

RABBITS

Prepared at the request of the Rabbit Destruction Council
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THE history of the rabbit since it was first commercialised in New Zealand some 80 years ago, has economically been one of tragedy. The export of skins and carcasses has given us a national return of a little over twenty million pounds in all those years, but the loss in more legitimate exportable primary produce alone is estimated at several hundred million pounds. At today's ruling prices it is considered that rabbits are costing New Zealand approximately twenty million pounds annually. This loss of national earning-power, naturally affects both the standard of living of all New Zealanders and the overseas purchasing power of the nation.

Internally, the financial loss caused by rabbits is difficult to estimate, but consideration must be given to the huge areas of land where the natural cover has been eaten out and the surface left naked to the forces of erosion. Scores of farmers have been bankrupted by rabbits which have caused the more or less permanent abandonment of tens of thousands of acres of run country. On millions of acres the stock-carrying capacity of the land has been seriously reduced by the rabbit population.

The devastating effects of rabbits upon the carrying capacity of the land became alarmingly evident within a very few years of their liberation. Despite desperate attempts to stem the invasion, by 1875 Southland and North and Central Otago were being overrun. The Moa Flat station in Otago had to reduce its carrying capacity from 120,000 to 45,000 sheep, the Castle Rock station in Southland dropped from 50,000 to 20,000 sheep—to quote just two of many such instances. And in the remaining flocks, lambing percentages fell by as much as two-thirds and some wool clips were halved. The Castle Rock station sold over 300,000 rabbit skins in one year, and over one and a-quarter million rabbits were destroyed on the Teviot station in four

years at an estimated cost of £25,000. By 1887 over one and a-half million acres had been abandoned in Otago and Southland alone, and in the 13 years from 1875-1887 the government lost over £315,000 in rentals. By 1888 it was estimated that the annual national loss occasioned by rabbits was approaching two million pounds.

Rabbits have been farmed in New Zealand since the very early days. In 1842 a Baron Ortsdorff was conducting a very lucrative business at Hutt breeding rabbits and selling them to farmers all over New Zealand. By 1882 the export of rabbit skins numbered over nine million a year.

Before the days of refrigerated ships the export of primary produce was confined to wool and wheat with the result that a prospective fur trade from rabbit skins was eagerly welcomed by some commercial interests and by farmers. The fact that rabbits were creating ruin and desolation was overlooked in the search for immediate financial gain. By the time the widespread havoc and abandonment of land had forced the government, in 1876, to pass the first Rabbit Nuisance Act, it is worthy of note that even while this legislation was being drafted, concerted efforts were being made by

interested parties to have more rabbits introduced from overseas in an endeavour to improve the strain and pelts of those already acclimatised.

Prior to this large-scale commercialisation of the rabbit in New Zealand run-holders had endeavoured to exterminate them at all times of the year. Some run-holders had spent their entire resources in efforts that were fruitless because there was no co-ordinated attack. As quickly as they cleared their properties the rabbits came in again in overwhelming numbers from adjacent lands. But now with winter pelts worth several times as much as summer skins, it became the widely-accepted practice to leave rabbits alone during the vital breeding months of the spring and summer and concentrate on killing them in the winter. Rabbits would be made to pay for their own extermination.

No plan of operation could have been more fatal and only one other has done more to spread and perpetuate the rabbit. That was the export of carcasses.

As soon as buyers were able to offer a price both for pelts and carcasses it became obvious that poisoning would have to be abandoned. Trapping became universally popular. Professional rabbiters and rabbit farmers refused to use poisons and so the era of catching instead of killing was ushered in.

With plenty of heavily-infested areas to choose from it was only natural that rabbiters would refuse to work where the rabbit population was relatively light. The result was that it became almost impossible to obtain the services of rabbiters for extermination work. It became the accepted practice for rabbiters to work only heavily-infested areas and farmers could not obtain labour until their farms reached a stage of heavy infestation. The cash value of rabbit carcasses and skins, together with bonus payments, did more to spread the rabbit and stabilise the rabbit population, than anything else.

Bonus System Ineffective:

An example of the evil results accruing from bonus payments became evident prior to 1900.

A joint parliamentary committee had been set up to investigate the rabbit problem. In its report to the government, the committee stated that Crown and Maori lands were "little better than rabbit nurseries where myriads of the animals were breeding." So the government com-

menced paying a bonus of 3d a skin for all rabbits killed on Crown and Maori lands. Thereupon the rabbiters refrained from poisoning and used only traps and dogs. It was alleged that large areas were left for breeding and that rabbits were taken from infested localities to other areas to form new breeding grounds. Rabbits commenced to increase astronomically in these and adjacent areas and it soon became evident that thousands of skins were being sent in from other sources so that the 3d bonus could be claimed on them.

So in 1901 the bonus payment ceased and the Department of Agriculture commenced widespread operations with phosphorised pollard. Within a few months rabbits were almost eradicated in some areas, but unfortunately they were later re-infested by rabbits breeding on private property.

Decommercialisation Advocated:

Ever since the formation of the Department of Agriculture, in 1892, its officers have been charged with the task of supervising rabbit destruction. And ever since those early days, the department's most responsible officers have advocated the complete decommercialisation of rabbits as an imperative prerequisite to their destruction and eradication.

This is one of the fundamental principles now advocated under the present "killer" policy. For so long as money is to be made out of catching rabbits and trading in them, a stable breeding population is liable to be left to assure the future incomes of all those concerned. And if carcasses have a good market value, trapping—the slowest method of rabbit destruction—is the only means that can be used on a wide scale.

When skins represent the sole cash return from rabbits, poisoning with strychnine is acceptable to rabbiters because death is sudden and the animals can be gathered up close to where the poison is laid. But if phosphorised pollard is used, many of the rabbits die in their holes or well away from where the poison is laid, with the result that a fairly large proportion of the skins is not recoverable. Few, if any, skins are recoverable if rabbits are gassed in their holes and warrens.

Yet, it has been shown by rabbit boards that poisoning with phosphorised pollard, and gassing of rabbits underground—particu-

larly with chloropicrin (larvacide) —are the deadliest, fastest, most economical and most thorough methods of rabbit eradication.

Reluctance to use these methods is engendered by the fact that no cash returns can be received from the sale of skins or carcasses. Yet, apart from other aspects, the use of phosphorised pollard and chloropicrin presents the easiest means of rabbit destruction today. These methods are to be advocated more particularly because of the manpower shortage. Phosphorised pollard can be spread over huge areas of land by plane quickly and economically, and warren-fumigation with chloropicrin is far more deadly and is quicker than fumigation by other methods.

The method of computing rabbit kills after poisoning is more or less guess work, though it is claimed that competent assessors can estimate within several per cent by noting the degree of infestation both before and after the kill. In this manner it has been estimated that phosphorised pollard is the deadliest of all broadcast poisons, for kills of from 90 to 95 per cent have often been claimed.

Perseverance Needed:

But isolated sets of phosphorised pollard are sometimes a total failure. Pollard can be spread on three or four occasions at different times of the year without achieving any worthwhile result, and then, for no known reason, the next distribution will result in an almost total kill. For this reason phosphorised pollard poisoning has often been condemned as unsatisfactory by people who have not persevered with its application. After perhaps two or three negative results, they adopt other methods. These other methods invariably have the effect of making the rabbits timid and less likely to succumb to poisoning. But in many districts, where the laying of phosphorised pollard has been persevered with, and where the fumigation of breeding grounds has been the other main method of destruction, excellent overall results have been achieved.

It has been discovered that better kills have been obtained from poisoned pollard distributed from the air than from that laid by hand. This may partly be accounted for by the fact that distribution from the air is more thorough and widespread, but the main reason is that the poisoned pollard is not handled so much and is therefore far less likely to become contaminated. Tests have proved that the slightest taint from

tobacco, sweat, or similar contamination is sufficient to frighten rabbits away from the poisoned bait. Hands that have any contact with tobacco or a sweating horse, for instance, should not handle poisoned bait until they have been thoroughly washed, preferably in a weak solution of aniseed.

When aerial poisoning was first commenced, the load of poison that could be carried was strictly limited. It was difficult to obtain an even distribution of the poison because it was essential to carry a passenger, who tipped the poison over the side of the plane. Now most aircraft used for poisoning are equipped with automatic hoppers, a full load can be carried and a more even distribution is assured.

The usual precautions should be taken, by removing stock, to prevent possible losses by poisoning.

Chloropicrin is Deadly:

The method of destruction which is proving to be a most satisfactory complement to poisoning with phosphorised pollard, is the fumigation of rabbit warrens and burrows with chloropicrin.

Chloropicrin (larvacide) is obtained as a liquid which gives off poisonous gas known as "tear gas" or "vomiting gas" because of its effects on human beings. Great care should be taken not to breathe the fumes. The gas, being more than five times as heavy as air, does not escape through porous soils, as does cyanogas or the carbon monoxide produced by engine-functioned smokers.

As far as rabbits are concerned, there seems no doubt that chloropicrin is the deadliest and at the same time the most economical of the available fumigants.

A gang of four men, using chloropicrin, can cover as much ground in two days as a similar gang would take five days to cover using a smoking outfit. When using chloropicrin on country where there is plenty of scrub and other cover, it pays to drive the rabbits underground with a dog pack and follow up by injecting a shot of chloropicrin into each burrow before filling it in. One man in each gang usually carries and works the simple, syringe-type injector, while the others fill in the holes with shovels.

Chloropicrin is highly corrosive and because of this at least 10 per cent, and up to 40 per cent, of old engine oil is mixed with it in order to protect the injector. By increasing the percentage of oil, greater economy is ob-

tained. Some users report excellent results with up to 40 per cent oil, but a more general opinion is that 15 per cent of oil is enough if 100 per cent kills are to be made underground. With this mixture, it is very rarely that any burrows are opened from the inside and any rabbits that break in from the outside usually die almost immediately. There are occasions, however, when a greater percentage of oil is desirable. Adding oil to chloropicrin slows down the vaporisation, and it has been found that when chloropicrin mixtures from 35 to 50 per cent of oil are injected into open crevasses amongst rocks where rabbits often live, the effect is more lasting than if only 10 per cent of oil is used.

Spectacular Results:

Chloropicrin was first used on a large scale for destruction in New Zealand by a Central Otago board with such outstanding results that over 50 out of the 163 boards in New Zealand are now using it. Increasing numbers of farmers are also using it with quite spectacular results.

Here are some extracts from a letter written by a Southland farmer:

"Chloropicrin is absolutely the best thing on my farm . . . the farm is 700-odd acres and the two last owners were put out by the rabbits. I have had the farm for nearly two years, but we have killed more rabbits with chloropicrin in a few weeks than in all that two years and I am sure that I will have no rabbits left within twelve months. . . The first

two days we injected chloropicrin and blocked all the burrows, and when outside rabbits came in to open the burrows, they died as soon as they got in, or ran out into the paddocks and died there. . . I can really say that this fumigant would be cheap at £20 per gallon."

In poisoning from the air with phosphorised pollard, and in using chloropicrin, it is obvious that we now have better means than ever before of destroying rabbits. In many of the 163 rabbit board areas in New Zealand outstanding results have been achieved in rabbit destruction but there is no doubt that this important work is being seriously hindered in some districts by the repeated influx of rabbits from areas where no boards have been formed.

There are two fundamental principles of the "killer" policy. The first is that rabbits should be killed and not caught. Killing is infinitely faster, more economical, and could ultimately lead to the complete eradication of rabbits. The second is that there should be a complete coverage of all rabbit-infested areas by contiguous boards. Neither of these objectives has been more than partially achieved as yet, primarily because of apathy and commercialisation. If all farmers would realise the potential menace of even a few rabbits, and form rabbit districts before they assume plague proportions, the task of existing rabbit boards would be greatly simplified and the "killer" policy could be put on a sound and lasting footing.

Copies of this Bulletin may be obtained from the Secretary, Canterbury Chamber of Commerce, P.O. Box 187, Christchurch.