Zamia (cycad) poisoning

Information for livestock owners

Description and distribution

The cycad, or zamia palm, is a group of plants with palm-like leaves arranged in a rosette around a cone at the top of a single trunk. There are at least 10 species of cycads found in the NT, primarily around the Top End and extending along the coastal areas in the gulf.

Toxin

Cycad leaves and seeds contain at least two toxins; a chemical which damages the liver and intestines, and an unidentified neurotoxin causing irreversible damage to the nerves of the spinal cord. All mammals can be poisoned, however cattle are primarily affected by the neurotoxin, seen as the characteristic ‘zamia staggers’. Large consumption is required to poison cattle. When poisoning occurs

Cattle may graze cycads when other feed is scarce or if young leaves or seeds are available, particularly after bushfires. Poisoning may be progressive over a number of years; cattle which have grazed cycad-infested country may show signs after importation to cycad-free county.

Signs

Zamia staggers may be seen after just 14 days of eating the plant, but signs are usually slowly progressive over a number of years and include

- goose-stepping gait in the hind limbs
- knuckling of the hind fetlocks
- wasting of the hindquarters

Severely affected animals may not be able to reach food or water. Diagnosis is made by laboratory examination of the spinal cord.
Transmission and prevention

There is no treatment for zamia staggers. Prevent stock cattle accessing the plants, especially those with fruit or young fronds. Many cycad species in Australia are threatened, and a permit may be required to remove or poison them; contact Parks and Wildlife on 08 8999 4486 for further information. If removal or exclusion fencing is not possible, ensure adequate feed supplement is available to help reduce intake of cycads.

If you suspect zamia staggers in your cattle, contact your local Regional Veterinary Officer to conduct a disease investigation.

Cattle showing neurological signs may be eligible for testing under the NTSESP, with a producer subsidy of $300 per animal.

For more information contact your regional Animal Biosecurity Office

- Darwin 8999 2035
- Katherine 8973 9716
- Tennant Creek 8962 4458
- Alice Springs 8951 8181