United States Department of Agriculture
NRCS Natural Resources Conservation Service
Plant Guide

WHITE SAGE

Salvia apiana Jepson

plant symbol = SAAP2

Contributed By: USDA, NRCS, National Plant Data Center & Rancho Santa Ana Botanic Garden

Alfred Brousseau

Uses

Ethnobotanic: White sage seeds were one component in pinole, which was a staple food of the Indians of the Pacific coast (Barrows 1977). Seeds were collected with a seed beater basket and flat basket, and were parched and ground into meal. The Cahuillas of southern California used this meal to create a mix with one part meal, three parts wheat flour, and a little sugar. This mixture was eaten dry, mixed with water to form gruel, or baked into little cakes or biscuits. The seeds were harvested in quantity and stored in baskets in the home. The tribes, north of Santa Barbara, kept small baskets of seeds and other foodstuffs on hand, with some stored for the winter. The Chumash and other California tribes also ate leaves and stems of white sage.

The Cahuilla, Costanoan, Diegeño, Kawaiisu, and Maidu tribes of California used white sage or chia seeds to clean and heal their eyes (Strike 1994). One method was to place a few *Salvia* seeds in their eyes at bedtime. During the night, the seeds would swell and become gelatinous. Moving around under the eyelids during sleep, the seeds collected any foreign substances on the eyeballs. In the morning the seeds were removed, leaving the eyes clear and free of contaminants. Cahuilla women drank an infusion of white sage roots after giving birth to remove the afterbirth and promote internal healing. White sage seeds were eaten by the Cahuilla to cure colds. The Diegueño used white sage tea for this purpose. Leaves of white sage were smoked, made into a tea, and used in sweathouses to cure colds. White sage leaves were also used by the Diegueño as a shampoo to clean their hair and to keep it from turning gray. Crushed leaves were rubbed on the body to eliminate body odor; this was often done by Cahuilla men before they went hunting. The smoke from burning white sage is used widely by many Native groups as part of their purification ceremonies. White sage is widely valued and cherished among many Indians and other cultures today, prized for its soft "feminine" qualities (Stevens, unpublished field notes, 1998).

Today the leaves and stems of *Salvia apiana* are gathered, dried, and used for smudging by many tribes around the country. The Chumash and other California Indian people are concerned about over-harvesting and disrespect of this plant for commercial purposes.

Sage tea will decrease sweating, salivation, milk secretions, and mucous secretions of the sinuses, throat, and lungs (Moore 1979). It is the best herbal treatment for decreasing lactation during weaning in either animals or humans. A cold cup of the tea is a good stomach tonic. The lukewarm tea is sufficiently bacteriostatic and astringent to make it useful for treating nearly all sore throats, first gargled and then drunk. The crushed leaves are made into a reliable uterine hemostatic tea, good for heavy menstruation but inadvisable for the new mother who plans to nurse.

Wildlife: White sage is an important browse plant for deer, antelope, elk, mountain sheep, and rabbits. The flowers attract hummingbirds, butterflies, bees, and other insects. Small mammals, sparrows, grouse, and quail eat the seeds. *Salvia apiana* is a beautiful low maintenance ornamental plant.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

Description

General: Mint Family (Lamiaceae). White sage is a perennial sub-shrub less than 1 m tall. Leaves are generally 4-8 cm long, lanceolate, with a tapered base and minute teeth. The leaves are simple, with dense hairs and a distinctive fragrance. The inflorescence is many-flowered raceme with white to pale lavender blossoms. The fruits are light brown, shiny nutlets.

Distribution
For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site. White sage generally occurs at elevations below 1500 m. It is common on dry slopes in coastal-sage scrub, chaparral, and yellow pine forests. It occurs in the South Coast, Transverse Ranges, Peninsular Ranges, and the western edge of the Desert Province. *Salvia apiana* extends south from southern California to Baja California.

Establishment
Salvia apiana requires well-drained, fairly dry soils and full sun. Excessive watering of white sage, especially during summer months, is likely to kill the plant. White sage is particularly good for stabilizing or restoring disturbed or degraded areas. Bart O'Brien, Director of Horticulture, Rancho Santa Ana Botanic Garden and Rick Hepting, Theatrum Botanicum, provided the following horticultural information:

Seeds: *Salvia apiana* propagates more easily from seed than from cuttings. Plant seeds in flats in an appropriate planting soil. Seeds may respond to light, so plant seeds at the soil surface or plant 1/8" to 1/4" in a well-drained soil mix. Immediately after planting, soak flats thoroughly, and then water sparingly as needed. Seeds germinate in 2-3 weeks at 20 to 30° C (68 to 86° F). Plant the seedlings into 2" or 4" pots after they grow 2-4 leaves beyond the cotyledons. Water as needed, but do not overwater. *Salvia apiana* plants grow rapidly; they are usually ready to outplant in 6 months to a year. It is best to outplant in the fall; don't plant in the summer.

Cuttings: Gather soft wood cuttings of young vegetative shoots before the plant has flowered. The rooting ability of these cuttings is enhanced by collection and preparation in the spring. Collect cuttings 3-4 inches long, and remove the lowest pair of leaves. Dipping the basal 1-2 inch portion of the cutting in rooting hormones enhances rooting. Bury the cuttings so that the lowest node is ½ inch under ground. Plants will root quickly if they are going to survive. If the cutting material is too hard, rooting may take a long time, or cuttings won't ever root. If the cutting material is too soft, it will rot. It takes some experience to collect the cuttings at the right time. Cuttings establish more readily if kept warm under the flats for weeks at 20 to 30° C (68 to 86° F). Once roots are established on cuttings, plant them in 2" or 4" pots. Pot them in bigger containers as the plants grow. *Salvia apiana* grows rapidly, so it is usually ready to out-plant in 6 months to a year in southern California (warmer climates). In northern California, out-plant when the plants are a year old because the winters are sometimes too severe for them. It is best to outplant in the fall; don't plant in the summer.

Management
Horticultural management includes avoiding over-watering seedlings and plants. Plants will mildew if they experience excessive humidity or too much shade. Aphids can be a problem for younger plants, particularly in the spring. As the plants grow older, they are fairly resistant to herbivores.

Traditional Resource Management: Traditional management of white sage includes the following:

- Pruning leaves and branches to stimulate new growth.
- Since this is a valued medicine plant, prayer, thanksgiving, and ceremony are important components of harvest and renewal.
- Burning occurred during September and October after seeds ripened. *Salvia* species were burned for plant improvement by the Cupreño, Mountain Cahuilla, Northern Digueño, and Southern Digueño.
- Seeds were planted from wild plants. A Diegueño woman reported her people always cleared a small spot near their dwelling to plant seeds of plants with greens, seeds, or roots.
- Ownership of seed-gathering grounds promoted long term care and sustainable harvest practices.

Cultivars, Improved and Selected Materials (and area of origin)
Please check the Vendor Database, expected to be on-line through the PLANTS Web site in 2001 by clicking on Plant Materials. This species is readily available from native plant nurseries throughout its range.

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS <http://plants.usda.gov> and Plant Materials Program Web sites <http://Plant-Materials.nrcs.usda.gov>.