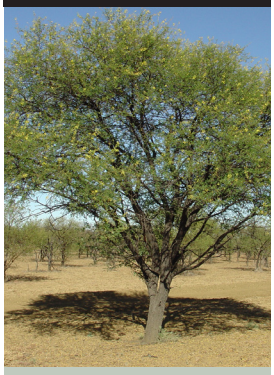
DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

Prickly acacia

Acacia nilotica

HABIT	STEMS & BRANCHES	LEAVES	FLOWERS	FRUIT & SEED
				
An erect shrub to 4m high with spine-covered stems.	True leaves are shed early, and the flat stem segments are often incorrectly referred to as leaves. The lower segments may thicken and form trunks on older plants.	Flowers are yellow, produced mostly on the margins of the fleshy segments.	The fleshy fruit is pear-shaped, edible and turns purple when ripe. Seeds are pale brown, to 5mm long.	Very distinctive elongate, hanging seedpods, usually 10 - 20cm long. The pod is constricted between seeds. When ripe the pods are grey-green in colour. The soft and hairy seedpod breaks into single seeded segments once it drops.

Prickly acacia is declared a Class A (to be eradicated) and Class C (not to be introduced) weed in the Northern Territory and is a Weed of National Significance in Australia.

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

Prickly acacia should not be confused with Mimosa bush (*Acacia farnesiana*) which has brown-black, hairless, cigar shaped seed pods, grey bark with prominent white spots and zig-zag shaped branches.

The problem

Prickly acacia is causing significant damage to the northern Mitchell grass downs of Queensland, where it is replacing valuable grazing lands with impenetrable, thorny shrub land. Biodiversity is severely impacted as native vegetation and fauna habitat are rapidly replaced with monocultures. Most of northern Australia is susceptible to prickly acacia invasion, and in particular the ecologically and economically important areas of the Northern Territory, including the Barkly Tablelands and Victoria River District.

Prickly acacia produces massive amounts of seeds that can remain viable for at least seven years. Any flowing water will facilitate seed distribution. Prickly acacia trees prosper along watercourses and can rapidly out-compete native plants for available water. Once established along water courses and bore drains, prickly acacia spreads out into adjacent grasslands. Cattle contribute to seed spread, as they preferentially graze the high protein seed pods which can remain viable after passing through the digestive tract. Cattle can also transport seeds on their hair and hooves. Resultant thickets can impede mustering, movement of stock and access to water, and will significantly reduce carrying capacity in the long term.

Habitat and distribution

Prickly acacia is native to the tropics and subtropics of Africa through to Pakistan, India and Burma. It was deliberately imported into Australia as a shade and fodder tree prior to the 1960s. Prickly acacia is now distributed from Cooktown (north Queensland) to the New South Wales border and from Bowen (east Queensland) to Western Australia's Kimberly region. The transportation of cattle is believed to have contributed to the wide dispersal.

Prickly acacia has established across approximately 7 million hectares in Queensland. The first recorded outbreak in the NT was in 1981 as a single plant on the roadside of the Barkly Highway. Infestations in the Northern Territory generally do not exceed low density (1-10% coverage), however plants are present throughout the Barkly, Katherine and Alice Springs regions. Control work has significantly reduced density levels and spread, however continued collaborative management is essential. Outbreaks in Adelaide River and Batchelor have been successfully eradicated. The Victoria River District has one of the most significant infestations. Monitoring will continue in all susceptible areas.

Preventing spread of Prickly acacia

By implementing the following recommendations potential spread can be significantly reduced:

- Map infestations before control to enable the development of a coordinated management strategy;
- control minor infestations, isolated trees or seedlings first
- prioritise control along bore drains, creeks and dams to reduce spread
- exclude stock where mature pods are available; incorporate strategic fencing to contain infestations and quarantine stock when moving from infested paddocks to clean paddocks (seeds may take up to six days to pass through an animal)
- do not overgraze - a healthy stand of grass will reduce the establishment of seedlings
- ensure stock imported from affected areas in QLD are quarantined upon arrival to the NT or your property. Monitor quarantine area or paddock for emerging seedlings.

Prickly acacia control

Non-chemical control

- Hand grubbing (small plants).
- Blade ploughing, stick raking and chaining (for larger plants or infestations, cutting the root at least 30cm below the soil surface can be effective).
- For larger trees greater than 40mm trunk diameter, chain pulling is more effective. Chain pulling has been successfully used on established, dense stands of prickly acacia, especially if dry or drought conditions are prevailing.
- Fire is useful for mass seedling control if there is a sufficient fuel load.*

** 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.*

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. Control should preferentially be undertaken prior to seed drop.

In Queensland significant research has been carried out on biological control options for prickly acacia. Tip boring moths, seed feeding beetles, leaf feeding beetles, caterpillars and bark/wood-feeding insects have all been released with little success. Research is ongoing. Infestations in the Northern Territory are not dense enough to require or enable biocontrol. A range of chemical and mechanical options are suitable for prickly acacia control.

Chemical control

A range of chemical and mechanical options are suitable for prickly acacia control.

Chemical and concentration	Rate	Situation, method and comments
Fluroxypyr 200 g/L Various trade names	750 ml / 100 L	**Seedling (individuals or infestation) + adult (infestation)** Foliar spray – add uptake spraying oil
Metsulfuron-methyl 600 g/L Various trade names	10g / 100 L	**Seedling (individuals or infestation) + adult (infestation)** Foliar spray - apply when actively growing, need wetting agent (follow label directions)
Tebuthiuron 200 g/kg Various trade names	1.5g / m^2 10 - 15kg / ha	**Seedling (individuals or infestation) + adult (infestation)** Granular product: hand application - do not use within 30m of desirable trees or apply to continuous area > 0.5 ha Use higher rate on dense growth or heavy clay soils.
Triclopyr 240 g/L and Picloram 120 g/L Access®	1 L / 60 L (diesel)	**Adult (individuals or infestation)** Basal bark < 5 cm stem diameter Cut stump > 5 cm stem diameter
Fluroxypyr 200 g/L Various trade names	1.5 L / 100 L (diesel)	**Adult (individuals or infestation)** Basal bark < 10 cm stem diameter, treat up to 45 cm from ground Cut stump > 10 cm stem diameter
Triclopyr 600 g/L Various trade names	1 L / 120 L (diesel)	**Adult (individuals or 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 treatmetn can be carried out all year round.

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

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 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.

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.