

PROCEEDINGS OF THE AUSTRALIAN RANGELAND SOCIETY BIENNIAL CONFERENCE
Official publication of The Australian Rangeland Society

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The reference for this article should be in this general form;

Author family name, initials (year). Title. *In*: Proceedings of the nth Australian Rangeland Society Biennial Conference. Pages. (Australian Rangeland Society: Australia).

For example:

Anderson, L., van Klinken, R. D., and Shepherd, D. (2008). Aerially surveying Mesquite (*Prosopis* spp.) in the Pilbara. *In*: 'A Climate of Change in the Rangelands. Proceedings of the 15th Australian Rangeland Society Biennial Conference'. (Ed. D. Orr) 4 pages. (Australian Rangeland Society: Australia).

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RABBIT CONTROL – REDUCING THE IMPACT OF THE DROUGHT IN SOUTH WEST NSW

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ABSTRACT

Rabbits have been a major problem creating overgrazing and increasing the impacts of drought in the rangelands. Rabbits have the ability to eat 100-150 g of food per day, which when a doe can produce over 100 rabbits in a breeding season, stock are competing with rabbits for available feed. The South West Rabbit Control Group and the WEST 2000 program have been running a successful rabbit warren ripping program over the last six years, since 1996. The programs have worked with Landcare groups, and Rural Lands Protection Boards covering the Western Division of New South Wales. Participating properties have mapped paddocks treated and recorded the number of warrens ripped, hours taken to complete the project, and cost per hectare treated.

The rabbit warren ripping program with the South West Rabbit Control Group and West 2000 has demonstrated the benefits of a rabbit warren ripping program. The development of the project has prompted other groups in Australia to conduct similar projects. Public and environmental benefits of the program have continued to become evident over the running of the project, particularly during the drought, as the impact from rabbits has been decreased.

INTRODUCTION

The South West Rabbit Control Group (SWRCG) was a project developed in September 1996 to have a coordinated and regional approach to rabbit control and take full advantage of the rabbit eradication opportunity presented by the release of Rabbit Calicivirus Disease (RCD). In the south west of the Western Division of New South Wales, rabbits are recognised as one of Australia's greatest environmental pests and detrimental to pastures and native vegetation. Rabbits eat plants, shrubs and grasses, which are more palatable, and nutritious with higher water content, all vegetation species desired by stock (Gooding 1955).

The South West Rabbit Control Program ran in the south west of NSW from September 1996 to May 2002. A management plan and guidelines were developed to implement a coordinated approach to rip warrens over the 1.8 million ha of the South West Rabbit Control Group area. The aim of the project was to reduce rabbit numbers and capitalise on RCD (Croft 1997). Guidelines and standards for machinery were put in place, with landholders having completed property maps to record treated areas. West 2000 Plus has continued to provide landholders with incentives to complete rabbit ripping.

Most landholders initially underestimated their rabbit problem. After taking part in the program, they have a greater awareness of damage caused by rabbits and the benefits arising, not only to the environment but benefits to drought management.

PROJECT RESULTS

Since the commencement of the project in September 1996, the South West Rabbit Control Group has ripped a total of 309,627 warrens in the region, with an additional 52,204 warrens ripped under the West 2000 project, with properties still completing work with West 2000 Plus funding. Project totals (Table 1) indicate the average cost per warren and the total cost to carry out the project, which was funded on a dollar for dollar basis.

Table 1. SWRCG project totals September 1996 – May 2002

Project Totals	Warrens	Hours	Cost (\$)	\$/Warren
SWRCG	309,627	26,399	2,336,274	\$7.59
West 2000 Plus	52,204	6,205	490,753	\$9.40
	361,831	32,604	2,827,027	\$7.85

CONTROL BENEFITS

Many properties in the South West Rabbit Control Group area have continued to control rabbits, regardless of the drought and lack of finances as they have realised the benefits that destroying rabbit warrens gives to their property. The reduction of rabbits provides some relief of total grazing pressure on properties, and therefore provides a head start when the drought breaks.

Environmental benefits

To determine the benefits of the rabbit-ripping project, a study was undertaken to collect information and data from a limited number of field sites in western New South Wales. The data collected on rabbits and the diversity of plants in relation to rabbit warrens were compared with similar data from Yathong Nature Reserve near Cobar. The study confirmed that the activity of rabbits results in reduced diversity of vascular plants, and the grazing of rabbits also produces major impacts on shrubs and trees, through reduced recruitment (Eldridge 2002). Results of the study indicated that ripping of rabbit warrens is a highly effective control method. Results also show that Rabbit Calicivirus Disease (RCD) is not sufficiently effective as a sole method of rabbit eradication. The rabbit warren ripping project has demonstrated on properties that the land has a greater cover of different grasses which had not been seen for years, along with trees returning naturally as evidenced by pine, belah and apple bush that are regenerating.

Production Benefits

The benefit of the rabbit ripping program to the grazier has been an improvement in stock management and productivity rather than to run more stock. The reduction in rabbit numbers has resulted in an increase in available feed particularly in drought conditions, as on some properties with a ripping program, the drought has taken much longer before affecting the property. Decreasing grazing pressure and improving environmental condition has lead to better wool cuts and higher lambing percentages. Domestic stock can be rotated around paddocks as the feed levels drop off, knowing grazing pressure by rabbits has been reduced and forward paddocks have not been depleted of ground cover and desired palatable pastures.

CONCLUSION

Rabbit numbers are at an all time low in some areas due to the combination of the rabbit ripping program and RCD. Even during the drought landholders continued to control rabbit populations. With their properties destocked, carrying out ripping program was seen as beneficial as results of such a project were becoming evident. The coordinated approach to the project and co-operation of property owners in the region resulted in the project exceeding the expectations when originally established. Although further and more detailed studies are required to assess the impact of rabbit activity on reptiles and small mammals, information from landholders, while qualitative, provides an understanding that rabbit control has benefited some properties, including during the drought.

REFERENCES

- Croft, D. (1997). South West Rabbit Control Group Rips Into Warrens. SWRCG Final Report.
 Eldridge, D. (2002). The Impact of the European Rabbit (*Oryctolagus cuniculus L.*) on diversity of vascular plans in semi – arid woodlands. Consultancy Report for West 2000.
 Gooding, C.D. (1955). Rabbit damage to pastures. *Journal of Agriculture* 4: 753-755.