaller, and clasp the stem. Fine, silvery white woolly hairs cover the stems, leaves and leaf undersides. As plants mature, they shed most of these hairs and the leaves become wrinkled, showing prominent venation. The leaves of Mediterranean sage release a pungent, sage-like odor when crushed, hence the plant's common name. Multi-branched flowering stems develop from May to August. The flowers are small, white to yellowish-white and are borne in clusters at branch ends. Individual flowers are about ½ to 1 inch long, have five petals, and develop four smooth nutlets with dark brown veins. A mature plant can produce up to 100,000 seeds, which are widely scattered after the plant breaks off in the fall and becomes a tumbleweed.



Photo by: Eric Combs, Oregon Department of Agriculture

The plant is primarily a rangeland weed, although it can be found along roadsides and in pastures, fields, and some agronomic crops. Although adaptable to a wide variety of environmental conditions, Mediterranean sage prefers dry, south-facing slopes and gravelly, well-drained soil. The plant has the ability to induce dormancy during drought periods, allowing young plants to survive until moisture is adequate for growth. Mediterranean sage can quickly displace native vegetation and severely reduce forage production as a result of its prolific seed production, widespread dispersal, viability, and adaptability. Although not toxic, the plant is unpalatable and thus generally avoided by livestock.



Photo by: Steve Hurst, @ USDA-NDCS Plants Database, Bugwood.org



Photo by: Joseph M DiTomaso, University of California-Davis, Bugwood.org



Photo by: Washington State Noxious Weed Control Board



Photo by: K George Beck & James Sabastian, Colorado State University, Bugwood.org



The rosettes of common mullein can be confused with those of Mediterranean sage, but can be distinguished by their yellow-tinted and stalkless leaves and absence of pungent sage-like smell when the leaves are crushed. Another occasionally-confused plant, Meadow sage (*S. pratensis* L.) can be distinguished by its blue flowers and coarser hair.

Photo by: Joseph DiTomaso, University of California-Davis, Bugwood.org

Control Methods

Containment is the best method of control. Eliminating small, isolated infestations and preventing seed production and spread are important management strategies. An integrated plan using a combination of control methods tailored to each occurrence offers the best overall management approach.

Physical/Mechanical Control: For small infestations, individual plants should be dug out before they set seed by severing the root 2-3" below the crown to prevent resprouting. For mowing to be effective, it must occur after the rosette stage but before seed production and then be repeated throughout the growing season to prevent regrowth. Tillage is effective, but may not be feasible depending on the terrain.

Cultural Control: The seed of Mediterranean sage can be spread through contamination and human activity. To prevent unnecessary spread, it is important to clean vehicles, equipment, and footwear before leaving an area infested by this plant. Disturbed or previously infested areas should be

reseeded with vigorous, competitive species. Grazing can be timed to encourage growth of desirable vegetation, but if the land is overgrazed, invasive weeds will only worsen.

Chemical Control: Several herbicides are effective in controlling Mediterranean sage. A surfactant is necessary when herbicides are applied to Mediterranean sage. Clopyralid will eradicate existing plants, but does not have the residual effect of Picloram, an herbicide that will kill not only existing plants, but also seedlings from seeds that have not yet germinated. Metsulfuron + 2,4-D, Metsulfuron and glyphosate may also be effective for controlling Mediterranean sage at the rosette to early flowering stages.

[More information can be found in the PNW Weed Management Handbook](#)

USE PESTICIDES WITH CARE. Apply them only to plants, animals, or sites listed on the label. When mixing and applying pesticides, follow all label precautions to protect yourself and others around you. It is a violation of the law to disregard label directions. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

Biological Control: The root-crown weevil *Phrydiuchus tau* has proven somewhat effective in suppressing the spread of Mediterranean sage, and populations of this insect have established in Idaho, Oregon, and California. The weevil does best at warm, dry sites, such as south-facing slopes. The larvae feed inside the root crown, reducing or preventing bolting. While this insect has been known to slow seed production and reduce plant density, weevil populations are slow to establish and will not alone provide control. Maintaining competitive vegetation may improve the weevils' effectiveness.



Photo by: Eric Combs, Oregon State Department of Agriculture,

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Questions: contact [Steve Van Vleet](#) or phone (509) 397 - 6290