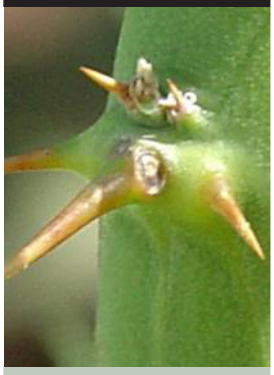
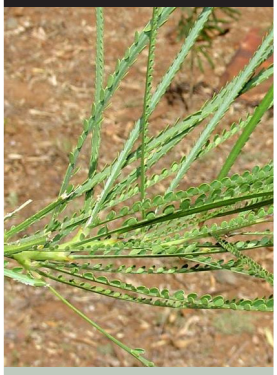
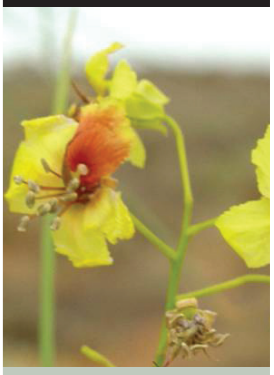
DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

Parkinsonia

Parkinsonia aculeata

HABIT	STEMS & ROOTS	LEAVES	FLOWERS	FRUIT & SEED
				
A branched spreading tree to 6m high.	The bright green branchlets have a thin zig zag pattern, with sharp, woody spines along the stems.	Green, drooping compound leaves with numerous oval leaflets, 1 - 3mm long.	Flowers are small and yellow with five petals, found along the stalk.	Pods are green to pale brown, 5 - 10cm long with small constrictions between hard, oval seeds.

Parkinsonia is declared a Class B (growth and spread to be controlled) and Class C (not to be introduced) weed in the Northern Territory and is a Weed of National Significance in Australia.

Parkinsonia is a declared weed in accordance with the *Weeds Management Act.*

The problem

Parkinsonia is recognised as a Weed of National Significance (WoNS). Parkinsonia infests nearly one million hectares, and threatens the agricultural and environmental values of over three-quarters of the Australian mainland. It can form dense, impenetrable thickets, sometimes several kilometres across, making areas of land inaccessible to humans and animals. The thickets can impede mustering, restrict stock access to water, displace native plants and animals, alter stream flows and harbour feral animals, particularly pigs.

Wetlands are particularly vulnerable because parkinsonia can dam watercourses, cause erosion, lower watertables and take over vast tracts of floodplain. Threatened areas include significant wetlands, national parks and other regions of high aesthetic, Indigenous and tourist value.

Habitat and distribution

It is suggested that parkinsonia was first introduced into Australia in the late 19th century as a shade tree for planting around water bores, dams and homesteads. It is now found in established thickets throughout semi- arid Australia with infestations in Western Australia, the Northern Territory, Queensland and northern New South Wales. Parkinsonia is well established on the Barkly Tableland, in the Victoria River district and Gulf regions and occurs in various densities across most of the Northern Territory.

Parkinsonia is adapted to growing in a wide range of climatic and soil conditions. Once plants are established they withstand heat and drought well. The seed pods are buoyant, and are often carried down

drainage lines and rivers for long distances. Parkinsonia seeds have a thick and extremely hard coat and can remain viable in the soil for many years. Mass germination events may occur following flooding, enabling the establishment of dense thorny thickets if not controlled early. Seeds can also be spread in mud sticking to machinery, animals and footwear. Although the seeds are relatively unpalatable, animals have been known to eat and disperse seeds, particularly in drought conditions when other foods are unavailable.

Preventing spread of Parkinsonia

- Map infestations before commencing control to enable development of a coordinated management strategy
- control minor infestations, isolated trees or seedlings first
- prioritise control along bore drains and dams to reduce spread
- raise community awareness to aid in early detection and control of the species
- follow strict hygiene regimes to prevent spread into clean areas
- prioritise control along waterways to reduce spread
- always control plants upstream first.

Parkinsonia control

Chemical control

Chemical and concentration	Rate	Situation, method and comments
Triclopyr 300 g/L and Picloram 100 g/L Various trade names	**350 ml / 100 L** 3 L / ha	**Seedling (individuals and infestation)** Foliar spray - avoid spraying if plants are stressed or bearing pods - add Uptake® spraying oil Foliar spray – plants up to 2m or 2 years old - add Uptake® spraying oil
Triclopyr 240 g/L and Picloram 120 g/L Access®	**1 L / 60 L (diesel)** 1 L / 60 L (diesel)	**Seedling (individuals and infestation)** Basal bark < 5 cm stem diameter Cut stump > 5 cm stem diameter

Optimum treatment times – Darker colours represent preferred months for foliar treatment. Basal bark and cut stump treatment can be carried out all year round.

Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

Non-chemical control

The following methods can be effective if the root layer is removed from the soil:

- Blade-ploughing
- Stick-raking
- Bulldozing and chaining.

It is vital that follow up works are carried out to control seedling recruitment and regrowth after a site has been treated. If left uncontrolled, seedlings and regrowth may develop into a bigger problem than the initial infestation.

Cultivation of pasture or native vegetation after mechanical control will help to prevent re-sprouting and seedling establishment.

Fire can be a useful tool in managing parkinsonia as it provides a level of control for vulnerable seedlings. However, the impact may be reduced because low fuel levels around parkinsonia infestations can limit fire intensity. Fire does not generally kill a high proportion of the seeds in the soil but it can stimulate germination, allowing simple follow-up control. It is also useful for removing dead plant material to allow improved access for further management operations.*

Control should preferentially be undertaken prior to seed drop to avoid spread.

Disclaimer

In the Northern Territory, a registered product must only be used in situations consistent to those appearing on the label, unless authorised under a permit; and a person:

- must not have in their possession or use a chemical product unless the product is registered in Australia (exemptions apply)
- may use a registered product at a concentration, rate or frequency lower than that specified on the label unless this is specifically prohibited on the label. This does not apply to herbicide use occurring under an Australian Pesticides and Veterinary Medicines Authority (APVMA) permit
- may use a registered product to control a pest not specified on the label provided the pest is in a situation that is on the label and use on that pest is not specifically prohibited on the label
- may also use a registered product using a method not specified on the label unless this is specifically prohibited on the label.

Users of agricultural (or veterinary) chemical products must always read the label and any permit, before using the product and strictly comply with the directions on the label and any conditions of any permit. Users are not absolved from compliance with the directions on the label or conditions of the permit by reason of any statement made in or omission from this publication.

* Any management incorporating burning must be in accordance with the *Bushfires Act* and *Fire and Emergency Act*. Please contact your local fire station for permits to burn.

Further information

Weed Management Officers from the Weed Management Branch can provide advice on all aspects of weed management including control techniques, biological control, legislative responsibilities, policy advice, monitoring and reporting and regional planning.

For further information on weed management planning, integrated control, herbicide application techniques and monitoring please refer to the NT Weed Management Handbook.