Atriplex semibaccata R. Br.

Australian saltbush

Family: Chenopodiaceae
Range: Southwestern U.S. from California to Texas, also including Arizona, Nevada, Utah, and New Mexico.
Habitat: Disturbed places, roadsides, waste places, irrigation canals, sandy fields, margins of cultivated fields, grassland, scrub, shrubland, woodland, salt marsh areas on many types of soil; often grows under alkaline or saline conditions.
Origin: Native to Australia. Brought to the U.S. as a forage plant for alkaline and saline areas in the 1920s. More recently it has been promoted as a fire-resistant, drought-, salt- and alkali-tolerant plant for groundcover or erosion control and as a component of reclamation vegetation for the restoration of mined sites in the southwestern states.
Impacts: Has become regionally invasive in coastal grassland, scrub, and on the higher ground of salt marshes. Australian saltbush is susceptible to the beet western yellows virus, which can affect a variety of crop plants and is transmitted by aphids.
California Invasive Plant Council (Cal-IPC) Inventory: Moderate Invasiveness

Spreading, semi-shrubby short-lived perennial to 2 ft tall, with weakly woody stems. Leaves are alternate, mostly short-stalked and oblong to narrow-elliptic, 0.5 to 2 inches long, up to 1 inch wide, with a smooth or wavy-toothed margin. The leaves are usually gray-green and somewhat scurfy, especially the lower surface.

Plants flower between April and December. Male and female flowers develop in separate small clusters within the same plant (monoecious). Male flower clusters develop at stem tips. One or a few female flowers develop in leaf axils below the male flower clusters. They reproduce by seed with only one seed per fruit. Fruits are small, fleshy, oblong to diamond-shaped, turning reddish at maturity. Fruits persist on the parent plant, fall near it, and disperse to greater distances with water, mud, soil movement, human activities, and animals, including birds. Seeds germinate under saline and alkaline conditions. Most germination occurs in spring.

NON-CHEMICAL CONTROL

Mechanical (pulling, cutting, disking)	The plant is fairly brittle and low growing and is fairly easy to remove by hand or mechanical weeding.
Cultural	Australian saltbush is occasionally grazed by cattle, sheep, horses, and hogs and is rich in protein. It may be possible to use this as a control tool in pastures or rangelands, when it is a problem in these sites.
Biological	While some native insects can feed on the leaves, they do not appear to cause any impact on the populations.

CHEMICAL CONTROL

There is no direct information on the control of this species. As such, recommendations were used for other *Atriplex* or related Chenopodiaceae species. It is expected that the response of Australian saltbush would be similar. 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	
Dicamba *Banvel*, *Clarity*	**Rate:** 3 to 4 pt product/acre (1.5 to 2 lb a.e./acre) **Timing:** Postemergence to seedlings or to mature plants that are growing rapidly. **Remarks:** Dicamba has provided between 80 and 90% control of other *Atriplex* species in Canada. Dicamba has also been used to control *Bassia scoparia*, which is also related to Australian saltbush.
AROMATIC AMINO ACID INHIBITORS	
Glyphosate *Roundup*, *Accord XRT II*, and others	**Rate:** 1 to 2 qt product (*Roundup ProMax*)/acre (1.1 to 2.25 lb a.e./acre). Larger plants may require higher rates. **Timing:** Postemergence to seedlings or to mature plants that are growing rapidly. **Remarks:** Glyphosate is a nonselective herbicide that can damage other non-target species. It has been shown to give good to excellent control of other *Atriplex* species, but most of these are annuals. Glyphosate can also be mixed with 2,4-D ester or dicamba to increased efficacy. This combination should be applied during cooler weather to prevent volatilization of 2,4-D ester.
AROMATIC AMINO ACID INHIBITORS	
Chlorsulfuron *Telar*	**Rate:** 0.5 to 1 oz product/acre (0.375 to 0.75 oz a.i./acre). Apply with surfactant. **Timing:** Postemergence in late spring or early summer. **Remarks:** Chlorsulfuron has been shown to be more effective than metsulfuron in western rangelands. There is no direct information on the effect of chlorsulfuron on Australian saltbush, but it has been shown to damage a related native, Nuttall's saltbush (*Atriplex nutalllii*). Thus, it is likely that it would also provide control of Australian saltbush.

RECOMMENDED 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.