

Camel Control Using Alternative Fencing

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The purpose of this Agnote is to provide information on fencing alternatives for control of feral camel movement on pastoral lands of the Northern Territory.

INTRODUCTION

Historically, both feral horses and feral camels have caused significant damage to conventional fences. The presence of feral horses has at times been reduced by musters and drought, however feral camels have been able to survive drought and up until the early 1990s were considered to have insufficient value to justify retaining within paddocks. With increasing numbers of feral camels, fence damage has consequently remained significant, particularly for properties bordering the desert areas.

CAMEL BEHAVIOUR

Camels are observant, easily taught and have good memories. When in search of food, camels can migrate 400 km or more at rates of up to 50 km per day. Once food is found, movement is reduced. Camels that have had no prior exposure to fences have little regard for any fence across a migration path. In the non-breeding season, camels form bull herds and cow/calf herds. During the six month breeding season, commencing as early as April in central Australia, bull-camels come into heat (rut) and establish their own harems. Other bulls try to take over these harems and fighting is common. Consequently during the breeding season, bulls in rut have little regard for fences, especially if they have not previously recognised specific fences. To ensure that a fence becomes an effective deterrent to camel movement, fences should be constructed so that they are both easily seen and remembered.

FENCE CONSTRUCTION - GENERAL

Construct new fences before the breeding season

New fences must be erected before the breeding season (i.e. before April) when camels are more likely to take the time to stop walking, running (or fighting), before intercepting and damaging the fence.

Make one-way openings in new fences

Where new fences adjoin previously unfenced country, it is preferable to leave openings through which camels can pass. The openings can be constructed similar to a large version of a spear trap. The openings can then be closed off after a season. Attention must be given to management or humane destruction of any camels caught on fences or trapped inside paddocks.



Make fence-line obvious

If a fence is not visually obvious, camels are more likely to hit the fence in full flight and go through it. If camels are encouraged to stop to inspect the wires of a new fence and get a memory stimulant when they retreat and try again, they will develop a permanent memory of where a fence-line barrier exists. Camels are more likely to stop and examine a new fence-line if they first encounter an unusual landscape feature such as a corridor of newly cleared ground. Flat grading on both sides of the fence is recommended to make the presence of a fence-line obvious. To be effective, cleared ground should be maintained on both sides of the fence, 8 m wide externally (the side of maximum camel pressure) and 3 m wide internally. Clearing will cause erosion in some situations, so siting of the fence-line should take this into account.

FENCE CONSTRUCTION - SPECIFIC

Barbed-wire fence

Use of barbed wire should be limited. Barbed wire can provide a physically aversive stimulus, but often the reaction by a camel is opposite to what is desired. When the camel pushes against the fence, it will often just jump forward, further into the fence.

It is noted that electrifying barbed wire is illegal and is a prosecutable offence.

Electric fence

Strategic use of electric wires can increase the memorable and deterrent aspects of a fence. The following features are suggested for an electric fence to be effective.

- *Energisers of sufficient capacity*

Energisers vary in capacity. A powerful unit may energise up to 50 km of fence whilst smaller units will control up to 15 km. A voltage of 6,000 volts is suggested for control of camels (pers. com., Sims 2005). The energised distance is reduced by leakage through poor insulation or contact with plants.

- *Effective fence design*

General advice on the design and cost of an electric fence is available from animal management companies. The required equipment can be ordered through local stock and station agents.

The electrified fence may be either custom-built, or a modification of an existing conventional (suspension) fence. The choice will depend upon the current infrastructure, cost of electric fence materials and construction, plus the nature of the problem caused by camel movement in the area.

For a custom-built electric fence, two-plain wires (one energised) or four-plain wires (two energised) with or without spacers (e.g. insul-timber, poly-spacer) are options.

A four-plain wire electric fence has been found to effectively control camel movement where internal fences have a lot of pressure. Two wires are energised—one wire on the top and one wire second-from-the-bottom. The other two wires serve as the earth wires. Where camels are familiar with electric wires and there is low pressure on an internal fence, a single electric wire has proven adequate (pers. comm., Sims 2005).

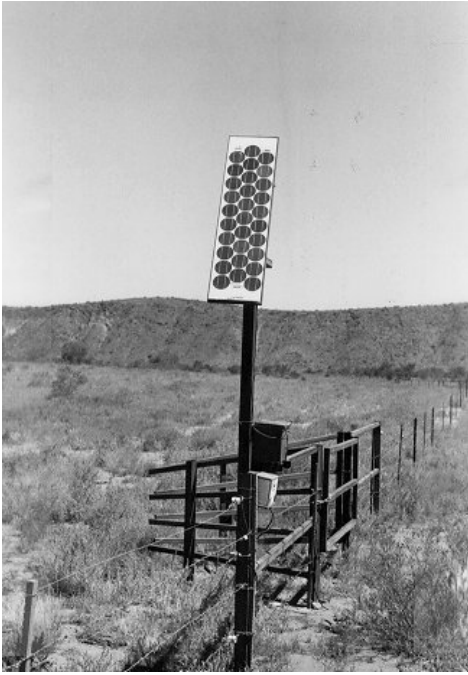


Figure 1. Solar panels are effective for powering electric fencing



Figure 2. Outriggers carrying an electric wire

For modification of an existing suspension fence, the following options may be considered:

- an energised plain top wire run through insulators;
- an energised plain wire offset on outriggers with insulators, on the side from which camel pressure is expected.

However outriggers have not been proven very effective for feral camels, and the offset wire may actually increase risk of entanglement.

‘Aluminium-can’ fence extension

Control of camel movement has been achieved by threading empty aluminium cans onto a plain wire, raised on extended metal pickets, 1.5 m above a conventional suspension fence. The shine and rattle of the cans provides an obvious visual and auditory deterrent to camel movement, especially at ‘pressure points’ on a fence in paddock corners, at gateways and near livestock waters (pers. comm., Dörjes and Heucke 2005).



Figure 3. Two camels halted at a fence with an ‘aluminium-can’ extension

'Cable' fence

Control of feral camel movement has been achieved by the joint management of Uluru – Kata Tjuta National Park, using recycled heavy duty materials, i.e. 100 mm bore casing (up to 4 m above the ground and sunk 1.5 m into the ground) and 20 mm steel cables (loosely strung 80 cm and 100 cm above the ground). This structure has both the 'strength' and 'give' to successfully keep feral camels out of sensitive areas (pers. comm., Starkey 2006).



Figure 4. A stretch of 'cable fence' with loosely strung cable



Figure 5. Close-up of cable fastening and fixture for the 'cable fence'

OTHER CONTACTS:

Central Australian Camel Industry Association Inc (CACIA), <http://www.camelsaust.com.au/>

Gallagher Animal Management Systems, <http://www.gallagher.com.au/>

Uluru - Kata Tjuta Board of Management and Parks Australia staff, <http://www.deh.gov.au/parks/uluru/>

Please visit us at our website:

www.nt.gov.au/dpifm

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