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THE ECONOMICS OF RABBIT CONTROL - WESTERN DIVISION OF NSW

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In the Broken Hill, Ivanhoe and Wentworth areas of the Western Division some landholders have achieved effective long-term rabbit control by ripping warrens. The lack of contractors and extension efforts saw Broken Hill landholders approach the Soil Conservation Service of NSW, to provide machinery for contract ripping.

The aim was to prove that large-scale warren ripping was the most efficient and economical control method over large areas. It was also intended to encourage other private heavy machinery contractors to provide their services.

With the onset of good seasons and wool prices in the late 1980s combined with the formation of Landcare, rabbit warren ripping was gaining greater acceptance. Demonstration money generally on a dollar for dollar basis was made available to some Landcare Groups, along with strategy planners. Contractors also emerged, as few graziers had the machinery and labour to undertake the quite often very large task on hand. To maximise the effectiveness group control proved extremely worthwhile. Groups emerged in the Ivanhoe, Broken Hill, Balranald, and Wentworth areas, but the onset of drought and poor wool prices in 1991 reduced activity. The Cobar and Bourke areas, although only having pockets of rabbits, never really got going.

In 1990-91 the author carried out a survey on stocking rates to determine the economics of various rates. From this survey of 20 landholders, two had carried out rabbit ripping (one at Ivanhoe 1956-8 and the other at Wentworth 1960-present) and another at Ivanhoe had undertaken a recent baiting, shooting and ripping program (with the aid of demonstration funding). Follow up work was carried out in 1992-3 with some survey participants, including two that had controlled rabbits.

These two landholders had superior wool cuts per head, higher lambing percentages and better surplus sheep sales compared to near neighbours on similar land types with rabbits.

Example 1: Long-term rabbit control combined with fodder conservation, conservative stocking and good financial management saw the Ivanhoe landholder successfully handle drought (see Table 1) and make a significant profit.

Table 1. Ivanhoe landholder production records.

	Long-term average	1992
Wool production (kg/ha)	1.7	2.0
Average cut per ewe (kg)	7.0	7.0
Lambing percentage	84.0	50.0

Example 2: When the other Ivanhoe property owner identified a serious rabbit problem in 1987, and income fell from \$13/ha to \$8/ha in a good season he undertook a major ripping and poisoning program. This was assisted with NSCP demonstration funding which was matched by the landholder dollar for dollar. In conjunction with good seasons and prices in 1989 income rose to \$23/ha as a result of this program.

WHAT IS THE COST OF RABBIT WARREN RIPPING?

Data from Broken Hill (Topar and Pine Creek Landcare Project 1991) showed costs of warren ripping varied due to land type and warren density. Per warren costs were in the \$4-7 range. Per hectare costs were generally from \$2.81 - \$0.43. But there were instances of up to \$7.25/ha in sandplains and dunefields with 1.6 warrens per hectare.

Using Gross Margin analysis and assuming a rabbit warren per 3.7 ha, the break-even time for warren ripping when per warren costs are \$6 was calculated (Table 2).

Table 2. Break-even time for warren ripping when per warren costs are \$6.

Gross margin/dse*	Stocking rate	Break-even time
\$	dse:ha	(years)
6.23	1:3	5.9
12.04	1:3	2.23
17.93	1:3	1.25
27.17	1:3	0.60

* dry sheep equivalents.

It is the author's opinion that even in recession and/or drought warren ripping can be a least loss method. In periods of high prices it is very poor financial management to fail to control rabbits in rabbit prone areas.

A 1990 profit and loss analysis by the author involved a hypothetical comparison of two properties capable of carrying 5000 ewes; one has a long-term rabbit control program, the other does not. Both have an asset value of \$1.4m (1989). Due to a major rabbit plague the nil control has to sell sheep on a depressed market and overall income is considerably reduced and extra carry-on finance is required. At the end of 1990 nil control has a net position of \$1.14m compared to the controlled of \$1.55m (before tax).

The conclusion is that the failure to control *total grazing pressure* can have severe consequences on the viability of pastoral holdings, not to mention the problem of land degradation.

Whilst drought and recession have reduced the ability and willingness of WD landholders to continue and/or start warren ripping programs it could be argued they should do it regardless. Now with Rabbit Calicivirus Disease (RCD) they hope their problems will be solved. But the reality is whilst it may be a very useful weapon, the need to destroy remaining rabbits and warrens with ripping and other follow-up methods is essential.