

RSPCA Qld comments:

Enquiry into barrier fences in Queensland

Barrier fences as a means of pest control have been an important part of Queensland's strategy to combat the negative impact of pests for over a hundred years. Originally they were built to exclude rabbits but equally exclude dingoes and wild dogs, kangaroos and emus, all species seen as pests by agriculturists. However, depending on the fence construction type, they may also exclude other native and non-native species (for example, foxes) but not others (for example, cats). What the fences exclude and do not exclude influences prey and predator numbers on both sides of the fence.

With the increase in the number of cluster fences being constructed in Queensland, it is timely that the concept of barrier fences be considered more thoroughly. As research increases our understanding of population dynamics, landscape broad biodiversity and animal movements, RSPCA Qld believes that fences may be introducing as many problems as they are solving, and should not be seen as the answer to all our pest and predation problems. Other solutions must be found.

Success of fences

The success of barrier fences can only be assessed against pre-determined criteria. Such criteria will vary depending on the interest of the party setting them. For farmers concerned about predation of their sheep or cattle by wild dogs, or overgrazing of their pastures by macropods, barrier fences can easily be seen as successful. However, one could argue that this represents a narrow and simplistic view of a complex issue. It is also a 'success' which might ultimately prove costly in terms of long-term abundance of some pest species, continental-scale wildlife biodiversity, effects on non-target species, to name a few^{1,2,3}.

While a reduced number of sheep and cattle predated on by wild dogs is a positive outcome (see animal welfare section below), it may not mean a reduced total number of animals predated on – just a change of species.

Impacts of fences on wildlife

A growing amount of research is looking at the effect of the abundance of one species on that of others (the trophic cascade effect), the role of top predators in biodiversity and the role of meso-predators when top predators are controlled^{3,4,5,6,7,8}. There seems to be general agreement that dingoes are important in limiting macropod numbers in most rangeland environments⁶. They also seem to be important in controlling the population of smaller predators such as foxes and cats⁵. As a corollary to this, it appears that the dingo, then, has a key role to play in maintaining biodiversity in ecosystems.

Fences may have several negative consequences on wildlife including blocking natural wildlife migratory routes² and also, by confining animals within a defined area, restricting evolutionary potential through increased inbreeding¹. A fence creates an unnatural 'island' within a larger landscape in which certain animal species inside the fence can build up in numbers, such as macropods, if there is plenty of feed available and their natural predators are in low numbers or non-existent⁶. Cat numbers can also increase as most fences do not exclude cats⁹. Increased herbivore numbers put extra pressure on pastures which leads to the view that macropods are pests and efforts are made to reduce the macropod numbers. The increased cat numbers (and possibly fox numbers) inside the fence where there is no natural control, leads to increased predation on vulnerable smaller native species. A loss of biodiversity locally is the result.

Population levels have been shown to vary significantly either side of an exclusion fence. For example, red kangaroo and emu numbers remained low outside an exclusion fence due to predation by dingoes, whereas inside the numbers increased during drought recovery periods⁶. So, the fence prevented dingoes from being inside the fence and maybe attacking sheep, but the build-up of macropod and emu numbers had to be controlled in other ways. Those control measures may or may not be humane. It could be argued that one is creating a problem that one then has to solve!

Animal Welfare

Exclusion fences lead to a number of animal welfare considerations.

- It is argued that fences reduce the predation on sheep and cattle by dogs thereby having a positive welfare outcome. However, if wild dogs are not preying on domesticated species they are preying on wild ones. Any animal preyed on by another is likely to suffer pain and distress. This is true of wildlife just as much as domesticated animals. Therefore, a fence could be seen as merely changing which species of animal is being preyed on and suffering poor welfare, rather than preventing the welfare risk. The improved welfare argument then becomes a fallacy and an economic argument, not a welfare one.
- When herbivore numbers build up inside a fenced area due to lack of ability to move away or an absence of predators, management methods are used to control numbers. Various methods are used by farmers in Queensland to control macropod numbers inside an exclusion fence.
 - Shooting of kangaroos may be undertaken and while this method is recognised as humane when carried out by a professional shooter, it may not be if carried out by others who are less experienced and not following the *National code of practice for the humane shooting of kangaroos for non-commercial purposes*. Also, the code requires certain provision around the humane destruction of young at foot and pouch young which poses extra risk to the welfare of the animals.
 - Restriction of access to water is another common management technique employed¹⁰. This method exists as a recommended method in the *ACT kangaroo management plan*¹¹ but is also used in Queensland. Once livestock have been removed from an area the water source is fenced off and any animal which cannot escape will perish from thirst. Of course, in an unfenced area animals such as macropods can and do move away to find water elsewhere and the method could be considered humane, but in a fenced area it is not and the animals die a particularly nasty death.
- The fencing of wildlife from particular areas may also have welfare impacts that are not immediately obvious such as preventing species from accessing particular landscape items preferred as food or shelter which may impact their health and well-being.
- Smaller vertebrates may be prevented from accessing a water resource that is their usual source but lack the ability to move across the landscape to find another, or if they attempt a move they put themselves at great risk of predation, starvation and dehydration.
- Animals may get caught up on fencing as they attempt to move through an area or flee a predator.

Other issues

A concentration on fencing to solve predation problems is reactionary and in no way looks at finding long-term solutions. Long-term solutions are difficult and more research is needed to understand the complex dynamics of landscape-scale biodiversity and identify alternate humane pest animal control methods. One problem is the hybridisation of dingoes with domestic dogs. This hybridisation results in larger and potentially stronger dogs. Measures need to be taken to ensure dogs are

sterilised and unable to mate with dingoes. Equally, cats must be sterilised to prevent successful breeding and living in the wild.

Fences are also extremely expensive to erect and maintain. RSPCA Qld argues that the money could be better spent on research and steps to ensure responsible pet ownership.

Conclusion

RSPCA Qld believes that fencing represents a narrow and knee-jerk reaction to a major problem. We recognise that a major problem exists, that it is extremely complex and no simple answers are currently available. We believe that we need to strive to better understand the issues from different perspectives and be prepared to adopt longer-term solutions. Fences may have a role to play for certain purposes in particular places for a limited period (e.g. fence an area to allow for regeneration). However, the building of more and more fences could have long-term and serious negative consequences on Australia's biodiversity from which it might prove impossible to recover. The animal welfare impact of fences must also not be ignored.

References

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