

Ironwood Poisoning

B. Lemcke, Livestock Management Officer, Pastoral Production, Darwin

INTRODUCTION

There are continuing reports of stock dying after ingesting northern ironwood (*Erythrophleum chlorostachyum*) in the Top End of the Northern Territory. Northern ironwood is characterised by its distinctive rounded glossy dark to mid-green leaves, rough bark and excellent resistance to termites. Poisoning of stock occurs in grazing paddocks and also after eating hay containing ironwood leaves. Many grazing stock can be affected, including cattle, buffalo, goats, camels, deer, horses, donkeys and sheep.

The most likely scenario for deaths is soon after animals are imported into the Top End. Most deaths occur within the first week of animals being let out into a paddock. Poisoning usually occurs during the dry season when there is often an overall shortage of feed, or typically only dry grass is available with plenty of green ironwood suckers. Hungry stock that have travelled long distances and are put directly into the paddock without hand feeding first, are particularly at risk because of their hunger and no previous exposure to ironwood.

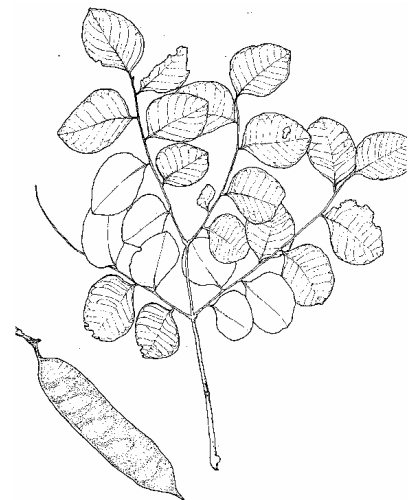
In a previously grazed paddock, often the only suckers left standing are ironwood or other unpalatable species. Livestock that are hungry and unfamiliar with ironwood are the most likely to succumb to poisoning.

SYMPTOMS

It appears that only a small quantity of leaves, less than 100 gm, is needed to kill cattle and horses. Only one or two leaves will kill sheep and goats. The symptoms are severe colic, sunken eyes, loss of appetite, recumbency and death within 24 to 48 hours. Scours may or may not occur. If they occur, they will be heavily blood-stained.

Poisoning is not common in locally-bred livestock. However, there are some instances where problems can still arise. For example, young newly-weaned kids (goats) appear to be susceptible to ironwood poisoning during the dry season, when the doe is no longer present. This may be due to more adventurous feeding habits, trying different forages.

Also at Beatrice Hill Farm in the 1990s, a bout of poisoning occurred in one group of buffalo that had been reared entirely on floodplain where no northern ironwood grows. During the following wet season, there was one episode of poisoning where a number of buffalo died and one or two survived. The cause was probably just a branch blown down in a storm. However, the buffalo had had no previous exposure to the tree and were susceptible. These are the only **known** cases of deaths in locally-bred buffalo. The surviving buffalo were badly affected for a long period of time and had heavily bloodstained faeces, but did ultimately recover. The majority of those that died, did so within a few days.



Leaves and seed pod of northern ironwood

Post mortem findings include large haemorrhages on the surface of the heart muscle, ironwood leaf portions in the rumen and inflammation of the stomach and the small intestines.

Other reported losses are from stock eating hay containing ironwood leaves. This is particularly important for hay producers in the north who send hay to different areas of the Territory and run the risk of being potentially liable for stock losses through ironwood poisoning.

HOW TO PRODUCE IRONWOOD-FREE HAY

There are several different strategies for achieving ironwood-free hay:

1. Ensure that the hay mower operator stops the tractor and removes ironwood suckers from the path of the mower or from the windrow immediately after cutting. Preferably he/she should ensure the complete removal of leaves from the paddock or at least place them securely so that there is no likelihood that they will be raked into or baled up from a windrow. If there are too many ironwood leaves in the paddock for this to be feasible, the grass in the paddock should **not** be baled at all and be left for grazing. A small hand mattock or tomahawk/axe and a large bag or container should be carried for storing and disposal of ironwood leaves from the paddock.
2. Before haymaking time, suckers appearing during the growing season should be killed by a spot spray method. A small hand sprayer, or ute-pack, or 4 wheel motor quad bike sprayer would be the most convenient machines, depending on the number of suckers and the size of paddocks. An all-over foliar spray of Garlon 480® or GRAZON DS® diluted at 1:100 with water is usually effective but follow up sprays will be required for regrowth in some cases or to mop up those missed by the operator. Velpar® could be an alternative but would leave a bare patch as it is non-selective. Tordon/diesel and Garlon/diesel sprays (basal bark) are also effective. A 1:50 dilution is required.
3. Hand grubbing is not likely to be 100% effective in the long term as small root sections left underground can re-sucker at a later date. This is why ironwood suckers can be particularly thick in newly cleared areas. Even 100 mm long sections of ironwood roots left in the ground in damp conditions can quickly regenerate roots and shoots.
4. To eliminate heavy suckering after clearing native vegetation, it would be advisable to first kill existing large ironwood trees by poisoning before the clearing occurs, so that there are no live roots from trees to start new suckers after ploughing. The only other alternative is heavy blade ploughing and thorough stick raking to remove the sucker sources. This requires a lot of machinery and fuel.

After haymaking, it is a good time to eliminate new suckers because many emerge over the next few months after grass cutting and are more visible during the dry. They are also more susceptible to herbicides when actively regrowing after grass cutting. It may take several years to get an area to a stage where suckers no longer regenerate. Persistence is required.

Hay producers should be particularly vigilant to ensure that the hay they sell is not contaminated with ironwood.

Department of Primary Industry, Fisheries and Mines
ISSN 0157-8243
Serial No. 646
Agdex No. 400/657

Disclaimer: While all care has been taken to ensure that information contained in this Agnote is true and correct at the time of publication, the Northern Territory of Australia gives no warranty or assurance, and makes no representation as to the accuracy of any information or advice contained in this publication, or that it is suitable for your intended use. No serious, business or investment decisions should be made in reliance on this information without obtaining independent/or professional advice in relation to your particular situation.