

# Pest plant - Caltrop (*Tribulus terrestris*)

Fact sheet February 2017

## What is it?

Caltrop is a flat, sprawling, fast summer-growing, annual herb.

Caltrop produces sharp, spiny burrs throughout summer and autumn. Up to 1000 fruit can be produced on each plant, with a total of up to 20,000 seeds. Seeds germinate after summer rain. Caltrop seeds can remain dormant in the soil for up to 5 years. Plants grow rapidly, flowering and forming new burrs within three to five weeks. Caltrop prefers warm-temperate regions on light-textured soils.

Caltrop is a weed of cultivated crops, orchards, over-grazed pastures, stock yards, roadsides and wasteland. It commonly occurs in areas with sandy soils where there is little competition from other plants.

Caltrop is a declared weed under the Natural Resources Management Act 2004 (NRM Act).

## What does it look like?

### Stems

The trailing stems of caltrop lie prostrate on the ground, radiating from a central taproot. The stems are reddish brown, wiry and covered with fine hairs.

### Leaves

Caltrop has small divided leaves, arranged in pairs on opposite sides of the stem. The leaves are darker on the upper surface than on the lower. Each leaflet is about 5–12 mm long and 3–5 mm wide. Fine hairs, particularly on the underside, give a silvery appearance to the leaves.

### Flowers

Flowers are produced from spring to autumn. Flowers are small, less than 1 cm in diameter, yellow and have five petals.

### Fruit

The fruit of Caltrop is a woody burr with sharp rigid spines to about 6 mm long. The burr splits into five wedge-shaped segments when ripe with each segment containing two unequal pairs of spines. Each fruit segment contains up to four seeds.

## History

Caltrop is native to the Mediterranean region, Africa, Asia and subtropical parts of Australia. In Northern Australia a native form exists but it is considered the same species and



*Caltrop fruit. Image credit: ABC*

the exotic form. Caltrop is thought to have been introduced to southern Australia as a contaminant in seed from Europe.

## Why is it a problem?

- Caltrop is a highly competitive weed in summer crops as it is able to extract soil moisture from a great depth, allowing the plant to thrive in very dry conditions.
- Caltrop spines are a hazard to stock, damaging the feet, mouth, stomach and intestines of animals.
- Caltrop is toxic to sheep and may present similar problems to native fauna.
- Caltrop contaminates harvested products and is a vegetable fault in wool.
- Spines of caltrop cause injury to fruit pickers, shearers and people around farm buildings, roadsides and recreational areas.



*Caltrop in flower. Image credit: Agriculture Victoria*

## Distribution

Caltrop is a common weed on mainland South Australia. Its distribution is limited and somewhat unknown on Kangaroo Island. Known infestations exist within the



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townships of Penneshaw and Kingscote. Reports are occasionally received from farmers detecting the burrs in feed grain purchased from other regions.

## How is it spread?

The burrs are well-equipped for dispersal. The burrs readily attach to the feet and pelts of animals, vehicle tyres, shoes and almost any object that is placed on it. The world spread of caltrop, may have been as a contaminant in wool and seed.

## How do we control it?

Preventing the spread of Caltrop is the best control measure. Be aware of the risks of purchasing stock, fodder and machinery from contaminated areas. Clean shoes, equipment, machinery and vehicles before returning to the region from infested areas.

Hand removal is effective in small infestations. Use a pick as deep tap roots prevent pulling. Bag seeds and burn outside of fire ban season. There is a wide range of herbicides available to control Caltrop. Spraying needs to be done before seeds set and repeated for each germination of seedlings. Residual herbicides can be beneficial in some situations.

For further advice on chemical control techniques contact the Natural Resources Centre in Kingscote or download the *Weed control handbook for declared plants in South Australia* for advice on chemical control  
[http://www.pir.sa.gov.au/biosecurity/weeds\\_and\\_pest\\_animals/weeds\\_in\\_sa](http://www.pir.sa.gov.au/biosecurity/weeds_and_pest_animals/weeds_in_sa)

## Declarations

The following sections of the NRM Act apply to caltrop on Kangaroo Island:

- 175 (2) Cannot transport the plant or anything carrying it**
- 177 (1) Cannot sell the plant**
- 177 (2) Cannot sell any produce / goods carrying the plant**
- 182 (2) Landowner must control the plant on their land**
- 185 NRM authority may recover costs for control of weeds on roadsides from adjoining landowners.**

## For more information

### Kangaroo Island Natural Resources Centre

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