

Sages do well in southern California gardens

J. Giles Waines

The objectives of this project were to introduce and assess the horticultural value of different sage (*Salvia*) species from around the world that might provide color in semiarid gardens in southern California inland valleys. The minimum amount of irrigation necessary for adequate growth and floral development was determined on various species of sage. Species were tested for their value as ground covers and accent plants: information on pests, diseases, and smog tolerance was collected. Ease of propagation was determined.

In general, species native to semiarid areas did well in the Riverside area with low water availability. Species from wetter or more tropical areas of the world did poorly in the dry, hot summer months unless they received up to 1 inch of water each week. Even so, since there are over 700 species in the genus *Salvia* and they are native to both the Old and New Worlds, there are plenty of desirable species to choose from that will adapt well to hot, dry environments with only a small amount of water, 2 inches every 8 or even 16 weeks in the summer. Although we looked at over 70 species, this was only one-tenth of the material known in the genus. New species of *Salvia* are often discovered growing in Mexico, Central and South America, and the Near and Middle East. We can expect many new colorful introductions into gardens in future years.

Dwarf garden sage

Winter rainfall in the Riverside area was 7 inches or more for the duration of the experiments. One of the best drought-tolerant ground cover species was a dwarf form of the garden sage *Salvia officinalis* from the Mediterranean area. It looked horticulturally acceptable with only 2 inches of water applied between May 1 and October 1. Other taller forms of the same species were less drought tolerant and required a total of 4 or 8 inches of irrigation from May 1 to October 1. The variegated and purple-leaved forms of this species were not well adapted. One drawback of dwarf garden sage is that it has a short flowering season (March to May) in the spring, but the flower color is a brilliant blue-purple. *Salvia brandegei* from the California Channel Islands also looked attractive with only 2 inches of additional water in the summer months. Its blue-white flowers appear between December and April, and it also forms an attractive ground cover. *Salvia clevelandii* and the *S. clevelandii* x *S. pachyphylla* hybrid performed exceptionally well. They are native to southern California coastal areas and flower between March and June (and even to October) or May and June (to November), respectively. They are taller; *S. clevelandii*, especially, may require pruning every few years. Flower color is blue or blue-purple, respectively.



Hardy sages native to California and from around the world do well in southern areas of the state with very little water. The blue-white flowers of *Salvia brandegei* (left) from the California Channel Islands, bloom between December and April. *Salvia chionoeplica*, from Baja California, flowers off and on all year.

The Mexican species *Salvia leucantha*, with white petals and bright purple bracts, is taller still, flowers in the fall, winter, and spring, and needs to be pruned to the ground during the summer dormant season. It can survive well with only one 2-inch additional irrigation between May 1 and October 1.

A new, attractive, crimson-flowered species from Mexico is *S. iodanthe*. It has dark green foliage and flowers from January to May. As far as we know, this is a new introduction to California gardens. The flowers and foliage are darker in color than those of *S. microphylla*, also from Mexico, which bears bright Chinese-red flowers from October to May and also requires only 2 inches of additional irrigation between May and October.

Two pale blue Baja California sages, *S. californica* and *S. chionoeplica* flower off and on all year, depending on the water supply. *Salvia californica* prefers sandy soil, but both species look attractive with only 2 to 4 inches of additional irrigation in the summer months.

Some need irrigation

At Riverside, the two native sages *S. munzii* and *S. leucophylla* required 4 inches of additional irrigation in the summer on top of the 7 inches of winter rainfall. The former has blue-purple flowers from December to April, while the latter has pinkish-blue flowers from April to June. Between them, they can provide garden color for six months of the year.

Several sages are good accent plants. Most notable is *S. canariensis*, which required no irrigation or only 2 inches of additional water in the summer. It has pink flowers from April to October and is native to the Canary Islands. It

should be pruned to the ground every one or two years after flowering. The native white sage, *S. apiana*, also survives well with 0 to 2 inches of additional summer irrigation. Its silver-grey foliage is as attractive as its white flowers. It also needs to be pruned to the ground every year, or it becomes a very rank grower. The flowering season is from March to June. The native black sage, *S. mellifera*, bears white-blue flowers from December to May, depending on the ecotype grown. It looks attractive with only 2 inches of additional irrigation, but is very susceptible to aphid attack. It should be pruned to the ground after the flowering season.

The Arizonan sage, *S. parryi* (blue flowered) is an attractive medium-size plant with flowers from September to November. It likes 4 inches of additional water, especially before flowering. *Salvia greggii* from Texas and Mexico has crimson, rose, red, white, or orange flowers. It forms a very attractive garden plant, but requires 4, or preferably 8, inches of additional water in the summer. The flowering period is in the fall and again in the spring, depending on the ecotype of the species used. It is a very variable species and has a wide range in Mexico.

Other attractive species proved to require more supplemental irrigation than *S. greggii* and so will not be mentioned here. It should be stressed, however, that many attractive sages exist, and together they can provide color in the native garden at most times of the year. With such a wide range of growth forms, there are numerous examples of prostrate ground covers or accent plants 6 feet tall.

J. Giles Waines is Director, Botanic Gardens, University of California, Riverside.