

# Sarcostemma (pencil caustic) poisoning

## Information for livestock owners

### Description and distribution

The *Sarcostemma* species, also known as pencil caustics, caustic vines or caustic bushes, are a species of succulent greyish-green bush, with smooth, cylindrical stems and a milky sap. The most common species forms an upright mound, up to 1m tall and 1.5m wide. From September to June, cream star-shaped flowers occur in clusters, growing on short stalks. There are three species of *Sarcostemma* plant native to Australia; the most common is *S.viminale subsp. australe*. It grows in arid areas of the tropics and subtropics of Western Australia, the Northern Territory, Queensland and New South Wales, particularly in red soils or acacia scrubland.

Figure 1: *Sarcostemma* plant



As with many plant poisonings, intoxication occurs when grazing is scarce and hungry cattle eat the plant because it is green and available. This occurs particularly after fires, when *Sarcostemma* forms new shoots before other pasture has had a chance to regrow. Young and imported stock may be more likely to consume the plant because they have not encountered it before.

### Toxin

The toxin is thought to be a pregnane glycoside found in the stems of the plant, which interferes with the central nervous system. The minimum toxic dose can be as little as 0.5 to 1kg for adult cattle and horses. However, as there are historic reports of cattle having eaten the plant with no effects, there may be variations in toxicity between plants or regions.

### Signs

As the toxin acts on the nervous system, the first signs are:

- restlessness
- staggering

- muscle tremors
- collapse.

This is followed by:

- seizures
- jaw clenching
- paddling with the legs
- side-to-side movement of the eyeballs.

Death may take up to a week. There are no specific findings on post mortem, so a diagnosis is usually based on clinical signs and identification of the consumed plant.

## Treatment and prevention

There is no treatment for this poisoning. To reduce the risk of poisoning, prevent young or hungry stock from accessing the plant, especially when other feed in the paddock is scarce. If you suspect *Sarcostemma* poisoning in livestock, contact your regional Livestock Biosecurity Branch veterinary officer or stock inspector for assistance with diagnosis.

Accurate plant identification by a botanist is essential to confirm the diagnosis. This involves differentiation of *Sarcostemma* from other succulent plants that do not poison stock. Dried, whole, flowering plant specimens are required for a definitive identification.

## Livestock Biosecurity Branch contact details

### Darwin Region

Veterinary Officer

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Regional Livestock Biosecurity Officer

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### Katherine Region

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Regional Livestock Biosecurity Officer

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