

## ARMED SALTBUSH

### *Atriplex acanthocarpa* (Torr.)

S. Wats.

plant symbol = ATAC

Contributed by: USDA NRCS Kika de la Garza Plant Materials Center

#### Alternate Names

tuberclad saltbush, huaha

#### Uses

Armed saltbush has wildlife value, providing shelter for birds and small animals. It has also been documented as having nutritious browse for cattle and deer (Garza & Fulbright, 1988). Garza and Fulbright note that armed saltbush has higher crude protein levels than four-wing saltbush (*Atriplex canescens*), a close relative of armed saltbush. Armed saltbush has been used for windbreaks, roadside cover, and as an ornamental (Correll & Johnston, 1996; Everitt & Drawe, 1993).

Four-wing saltbush has been used in the restoration of oil well reserve pits with high salinities (Mc Farland, et al, 1987). Armed saltbush can also be useful for plantings on such sites that exhibit complex alkaline and saline soil problems, and can be more adapted than four-wing saltbush in some situations. A 1988 study by Garza and Fulbright found armed saltbush to have higher concentrations of sodium in its leaves than four-wing saltbush. In addition, studies conducted by Kika de la Garza PMC (1998) have found armed saltbush to be more adapted to the dry saline conditions of South Texas than four-wing saltbush.

#### Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

#### Description

*General:* Armed saltbush (*Atriplex acanthocarpa*) is a native, saline tolerant, evergreen, perennial shrub with a woody root (Correll & Johnston, 1996). It can grow from 3 to 10 dm in height (Everitt & Drawe, 1993). It is a member of the pigweed (*Chenopodiaceae*) family (Jones, 1982).

Armed saltbush is also known by the common names huaha (Everitt & Drawe, 1993) and tuberclad saltbush (USDA 2002) because the bracts of the fruit have many flattened tubercles (Everitt & Drawe, 1993). It is dioecious, having male and female flowers on separate plants (Correll & Johnston, 1996).

*Distribution:* For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

#### Adaptation

Armed saltbush occurs in parts of South Texas (Jones, 1982), and Correll & Johnston (1996) record its presence from West Texas to southern New Mexico, and south into Mexico. Everitt and Drawe (1993) note that it is found predominately in the western half of Texas, and less frequently in Cameron, Starr, Webb, and Zapata counties. Armed saltbush prefers well-drained, often alkaline soils. The Kika de la Garza Plant Material Center staff has found that it does not do as well on wetter sites, as it appears to be susceptible to cotton root rot.

#### Establishment

Armed saltbush can be difficult to grow from seed, as it is very particular about the conditions under which it will germinate. Germination studies at the Plant Material Center using an 8 hour day temperature of 70°F and a 16 hour night temperature of 50°F with various light conditions yielded a maximum of 16% germination. Yet, a greenhouse planting in the winter of 1999 yielded much higher germination, indicating that the seed will germinate under the right conditions. Testing conducted by the USDA National Seed Storage Laboratory in the year 2000 confirmed good germination potential. A seed sample of armed saltbush accession #9085310 sent to them in the fall of 1999 was found to have 67% viable seed, 10% non-viable seed, and 23% empty seed (personal communication with Loren Weisner, NSSL Curator, January 25, 2001).

The Plant Material Center staff has had fairly good success growing new plants of armed saltbush from cuttings. Cuttings are best made in the late spring, once new growth has started. They should be treated with a rooting hormone to help facilitate root growth. Cuttings can be transplanted after 3 months, but we suggest fall planting to give plants a chance to get established before undergoing a hot, dry Texas summer. The use of tree shelters to optimize soil

moisture and protect small plants from browsing animals is highly recommended (Kika de la Garza Plant Materials Center, 1998).

### **Management**

Once established, armed saltbush requires very little management. Weed control is the only management we do at the Plant Material Center, and even that is optional. Female plants produce abundant seed and tend to drop their leaves in the fall once seed has mostly matured. Male plants will drop their flowers, but retain most of their leaves.

### **References**

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Jones, F.B. 1982. *Flora of the Texas Coastal Bend*. Welder Wildlife Foundation, Sinton, TX.

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