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Oxalis: From Ornament to Nuisance

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Oxalis pes-caprae, or Bermuda buttercup, has become a serious nuisance plant in gardens.

SUMMARY

Originally imported from South Africa as an ornamental plant, Bermuda buttercup (*Oxalis pes-caprae*) has become a tenacious and frustrating weed throughout California. Control requires equal tenacity of the gardener. Understanding its life cycle and growth characteristics is key.

Q: How can I get rid of oxalis in my yard? I pull it out and think I've got it all, but it just comes back with more gusto the following year. It's annoying, to say the least!

A: From November through April, the bright yellow flowers of Bermuda buttercup, *Oxalis pes-caprae*, also known as buttercup oxalis, cape sorrel or sourgrass, cluster on the ends of slender leafless stalks. It can be seen throughout Contra Costa County in the compacted, poorly-drained clay soils of yards, gardens, turf, landscaped areas, urban places, orchards, vineyards, fields and among agricultural crops. A native of South Africa, it is found throughout California up to 8200 feet (2500 m). Though sometimes used as a rock garden ornamental, it's generally viewed as a chronic nuisance because of the difficulty in curbing its ability to spread within flower beds, groundcovers and shrub plantings.

Tenacious & Prolific:

Homeowners and gardeners wishing to eradicate Bermuda buttercup face a tenacious, prolific weed which has devised many successful survival strategies. Each year, after the first seasonal rains, and sometimes before in a dry year, about a dozen ovoid bulbils develop along the length of the threadlike, underground rhizome. These readily detach from the rhizome to replenish the soil seed bank. Another survival technique of Bermuda buttercup is that, after initial removal by hand, new plants will grow from broken off stem segments left in the soil. Several passes at hand weeding may be necessary to completely remove this new growth. Discouraging survival of Bermuda buttercup can be accomplished by gently pulling on the plant and removing all of it just as it is about to flower. By this time, the parent bulb energy reserves are exhausted. The parent bulb should be completely dried out and most young bulbils too immature to survive disturbance.

Prevention Is Ideal:

Bermuda buttercup can establish a foothold in a variety of ways. Gardeners aid

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in the dispersal of bulbils when they move soil from an infested area to one that is free of the weed. This happens through cultivation, intentional planting and recycling of garden waste and nursery soil.

Unsuspecting gardeners may introduce soil harboring Bermuda buttercup plants from nursery-bought containers. Difficult to see Bermuda buttercup bulbils found on hand-pulled rhizomes and in contaminated soil are not killed by the high temperatures in the compost pile. Prevention dictates the removal of contaminated soil and hand weeded Bermuda buttercup from garden premises. Also, voles who consider Bermuda buttercup a palatable food source can aid in the spread of bulbs from the source population.

Controls:

Though prevention is the best control method, soil solarization can reduce the bulb population. To be effective, solarization using a clear plastic tarp treated with an ultraviolet light inhibitor must be in place for no less than 4 consecutive weeks during June, July, or August. The sun's rays will heat up the soil to temperatures that are lethal to Bermuda buttercup bulbs. Some researchers investigating approaches for controlling Bermuda buttercup suggest covering it with stiff cardboard and applying a thick layer of mulch. The goal is to weaken the bulbs and deprive the plant of sunlight, causing an inability to photosynthesize and eventual death by starvation. Chemical control can affect the top growth but is ineffective in preventing bulb germination.

The lack of movement of water and air between compacted clay soil molecules promotes the survival of Bermuda buttercup bulbils. Adding nitrogen-rich organic matter will loosen existing soil particles and benefit soil structure by increasing porosity and improving drainage.

Though complete eradication is all but impossible to achieve, following strict non-contamination practices, mulching, solarizing, improving soil structure and drainage are all steps gardeners can take to create an environment unfavorable to the establishment and survival of Bermuda buttercup.

For More Information:

For more information, see UC's free Pest Note entitled *Creeping Woodsorrel & Bermuda Buttercup*, available at: http://www.ipm.ucanr.edu/PMG/PESTNOTES/pn7444.html